

# ABB and Baldor Drives

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**BALDOR**  
A MEMBER OF THE ABB GROUP



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## AC Drives Selection Chart

ACS55	ACS150	ACS250	ACS250 NEMA 4X	ACS310
				 <b>Control panel not included.</b>
<b>Main Attributes</b>				
Starter-style Microdrive; V/Hz Control, DIN or Panel Mounting, DIP switches and potentiometer configuration, PC configuration tool. EMC model available.	Component-style Microdrive; V/Hz Control, DIN or panel mounting, integral LCD control panel and integrated potentiometer, internal EMC filter.	Starter-style Microdrive; V/Hz Control, integral LED display, Built-In PI Loop; DIN or Panel Mounting.	NEMA 4X Enclosure Micro Drive; V/Hz Control; integral control panel, Built-In start/stop, speed potentiometer and disconnect switches.	General purpose Microdrive; V/Hz control, PID control, pump/fan control and protections, quick start assistant, internal EMC filter. Optional advanced or basic removable LCD control panel.
<b>Hp Range</b>				
1~115 V - 0.25 to 0.5HP		1~115 V - 0.5 to 1.5 HP	1~115 V - 0.5 to 1.5 HP	
1~230 V - 0.25 to 3HP	1~230 V - 0.5 to 3 HP		1~230 V - 0.5 to 3 HP	1~230 V - 0.5 to 3 HP
	3~230 V - 0.5 to 3 HP		3~230 V - 0.5 to 5 HP	3~230 V - 0.5 to 15 HP
	3~460 V - 0.5 to 5 HP		3~460 V - 1 to 10 HP	3~460 V - 1 to 30 HP
		3~600 V - 0.75 - 20 HP	3~600 V - 0.75 - 15 HP	
<b>Voltage Range</b>				
1~115 V In / 3~230 V Out		1~115 V In / 3~ 230 V Out	1~115 V In / 3~230 V Out	
1~230 V In / 3~230 V Out	1~230 V In / 3~230 V Out		1~230 V In / 3~230 V Out	1~230 V In / 3~230 V Out
	3~230 V In / Out		3~230 V In / Out	3~230 V In / Out
	3~460 V In / Out		3~460 V In / Out	3~460 V In / Out
		3~600 V In / Out	3~600 V In / Out	
<b>Enclosure Type</b>				
UL type 0 (IP20)	UL type 0 (IP20)	UL type 0 (IP20)		UL type 0 (IP20)
	UL Type 1 Kit - Option		NEMA 4X (IP66)	UL Type 1 Kit - Option
<b>Motor Control Mode</b>				
Scalar (V/Hz)	Scalar (V/Hz)	Scalar (V/Hz)	Scalar (V/Hz)	Scalar (V/Hz)
<b>Motor Type</b>				
Induction Motor	Induction Motor	Induction Motor	Induction Motor	Induction Motor
<b>Communications Options</b>				
N.A.	N.A.	Embedded Modbus-RTU	Embedded Modbus-RTU	Embedded Modbus-RTU
<b>Operator Interface (Control Panel)</b>				
DIP switches and potentiometer or PC tool parameter configuration	Integral LCD control panel and integrated potentiometer. FlashDrop configurable	Integral LED and/or remote mount LED	Integral LED and/or remote mount LED control panel; Copycat Capability; Speed Pot; Fwd/Rev Switch; Input Disconnect	Integral or remote mount LCD control panel. Parameter upload and download capable. Assistants mode for quick start-up, DriveWindow Light and FlashDrop configurable.
See page 5	See page 8	See page 11	See page 14	See page 17

## AC Drives Selection Chart Continued

	ACS355	ACS355 NEMA 4X	ACB530	ACB530 +L502
AC Micro Drives				
AC Inverter Drives	Control panel not included.			
AC Vector Drives	<b>Main Attributes</b>		<b>Main Attributes</b>	
Analog AC Drives	Machinery Micro Drive; Open Loop vector, (encoder feedback option) or V/Hz control, permanent magnet or induction motor control, PID control, internal EMC filter, optional advanced or basic removable LCD control panel.	UL Type 4X Machinery Micro Drive; NSF certified enclosure, Open Loop vector, (encoder feedback option), or V/Hz control, permanent magnet or induction motor control, internal EMC filter, optional built-in disconnect.	Sensorless Vector or V/Hz Control, PID Control, Quick Start Assistant, UL Type 1 or UL Type 12 Enclosure, Easy to use keypad	Closed Loop Vector, Sensorless Vector or V/Hz Control, PID Control, Quick Start Assistant, UL Type 1 or UL Type 12 Enclosure, Easy to use keypad
Baldor DC Drives	<b>Hp Range</b>		<b>Hp Range</b>	
ACS Drives	1~230 V - 0.5 to 3 HP		1~230 V - 0.75 to 40 HP	1~230 V - 0.75 to 40 HP
	3~230 V - 0.5 to 15 HP	3~230 V - 0.5 to 5 HP	3~230 V - 1.5 to 100 HP	3~230 V - 1.5 to 100 HP
	3~460 V - 0.5 to 30 HP	3~460 V - 0.5 to 10 HP	3~460 V - 1.5 to 550 HP	3~460 V - 1.5 to 550 HP
			3~600 V - 1.5 to 150 HP	3~600 V - 1.5 to 150 HP
ACB Drives	<b>Voltage Range</b>		<b>Voltage Range</b>	
	1~230 V In / 3~230 V Out		230V 1 Phase	230V 1 Phase
	3~230 V In / Out	3~230 V In / Out	208-240V 3 Phase	208-240V 3 Phase
	3~460 V In / Out	3~460 V In / Out	380-480V 3 Phase	380-480V 3 Phase
			500-600V 3 Phase	500-600V 3 Phase
Resistors	<b>Enclosure Type</b>		<b>Enclosure Selection</b>	
	UL type 0 (IP20)		NEMA 1 (UL Type 1) - 3/4-350Hp	NEMA 1 (UL Type 1) - 3/4-350Hp
	UL Type 1 Kit - Option	UL type 4X (IP66)	NEMA 12 (UL Type 12) - 3/4-550Hp	NEMA 12 (UL Type 12) - 3/4-550Hp
Powerhm	<b>Motor Control Mode</b>		<b>Control Mode</b>	
	Open Loop vector, (encoder feedback option), Scalar (V/Hz)	Open Loop vector, (encoder feedback option), Scalar (V/Hz)	Sensorless Vector or V/Hz	Closed Loop Vector, Sensorless Vector or V/Hz
Input Reactors	<b>Motor Type</b>		<b>Motor Type</b>	
	Permanent magnet or Induction Motor	Permanent magnet or Induction Motor	Induction Motor	Induction Motor
Output Filters	<b>Communications Options</b>		<b>Communication Options</b>	
	CANopen, DeviceNet, EtherNet/IP, EtherCAT, Modbus-RTU, Modbus/TCP, PROFIBUS, Profinet-IO	CANopen, DeviceNet, EtherNet/IP, EtherCAT, Modbus-RTU, Modbus/TCP, PROFIBUS, Profinet-IO	Built-in Modbus-RTU, Optional: DeviceNet, PROFIBUS, Modbus/TCP, EtherNet/IP, ControlNet, EtherCAT	Built-in Modbus-RTU, Optional: DeviceNet, PROFIBUS, Modbus/TCP, EtherNet/IP, ControlNet, EtherCAT
Application Information	<b>Operator Interface (Control Panel)</b>		<b>Operator Interface</b>	
	Integral or remote mount LCD control panel, optional potentiometer with start/stop switches. Parameter upload and download capable. Assistants mode for quick start-up, DriveWindow Light and FlashDrop configurable.	Integral or remote mount LCD control panel. Parameter upload and download capable. Assistants mode for quick start-up, DriveWindow Light and FlashDrop configurable.	Advanced Control Panel standard, with two soft keys that change state according to state of panel, Local / Remote control modes, Built-in "Help" button, Real-time clock, Changed Parameter menu	Advanced Control Panel standard, with two soft keys that change state according to state of panel, Local / Remote control modes, Built-in "Help" button, Real-time clock, Changed Parameter menu
Cross Reference	See page 20	See page 25	See page 30	See page 37
Glossary of Terms				
Part Number Index				

## ACB Part Numbers

**ACB 530 - U1 - 07A5 - 2**

Voltage:  
2 = 230V  
4 = 460V  
6 = 600V

Rating:  
07A5 = 7.5A

Type:  
U1 = ACB530 - Wall Mount  
PC = ACB530 - Cabinet Drive

Family:  
530 = ACB General Purpose Drive

## ACS Part Numbers

**ACS 355 - 03U - 08A8 - 2**

Voltage:  
2 = 230V  
4 = 460V  
6 = 600V

Rating:  
08A8 = 8.8A

Type:  
01U = ACS355 - 1 Phase Input  
03U = ACS355 - 3 Phase Input

Family:  
355 = ACS Microdrive

## ACS55 AC Micro Drive



**1/4 & 1/2 Hp - No EMC Filter**

**115 Vac**

**1 Phase - 50/60 Hz**

**1/4 thru 3 Hp - No EMC Filter**

**230 Vac**

**1 Phase - 50/60 Hz**

**1/4 & 1/2 Hp - Built-In EMC Filter**

**115 Vac**

**3 Phase - 50/60 Hz**

**1/4 thru 3 Hp - Built-In EMC Filter**

**230 Vac**

**3 Phase - 50/60 Hz**

**Applications:** Conveyors, gate controls, material handling, printing, packaging machinery variable torque or constant torque applications. New installations, replacements and original equipment manufactures (OEM).

**Features:** Compact size replaces contactors and starters, fast setup, easy configuration. Scalar (Volts per Hertz), with peak overload capacity of 150%, IP20 enclosure. Flexible mounting options - Wall mounting with bracket or DIN rail mounting in either wide or narrow orientation. Option kit has speed potentiometer with two switches - Run/Stop and Fwd/Rev, Serial or USB DriveConfig Kit available for volume configuration of un-powered drives.

<b>Performance Features</b>	Control Modes	Scalar V/Hz	
	Operator Interface Module	Control potentiometers and dip switches, Optional speed potentiometer and control switches	
	Fault Display	Green and red status indication LED's	
	Programmable Preset Speeds	Three (When Programmed with DriveConfig)	
	Auto Restart	10 in three minutes	
	Digital Inputs	Three, Dedicated: Start, Reverse, & Jog	
<b>Drive Specifications</b>	Digital Inputs Type	12 to 24VDC, (10V Logic 0) with internal 12 VDC power supply (12 VDC, +/-10%, 30mA max.)	
	Analog Inputs: One	0-10VDC, -10 to 10VDC or 0/4 - 20mADC	
	Digital Outputs: One	One programmable relay output, Type: NO + NC, Switching capacity: 12-250VAC/30VDC/0.5A, Current: 10mA - 2A	
	Overload Capacity	Drive Output 150% for 1 min., 180% for 2 sec. at start	
	Input Voltage Ranges:	110 - 120VAC, 1-phase & 200 - 240VAC, 1-phase	
	Input Voltage Tolerance	10% / -15%	
	Rated Input Frequency	48 to 63Hz, maximum rate of change = 17% / sec	
	Carrier Frequency:	5-16 kHz (5 kHz default)	
	Operating Temperature:	-20° to 40°C; no frost allowed, 50°C if continuous output current is maximum 85% of nominal output current	
	Volts/Hz	Scalar, selectable for linear (CT) or square function (VT)	
	Frequency Control Range:	0-130 Hz	
	Accel/Decel:	One setting by control potentiometer	
	Time Range:	0.0 to 30 Seconds	
	Electronic Motor Overload	Over Current Trip	
	<b>Protective Features</b>	Under Voltage Trip Limit	65% of Input Voltage
		Over Voltage Trip Limit	130% of Input Voltage
Ground Fault Protection		Yes	
Output Short Circuit		Yes	
Over Temperature		Heatsink Monitor (90°C / 203°F)	
Motor Overtemp		Yes	
DC Bus Overvoltage		DC Bus Level Trip	
IGBT Overtemp		Yes	
Over Current		Protected	
Loss of Reference		Yes	
<b>Agency Certifications</b>	UL, cUL, CE, RoHS, C-Tick, GOST-R		
<b>Service Conditions</b>	Altitude:	1,000 m (3,300 ft.). Derate by 1% every 100 m (328 ft.) up to 2,000m (6,600 ft.)	
	Ambient Temperature:	-20° to 40°C; no frost allowed, 50°C if continuous output current is maximum 85% of nominal output current	
	Relative Humidity:	0% to 95%, non-condensing	
	Intermittent Overload:	150% overload capacity for up to 1 minute	
	Vibration	In accordance with ISTA 1A	



## ACS55 110 - 240Vac Ratings & Pricing

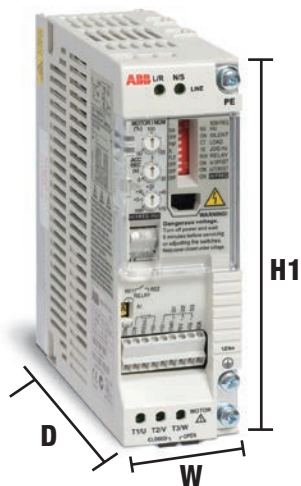
### Single phase supply voltage 110V-120V and 200V-240V

Catalog Number	HP	kW	Nominal Output Current	Maximum Output Current	Input Current	Frame Size	List Price	Multiplier Symbol
<b>1-Phase Supply Voltage 110 to 120V, +10/-15%, 3-Phase Output 200 to 240V</b>								
ACS55-01N-01A4-1	0.25	0.18	1.4	2.1	6.4	A	156	EN
ACS55-01N-02A2-1	0.5	0.37	2.2	3.3	9.5	A	175	EN
<b>1-Phase Supply Voltage 200 to 240V, +10/-15%, 3-Phase Output 200 to 240V</b>								
ACS55-01N-01A4-2	0.25	0.18	1.4	2.1	4.4	A	156	EN
ACS55-01N-02A2-2	0.5	0.37	2.2	3.3	6.9	A	175	EN
ACS55-01N-04A3-2	1	0.75	4.3	6.5	10.8	B	212	EN
ACS55-01N-07A6-2	2	1.5	7.6	11.4	18.2	C	265	EN
ACS55-01N-09A8-2	3	2.2	9.8	14.7	22	C	307	EN
<b>1-Phase Supply Voltage 110 to 120V, 3-Phase Output 200 to 240V (Built-in EMC filter)</b>								
ACS55-01E-01A4-1	0.25	0.18	1.4	2.1	6.4	A	211	EN
ACS55-01E-02A2-1	0.5	0.37	2.2	3.3	9.5	A	230	EN
<b>1-Phase Supply Voltage 200 to 240V, 3-Phase Output 200 to 240V (Built-in EMC filter)</b>								
ACS55-01E-01A4-2	0.25	0.18	1.4	2.1	4.4	A	211	EN
ACS55-01E-02A2-2	0.5	0.37	2.2	3.3	6.9	A	230	EN
ACS55-01E-04A3-2	1	0.75	4.3	6.5	10.8	B	266	EN
ACS55-01E-07A6-2	2	1.5	7.6	11.4	18.2	D	338	EN
ACS55-01E-09A8-2	3	2.2	9.8	14.7	22	D	402	EN

## ACS55 Option Kits

Catalog Number	Name	List Price	Mult. Sym.
ACS50-POT	Potentiometer, Run/Stop & Fwd/Rev	20	ES
RFDT-02	DriveConfig Kit (USB) The DriveConfig Kit is a PC tool for volume configuration and control of ACS55 drives. The kit enables parameter setting and software updating without the need for a power connection. The drives can even remain in their delivery boxes during configuration. The DriveConfig Kit features on-line drive control and monitoring of up to four signals simultaneously. DriveConfig kit includes: <ul style="list-style-type: none"> <li>• Hardware and cables</li> <li>• PC software</li> <li>• User's manual in English (hard copy and PDF)</li> <li>• Battery charger</li> <li>• USB adapter</li> </ul>	700	ES

## ACS55 Dimensions



Frame Size	H1 (in)	H2* (in)	W (in)	D (in)	Weight (lb)
A	6.69	5.77	1.77	5.04	1.5
B	6.69	5.77	2.66	5.04	1.5
C	7.60	6.70	2.80	6.30	2.4
D	8.90	8.00	2.70	6.20	2.4

\*H2 is without din rail mounting clip

**ACS150  
AC Micro Drive**

<b>1/2 thru 3 Hp</b>	<b>230 Vac</b>	<b>1 Phase - 50/60 Hz</b>
<b>1/2 thru 3 Hp</b>	<b>230 Vac</b>	<b>3 Phase - 50/60 Hz</b>
<b>1/2 thru 5 Hp</b>	<b>460 Vac</b>	<b>3 Phase - 50/60 Hz</b>



**Applications:** Conveyors, gate controls, material handling, pumps, printing, packaging, food and beverage. Any variable torque or constant torque applications where vector control is not required. New installations, replacements and original equipment manufactures (OEM).

**Features:** Scalar control for linear (CT) or squared (VT) applications with peak overload capacity of 150% and PID capability. Flexible mounting options - wall with bracket or DIN Rail. IP20 enclosure as standard and NEMA1 option kit. Integrated control panel with keypad and LCD display, Integrated speed potentiometer. FlashDrop programming tool for fast and easy parameter selecting and setting of un-powered drives. Easy setup and commissioning with ABB common programming structure. Fast setup with macros. Built-in braking chopper allows connection to remote braking resistor for enhanced performance needs.

<b>Performance Features</b>	Control Modes	Scalar (V/Hz)
	Operator Interface Module	Integral Drive Mounted with speed potentiometer
	Keypad Display	LCD Graphical Display
	Programmable Preset Speeds	Seven
	Analog Outputs	None
	Auto Restart	Yes -- Up to 5 attempts
	Frequency Avoidance	Three Bands
	Fault History	Last Three Faults
	Digital Inputs	Five Programmable Inputs including pulse train input
	Digital Inputs Type	PNP & NPN, 12-24VDC, (10V logic 0), Pulse train 0 to 16kHz
<b>Drive Specifications</b>	Analog Inputs: One	0-10VDC or 0/4 - 20mADC
	Digital Outputs: One	Programmable Relay Output, NO + NC, 12-250 VAC / 30 VDC
	Overload Capacity	Drive Output 150% for 1 min.
	Input Voltage Ranges:	200 - 240 VAC; 380 - 480 VAC
	Input Voltage Tolerance	10% / -10%
	Rated Input Frequency	48 to 63Hz, maximum rate of change 17% / second
	Carrier Frequency:	4-16 kHz (4 kHz default)
	Operating Temperature:	-10° to 40°C; -10° to 50°C w/ 10% derate
	Dynamic Braking	Built-in braking chopper (100% braking capability)
	DC Injection Braking:	Yes
	Flux Optimization:	Can improve efficiency up to 10% on light loads
	Volts/Hz	Selectable for linear (CT) or square function (VT)
	Frequency Control Range:	0-500 Hz
	Accel/Decel:	Two independently adjustable sets of ramps
	Time Range:	0.0 to 1800 Seconds
	S Curve Accel. & Decel.	Yes, with adjustable rounding time
	Keypad Speed Control	Yes
	Sink/Source Inputs	Selectable, 24 VDC logic
	Electronic Motor Overload	Protected: Over Current & Over Temp
	PID Control	One with PID macro setup
	EMC Filter	2nd Environment - disconnectable
	Application Macros	Seven, including Three-wire, Hand/Auto, and PID Control
<b>Protective Features</b>	Under Voltage Trip Limit	65% of input voltage
	Over Voltage Trip Limit	130% of input voltage
	Ground Fault Protection	Motor or motor cables
	Output Short Circuit	Phase-to-phase on drive output
	Drive Overtemperature	Heatsink monitor (90°C / 203°F)
	Motor Overtemperature	Protected (I <sup>2</sup> t)
	Motor Stall	Motor operating in stall region
	DC Bus Overvoltage	DC bus level trip
	IGBT Overtemperature	Detects IGBT overtemp
	Over Current	Over-current trip limit up to 325%
	Incorrect Wiring	Fault for input cables connected to output
	Loss of Reference	Trips on loss of speed command signal
	Underload	Motor load too low, load disconnected
Single Phase	Loss of input phase	
<b>Agency Certifications</b>	UL, cUL, CE, C-tick, RoHS, GOST-R	
<b>Service Conditions</b>	Altitude:	1,000 m (3,300 ft.). Derate by 1% every 100 m (328 ft.) up to 2,000m (6,600 ft.)
	Ambient Temperature:	-20° to 40°C; no frost allowed, 50°C if continuous output current is maximum 85% of nominal output current
	Relative Humidity:	0% to 95%, non-condensing
	Intermittent Overload:	150% overload capacity for up to 1 minute

## ACS150 - 240Vac Ratings & Pricing

1-phase and 3-phase supply voltage 200, 208, 230 or 240 V. The power ratings are valid at nominal voltage, 208Vac at 40°C (104°F) or 230Vac at 50°C (122°F).

Catalog Number	Nominal Ratings				Frame Size	kW	List Price	Multiplier Symbol
	40°C (104°F) Continuous Rating		50°C (122°F) Continuous Rating					
	A	HP	A	HP				
<b>1-Phase Input Voltage = 200...240V (200, 208, 230, 240V)</b>								
ACS150-01U-02A4-2	2.4	1	2.2	0.5	R0	0.37	216	E0
ACS150-01U-04A7-2	4.7	1	4.2	1.0	R1	0.75	270	E0
ACS150-01U-06A7-2	6.7	1.5	6.0	1.5	R1	1.1	311	E0
ACS150-01U-07A5-2	7.5	2	6.8	2	R2	1.5	352	E0
ACS150-01U-09A8-2	9.8	3	8.8	2	R2	2.2	417	E0
<b>3-Phase Input Voltage = 200...240V (200, 208, 230, 240V)</b>								
ACS150-03U-02A4-2	2.4	0.50	2.2	0.50	R0	0.37	216	E0
ACS150-03U-03A5-2	3.5	0.75	3.2	0.75	R0	0.55	243	E0
ACS150-03U-04A7-2	4.7	1	4.2	1	R1	0.75	270	E0
ACS150-03U-06A7-2	6.7	1.5	6.0	1.5	R1	1.1	311	E0
ACS150-03U-07A5-2	7.5	2	6.8	2	R1	1.5	352	E0
ACS150-03U-09A8-2	9.8	3	8.8	2	R2	2.2	417	E0

## ACS150 - 480Vac Ratings & Pricing

3-phase supply voltage 380, 400, 415, 440 or 480 V. The power ratings are valid at nominal voltage, 480Vac at 50°C (122°F).

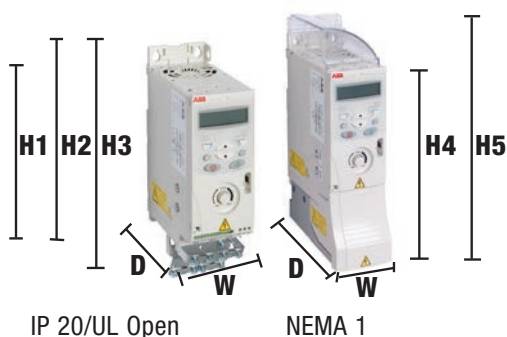
Catalog Number	Nominal Ratings				Frame Size	kW	List Price	Multiplier Symbol
	40°C (104°F) Continuous Rating		50°C (122°F) Continuous Rating					
	A	HP	A	HP				
<b>3-Phase Input Voltage = 380...480V (380, 400, 415, 440, 460, 480V)</b>								
ACS150-03U-01A2-4	1.2	0.50	1.1	0.50	R0	0.37	305	E0
ACS150-03U-01A9-4	1.9	0.75	1.7	0.75	R0	0.55	316	E0
ACS150-03U-02A4-4	2.4	1	2.2	1	R1	0.75	328	E0
ACS150-03U-03A3-4	3.3	1.5	3.0	1.5	R1	1.1	362	E0
ACS150-03U-04A1-4	4.1	2	3.7	2	R1	1.5	396	E0
ACS150-03U-05A6-4	5.6	3	5.0	3	R1	2.2	441	E0
ACS150-03U-08A8-4	8.8	5	7.9	5	R1	4.0	564	E0

## ACS150 Option Kits

Catalog Number	Name		List Price	Mult. Sym.
<b>MFD1-01</b>	FlashDrop	FlashDrop is a powerful palm sized tool for fast and easy parameter selecting and setting. It gives the possibility to hide selected parameters to protect the machine. Only the parameters needed in the application are shown. The tool can upload/download parameters, copy parameters between two drives or between a PC and a drive. Includes DrivePM (Drive Parameter Manager) which is a software tool to create, edit and copy parameter sets for FlashDrop. The parameter sets can consist of all parameters or only a set of the user parameters.	600	ES
<b>MUL1-R1</b>	NEMA 1 Enclosure Kit	This option provides the necessary hardware to modify the ACS150 drive from the standard fingersafe protected chassis to NEMA 1 protection capable of landing conduit. MUL1-R1 kit is used with frame sizes R0 through R2.	75	ES

## ACS150 Dimensions

Frame Size	IP20 (cabinet) / UL Open						NEMA 1 / UL Type 1				
	H1 (in)	H2 (in)	H3 (in)	W (in)	D (in)	Wt. (lb)	H4 (in)	H5 (in)	W (in)	D (in)	Wt. (lb)
R0	6.65	7.95	9.41	2.76	5.59	2.4	10.12	11.02	2.76	5.59	3.3
R1	6.65	7.95	9.41	2.76	5.59	2.9 / 2.61	10.12	11.02	2.76	5.59	3.7 / 3.52
R2	6.65	7.95	9.41	4.13	5.59	3.3	10.12	11.1	4.13	5.59	4.2



<sup>1</sup> U<sub>N</sub> = 200...240 V: 1.3 kg / 2.9 lb, U<sub>N</sub> = 380...480 V: 1.2 / 2.9 lb.

<sup>2</sup> U<sub>N</sub> = 200...240 V: 1.7 kg / 3.7 lb, U<sub>N</sub> = 380...480 V: 1.6 / 3.5 lb.

H1 = Height without fastenings and clamping plate

H2 = Height with fastenings but without clamping plate

H3 = Height with fastenings and clamping plate

H4 = Height with fastenings and NEMA 1 connection box

H5 = Height with fastenings, NEMA 1 connection box and Hood

## ACS250 IP20 AC Micro Drive

1/2 thru 1/5 Hp  
1 thru 20 Hp

115 Vac  
600 Vac

1 Phase - 50/60 Hz  
3 Phase - 50/60 Hz

**Applications:** Applications with 115V (for 230V motors) and 600V supply power: conveyors, mixers, pumps, fans, food and beverage variable torque, constant torque or constant horsepower applications. Compact size replaces motor starters/soft starters. New installations, replacements and original equipment manufactures (OEM).

**Features:** V/Hz control for linear (CT) or squared (VT) applications or Sensorless Vector Control (600V only). Overload capacity of 150% for 60 seconds or 175% for 2 seconds. Built in PI control. IP20 enclosure with wall or DIN rail mounting. Remote mount keypad option kit. Integrated keypad with operator interface and local speed control. Optional drive parameter copying tool. Easy setup and commissioning with ABB common programming structure. Quick start macros for fast commissioning and start-up built-in braking chopper allows connection to remote braking resistor for enhanced performance needs. Built-in Modbus RTU and relay option kit allows fast system integration.



<b>Performance Features</b>	Control Mode	115 VAC: V/Hz 600 VAC: V/Hz and open loop vector
	Operator Interface Module	Integral Drive Mounted
	Keypad Display	6-character LED display
	Programmable Preset Speeds	Four
	Analog Outputs: one	One (0-10 VDC)
	Auto Restart	Yes -- Up to 5 attempts
	Frequency Avoidance	One band
	Fault History	Last four faults
	Digital Inputs: four	Two programmable digital inputs, two user selectable analog/digital inputs
	<b>Drive Specifications</b>	Analog Inputs: two
Relay Outputs: one		Built-in form C relay, 250 VAC, 6A / 30 VDC, 5A
Analog Output / Digital Output		0-10 VDC: one analog usable for meter (freq., current, voltage) or digital output
Overload Capacity		Drive Output 150% for 1 minute and 175% for 2 seconds
Maximum Load		1.5 HP @ 120 V In/230 V Out, 20 HP @ 600 V In/Out
Input Voltage Ranges:		115 VAC (99-126); 600 VAC (450-660)
Rated Input Frequency		50-60Hz (±5%)
Safe Torque Off		600V only: SIL2 rating
Carrier Frequency:		4-32 kHz (8 kHz default)
Operating Temperature:		-10° to 50°C
Dynamic Braking:		Built-in brake chopper in frames 2 & 3
External Braking Resistor		Up to 150% dynamic braking with properly sized resistor
DC Injection Braking:		Included
Volts/Hz		Linear V/Hz, user defined, energy optimizer & boost function
Frequency Control Range:		0-500 Hz
Accel/Decel:		Independently adjustable accel. & decel. Ramps
Time Range:		0.0 to 600.0 Seconds
Keypad Speed Control		Yes
Sink/Source Inputs		Source, 24 VDC Logic
Electronic Overload Trip		Electronic motor overload inverse 150% for 1 minute or 175% for 2 seconds
Communications	Built-in MODBUS-RTU (RS-485) Communications	
PI Control	Built-in	
<b>Protective Features</b>	Under Voltage	Level Depends on Voltage Class (120, 240, 480, or 600)
	Output Short Circuit	Phase-to-Phase on Drive Output
	Over Temperature	Heatsink Monitor
	DC Bus Overvoltage	DC Bus Level Trip
	Drive Overload	Exceed drive rating of 150% for one minute or 175% for 2 seconds
	Over Current	Over-current/short-Circuit protection
	Output Phase	Trips on open Output Phase
	Ground Fault	Trips on phase to ground short circuit
	Loss of Reference	Trips on Loss of Speed Command Signal
	Communication Error	Detects a communication error (fault)
<b>Agency Certifications</b>		UL, cUL, CE, C-tick, GOST-R
<b>Service Conditions</b>	Altitude:	1,000 m (3,300 ft.). Derate by 1% every 100 m (328 ft.) up to 2,000m (6,600 ft.)
	Ambient Temperature:	-10° (14°F) to 50°C (122°F)
	Relative Humidity:	0% to 95%, non-condensing
	Intermittent Overload:	150% overload capacity for up to 1 minute, 175% overload capacity for up to 2 seconds

## ACS250 IP20 - Ratings & Pricing

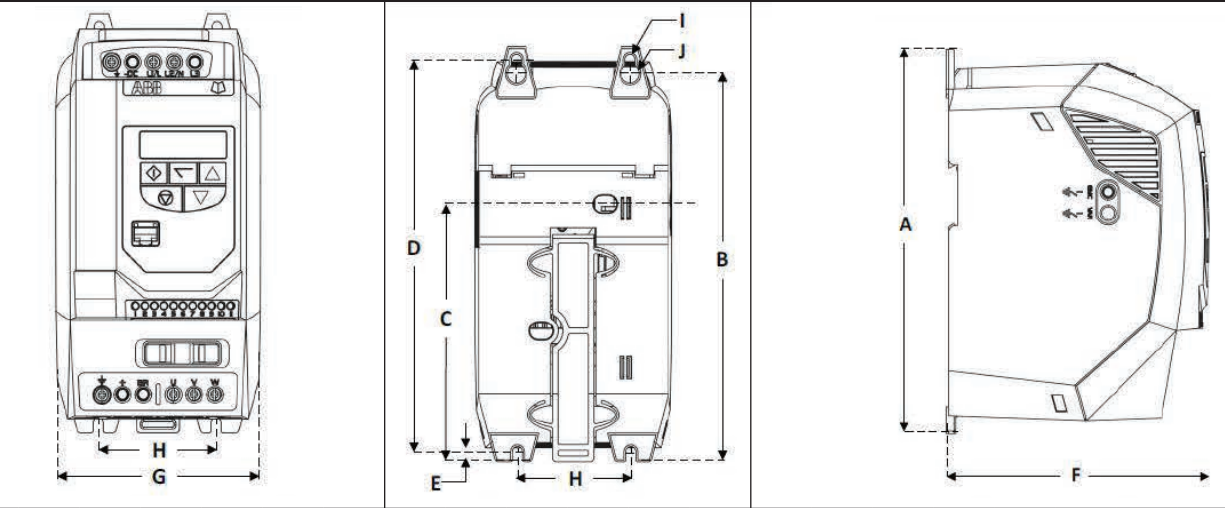
Catalog Number	Braking Chopper (included)	HP	Output Current	Weight (lbs)	Frame Size	List Price	Multiplier Symbol
<b>1-Phase Supply Voltage 110 to 120 V, +/-10%, 3-Phase Output 200 to 240 V</b>							
ACS250-01U-02A3-1	-	0.5	2.3	2.2	E1	408	EP
ACS250-01U-04A3-1	-	1.0	4.3	2.2	E1	450	EP
ACS250-01U-05A8-1	X	1.5	5.8	3.75	E2	552	EP
<b>3-Phase Supply Voltage 500 to 600 V, +/-10%</b>							
ACS250-03U-02A1-6	X	1.0	2.1	4.0	P2	602	EP
ACS250-03U-03A1-6	X	2.0	3.1	4.0	P2	782	EP
ACS250-03U-04A1-6	X	3.0	4.1	4.0	P2	869	EP
ACS250-03U-06A5-6	X	5.0	6.5	4.0	P2	1,043	EP
ACS250-03U-09A0-6	X	7.5	9.0	4.0	P2	1,459	EP
ACS250-03U-12A0-6	X	10.0	12.0	7.7	P3	1,751	EP
ACS250-03U-17A0-6	X	15.0	17.0	7.7	P3	2,291	EP
ACS250-03U-22A0-6	X	20	22	7.7	P3	2,917	EP

## ACS250 IP20 Option Kits

ACS250 IP20 options (these options will be shipped separately from drive shipping package)

Variant	Description	Field Kit	Voltage Rating		Multiplier Symbol
			120 V	600 V	
<b>RCCS-01 Copying Tool</b>	Copy stick, which is used to upload and download the parameters through RJ45 connection. Parameters can only be copied between drives of the same product range and power rating (size).	RCCS-01	234	234	ES
<b>RCRO-01 Relay Output Card</b>	The second relay output module can be used in applications where the analog output from the drive is converted to a relay output. Max relay switching voltage: 250 VAC/220 VDC. Max relay switching current: 1A Max input voltage: +/- 50 VDC Environmental: -10°C ... +50°C Conformity: IP00, UL94V-0.	RCRO-01	140	NA	ES
<b>RCRP-01 External LED</b>	Remote keypad that can be added through RJ45 connection. Signal interface: standard 6-way RJ45 connector Supply input: 10V ... 36 VDC, 30mA RS485 signal: industry standard 2-wire +5V differential Environmental: operational 0 ... 50 °C Storage: -40°C ... 60°C Relative humidity: < 95% (non condensing) Protection rating: IP54 Max cable length: 20m (unscreened, total length) 100m (screened, twisted pair, total length).	RCRP-01	106	106	ES
<b>RCRJ-01 RJ45 Y-Cable Splitter</b>	The data cable splitter is a 3-way "Y" cable splitter suitable for a RS-485 network of drives. The option is compatible with standard CAT 5 or CAT 6 type cable and can be used for Modbus-RTU or an RS-485 remote keypad network.	RCRJ-01	59	59	ES
<b>RCNT-01 RJ45 Y-Cable Splitter w/Term</b>	The data cable splitter with terminal block is a 3-way "Y" cable splitter with one terminal block suitable for an RS-485 network of drives. Two of the three connections are compatible with standard CAT 5 or CAT 6 type cable and the third is a terminal block that can be used to connect a PLC or network terminating resistor.	RCNT-01	183	183	ES
<b>ACS250 Democase</b>	Powered by 115 VAC, the program case does includes an ACS250 drive and IO board with switches, speed potentiometer and LED. Ideal for demonstrating the programmability of the ACS250. There is no motor included in this democase.	ACS250-DEMOCASE	2,000	NA	ES

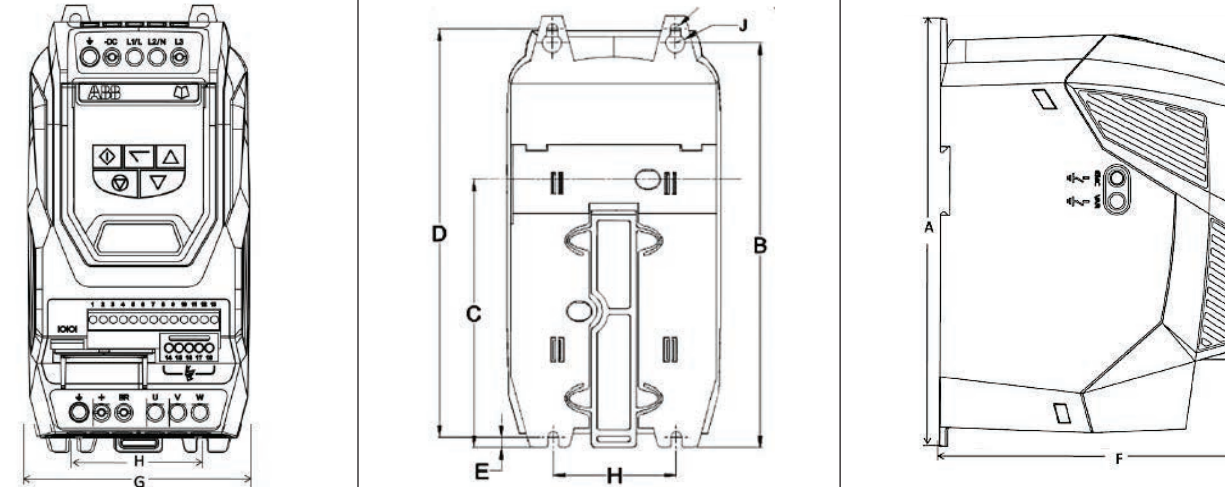
## 4.2. Mechanical Dimensions and Mounting – IP20 Open Units



Drive Frame Size	A		B		C		D		E		F		G		H		I		J		Weight	
	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	kg	lb
1	173	6.81	160	6.30	109	4.29	162	6.38	5	0.20	123	4.84	82	3.23	50	1.97	5.5	0.22	10	0.39	1.0	2.20
2	221	8.70	207	8.15	137	5.39	209	8.23	5.3	0.21	150	5.91	109	4.29	63	2.48	5.5	0.22	10	0.39	1.7	3.75

**NOTE** Maximum Control Terminal Torque Settings of 0.5 NM (4.5 lb-in)  
Maximum Power Terminal Torque Settings of 1 NM (9 lb-in)

## Mechanical Dimensions and Weights – IP20 Open Units 600V IP20 Units



Drive Size	A		B		C		D		E		F		G		H		I		J		Weight	
	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	Kg	lb
2	221	8.70	207	8.15	137	5.39	209	8.23	5.3	0.21	185	7.28	112	4.41	63	2.48	5.5	0.22	10	0.39	1.8	4
3	261	10.28	246	9.69	-	-	247	9.72	6	0.24	205	8.07	131	5.16	80	3.15	5.5	0.22	10	0.39	3.5	7.7



## ACS250 IP66 AC Micro Drive

<b>1/2 thru 1.5 Hp</b>	<b>IP66 - NEMA 4X</b>	<b>115 Vac</b>	<b>1 Phase - 50/60 Hz</b>
<b>1/2 thru 3 Hp</b>	<b>IP66 - NEMA 4X</b>	<b>230 Vac</b>	<b>1 Phase - 50/60 Hz</b>
<b>1/2 thru 5 Hp</b>	<b>IP66 - NEMA 4X</b>	<b>230 Vac</b>	<b>3 Phase - 50/60 Hz</b>
<b>1 thru 10 Hp</b>	<b>IP66 - NEMA 4X</b>	<b>460 Vac</b>	<b>3 Phase - 50/60 Hz</b>
<b>1 thru 15 Hp</b>	<b>IP66 - NEMA 4X</b>	<b>600 Vac</b>	<b>3 Phase - 50/60 Hz</b>



**Applications:** Harsh environment applications with 115V (for 230V motors), 230V, 460V & 600V supply power: conveyors, mixers, pumps, fans, food and beverage variable torque, constant torque or constant horsepower applications. Compact size replaces motor starters/soft starters. New installations, replacements and original equipment manufacturers (OEM).

**Features:** V/Hz control for linear (CT) or squared (VT) applications or Sensorless Vector Control (600V only). Overload capacity of 150% for 60 seconds or 175% for 2 seconds. Built in PI control. IP20 enclosure with wall or DIN rail mounting. Remote mount keypad option kit. Integrated keypad with operator interface and local speed control. Optional operator controls - On/Off, Fwd-Off-Rev, and Speed Pot. Easy setup and commissioning with ABB common programming structure. Quick start macros for fast commissioning and start-up Built-in braking chopper allows connection to remote braking resistor for enhanced performance needs. Built-in Modbus RTU and Y-cable splitter kit allows fast system integration. Optional drive parameter copying tool.

<b>Performance Features</b>	Control Modes	115-460 VAC: V/Hz 600 VAC: V/Hz and open loop vector
	Operator Interface Module	Integral Drive Mounted
	Keypad Display	6-character LED display
	Programmable Preset Speeds	Four
	Analog Outputs: one	One (0-10 VCD)
	Auto Restart	Yes -- Up to 5 attempts
	Frequency Avoidance	One band
	Fault History	Last four faults
<b>Drive Specifications</b>	Analog Inputs: two	0-10 VDC, 4 - 20mA
	Relay Outputs: one	Built-in form C relay, 250 VAC, 6A /30 VDC, 5A
	Analog Output / Digital Output	0-10 VDC: one analog usable for meter (freq., current, voltage) or digital output
	Overload Capacity	Drive Output 150% for 1 minute and 175% for 2 seconds
	Maximum Load	5 HP @ 230 VAC, 10 HP @ 460 VAC, 15 HP @ 600 VAC
	Input Voltage Ranges:	115 VAC (99-126); 230 VAC (198-264); 460 VAC (342-528); 600 VAC (450-660)
	Rated Input Frequency	50-60Hz (±5%)
	Carrier Frequency:	4-32 kHz (8 kHz default)
	Operating Temperature:	-10° to 40°C
	Dynamic Braking:	Built-in brake chopper in frames 2 & 3
	External Braking Resistor	Up to 150% dynamic braking with properly sized resistor
	DC Injection Braking:	Included
	Volts/Hz	Linear V/Hz, user defined, energy optimizer & boost function
	Frequency Control Range:	0-500 Hz
	Accel/Decel:	Independently adjustable accel. & decel. Ramps
	Time Range:	0.0 to 600.0 Seconds
	Keypad Speed Control	Yes
	Sink/Source Inputs	Source, 24 VDC Logic
	Electronic Overload Trip	Electronic motor overload inverse 150% for 1 minute or 175% for 2 seconds
	Communications	Built-in MODBUS-RTU (RS-485) Communications
PI Control	Built-in	
<b>Protective Features</b>	Under Voltage	Level Depends on Voltage Class (120, 240, 480, or 600)
	Output Short Circuit	Phase-to-Phase on Drive Output
	Over Temperature	Heatsink Monitor
	DC Bus Overvoltage	DC Bus Level Trip
	Drive Overload	Exceed drive rating of 150% for one minute or 175% for 2 seconds
	Over Current	Over-current/short-Circuit protection
	Output Phase	Trips on open Output Phase
	Loss of Reference	Trips on Loss of Speed Command Signal
Communication Error	Detects a communication error (fault)	
<b>Agency Certifications</b>	UL, cUL, CE, C-tick, GOST-R	
<b>Service Conditions</b>	Altitude:	1,000 m (3,300 ft.). Derate by 1% every 100 m (328 ft.) up to 2,000m (6,600 ft.)
	Ambient Temperature:	-10° (14°F) to 40°C (102°F)
	Relative Humidity:	0% to 95%, non-condensing
	Intermittent Overload:	150% overload capacity for up to 1 minute, 175% overload capacity for up to 2 seconds

## ACS250 IP66 Ratings & Pricing

Catalog Number	Braking Chopper (Included)	HP	Output Current	Weight (lbs)	Frame Size	List Price	Optional Switch (+F278)	Multiplier Symbol
<b>1-Phase Supply Voltage 110 to 120V, +/-10%, 3-Phase Output 200 to 240V</b>								
ACS250-01U-02A3-1+B063	-	0.5	2.3	6.5	E1	757	936	EP
ACS250-01U-04A3-1+B063	-	1	4.3	6.5	E1	836	1,010	EP
ACS250-01U-05A8-1+B063	X	1.5	5.8	9.3	E2	1,018	1,151	EP
<b>1-Phase Supply Voltage 200 to 240V, +/-10%, 3-Phase Output 200 to 240V</b>								
ACS250-01U-02A3-2+B063	-	0.5	2.3	6.5	E1	723	832	EP
ACS250-01U-04A3-2+B063	-	1	4.3	6.5	E1	795	893	EP
ACS250-01U-07A0-2+B063	-	2	7	6.5	E1	853	1,004	EP
ACS250-01U-10A5-2+B063	X	3	10.5	9.3	E2	982	1,122	EP
<b>3-Phase Supply Voltage 200 to 240V, +/-10%</b>								
ACS250-03U-02A3-2+B063	-	0.5	2.3	6.5	E1	660	780	EP
ACS250-03U-04A3-2+B063	-	1	4.3	6.5	E1	717	813	EP
ACS250-03U-07A0-2+B063	X	2	7	9.3	E2	824	974	EP
ACS250-03U-10A5-2+B063	X	3	10.5	9.3	E2	950	1,122	EP
ACS250-03U-18A0-2+B063	X	5	18	17	E3	1,353	1,500	EP
<b>3-Phase Supply Voltage 380 to 480V, +/-10%</b>								
ACS250-03U-02A2-4+B063	-	1	2.2	6.5	E1	777	896	EP
ACS250-03U-04A1-4+B063	-	2	4.1	6.5	E1	911	1,040	EP
ACS250-03U-05A8-4+B063	X	3	5.8	9.3	E2	1,027	1,175	EP
ACS250-03U-09A5-4+B063	X	5	9.5	9.3	E2	1,275	1,411	EP
ACS250-03U-14A0-4+B063	X	7.5	14	17	E3	1,646	1,765	EP
ACS250-03U-18A0-4+B063	X	10	18	17	E3	1,952	2,118	EP
<b>3-Phase Supply Voltage 500 to 600V, +/-10%</b>								
ACS250-03U-02A1-6+B063	X	1	2.1	10.6	P2	1,285	1,462	EP
ACS250-03U-03A1-6+B063	X	2	3.1	10.6	P2	1,484	1,649	EP
ACS250-03U-04A1-6+B063	X	3	4.1	10.6	P2	1,697	1,849	EP
ACS250-03U-06A5-6+B063	X	5	6.5	10.6	P2	1,946	2,082	EP
ACS250-03U-09A0-6+B063	X	7.5	9	10.6	P2	2,455	2,559	EP
ACS250-03U-12A0-6+B063	X	10	12	16.1	P3	2,925	3,096	EP
ACS250-03U-17A0-6+B063	X	15	17	16.1	P3	4,297	4,424	EP

## ACS250 IP66 Option Kits

ACS250 IP66 options (these options will be shipped separately from drive shipping package)

Variant	Description	Field Kit	Voltage Rating		Multiplier Symbol
			120 V	600 V	
<b>RCCS-01 Copying Tool</b>	Copy stick, which is used to upload and download the parameters through RJ45 connection. Parameters can only be copied between drives of the same product range and power rating (size).	RCCS-01	234	234	ES
<b>RCRO-01 Relay Output Card</b>	The second relay output module can be used in applications where the analog output from the drive is converted to a relay output. Max relay switching voltage: 250 VAC/220 VDC Max relay switching current: 1A Max input voltage: +/- 50 VDC Environmental: -10°C ... +50°C Conformity: IP00, UL94V-0	RCRO-01	140	N/A	ES
<b>RCRP-01 External LED</b>	Remote panel that can be added through RJ45 connection. Signal interface: standard 6-way RJ45 connector Supply input: 10V ... 36 VDC, 30mA RS485 signal: industry standard 2-wire +5V differential Environmental: operational 0 ... 50°C Storage: -40°C ... 60°C Relative humidity: < 95% (non condensing) Protection rating: IP54 Max cable length: 20m (unscreened, total length) 100m (screened, twisted pair, total length).	RCRP-01	106	106	ES
<b>RCRJ-01 RJ45 Y-Cable Splitter</b>	The data cable splitter is a 3-way "Y" cable splitter suitable for a RS-485 network of drives. The option is compatible with standard CAT 5 or CAT 6 type cable and can be used for Modbus-RTU or an RS-485 remote keypad network.	RCRJ-01	59	59	ES
<b>RCNT-01 RJ45 Y-Cable Splitter w/Term</b>	The data cable splitter with terminal block is a 3-way "Y" cable splitter with one terminal block suitable for an RS-485 network of drives. Two of the three connections are compatible with standard CAT 5 or CAT 6 type cable and the third is a terminal block that can be used to connect a PLC or network terminating resistor.	RCNT-01	183	183	ES

### 4.4. Mechanical Dimensions – IP66 (NEMA 4X) Enclosed Units

Drive Frame Size	A		B		D		E		F		G		H		I		J		Weight	
	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	Kg	lb
1	232.0	9.13	207.0	8.15	189.0	7.44	25.0	0.98	179.0	7.05	161.0	6.34	148.5	5.85	4.0	0.16	8.0	0.31	2.95	6.50
2	257.0	10.12	220.0	8.67	200.0	7.87	28.5	1.12	186.5	7.34	188.0	7.40	176.0	6.93	4.2	0.17	8.5	0.33	4.20	9.26
3	310.0	12.2	276.5	10.89	251.5	9.90	33.4	1.31	228.7	9.00	210.5	8.29	197.5	7.78	4.2	0.17	8.5	0.33	7.7	17

**NOTE** The size 3 product has 4 symmetrical mounting points  
Maximum Control Terminal Torque Settings of 0.5 NM (4.5 lb-in)  
Maximum Power Terminal Torque Settings of 1 NM (9 lb-in)

## ACS310 AC Micro Drive

<b>1/2 thru 3 Hp</b>	<b>230 Vac</b>	<b>1 Phase - 50/60 Hz</b>
<b>1/2 thru 15 Hp</b>	<b>230 Vac</b>	<b>3 Phase - 50/60 Hz</b>
<b>1/2 thru 30 Hp</b>	<b>460 Vac</b>	<b>3 Phase - 50/60 Hz</b>



**Applications:** Pumps and fans - Applications not requiring vector speed control. Variable torque, constant torque or constant horsepower applications. New installations, replacements and original equipment manufactures (OEM).

**Features:** V/Hz control for linear (CT), squared (VT) or custom user defined curve. Peak overload capacity of 110%. Flexible mounting options - wall or DIN rail mount. IP20 enclosure standard. NEMA1 protection kit available. Ships with blank cover, advanced or basic control panel option available for operator interface and local speed control. Programming by groups makes it easy to navigate and find parameters. A quick start assistant enables users to program and start using the drive in minutes without need for a User Manual. Built-in PID controller, Pump protection, Pump and fan control (PFC) for pumps and fans run in parallel.

<b>Performance Features</b>	Control Modes	Scalar (V/Hz)
	Operator Interface Module	Basic and advanced control panel option kits are available. Drive Ships as shown with blank cover.
	Control Panel Display	LCD Graphical Display
	Programmable Preset Speeds	Seven
	Analog Outputs	One (0/4 - 20 mADC)
	Auto Restart	Yes -- Up to 5 attempts
	Frequency Avoidance	Three Bands
	Fault History	Last Three Faults
	Digital Inputs	Five Configurable Inputs
	<b>Drive Specifications</b>	Analog Inputs: Two Total
Digital Outputs: Two Total		One Transistor Output Form C Relay
Analog Outputs		0/4 - 20mADC
Overload Capacity		Drive Output 110% for 1 min.
Input Voltage Ranges:		Single phase: 200 - 240 VAC 3-phase: 200 - 240 VAC; 380 - 480 VAC
Input Voltage Tolerance		10% / -10%
Rated Input Frequency		50-60Hz (±5%)
Carrier Frequency:		4-16 kHz (4 kHz default)
Operating Temperature:		-10° to 40°C; -10° to 50°C w/ 10% derate
DC Injection Braking:		Standard
Flux Optimization:		Can improve efficiency up to 10% on light loads
Volts/Hz		Linear V/Hz (CT) Squared V/Hz (VT) Custom 4-Point V/Hz Curve
Frequency Control Range:		0-599 Hz
Accel/Decel:		Two independently adjustable sets of ramps
Time Range:		0.0 to 1800 Seconds
Keypad Speed Control		Yes
Sink/Source Inputs		Selectable, 24 VDC Logic
Electronic Overload Trip		Electronic Motor Overload Inverse Time calculation
Communications		Built-in MODBUS-RTU (RS-485) Communications
PID Control		Built-in
<b>Protective Features</b>	Under Voltage	Level Depends on Voltage Class (240, 480)
	Ground Fault Protection	Ground Fault protection active during run
	Output Short Circuit	Phase-to-Phase on Drive Output
	Over Temperature	Heatsink Monitor
	Motor Overtemp	Excessive estimated Motor Temperature
	DC Bus Overvoltage	DC Bus Level Trip
	IGBT Overtemp	Drive Output IGBT Temp is too high
	Over Current	Over-current/short-Circuit protection
	Output Phase Loss	Trips on Motor Phase Loss
	Loss of Reference	Trips on Loss of Speed Command Signal
	Comm. Error	Detects a communication error (fault)
	Loss of Keypad	Drive will trip if under keypad control and keypad communication is lost
	Incorrect Wiring	Drive faults on output wiring fault when input power is connected to Motor terminals
Motor Model Calc Fail	Drive will trip if Motor Model cannot be determined - Sensorless Vector Control	
<b>Agency Certifications</b>	UL, cUL, CE, C-tick, GOST-R	
<b>Service Conditions</b>	Altitude:	1,000 m (3,300 ft.). Derate by 1% every 100 m (328 ft.) up to 2,000m (6,600 ft.)
	Ambient Temperature:	-10°C (14°F) to 40°C (104°F) - up to 50°C with 10% derate
	Relative Humidity:	0% to 95%, non-condensing
	Intermittent Overload:	110% overload capacity for up to 1 minute

## ACS310 - Ratings & Pricing

### 240Vac Ratings Supply Voltage 200...240 V

Catalog Number	HP	kW	Ratings		Frame Size	IP20 with Blank Panel List Price	Multiplier Symbol
			50°C (122°F)	40°C (104°F)			
			Amps (110% OL)	Amps			
<b>1-Phase, 200 - 240V (200, 208, 230, 240V)</b>							
ACS310-01U-02A4-2	0.5	0.37	2.3	2.4	R0	258	EQ
ACS310-01U-04A7-2	1	0.75	4.5	4.7	R1	325	EQ
ACS310-01U-06A7-2	1.5	1.1	6.5	6.7	R1	385	EQ
ACS310-01U-07A5-2	2	1.5	7.2	7.5	R2	420	EQ
ACS310-01U-09A8-2	3	2.2	9.4	9.8	R2	475	EQ
<b>3-Phase, 200 - 240V (200, 208, 230, 240V)</b>							
ACS310-03U-02A6-2	0.5	0.37	2.4	2.6	R0	215	EQ
ACS310-03U-03A9-2	0.75	0.55	3.5	3.9	R0	239	EQ
ACS310-03U-05A2-2	1	0.75	4.7	5.2	R1	274	EQ
ACS310-03U-07A4-2	1.5	1.1	6.7	7.4	R1	303	EQ
ACS310-03U-08A3-2	2	1.5	7.5	8.3	R1	346	EQ
ACS310-03U-10A8-2	3	2.2	9.8	10.8	R2	415	EQ
ACS310-03U-19A4-2	5	4.0	17.6	19.4	R2	545	EQ
ACS310-03U-26A8-2	7.5	5.5	24.4	26.8	R3	739	EQ
ACS310-03U-34A1-2	10	7.5	31.0	34.1	R4	957	EQ
ACS310-03U-50A8-2	15	11.0	46.2	50.8	R4	1,235	EQ

### 480Vac Ratings 3-phase Supply Voltage 380...480V

Catalog Number	HP	kW	Ratings		Frame Size	IP20 with Blank Panel List Price	Multiplier Symbol
			50°C (122°F)	40°C (104°F)			
			Amps (110% OL)	Amps			
<b>3-Phase Input Voltage = 380...480V (380, 400, 415, 440, 460, 480V)</b>							
ACS310-03U-01A3-4	0.5	0.37	1.2	1.3	R0	342	EQ
ACS310-03U-02A1-4	0.75	0.55	1.9	2.1	R0	359	EQ
ACS310-03U-02A6-4	1	0.75	2.4	2.6	R1	376	EQ
ACS310-03U-03A6-4	1.5	1.1	3.3	3.6	R1	400	EQ
ACS310-03U-04A5-4	2	1.5	4.1	4.5	R1	415	EQ
ACS310-03U-06A2-4	3	2.2	5.6	6.2	R1	507	EQ
ACS310-03U-09A7-4	5	4.0	8.8	9.7	R1	606	EQ
ACS310-03U-13A8-4	7.5	5.5	12.5	13.8	R3	725	EQ
ACS310-03U-17A2-4	10	7.5	15.6	17.2	R3	867	EQ
ACS310-03U-25A4-4	15	11.0	23.1	25.4	R3	1,065	EQ
ACS310-03U-34A1-4	20	15.0	31.0	34.1	R4	1,402	EQ
ACS310-03U-41A8-4	25	18.5	38.0	41.8	R4	1,709	EQ
ACS310-03U-48A4-4	30	22.0	44.0	48.4	R4	2,055	EQ

## ACS310 Option Kits

Catalog Number	Name		List Price	Mult. Sym.
<b>ACS-CP-A</b>	Advanced Control Panel	The Advanced Control Panel includes a full graphic, backlite display capable of displaying three Actual Signal values or bar graphs. The Alpha-Numeric display supports thirteen languages. A Real Time Clock is also included. This panel supports the internal Sequence Programming Function.	150	ES
<b>ACS-CP-C</b>	Basic Control Panel	The Basic Control Panel includes a single line numeric backlit LCD display.	75	ES
<b>OPMP-01</b>	Cabinet Panel Mounting	Control Panel Mounting Platform allows remote mounting of the keypad on a large enclosure or remote panel. The kit maintains UL Type 12 integrity of the mounting location. Adapters, 3 m (10ft) cable and mounting hardware are included in this kit. With this mounting arrangement, the keypad is removable from the panel in a fashion identical to a drive-mounted keypad.	138	ES
<b>ACS/H-CP-EXT</b>	Control Panel Mounting	Control Panel Mounting Kit for ACS310 drives allows remote mounting of the keypad on the door of an enclosure. The kit includes a 10 ft (3 m) CAT 5 patch cable, gasket for NEMA 12, mounting hardware and drilling template.	55	ES
<b>ACS/H-CP-EXT-IP66</b>	NEMA 4X Cabinet Panel Mounting	Allows remote mounting of the ACS-CP-A or ACS-CP-C Operator Panels on a larger NEMA 4X (IP66) enclosure or remote panel. The kit maintains NEMA 4X integrity of the mounting location. All necessary hardware and a mounting template are provided in addition to a 3 m panel cable. When mounted, the operator is not removable from the front of the enclosure. The operator panel must be purchased separately.	63	ES
<b>OCAT-01</b>	Panel Extension Cable	7 foot CAT 5 patch cable allows remote operation of the standard panel or connection of the drive to a Personal Computer using the RJ45/DB9 Adapter which must be purchased separately.	40	ES
<b>MREL-01</b>	Relay Output Extension Module	The Relay Output Extension module (MREL) is an interface for connecting three (3) FORM C relay outputs. The MREL-01 is supported from SW version 2.57C and onwards for the ACS355 and is supported by all SW version of ACS310 & ACS355.	105	ES
<b>SREA-01-KIT</b>	Ethernet Adapter (Gateway)	SREA-01 is an optional device for web browser based remote interface to the ACS310 and ACS355 drives via ethernet. This din rail mounted adapter enables remote data acquisition through a standard web browser, utilizing an internal web server for drive configuration and access. Multiple drives (up to 10) can be connected to the Modbus-RTU or Modbus-TCP.	1,250	ES
<b>MFDT-01</b>	Flashdrop	FlashDrop is a powerful palm sized tool for fast and easy parameter selecting and setting. It gives the possibility to hide selected parameters to protect the machine. Only the parameters needed in the application are shown. The tool can upload/download parameters, copy parameters between two drives or between a PC and a drive. Includes DrivePM (Drive Parameter Manager) which is a software tool to create, edit and copy parameter sets for FlashDrop. The parameter sets can consist of all parameters or only a set of the user parameters.	600	ES
<b>OPCA-01</b>	RJ45/DB9 Adapter	This adapter converts the drive's panel port RJ45 (CAT 5 cable connector) plug to a 9 pin RS-232 computer serial port connector for connecting the drive to a PC.	50	ES
<b>MUL1-R1</b> <b>MUL1-R3</b> <b>MUL1-R4</b>	NEMA 1 Enclosure Kit	This option provides the necessary hardware to modify the ACS310, or ACS355 drive from the standard fingersafe protected chassis to NEMA 1 protection capable of landing conduit. MUL1-R1 kit is used with frame sizes R0 through R2, MUL1-R3 is used with frame size R3, and MUL1-R4 is used with frame size R4.	75 75 100	ES ES ES
<b>3AFE64532871</b>	DriveWindow Light 2.x	DriveWindow Light is software designed for online drive commissioning and maintenance purposes. It is possible to adjust parameters, read the actual values and control the drive with DriveWindow Light instead of the drive control panel. It is also possible to follow trends and draw graphs. An RJ45 to DB9 adapter cable (OPCA-02) is provided to permit connection between the panel port and a PC.	275	ES
<b>ACS310 DEMOCASE</b>	ACS310 Demo Case	Powered by 115VAC, the DemoCase includes an ACS310 drive mounted on a panel. Included is a motor and I/O board with switches, pots, meters and LEDs permitting remote operation of the drive and motor.	2,800	ES

## ACS310 Dimensions



Frame Size	IP20 (cabinet) / UL Open				NEMA 1 / UL Type 1			
	H1 (in)	W (in)	D (in)	Wt. (lb)	H2 (in)	W (in)	D (in)	Wt. (lb)
R0	9.41	2.76	6.34	2.6	11.02	2.76	6.65	3.5
R1	9.41	2.76	6.34	2.6	11.02	2.76	6.65	3.5
R2	9.41	4.13	6.50	3.3	11.10	4.13	6.65	4.2
R3	9.29	6.65	6.65	5.5	11.77	6.65	6.97	6.8
R4	9.61	10.24	6.65	9.7	12.60	10.24	6.97	11.0

- 1) Height with fastenings and clamp plate
- 2) Height with fastenings, NEMA 1 connection box and hood.

## ACS355 AC Micro Drive

**1/2 thru 3 Hp**  
**1/2 thru 15 Hp**  
**1/2 thru 30 Hp**

**230 Vac**  
**230 Vac**  
**460 Vac**

**1 Phase - 50/60 Hz**  
**3 Phase - 50/60 Hz**  
**3 Phase - 50/60 Hz**



**Applications:** Variable torque, constant torque or constant horsepower applications. New installations, replacements and original equipment manufactures (OEM).

**Features:** Volts per Hertz, Open Loop Vector Control with peak overload capacity of 150% and PID capability. Flexible mounting options with IP20 enclosure as standard and NEMA 1 option kit. Ships with blank cover, advanced or basic control panel option available for operator interface and local speed control. Programming by groups makes it easy to navigate and find parameters. A quick start assistant enables users to program and start using the drive in minutes without need for a User Manual. Built-in braking transistor allows connection to remote braking resistor for enhanced performance needs.

Performance Features	Control Modes	VHz and Open Loop Vector
	Motor Control	Induction, Permanent Magnet
	Operator Interface Module	Basic and advanced control panel option kits are available. Drive ships as shown with blank cover.
	Control Panel Display	LCD Graphical Display
	Programmable Preset Speeds	Seven
	Analog Outputs	One (0/4 - 20 mADC)
	Auto Restart	Yes -- Up to 5 attempts
	Frequency Avoidance	Three Bands
	Fault History	Last Three Faults
	Digital Inputs	Five Configurable Inputs
Drive Specifications	Analog Inputs: Two Total	0-10VDC, -10 to 10VDC or 0/4 - 20mADC
	Digital Outputs: Two Total	One Transistor Output Form C Relay, NO + NC, 250 VAC / 30 VDC
	Analog Outputs	0/4 - 20mADC
	Safe Torque Off	STO SIL 3
	Overload Capacity	Drive Output 150% for 1 min., 180% for 2 sec. at start
	Speed Control Accuracy	Static: 20% of motor nominal slip
	Input Voltage Ranges:	200 - 240 VAC; 380 - 480 VAC
	Input Voltage Tolerance	10% / -10%
	Rated Input Frequency	50-60Hz (±5%)
	Carrier Frequency:	4-16 kHz (4 kHz default)
	Operating Temperature:	-10° to 40°C; -10° to 50°C w/ 10% derate
	Dynamic Braking	Built-in Brake Chopper
	Flux Braking:	Standard
	DC Injection Braking:	Standard
	Flux Optimization:	Can improve efficiency up to 10% on light loads
	Volts/Hz	Linear V/Hz (CT) Squared V/Hz (VT) Custom 4-Point V/Hz Curve
	Open Loop Vector:	Full Open Loop Vector Control with Autotune Function and Motor Model Calculation
	Frequency Control Range:	0-599 Hz
	Accel/Decel:	Two independently adjustable sets of ramps
	Time Range:	0.0 to 1800 Seconds
	S Curve Accel. & Decel.	Yes, with adjustable rounding time
	Control Panel Speed Control	Yes
	Sink/Source Inputs	Selectable, 24 VDC Logic
	Electronic Overload Trip	Electronic Motor Overload Inverse Time calculation
	Communications	Built-in MODBUS-RTU (RS-485) Communications
	PID Control	Two independently controllable



<b>Protective Features</b>	Under Voltage	Level Depends on Voltage Class (240, 480)
	Ground Fault Protection	Ground Fault protection active during run
	Output Short Circuit	Phase-to-Phase on Drive Output
	Over Temperature	Heatsink Monitor
	Motor Overtemp	Excessive estimated Motor Temperature
	DC Bus Overvoltage	DC Bus Level Trip
	IGBT Overtemp	Drive Output IGBT Temp is too high
	Over Current	Over-current/short-Circuit protection
	Output Phase Loss	Trips on Motor Phase Loss
	Loss of Reference	Trips on Loss of Speed Command Signal
	Comm. Error	Detects a communication error (fault)
	Loss of Control Panel	Drive will trip if under Control Panel control and Control Panel communication is lost
	Incorrect Wiring	Drive faults on output wiring fault when input power is connected to Motor terminals
	Motor Model Calc Fail	Drive will trip if Motor Model cannot be determined - Open Loop Vector Control
<b>Agency Certifications</b>	UL, cUL, CE, C-tick, RoHS, TUV, NORD	
<b>Service Conditions</b>	Altitude:	1,000 m (3,300 ft.). Derate by 1% every 100 m (328 ft.) up to 2,000m (6,600 ft.)
	Ambient Temperature:	-10°C (14°F) to 40°C (104°F) - up to 50°C with 10% derate
	Relative Humidity:	0% to 95%, non-condensing
	Intermittent Overload:	150% overload capacity for up to 1 minute

## ACS355 - Ratings & Pricing

### ACS355 - 1-Phase Supply, 230V, 50/60Hz, IP20

Catalog Number	Frame	Hp	Cont. Amps	IP20 with Blank Panel List Price	Mult. Sym.
ACS355-01U-02A4-2	R0	0.5	2.4	319	ER
ACS355-01U-04A7-2	R1	1.0	4.7	362	ER
ACS355-01U-06A7-2	R1	1.5	6.7	405	ER
ACS355-01U-07A5-2	R2	2.0	7.5	448	ER
ACS355-01U-09A8-2	R2	3.0	9.8	540	ER

### ACS355 - 3-Phase Supply, 230V, 50/60Hz, IP20

Catalog Number	Frame	Hp	Cont. Amps	IP20 with Blank Panel List Price	Mult. Sym.
ACS355-03U-02A4-2	R0	0.5	2.4	319	ER
ACS355-03U-03A5-2	R0	0.75	3.5	341	ER
ACS355-03U-04A7-2	R1	1	4.7	362	ER
ACS355-03U-06A7-2	R1	1.5	6.7	405	ER
ACS355-03U-07A5-2	R1	2	7.5	448	ER
ACS355-03U-09A8-2	R2	3	9.8	540	ER
ACS355-03U-17A6-2	R2	5	17.6	669	ER
ACS355-03U-24A4-2	R3	7.5	24.4	873	ER
ACS355-03U-31A0-2	R4	10	31.0	1,152	ER
ACS355-03U-46A2-2	R4	15	46.2	1,523	ER

## ACS355 - 3-Phase Supply, 460V, 50/60Hz, IP20

Catalog Number	Frame	Hp	Cont. Amps	IP20 with Blank Panel List Price	Mult. Sym.
ACS355-03U-01A2-4	R0	0.5	1.2	380	ER
ACS355-03U-01A9-4	R0	0.75	1.9	419	ER
ACS355-03U-02A4-4	R1	1	2.4	458	ER
ACS355-03U-03A3-4	R1	1.5	3.3	494	ER
ACS355-03U-04A1-4	R1	2	4.1	529	ER
ACS355-03U-05A6-4	R1	3	5.6	641	ER
ACS355-03U-08A8-4	R1	5	8.8	761	ER
ACS355-03U-12A5-4	R3	7.5	12.5	935	ER
ACS355-03U-15A6-4	R3	10	15.6	1,154	ER
ACS355-03U-23A1-4	R3	15	23.1	1,475	ER
ACS355-03U-31A0-4	R4	20	31	1,800	ER
ACS355-03U-38A0-4	R4	25	38	2,142	ER
ACS355-03U-44A0-4	R4	30	44	2,602	ER

## ACS355 Option Kits

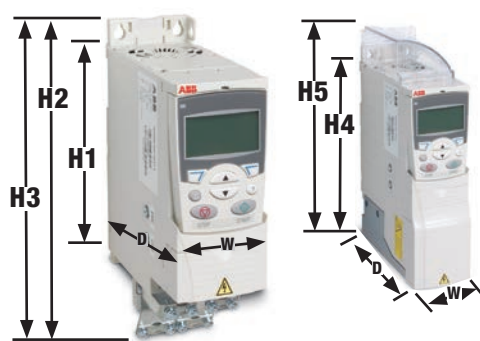
Catalog Number	Name		List Price	Mult. Sym.
ACS-CP-A	Advanced Control Panel	The Advanced Control Panel includes a full graphic, backlite display capable of displaying three Actual Signal values or bar graphs. The Alpha-Numeric display supports thirteen languages. A Real Time Clock is also included. This panel supports the internal Sequence Programming Function.	150	ES
ACS-CP-C	Basic Control Panel	The Basic Control Panel includes a single line numeric backlit LCD display.	75	ES
OPMP-01	Cabinet Panel Mounting	Control Panel Mounting Platform allows remote mounting of the keypad on a large enclosure or remote panel. The kit maintains UL Type 12 integrity of the mounting location. Adapters, 3 m (10ft) cable and mounting hardware are included in this kit. With this mounting arrangement, the keypad is removable from the panel in a fashion identical to a drive-mounted keypad.	138	ES
ACS/H-CP-EXT	Control Panel Mounting	Control Panel Mounting Kit for ACS355 drives allows remote mounting of the keypad on the door of an enclosure. The kit includes a 10 ft (3 m) CAT 5 patch cable, gasket for NEMA 12, mounting hardware and drilling template.	55	ES
ACS/H-CP-EXT-IP66	NEMA 4X Cabinet Panel Mounting	Allows remote mounting of the ACS-CP-A or ACS-CP-B Operator Panels on a larger NEMA 4X (IP66) enclosure or remote panel. The kit maintains NEMA 4X integrity of the mounting location. All necessary hardware and a mounting template are provided in addition to a 3 m panel cable. When mounted, the operator is not removable from the front of the enclosure. The operator panel must be purchased separately.	63	ES
OCAT-01	Panel Extension Cable	7 foot CAT 5 patch cable allows remote operation of the standard panel or connection of the drive to a Personal Computer using the RJ45/DB9 Adapter which must be purchased separately.	40	ES
MTAC-01	Pulse Encoder Interface	The Pulse Encoder Interface module offers a differential or single ended interface for a digital pulse encoder connection. The module is capable of operating from either an external 15 or 24 VDC signal with a maximum frequency of 200kHz.	125	ES
MPOW-01	Auxiliary power interface	The optional auxiliary power module provides auxiliary voltage to the control panel, fieldbus, and I/O.	125	ES
FEPA-01	Fieldbus Adapter Power Module	The optional Auxiliary Power Module allows connecting external 24VDC power source to the FPBA-01 or FCAN-01 fieldbus adapter.	120	ES
MREL-01	Relay Output Extension Module	The Relay Output Extension module (MREL) is an interface for connecting three (3) FORM C relay outputs. The MREL-01 is supported from SW version 2.57C and onwards for the ACS355 and is supported by all SW version of ACS310 & ACS355.	105	ES
MPOT-01	Speed Pot, Start/Stop & FW/Rev Switches	Potentiometer with two switches: Start/Stop and Forward/Reverse. Polarity is selected with DIP switches. No external power source is needed for the potentiometer.	30	ES

## ACS355 Option Kits

<b>FCAN-01 Kit</b>	CANopen Adapter	CANopen is a higher layer protocol based on the CAN (Control Area Network) serial bus system and the CAL (CAN Application Layer). CANopen assumes that the hardware of the connected device has a CAN transceiver and a CAN controller as specified in ISO 11898. The CANopen Communication Profile, CiA Ds301, includes both cyclic and event driven communication, which makes it possible to reduce the bus load to minimum while still maintaining extremely short reaction times. High communication performance can be achieved at relatively low baud rates, thus reducing EMC problems and cable costs. CANopen device profiles define both direct access to drive parameter and time critical process data communication. The FCAN-01 module fulfills CiA (CAN in Automation) standard DSP 402 (Drives and Motion Control).	325	ES
<b>FDNA-01 Kit</b>	DeviceNet Adapter	The DeviceNet network uses a linear bus topology. Terminating resistors are required on each end of the trunk line. Drop lines as long as 6 meters (20 feet) each are permitted, allowing one or more nodes to be attached. DeviceNet allows branching structures only on drop lines.	260	ES
<b>FENA-01 Kit</b>	Ethernet IP/Modbus TCP Adapter	The FENA-01 module supports both Modbus®-TCP and EtherNet/IP™ network protocols. The Modbus-TCP protocol is simply the Modbus protocol used on top of Ethernet-TCP/IP. Modbus-TCP is an open Industrial Ethernet network which has been specified by the Modbus-IDA User Organization. EtherNet/IP is based on the Common Industrial Protocol (CIP), which is also the framework for both the ControlNet and DeviceNet network protocols. The FENA-01 supports 10/100 Mbps transfer rate with network connections made with CAT 5 wiring and RJ-45 connectors. Both star and bus topology options are supported.	239	ES
<b>FECA-01 Kit</b>	EtherCAT Adapter	The FECA-01 module supports EtherCAT® network protocol. EtherCAT® is a Real Time Ethernet technology which aims to maximize the use of the full duplex Ethernet bandwidth. It overcomes the overhead normally associated with Ethernet by employing "on the fly" processing hardware. An EtherCAT® bus consists of a master system and up to 65535 slave devices, connected together with standard Ethernet cabling. The FECA-01 supports 10/100 Mbps transfer rate with network connections made with CAT 5 wiring and RJ-45 connectors. Designed for daisy chain configuration on an EtherCAT® network.	400	ES
<b>FPBA-01 Kit</b>	PROFIBUS-DP Adapter	PROFIBUS is an open serial communication standard that enables data exchange between all kinds of automation components. The physical transmission medium of the bus is a twisted pair cable (according to the RS-485 standard). The maximum length of the bus cable is 100 to 1200 meters, depending on the selected transmission rate. Up to 31 stations can be connected to the same PROFIBUS system without the use of repeaters.	290	ES
<b>FRSA-00</b>	Modbus RTU PCB	Similar to the FMBA-01-KIT except as a bare, coated printed circuit board (PCB) with the RS-485 GND as the same potential as the drive I/O GND.	65	ES
<b>FMBA-01 Kit</b>	Modbus RTU Adapter	Modbus is a serial, asynchronous protocol. The Modbus protocol does not specify the physical interface. Typical physical interfaces are RS-232 and RS-485. The FMBA-01 provides a galvanically isolated RS-485 interface. Modbus is designed for integration with Modicon PLCs or other automation devices, and the services closely correspond to the PLC architecture. The FMBA-01 supports the RTU protocol only..	142	ES
<b>SREA-01-KIT</b>	Ethernet Adapter (Gateway)	SREA-01 is an optional device for web browser based remote interface to the ACS310 and ACS355 drives via ethernet. This din rail mounted adapter enables remote data acquisition through a standard web browser, utilizing an internal web server for drive configuration and access. Multiple drives (up to 10) can be connected to the Modbus-RTU or Modbus-TCP.	1,250	ES
<b>MFDT-01</b>	Flashdrop	FlashDrop is a powerful palm sized tool for fast and easy parameter selecting and setting. It gives the possibility to hide selected parameters to protect the machine. Only the parameters needed in the application are shown. The tool can upload/download parameters, copy parameters between two drives or between a PC and a drive. Includes DrivePM (Drive Parameter Manager) which is a software tool to create, edit and copy parameter sets for FlashDrop. The parameter sets can consist of all parameters or only a set of the user parameters.	600	ES
<b>SEDG-01</b>	Ethernet to DeviceNet Gateway	SEDG-01 (EtherNet/IP to DeviceNet) -- will allow a DriveBrowser user to connect a PC's Ethernet port to drives on a DeviceNet networks.	3,995	ES
<b>SECG-01</b>	EtherNet to ControlNet Gateway	SECG-01 (EtherNet/IP to ControlNet) -- will allow a DriveBrowser user to connect a PC's Ethernet port to drives on a ControlNet networks.	3,995	ES

Baldor ACB & ACS Drives	<b>3AFE64532871</b>	DriveWindow Light	DriveWindow Light is software designed for online drive commissioning and maintenance purposes. It is possible to adjust parameters, read the actual values and control the drive with DriveWindow Light instead of the drive control panel. It is also possible to follow trends and draw graphs. An RJ45 to DB9 adapter cable (OPCA-02) is provided to permit connection between the panel port and a PC.	275	ES
AC Micro Drives	<b>3AUA0000041141</b>	DriveBrowser	DriveBrowser software is designed for online drive commissioning and maintenance purposes. DriveBrowser uses a computer's standard Ethernet port to connect to an EtherNet/IP or Modbus-TCP network. It is compatible with the ACS350, ACS355, ACS550, ACH550, DCS800 and ACS800* drives (*ACS800 standard control program). Drives require configuration and connection to an EtherNet/IP or Modbus-TCP network. DriveBrowser supports Microsoft Windows operating systems (Windows NT4, 2000, XP & Vista). <ul style="list-style-type: none"> <li>• Configure network connections</li> <li>• Parameter editing and monitoring</li> <li>• Upload/download drive parameter files, save, print</li> <li>• Compare files</li> <li>• Trending up to four signals</li> <li>• Drive Control for commissioning and test</li> </ul>	385	ES
AC Inverter Drives	<b>OPCA-01</b>	RJ45/DB9 Adapter	This adapter converts the drive's panel port RJ45 (CAT 5 cable connector) plug to a 9 pin RS-232 computer serial port connector for connecting the drive to a PC.	50	ES
AC Vector Drives	<b>MUL1-R1</b> <b>MUL1-R3</b> <b>MUL1-R4</b>	NEMA 1 Enclosure Kit	This option provides the necessary hardware to modify the ACS310, or ACS355 drive from the standard fingersafe protected chassis to NEMA 1 protection capable of landing conduit. MUL1-R1 kit is used with frame sizes R0 through R2, MUL1-R3 is used with frame size R3, and MUL1-R4 is used with frame size R4.	75 75 100	ES ES ES
Analog AC Drives	<b>ACS355-DEMOCASE</b>	ACS355 Demo Case	Powered by 115 VAC, the DemoCase includes an ACS355 drive mounted on a panel. Included is a motor and I/O board with switches, pots, meters and LEDs permitting remote operation of the drive and motor.	2,800	ES
DC Drives					
Baldor Drives					
ACS Drives					
ACB Drives					

## ACS355 Dimensions



Frame Size	IP20 (cabinet) / UL Open						NEMA 1 / UL Type 1				
	H1 (in)	H2 (in)	H3 (in)	W (in)	D (in)	Wt. (lb)	H4 (in)	H5 (in)	W (in)	D (in)	Wt. (lb)
R0	6.65	7.95	9.41	2.76	6.34	2.6	10.12	11.02	2.76	6.65	3.5
R1	6.65	7.95	9.41	2.76	6.34	2.6	10.12	11.02	2.76	6.65	3.5
R2	6.65	7.95	9.41	4.13	6.50	3.3	10.12	11.10	4.13	6.65	4.2
R3	6.65	7.95	9.29	6.65	6.65	5.5	10.24	11.77	6.65	6.97	6.8
R4	7.13	7.95	9.61	10.24	6.65	9.7	10.63	12.60	10.24	6.97	11.0

<sup>1</sup> U<sub>N</sub> = 200...240V, 1.3 kg / 2.9 lb, U = 380...780V: 1.2 kg / 2.9 lb  
<sup>2</sup> U<sub>N</sub> = 200...240V, 1.7 kg / 3.7 lb, U = 380...780V: 1.6 kg / 3.5 lb  
H1 = Height without fastenings and clamping plate  
H2 = Height with fastenings but without clamping plate

H3 = Height with fastenings and clamping plate  
H4 = Height with fastenings and NEMA 1 connection box  
H5 = Height with fastenings, NEMA 1 connection box and Hood

**ACS355 IP66,  
UL Type 4X  
AC Micro Drive**

**1/2 thru 5 Hp      230 Vac      3 Phase - 50/60 Hz**  
**1/2 thru 10 Hp      460 Vac      3 Phase - 50/60 Hz**



**Applications:** Variable torque, constant torque or constant horsepower applications. New installations, replacements and original equipment manufactures (OEM).

**Features:** Volts per Hertz, Open Loop Vector Control with peak overload capacity of 150% and PID capability. The drive is certified by NSF, designed with materials meeting current hygiene standards, means that the drive traps no bacteria and can withstand frequent high pressure washing. The Control Panel is housed within a plastic window is designed to resist moist and dusty environments. Programming by groups makes it easy to navigate and find parameters. A quick start assistant enables users to program and start using the drive in minutes without need for a User Manual. Built-in braking transistor allows connection to remote braking resistor for enhanced performance needs.

Performance Features	Control Modes	V/Hz and Open Loop Vector
	Motor Control	Induction, Permanent Magnet
	Operator Interface Module	Integral Drive Mounted
	Control Panel Display	Advanced control panel included
	Programmable Preset Speeds	Seven
	Analog Outputs	One (0/4 - 20 mADC)
	Auto Restart	Yes -- Up to 5 attempts
	Frequency Avoidance	Three Bands
	Fault History	Last Three Faults
	Digital Inputs	Five Configurable Inputs
Drive Specifications	Analog Inputs: Two Total	0-10VDC, -10 to 10VDC or 0/4 - 20mADC
	Digital Outputs: Two Total	One Transistor Output Form C Relay, NO + NC, 250 VAC / 30 VDC
	Analog Outputs	0/4 - 20maDC
	Safe Torque Off	STO SIL 3
	Overload Capacity	Drive Output 150% for 1 min., 180% for 2 sec. at start
	Speed Control Accuracy	Static: 20% of motor nominal slip
	Input Voltage Ranges:	200 - 240 VAC; 380 - 480 VAC
	Input Voltage Tolerance	10% / -10%
	Rated Input Frequency	50-60Hz (±5%)
	Carrier Frequency:	4-16 kHz (4 kHz default)
	Operating Temperature:	-10° to 40°C; -10° to 50°C w/ 10% derate
	Dynamic Braking	Built-in Brake Chopper
	Flux Braking:	Standard
	DC Injection Braking:	Standard
	Flux Optimization:	Can improve efficiency up to 10% on light loads
	Volts/Hz	Linear V/Hz Square V/Hz Custom 4-Point V/Hz Curve
	Open Loop Vector:	Full Open Loop Vector Control with Autotune Function and Motor Model Calculation
	Frequency Control Range:	0-500 Hz
	Accel/Decel:	Two independently adjustable sets of ramps
	Time Range:	0.0 to 1800 Seconds
	S Curve Accel. & Decel.	Yes, with adjustable rounding time
	Control Panel Speed Control	Yes
	Sink/Source Inputs	Selectable, 24 VDC Logic
	Electronic Overload Trip	Electronic Motor Overload Inverse Time calculation
	Communications	Built-in MODBUS-RTU (RS-485) Communications
	PID Control	Two independently controllable

<b>Protective Features</b>	Under Voltage	Level Depends on Voltage Class (240, 480)
	Ground Fault Protection	Ground Fault protection active during run
	Output Short Circuit	Phase-to-Phase on Drive Output
	Over Temperature	Heatsink Monitor
	Motor Overtemp	Excessive estimated Motor Temperature
	DC Bus Overvoltage	DC Bus Level Trip
	IGBT Overtemp	Drive Output IGBT Temp is too high
	Over Current	Over-current/short-Circuit protection
	Output Phase	Trips on open Output Phase
	Loss of Reference	Trips on Loss of Speed Command Signal
	Comm. Error	Detects a communication error (fault)
	Loss of Control Panel	Drive will trip if under Control Panel control and Control Panel communication is lost
	Motor Model Calc Fail	Drive will trip if Motor Model cannot be determined - Open Loop Vector Control
	<b>Agency Certifications</b>	UL, cUL, CE, C-tick, RoHS, TUV, NORD
<b>Service Conditions</b>	Altitude: 1,000 m (3,300 ft.). Derate by 1% every 100 m (328 ft.) up to 2,000m (6,600 ft.)	
	Ambient Temperature:	-10°C (14°F) to 40°C (104°F)
	Relative Humidity:	0% to 95%, non-condensing
	Intermittent Overload:	150% overload capacity for up to 1 minute
		180% overload capacity for up to 2 seconds

## ACS355 IP66, UL Type 4X - Ratings & Pricing

### ACS355 - 3-Phase Supply, 230V, 50/60Hz, IP66, UL Type 4X

Catalog Number	Frame	Hp	Cont. Amps	List Price	Mult. Sym.
<b>ACS355-03U-02A4-2+B063</b>	R1	0.5	2.4	750	ER
<b>ACS355-03U-03A5-2+B063</b>	R1	0.75	3.5	849	ER
<b>ACS355-03U-04A7-2+B063</b>	R1	1	4.7	904	ER
<b>ACS355-03U-06A7-2+B063</b>	R1	1.5	6.7	953	ER
<b>ACS355-03U-07A5-2+B063</b>	R1	2	7.5	1,017	ER
<b>ACS355-03U-09A8-2+B063</b>	R3	3	9.8	1,106	ER
<b>ACS355-03U-17A6-2+B063</b>	R3	5	17.6	1,460	ER

### ACS355 - 3-Phase Supply, 230V, 50/60Hz, IP66, UL Type 4X with Disconnect Switch

Catalog Number	Frame	Hp	Cont. Amps	List Price	Mult. Sym.
<b>ACS355-03U-02A4-2+B063+F278</b>	R1	0.5	2.4	990	ER
<b>ACS355-03U-03A5-2+B063+F278</b>	R1	0.75	3.5	1,120	ER
<b>ACS355-03U-04A7-2+B063+F278</b>	R1	1	4.7	1,193	ER
<b>ACS355-03U-06A7-2+B063+F278</b>	R1	1.5	6.7	1,259	ER
<b>ACS355-03U-07A5-2+B063+F278</b>	R1	2	7.5	1,342	ER
<b>ACS355-03U-09A8-2+B063+F278</b>	R3	3	9.8	1,460	ER
<b>ACS355-03U-17A6-2+B063+F278</b>	R3	5	17.6	1,927	ER

## ACS355 - 3-Phase Supply, 460V, 50/60Hz, IP66, UL Type 4X

Catalog Number	Frame	Hp	Cont. Amps	List Price	Mult. Sym.
ACS355-03U-01A2-4+B063	R1	0.5	1.2	718	ER
ACS355-03U-01A9-4+B063	R1	0.75	1.9	733	ER
ACS355-03U-02A4-4+B063	R1	1	2.4	786	ER
ACS355-03U-03A3-4+B063	R1	1.5	3.3	837	ER
ACS355-03U-04A1-4+B063	R1	2	4.1	900	ER
ACS355-03U-05A6-4+B063	R1	3	5.6	975	ER
ACS355-03U-08A8-4+B063	R1	5	8.8	1,180	ER
ACS355-03U-12A5-4+B063	R3	7.5	12.5	1,479	ER
ACS355-03U-15A6-4+B063	R3	10	15.6	1,802	ER

## ACS355 - 3-Phase Supply, 460V, 50/60Hz, IP66, UL Type 4X with Disconnect Switch

Catalog Number	Frame	Hp	Cont. Amps	List Price	Mult. Sym.
ACS355-03U-01A2-4+B063+F278	R1	0.5	1.2	898	ER
ACS355-03U-01A9-4+B063+F278	R1	0.75	1.9	916	ER
ACS355-03U-02A4-4+B063+F278	R1	1	2.4	982	ER
ACS355-03U-03A3-4+B063+F278	R1	1.5	3.3	1,047	ER
ACS355-03U-04A1-4+B063+F278	R1	2	4.1	1,125	ER
ACS355-03U-05A6-4+B063+F278	R1	3	5.6	1,219	ER
ACS355-03U-08A8-4+B063+F278	R1	5	8.8	1,475	ER
ACS355-03U-12A5-4+B063+F278	R3	7.5	12.5	1,849	ER
ACS355-03U-15A6-4+B063+F278	R3	10	15.6	2,253	ER

## ACS355 IP66, UL Type 4X Option Kits

Catalog Number	Name		List Price	Mult. Sym.
ACS-CP-A	Advanced Control Panel	The Advanced Control Panel includes a full graphic, backlite display capable of displaying three Actual Signal values or bar graphs. The Alpha-Numeric display supports thirteen languages. A Real Time Clock is also included. This panel supports the internal Sequence Programming Function. <b>STANDARD With ACS355 IP66, UL Type 4X.</b>	150	ES
OPMP-01	Cabinet Panel Mounting	Control Panel Mounting Platform allows remote mounting of the keypad on a large enclosure or remote panel. The kit maintains UL Type 12 integrity of the mounting location. Adapters, 3 m (10ft) cable and mounting hardware are included in this kit. With this mounting arrangement, the keypad is removable from the panel in a fashion identical to a drive-mounted keypad.	138	ES
ACS/H-CP-EXT	Control Panel Mounting	Control Panel Mounting Kit for ACS355 drives allows remote mounting of the keypad on the door of an enclosure. The kit includes a 10 ft (3 m) CAT 5 patch cable, gasket for NEMA 12, mounting hardware and drilling template.	55	ES
ACS/H-CP-EXT-IP66	NEMA 4X Cabinet Panel Mounting	Allows remote mounting of the ACS-CP-A Operator Panels on a larger NEMA 4X (IP66) enclosure or remote panel. The kit maintains NEMA 4X integrity of the mounting location. All necessary hardware and a mounting template are provided in addition to a 3 m panel cable. When mounted, the operator is not removable from the front of the enclosure. The operator panel must be purchased separately.	63	ES
OCAT-01	Panel Extension Cable	7 foot CAT 5 patch cable allows remote operation of the standard panel or connection of the drive to a Personal Computer using the RJ45/DB9 Adapter which must be purchased separately.	40	ES

Baldor ACB & ACS Drives	<b>FEPA-01</b>	Fieldbus Adapter Power Module	The optional Auxiliary Power Module allows connecting external 24VDC power source to the FPBA-01 or FCAN-01 fieldbus adapter.	120	ES
AC Micro Drives	<b>FCAN-01 Kit</b>	CANopen Adapter	CANopen is a higher layer protocol based on the CAN (Control Area Network) serial bus system and the CAL (CAN Application Layer). CANopen assumes that the hardware of the connected device has a CAN transceiver and a CAN controller as specified in ISO 11898. The CANopen Communication Profile, CiA Ds301, includes both cyclic and event driven communication, which makes it possible to reduce the bus load to minimum while still maintaining extremely short reaction times. High communication performance can be achieved at relatively low baud rates, thus reducing EMC problems and cable costs. CANopen device profiles define both direct access to drive parameter and time critical process data communication. The FCAN-01 module fulfills CiA (CAN in Automation) standard DSP 402 (Drives and Motion Control)	325	ES
AC Inverter Drives	<b>FDNA-01 Kit</b>	DeviceNet Adapter	The DeviceNet network uses a linear bus topology. Terminating resistors are required on each end of the trunk line. Drop lines as long as 6 meters (20 feet) each are permitted, allowing one or more nodes to be attached. DeviceNet allows branching structures only on drop lines.	260	ES
AC Vector Drives	<b>FENA-01 Kit</b>	Ethernet IP/Modbus TCP Adapter	The FENA-01 module supports both Modbus®-TCP and EtherNet/IP™ network protocols. The Modbus-TCP protocol is simply the Modbus protocol used on top of Ethernet-TCP/IP. Modbus-TCP is an open Industrial Ethernet network which has been specified by the Modbus-IDA User Organization. EtherNet/IP is based on the Common Industrial Protocol (CIP), which is also the framework for both the ControlNet and DeviceNet network protocols. The FENA-01 supports 10/100 Mbps transfer rate with network connections made with CAT 5 wiring and RJ-45 connectors. Both star and bus topology options are supported.	239	ES
Analog AC Drives	<b>FECA-01 Kit</b>	EtherCAT Adapter	The FECA-01 module supports EtherCAT® network protocol. EtherCAT® is a Real Time Ethernet technology which aims to maximize the use of the full duplex Ethernet bandwidth. It overcomes the overhead normally associated with Ethernet by employing "on the fly" processing hardware. An EtherCAT® bus consists of a master system and up to 65535 slave devices, connected together with standard Ethernet cabling. The FECA-01 supports 10/100 Mbps transfer rate with network connections made with CAT 5 wiring and RJ-45 connectors. Designed for daisy chain configuration on an EtherCAT® network.	400	ES
Baldor DC Drives	<b>FPBA-01 Kit</b>	PROFIBUS-DP Adapter	PROFIBUS is an open serial communication standard that enables data exchange between all kinds of automation components. The physical transmission medium of the bus is a twisted pair cable (according to the RS-485 standard). The maximum length of the bus cable is 100 to 1200 meters, depending on the selected transmission rate. Up to 31 stations can be connected to the same PROFIBUS system without the use of repeaters.	290	ES
ACS Drives	<b>FRSA-00</b>	Modbus RTU PCB	Similar to the FMBA-01-KIT except as a bare, coated printed circuit board (PCB) with the RS-485 GND as the same potential as the drive I/O GND.	65	ES
ACB Drives	<b>FMBA-01 Kit</b>	Modbus RTU Adapter	Modbus is a serial, asynchronous protocol. The Modbus protocol does not specify the physical interface. Typical physical interfaces are RS-232 and RS-485. The FMBA-01 provides a galvanically isolated RS-485 interface. Modbus is designed for integration with Modicon PLCs or other automation devices, and the services closely correspond to the PLC architecture. The FMBA-01 supports the RTU protocol only.	142	ES
Resistors	<b>SREA-01-KIT</b>	Ethernet Adapter (Gateway)	SREA-01 is an optional device for web browser based remote interface to the ACS310 and ACS355 drives via ethernet. This din rail mounted adapter enables remote data acquisition through a standard web browser, utilizing an internal web server for drive configuration and access. Multiple drives (up to 10) can be connected to the Modbus-RTU or Modbus-TCP.	1,250	ES
Powerhm	<b>MFD-01</b>	Flashdrop	FlashDrop is a powerful palm sized tool for fast and easy parameter selecting and setting. It gives the possibility to hide selected parameters to protect the machine. Only the parameters needed in the application are shown. The tool can upload/download parameters, copy parameters between two drives or between a PC and a drive. Includes DrivePM (Drive Parameter Manager) which is a software tool to create, edit and copy parameter sets for FlashDrop. The parameter sets can consist of all parameters or only a set of the user parameters.	600	ES
Input Reactors	<b>SEDG-01</b>	Ethernet to DeviceNet Gateway	SEDG-01 (EtherNet/IP to DeviceNet) -- will allow a DriveBrowser user to connect a PC's Ethernet port to drives on a DeviceNet networks.	3,995	ES
Output Filters	<b>SECG-01</b>	EtherNet to ControlNet Gateway	SECG-01 (EtherNet/IP to ControlNet) -- will allow a DriveBrowser user to connect a PC's Ethernet port to drives on a ControlNet networks.	3,995	ES
Application Information					
Cross Reference					
Glossary of Terms					
Part Number Index					



<b>3AFE64532871</b>	DriveWindow Light	DriveWindow Light is software designed for online drive commissioning and maintenance purposes. It is possible to adjust parameters, read the actual values and control the drive with DriveWindow Light instead of the drive control panel. It is also possible to follow trends and draw graphs. An RJ45 to DB9 adapter cable (OPCA-02) is provided to permit connection between the panel port and a PC.	275	ES
<b>3AUA0000041141</b>	DriveBrowser	DriveBrowser software is designed for online drive commissioning and maintenance purposes. DriveBrowser uses a computer's standard Ethernet port to connect to an EtherNet/IP or Modbus-TCP network. It is compatible with the ACS350, ACS355, ACS550, ACH550, DCS800 and ACS800* drives (*ACS800 standard control program). Drives require configuration and connection to an EtherNet/IP or Modbus-TCP network. DriveBrowser supports Microsoft Windows operating systems (Windows NT4, 2000, XP & Vista). <ul style="list-style-type: none"> <li>• Configure network connections</li> <li>• Parameter editing and monitoring</li> <li>• Upload/download drive parameter files, save, print</li> <li>• Compare files</li> <li>• Trending up to four signals</li> <li>• Drive Control for commissioning and test</li> </ul>	385	ES
<b>OPCA-01</b>	RJ45/DB9 Adapter	This adapter converts the drive's panel port RJ45 (CAT 5 cable connector) plug to a 9 pin RS-232 computer serial port connector for connecting the drive to a PC.	50	ES

### ACS355 UL Type 4X (IP66) Dimensions



Frame Size	H (in)	W (in)	D (in)	Weight (lb)
R1	12.01	7.68	11.06	16.98
R3	17.17	9.69	10.91	28.66

## ACB530 AC Inverter Drive



**3/4 thru 40 Hp**  
**1.5 thru 100 Hp**  
**1.5 thru 550 Hp**  
**1 1/2 thru 150 Hp**

**230 Vac**  
**230 Vac**  
**460 Vac**  
**600 Vac**

**1 Phase - 50/60 Hz**  
**3 Phase - 50/60 Hz**  
**3 Phase - 50/60 Hz**  
**3 Phase - 50/60 Hz**

**Applications:** Variable torque, constant torque or constant horsepower applications. New installation, replacement and original equipment manufacture (OEM) use.

**Features:** Volts per Hertz or Sensorless Vector Control with peak overload capacity of 150% and PID capability. Flexible mounting options include both UL type 1 & 12 enclosures. Removable keypad with operator interface and local speed control. Programming by Groups makes it easy to navigate and find parameters. A quick start assistant enables users to program and start using the drive in minutes without need of the User Manual. Built-in braking transistor allows connection to remote braking resistor for enhanced performance needs.

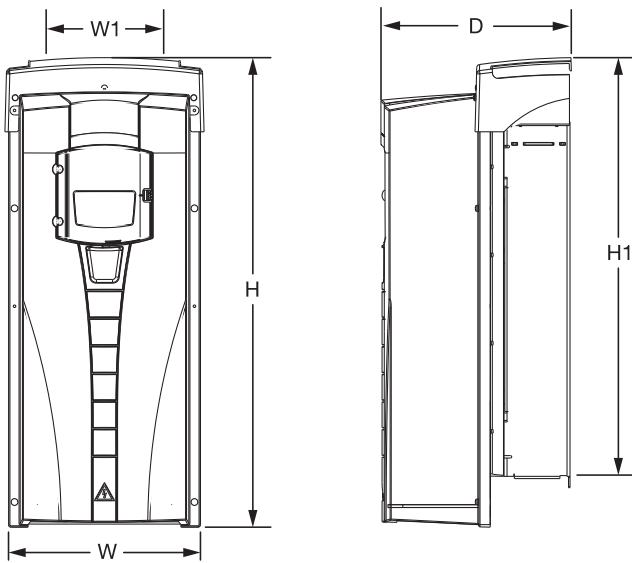
Patented swinging choke for superior harmonic reduction (R1-R6 frames) and AC line reactor (R8 frame)

<b>Input Ratings</b>	Voltage	230	460	600	
	Input Voltage Range	208-240	380-480	500-600	
	Input Voltage Tolerance	+10% / -15%			
	Phase	Three Phase (Single-Phase 230V with derating)			
	Frequency	50/60Hz +5%			
<b>Output Ratings</b>	Horsepower	3/4-40 HP @ 230VAC, 1PH; 1.5-100 HP @ 230VAC, 3PH; 1.5-550 HP @ 460VAC, 3PH; 1-150 HP @ 600VAC, 3PH			
	Overload Capacity	Heavy Duty (Constant Torque) = 150% for 60 seconds, 175% for 3 seconds Normal Duty (Variable Torque) = 110% for 60 seconds			
	Frequency	0-500Hz			
	Voltage	0 to maximum input voltage (RMS)			
	<b>Protective Features</b>	Overcurrent	Excessive Output Current		
DC Overvoltage		High DC Bus			
Overtemp		Drive heatsink above operating temperature			
Short Circuit		Short on motor output terminals			
Undervoltage		Low Voltage on Drive Input			
Loss of Reference		Analog Input programmed for 4-20ma but signal less than 4ma			
Motor Overtemp		Excessive estimated Motor Temperature			
Loss of Keypad		Drive will trip if under keypad control and keypad communication is lost			
Motor Model Calc Fail		Drive will trip if Motor Model cannot be determined - Sensorless Vector Control			
Motor Stall		Motor cannot achieve commanded speed due to excessive load			
Ground Fault		Ground Fault detected in motor or motor cabling			
Motor Phase Fault		Loss of one of the motor phases			
<b>Environmental Conditions</b>		Temperature	-10 to 40°C. -10 to 50°C w/ derate		
		Cooling	Forced air		
		Enclosure	UL Type 1 UL Type 12		
	Altitude	Sea level to 3300 ft. (1000 m) Derate 1% per 330 ft. (100 m) up to 6600 ft. (2000 m)			
	Humidity	0 to 95% RH Non-Condensing			
<b>Keypad Display</b>	Display	LCD Graphical			
	Keys	8 key keypad with tactile response			
	Functions	Output status monitoring, Digital speed control, Parameter setting and display, Diagnostic and Fault log display, Motor run, Local/Remote toggle			
	Remote Mount	Keypad may be mounted up to 10 ft. using appropriate cable (see Options for kit)			
	Trip	Last three faults stored in Fault History			
<b>Control Specifications</b>	PWM Frequency	Adjustable 1.5-5kHz STD, 5-16 kHz quiet			
	Frequency Setting	1, 4, 8, 12kHz (up to 150HP); 1 or 4kHz (over 150HP)			
	Accel/Decel	0-1800 seconds			
	V/Hz Ratio	Linear or squared reduced			
	Speed Control Accuracy	20% of motor slip			
	Skip Frequency	Three zones 0-Max frequency			
	PC Setup Software	Drive Window Lite			
	Maximum Output Frequency	500 Hz			
	Selectable Operating Modes	2-Wire, 3-Wire, Baldor 3-Wire, Motor Potentiometer, Hand/Auto, PID			
	<b>Analog Inputs</b>	Two Single-ended	0 (2) to 10 V, Rin > 312 kΩ single-ended 0 (4) to 20 mA, Rin = 100 Ω single-ended		
Accuracy		±1%			
<b>Analog Outputs</b>	Two Current Outputs	0 (4) to 20 mA, load < 500 Ω			
	Accuracy	±3%			

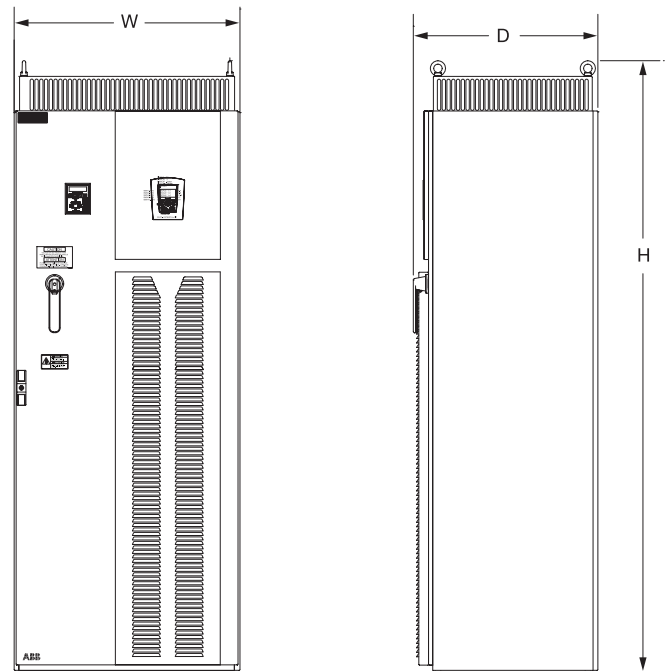
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<b>Digital Inputs</b>	Six Digital Inputs	12 V... 24 V DC with internal or external supply Pull-up or Pull-down (PNP or NPN)
	Input Impedance	2.4 kΩ
	Maximum delay	5 ms ± 1ms
<b>DriveWindow Light</b>	PN: 3AFE64532871	DriveWindow Light is software designed for online drive commissioning and maintenance purposes. It is possible to adjust parameters, read the actual values and control the drive with DriveWindow Light instead of the drive control panel. It is also possible to follow trends and draw graphs. An RJ45 to DB9 adapter cable (OPCA-02) is provided to permit connection between the panel port and a PC.
<b>RJ45/DB9 Adapter</b>	PN: OPCA-01	This adapter converts the drive's panel port RJ45 (CAT 5 cable connector) plug to a 9 pin RS-232 computer serial port connector for connecting the drive to a PC.
<b>Digital Outputs</b>	Three Relay Outputs	Form C
	Maximum switching voltage	250 V AC/30 V DC
	Maximum switching current	6 A/30 V DC; 1500 V A/230 V AC
	Maximum continuous current	2 A rms

## NEMA 1 Dimensions and Weights



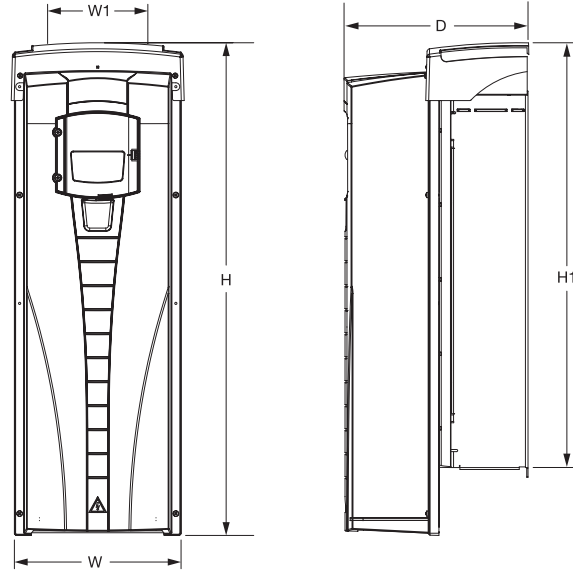
Wall Mount (R1-R6)



Floor Mount (R7-R8)

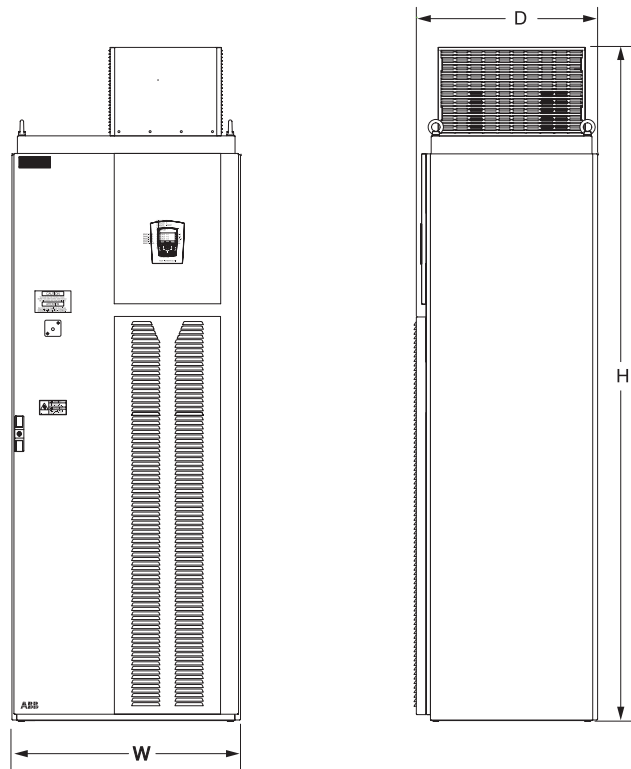
Frame	Product Dimensions						
	H1	W1	Mounting Hardware	H	W	D	Weight
R1	12.5	3.9	#10	14.5	4.9	8.3	14.3
R2	16.4	3.9	#10	18.5	4.9	8.7	19.5
R3	18.6	6.3	#10	23	8	9.1	35
R4	22.8	6.3	#10	27.1	8	10.3	53
R5	23.2	9.4	0.25	29	10.5	11.3	75
R6	26.6	10.4	0.25	35	11.9	15.8	152
R7	Free Standing		NA	59.2	24	19.5	430
R8	Free Standing		NA	83.9	31.5	23	827

## NEMA 12 Dimensions and Weights



Wall Mount (R1 - R6)

Frame	Product Dimensions						
	H1	W1	Mounting Hardware	H	W	D	Weight
R1	12.5	3.9	#10	18.1	8.4	9.2	17.6
R2	16.4	3.9	#10	22.1	8.4	9.6	24.3
R3	18.6	6.3	#10	24.8	10.1	10	37.5
R4	22.8	6.3	#10	29.9	10.1	11.2	57.3
R5	23.2	9.4	0.25	30.5	14.5	12.2	92.6
R6	26.6	10.4	0.25	36.4	16.1	16.7	190



Floor Mount (R8)

Dim	Product Dimensions						
	H1	W1	Mounting Hardware	H	W	D	Weight
PX12-8	Free Standing		NA	93.6	31.7	25.9	838

## ACB530 Inverter/Encoderless Vector - NEMA 1 Enclosure

### ACB530 - 230V, 50/60Hz, 1-Phase Ratings based on 50% de-rate of 3-Phase Drive

Catalog Number	Heavy Duty				Normal Duty			List Price	Mult. Sym.
	Frame	HP	Cont. Amps	Matched Perf. Motor Code	HP	Cont. Amps	Matched Perf. Motor Code		
ACB530-U1-07A5-2	R1	0.75	3.3	A2	0.75	3.8	A2	1,075	EG
ACB530-U1-012A-2	R1	0.75	3.8	A2	1	5.9	B2	1,100	EG
ACB530-U1-017A-2	R1	1	5.9	B2	2	8.4	C2	1,300	EG
ACB530-U1-024A-2	R2	2	8.4	C2	3	12.1	D2	1,675	EG
ACB530-U1-031A-2	R2	3	12.1	D2	5	15.4	E2	2,100	EG
ACB530-U1-046A-2	R3	5	15.4	E2	7.5	23.1	F2	2,580	EG
ACB530-U1-059A-2	R3	7.5	23.1	F2	10	29.7	G2	3,287	EG
ACB530-U1-075A-2	R4	10	29.7	G2	10	37.4	H2	4,136	EG
ACB530-U1-088A-2	R4	10	37.4	H2	15	44	H2	5,000	EG
ACB530-U1-114A-2	R4	15	44	H2	20	57	I2	6,114	EG
ACB530-U1-143A-2	R6	20	57	I2	25	71.5	J2	7,296	EG
ACB530-U1-178A-2	R6	25	75	J2	30	89	K2	9,268	EG
ACB530-U1-221A-2	R6	30	89	K2	40	110.5	L2	11,774	EG
ACB530-U1-248A-2	R6	30	96		40	124	M2	12,362	EG

### ACB530 - 230V, 50/60Hz, 3-Phase

Catalog Number	Heavy Duty				Normal Duty			List Price	Mult. Sym.
	Frame	HP	Cont. Amps	Matched Perf. Motor Code	HP	Cont. Amps	Matched Perf. Motor Code		
ACB530-U1-07A5-2	R1	1.5	6.6	B2	2	7.5	C2	1,075	EG
ACB530-U1-012A-2	R1	2	7.5	C2	3	11.8	D2	1,100	EG
ACB530-U1-017A-2	R1	3	11.8	D2	5	16.7	E2	1,300	EG
ACB530-U1-024A-2	R2	5	16.7	E2	7.5	24.2	F2	1,675	EG
ACB530-U1-031A-2	R2	7.5	24.2	F2	10	30.8	G2	2,100	EG
ACB530-U1-046A-2	R3	10	30.8	G2	15	46.2	H2	2,580	EG
ACB530-U1-059A-2	R3	15	46.2	H2	20	59.4	I2	3,287	EG
ACB530-U1-075A-2	R4	20	59.4	I2	25	74.8	J2	4,136	EG
ACB530-U1-088A-2	R4	25	74.8	J2	30	88.0	K2	5,000	EG
ACB530-U1-114A-2	R4	30	88	K2	40	114.0	L2	6,114	EG
ACB530-U1-143A-2	R6	40	114	L2	50	143.0	M2	7,296	EG
ACB530-U1-178A-2	R6	50	150	M2	60	178.0	N2	9,268	EG
ACB530-U1-221A-2	R6	60	178	N2	75	221.0	P2	11,774	EG
ACB530-U1-248A-2	R6	75	192	P2	100	248.0	Q2	12,362	EG

## ACB530 - 460V, 50/60Hz, 3-Phase

Catalog Number	Heavy Duty				Normal Duty			List Price	Mult. Sym.
	Frame	HP	Cont. Amps	Matched Perf. Motor Code	HP	Cont. Amps	Matched Perf. Motor Code		
ACB530-U1-04A1-4	R1	1.5	3.3	A4	2	4.1	B4	1,216	EG
ACB530-U1-06A9-4	R1	2	5.4	B4	3	6.9	C4	1,351	EG
ACB530-U1-08A8-4	R1	3	6.9	C4	5	8.8	D4	1,637	EG
ACB530-U1-012A-4	R1	5	8.8	D4	7.5	11.9	E4	1,776	EG
ACB530-U1-015A-4	R2	7.5	11.9	E4	10	15.4	F4	2,249	EG
ACB530-U1-023A-4	R2	10	15.4	F4	15	23.0	G4	2,466	EG
ACB530-U1-031A-4	R3	15	23.0	G4	20	31.0	H4	2,761	EG
ACB530-U1-038A-4	R3	20	31.0	H4	25	38.0	I4	3,353	EG
ACB530-U1-045A-4	R3	25	38.0	I4	30	44.0	J4	4,142	EG
ACB530-U1-059A-4	R4	30	44.0	J4	40	59.0	K4	4,930	EG
ACB530-U1-072A-4	R4	40	59.0	K4	50	72.0	L4	5,719	EG
ACB530-U1-078A-4	R4	50	65.0	L4	60	77.0	M4	7,100	EG
ACB530-U1-097A-4	R4	60	77.0	M4	75	96.0	N4	9,266	EG
ACB530-U1-125A-4	R5	75	96.0	N4	100	124.0	P4	10,748	EG
ACB530-U1-157A-4	R6	100	124.0	P4	125	157.0	Q4	12,424	EG
ACB530-U1-180A-4	R6	125	156.0	Q4	150	180.0	R4	13,311	EG
ACB530-U1-246A-4	R6	150	192.0	R4	200	245.0	S4	17,164	EG
ACB530-PC-316A-4	R8	200	240.0	S4	250	316.0	T4	23,686	EH
ACB530-PC-368A-4	R8	250	302.0	T4	300	368.0	U4	36,417	EH
ACB530-PC-414A-4	R8	300	368.0	U4	350	414.0	V4	41,085	EH
ACB530-PC-486A-4	R8	350	414.0	V4	400	486.0	W4	48,313	EH

## ACB530 - 600V, 50/60Hz, 3-Phase

Catalog Number	Heavy Duty				Normal Duty			List Price	Mult. Sym.
	Frame	HP	Cont. Amps	Matched Perf. Motor Code	HP	Cont. Amps	Matched Perf. Motor Code		
ACB530-U1-02A7-6	R2	1.5	2.4	A5	2	2.7	B5	1,362	EG
ACB530-U1-03A9-6	R2	2	2.7	B5	3	3.9	C5	1,651	EG
ACB530-U1-06A1-6	R2	3	3.9	C5	5	6.1	D5	1,801	EG
ACB530-U1-09A0-6	R2	5	6.1	D5	7.5	9.0	E5	1,952	EG
ACB530-U1-011A-6	R2	7.5	9.0	E5	10	11.0	F5	2,473	EG
ACB530-U1-017A-6	R2	10	11.0	F5	15	17.0	G5	2,713	EG
ACB530-U1-022A-6	R3	15	17.0	G5	20	22.0	H5	3,471	EG
ACB530-U1-027A-6	R3	20	22.0	H5	25	27.0	I5	4,123	EG
ACB530-U1-032A-6	R4	25	27.0	I5	30	32.0	J5	5,098	EG
ACB530-U1-041A-6	R4	30	32.0	J5	40	41.0	K5	6,182	EG
ACB530-U1-052A-6	R4	40	41.0	K5	50	52.0	L5	7,592	EG
ACB530-U1-062A-6	R4	50	52.0	L5	60	62.0	M5	9,111	EG
ACB530-U1-077A-6	R6	60	62.0	M5	75	77.0	N5	10,195	EG
ACB530-U1-099A-6	R6	75	77.0	N5	100	99.0	P5	11,822	EG
ACB530-U1-125A-6	R6	100	99.0	P5	125	125.0	Q5	15,185	EG
ACB530-U1-144A-6	R6	125	125.0	Q5	150	144.0	R5	16,269	EG

## ACB530 Inverter/Encoderless Vector - NEMA 12 Enclosure

### ACB530 - 230V, 50/60Hz, 1-Phase Ratings based on 50% de-rate of 3-Phase Drive

Catalog Number	Heavy Duty				Normal Duty			List Price	Mult. Sym.
	Frame	HP	Cont. Amps	Matched Perf. Motor Code	HP	Cont. Amps	Matched Perf. Motor Code		
ACB530-U1-07A5-2+B055	R1	0.75	3.3	A2	0.75	3.8	A2	1,205	EG
ACB530-U1-012A-2+B055	R1	0.75	3.8	A2	1	5.9	B2	1,580	EG
ACB530-U1-017A-2+B055	R1	1	5.9	B2	2	8.4	C2	1,800	EG
ACB530-U1-024A-2+B055	R2	2	8.4	C2	3	12.1	D2	2,412	EG
ACB530-U1-031A-2+B055	R2	3	12.1	D2	5	15.4	E2	2,852	EG
ACB530-U1-046A-2+B055	R3	5	15.4	E2	7.5	23.1	F2	3,538	EG
ACB530-U1-059A-2+B055	R3	7.5	23.1	F2	10	29.7	G2	4,422	EG
ACB530-U1-075A-2+B055	R4	10	29.7	G2	10	37.4	H2	5,410	EG
ACB530-U1-088A-2+B055	R4	10	37.4	H2	15	44	H2	5,972	EG
ACB530-U1-114A-2+B055	R4	15	44	H2	20	57	I2	6,875	EG
ACB530-U1-143A-2+B055	R6	20	57	I2	25	71.5	J2	8,618	EG
ACB530-U1-178A-2+B055	R6	25	75	J2	30	89	K2	11,092	EG
ACB530-U1-221A-2+B055	R6	30	89	K2	40	110.5	L2	14,216	EG
ACB530-U1-248A-2+B055	R6	30	96		40	124	M2	15,704	EG

### ACB530 - 230V, 50/60Hz, 3-Phase

Catalog Number	Heavy Duty				Normal Duty			List Price	Mult. Sym.
	Frame	HP	Cont. Amps	Matched Perf. Motor Code	HP	Cont. Amps	Matched Perf. Motor Code		
ACB530-U1-07A5-2+B055	R1	1.5	6.6	C2	2	7.5	B2	1,205	EG
ACB530-U1-012A-2+B055	R1	2	7.5	D2	3	11.8	C2	1,580	EG
ACB530-U1-017A-2+B055	R1	3	11.8	E2	5	16.7	D2	1,800	EG
ACB530-U1-024A-2+B055	R2	5	16.7	F2	7.5	24.2	E2	2,412	EG
ACB530-U1-031A-2+B055	R2	7.5	24.2	G2	10	30.8	F2	2,852	EG
ACB530-U1-046A-2+B055	R3	10	30.8	H2	15	46.2	G2	3,538	EG
ACB530-U1-059A-2+B055	R3	15	46.2	I2	20	59.4	H2	4,422	EG
ACB530-U1-075A-2+B055	R4	20	59.4	J2	25	74.8	I2	5,410	EG
ACB530-U1-088A-2+B055	R4	25	74.8	K2	30	88.0	J2	5,972	EG
ACB530-U1-114A-2+B055	R4	30	88	L2	40	114.0	K2	6,875	EG
ACB530-U1-143A-2+B055	R6	40	114	M2	50	143.0	L2	8,618	EG
ACB530-U1-178A-2+B055	R6	50	150	N2	60	178.0	M2	11,092	EG
ACB530-U1-221A-2+B055	R6	60	178	P2	75	221.0	N2	14,216	EG
ACB530-U1-248A-2+B055	R6	75	192	Q2	100	248.0	P2	15,704	EG

## ACB530 - 460V, 50/60Hz, 3-Phase

Catalog Number	Heavy Duty				Normal Duty			List Price	Mult. Sym.
	Frame	HP	Cont. Amps	Matched Perf. Motor Code	HP	Cont. Amps	Matched Perf. Motor Code		
ACB530-U1-04A1-4+B055	R1	1.5	3.3	A4	2	4.1	B4	1,657	EG
ACB530-U1-06A9-4+B055	R1	2	5.4	B4	3	6.9	C4	1,805	EG
ACB530-U1-08A8-4+B055	R1	3	6.9	C4	5	8.8	D4	2,135	EG
ACB530-U1-012A-4+B055	R1	5	8.8	D4	7.5	11.9	E4	2,302	EG
ACB530-U1-015A-4+B055	R2	7.5	11.9	E4	10	15.4	F4	2,811	EG
ACB530-U1-023A-4+B055	R2	10	15.4	F4	15	23.0	G4	3,058	EG
ACB530-U1-031A-4+B055	R3	15	23.0	G4	20	31.0	H4	3,523	EG
ACB530-U1-038A-4+B055	R3	20	31.0	H4	25	38.0	I4	4,713	EG
ACB530-U1-045A-4+B055	R3	25	38.0	I4	30	44.0	J4	5,512	EG
ACB530-U1-059A-4+B055	R4	30	44.0	J4	40	59.0	K4	6,296	EG
ACB530-U1-072A-4+B055	R4	40	59.0	K4	50	72.0	L4	7,742	EG
ACB530-U1-078A-4+B055	R4	50	65.0	L4	60	77.0	M4	9,071	EG
ACB530-U1-097A-4+B055	R4	60	77.0	M4	75	96.0	N4	10,343	EG
ACB530-U1-125A-4+B055	R5	75	96.0	N4	100	124.0	P4	12,294	EG
ACB530-U1-157A-4+B055	R6	100	124.0	P4	125	157.0	Q4	15,827	EG
ACB530-U1-180A-4+B055	R6	125	156.0	Q4	150	180.0	R4	17,211	EG
ACB530-U1-246A-4+B055	R6	150	192.0	R4	200	245.0	S4	21,947	EG
ACB530-PC-316A-4+B055	R8	200	240.0	S4	250	316.0	T4	31,446	EH
ACB530-PC-368A-4+B055	R8	250	302.0	T4	300	368.0	U4	40,945	EH
ACB530-PC-414A-4+B055	R8	300	368.0	U4	350	414.0	V4	42,813	EH
ACB530-PC-486A-4+B055	R8	350	414.0	V4	400	486.0	W4	49,688	EH
ACB530-PC-526A-4+B055	R8	400	477	W4	450	526		57,500	EH
ACB530-PC-602A-4+B055	R8	450	515		500	602	X4	59,159	EH
ACB530-PC-645A-4+B055	R8	500	590	X4	550	645		62,033	EH

## ACB530 - 600V, 50/60Hz, 3-Phase

Catalog Number	Heavy Duty				Normal Duty			List Price	Mult. Sym.
	Frame	HP	Cont. Amps	Matched Perf. Motor Code	HP	Cont. Amps	Matched Perf. Motor Code		
ACB530-U1-02A7-6+B055	R2	1.5	2.4	A5	2	2.7	B5	2,235	EG
ACB530-U1-03A9-6+B055	R2	2	2.7	B5	3	3.9	C5	2,540	EG
ACB530-U1-06A1-6+B055	R2	3	3.9	C5	5	6.1	D5	2,780	EG
ACB530-U1-09A0-6+B055	R2	5	6.1	D5	7.5	9.0	E5	3,026	EG
ACB530-U1-011A-6+B055	R2	7.5	9.0	E5	10	11.0	F5	3,577	EG
ACB530-U1-017A-6+B055	R2	10	11.0	F5	15	17.0	G5	4,062	EG
ACB530-U1-022A-6+B055	R3	15	17.0	G5	20	22.0	H5	5,378	EG
ACB530-U1-027A-6+B055	R3	20	22.0	H5	25	27.0	I5	6,211	EG
ACB530-U1-032A-6+B055	R4	25	27.0	I5	30	32.0	J5	7,319	EG
ACB530-U1-041A-6+B055	R4	30	32.0	J5	40	41.0	K5	8,491	EG
ACB530-U1-052A-6+B055	R4	40	41.0	K5	50	52.0	L5	10,015	EG
ACB530-U1-062A-6+B055	R4	50	52.0	L5	60	62.0	M5	11,692	EG
ACB530-U1-077A-6+B055	R6	60	62.0	M5	75	77.0	N5	12,862	EG
ACB530-U1-099A-6+B055	R6	75	77.0	N5	100	99.0	P5	15,271	EG
ACB530-U1-125A-6+B055	R6	100	99.0	P5	125	125.0	Q5	19,626	EG
ACB530-U1-144A-6+B055	R6	125	125.0	Q5	150	144.0	R5	20,601	EG



## ACB530 +L502 AC Vector Drive



**3/4 thru 40 Hp**  
**1.5 thru 100 Hp**  
**1.5 thru 550 Hp**  
**1 1/2 thru 150 Hp**

**230 Vac**  
**230 Vac**  
**460 Vac**  
**600 Vac**

**1 Phase - 50/60 Hz**  
**3 Phase - 50/60 Hz**  
**3 Phase - 50/60 Hz**  
**3 Phase - 50/60 Hz**

**Applications:** Variable torque, constant torque or constant horsepower applications. New installation, replacement and original equipment manufacture (OEM) use.

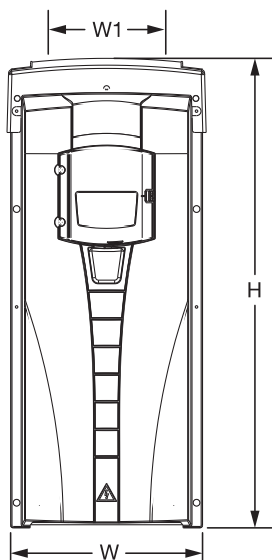
**Features:** Closed-Loop Vector, Volts per Hertz or Sensorless Vector Control with peak overload capacity of 150% and PID capability. Flexible mounting options include both UL type 1 & 12 enclosures. Removable keypad with operator interface and local speed control. Programming by Groups makes it easy to navigate and find parameters. A quick start assistant enables users to program and start using the drive in minutes without need of the User Manual. Built-in braking transistor allows connection to remote braking resistor for enhanced performance needs.

Patented swinging choke for superior harmonic reduction (R1-R6 frames) and AC line reactor (R8 frame)

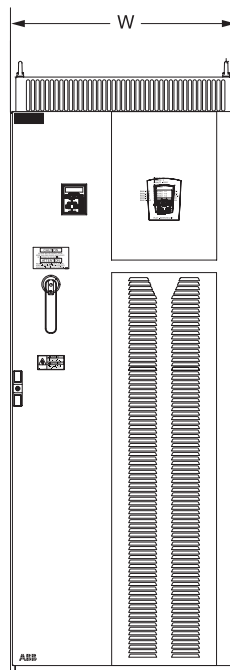
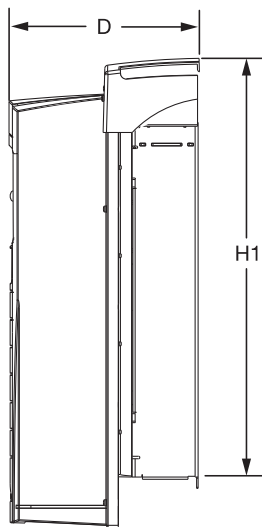
<b>Input Ratings</b>	Voltage	230	460	600
	Input Voltage Range	208-240	380-480	500-600
	Input Voltage Tolerance	+10% / -15%		
	Phase	Three Phase (Single-Phase 230V with derating)		
	Frequency	50/60Hz +5%		
<b>Output Ratings</b>	Horsepower	3/4-40 HP @ 230VAC, 1PH; 1.5-100 HP @ 230VAC, 3PH; 1.5-550 HP @ 460VAC, 3PH; 1-150 HP @ 600VAC, 3PH		
	Overload Capacity	Heavy Duty (Constant Torque) = 150% for 60 seconds, 175% for 3 seconds Normal Duty (Variable Torque) = 110% for 60 seconds		
	Frequency	0-500Hz		
	Voltage	0 to maximum input voltage (RMS)		
<b>Protective Features</b>	Overcurrent	Excessive Output Current		
	DC Overvoltage	High DC Bus		
	Overtemp	Drive heatsink above operating temperature		
	Short Circuit	Short on motor output terminals		
	Undervoltage	Low Voltage on Drive Input		
	Loss of Reference	Analog Input programmed for 4-20ma but signal less than 4ma		
	Motor Overtemp	Excessive estimated Motor Temperature		
	Loss of Keypad	Drive will trip if under keypad control and keypad communication is lost		
	Motor Model Calc Fail	Drive will trip if Motor Model cannot be determined - Sensorless Vector Control		
	Motor Stall	Motor cannot achieve commanded speed due to excessive load		
	Ground Fault	Ground Fault detected in motor or motor cabling		
	Motor Phase Fault	Loss of one of the motor phases		
<b>Environmental Conditions</b>	Temperature	-10 to 40°C. -10 to 50°C w/ derate		
	Cooling	Forced air		
	Enclosure	UL Type 1 UL Type 12		
	Altitude	Sea level to 3300 ft. (1000 m) Derate 1% per 330 ft. (100 m) up to 6600 ft. (2000 m)		
	Humidity	0 to 95% RH Non-Condensing		
<b>Keypad Display</b>	Display	LCD Graphical		
	Keys	8 key keypad with tactile response		
	Functions	Output status monitoring, Digital speed control, Parameter setting and display, Diagnostic and Fault log display, Motor run, Local/Remote toggle		
	Remote Mount	Keypad may be mounted up to 10 ft. using appropriate cable (see Options for kit)		
	Trip	Last three faults stored in Fault History		
<b>Control Specifications</b>	PWM Frequency	Adjustable 1.5-5kHz STD, 5-16 kHz quiet		
	Frequency Setting	1, 4, 8, 12kHz (up to 150HP); 1 or 4kHz (over 150HP)		
	Accel/Decel	0-1800 seconds		
	V/Hz Ratio	Linear or squared reduced		
	Speed Control Accuracy	20% of motor slip		
	Skip Frequency	Three zones 0-Max frequency		
	PC Setup Software	Drive Window Lite		
	Maximum Output Frequency	500 Hz		
	Selectable Operating Modes	2-Wire, 3-Wire, Baldor 3-Wire, Motor Potentiometer, Hand/Auto, PID		
	<b>Analog Inputs</b>	Two Single-ended	0 (2) to 10 V, Rin > 312 kΩ single-ended 0 (4) to 20 mA, Rin = 100 Ω single-ended	
Accuracy		±1%		
<b>Analog Outputs</b>	Two Current Outputs	0 (4) to 20 mA, load < 500 Ω		
	Accuracy	±3%		
<b>Motor Feedback</b>	Type	Digital Pulse Encoder		
	Pulses/Rev.	Up to 16,384; 1024 standard; 200 kHz max		
	Input	2 Channels in Quadrature, 24Vdc, single-ended or differential		
	Marker Pulse	Required for orientation		

<b>Digital Inputs</b>	Six Digital Inputs	12 V... 24 V DC with internal or external supply Pull-up or Pull-down (PNP or NPN)
	Input Impedance	2.4 kΩ
	Maximum delay	5 ms ± 1ms
	Maximum switching voltage	250 V AC/30 V DC
	Maximum switching current	6 A/30 V DC; 1500 V A/230 V AC
	Maximum continuous current	2 A rms

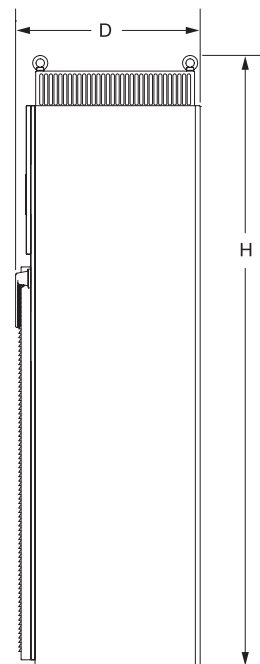
## Dimensions and Weights



Wall Mount (R1-R6)

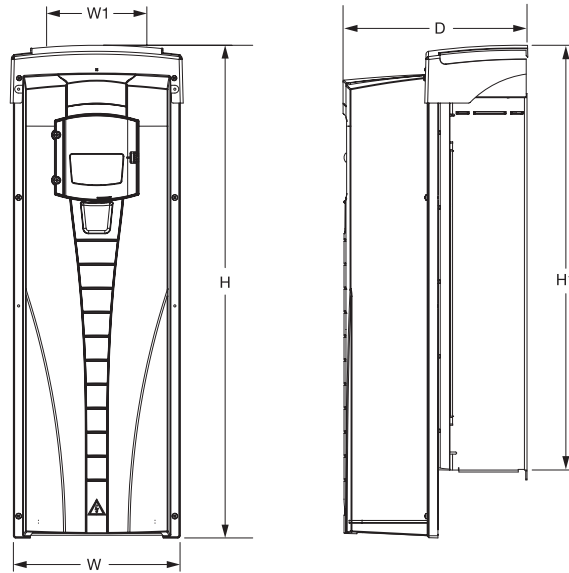


Floor Mount (R7-R8)



Frame	Product Dimensions						
	H1	W1	Mounting Hardware	H	W	D	Weight
R1	12.5	3.9	#10	14.5	4.9	8.3	14.3
R2	16.4	3.9	#10	18.5	4.9	8.7	19.5
R3	18.6	6.3	#10	23	8	9.1	35
R4	22.8	6.3	#10	27.1	8	10.3	53
R5	23.2	9.4	0.25	29	10.5	11.3	75
R6	26.6	10.4	0.25	35	11.9	15.8	152
R7	Free Standing		NA	59.2	24	19.5	430
R8	Free Standing		NA	83.9	31.5	23	827

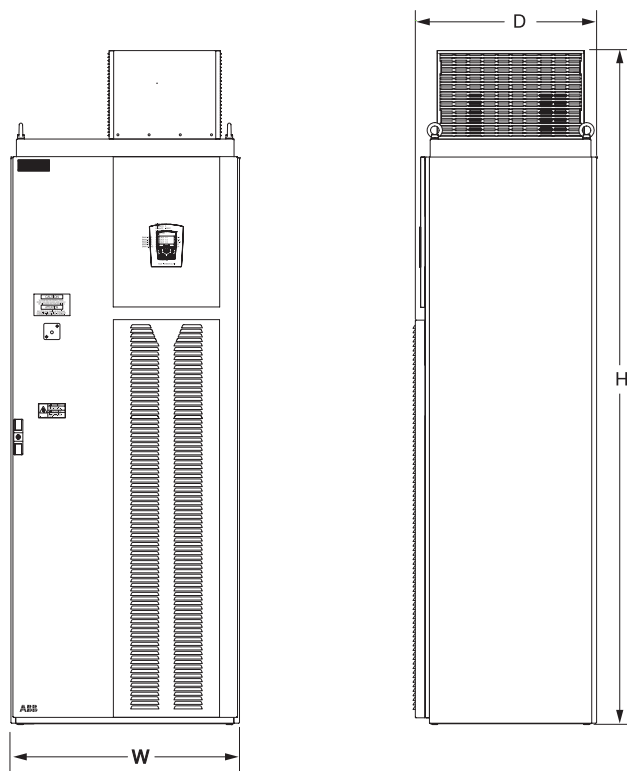
## Dimensions and Weights



**NEMA 12**

Wall Mount (R1 - R6)

Frame	Product Dimensions						
	H1	W1	Mounting Hardware	H	W	D	Weight
R1	12.5	3.9	#10	18.1	8.4	9.2	17.6
R2	16.4	3.9	#10	22.1	8.4	9.6	24.3
R3	18.6	6.3	#10	24.8	10.1	10	37.5
R4	22.8	6.3	#10	29.9	10.1	11.2	75
R5	23.2	9.4	0.25	30.5	14.5	12.2	92.6
R6	26.6	10.4	0.25	36.4	16.1	16.7	190



Floor Mount (R8)

Dim	Product Dimensions						
	H1	W1	Mounting Hardware	H	W	D	Weight
PX12-8	Free Standing		NA	93.6	31.7	25.9	838

## ACB530 +L502 Vector - NEMA 1 Enclosure

ACB530 +L502 - 230V, 50/60Hz,

1-Phase Ratings based on 50% de-rate of 3-Phase Drive

Catalog Number	Heavy Duty				Normal Duty			List Price	Mult. Sym.
	Frame	HP	Cont. Amps	Matched Perf. Motor Code	HP	Cont. Amps	Matched Perf. Motor Code		
ACB530-U1-07A5-2+L502	R1	0.75	3.3	A2	0.75	3.8	A2	1,291	EG
ACB530-U1-012A-2+L502	R1	0.75	3.8	A2	1	5.9	B2	1,470	EG
ACB530-U1-017A-2+L502	R1	1	5.9	B2	2	8.4	C2	1,637	EG
ACB530-U1-024A-2+L502	R2	2	8.4	C2	3	12.1	D2	1,894	EG
ACB530-U1-031A-2+L502	R2	3	12.1	D2	5	15.4	E2	2,378	EG
ACB530-U1-046A-2+L502	R3	5	15.4	E2	7.5	23.1	F2	2,909	EG
ACB530-U1-059A-2+L502	R3	7.5	23.1	F2	10	29.7	G2	3,556	EG
ACB530-U1-075A-2+L502	R4	10	29.7	G2	10	37.4	H2	4,537	EG
ACB530-U1-088A-2+L502	R4	10	37.4	H2	15	44	H2	5,621	EG
ACB530-U1-114A-2+L502	R4	15	44	H2	20	57	I2	7,011	EG
ACB530-U1-143A-2+L502	R6	20	57	I2	25	71.5	J2	8,534	EG
ACB530-U1-178A-2+L502	R6	25	75	J2	30	89	K2	10,353	EG
ACB530-U1-221A-2+L502	R6	30	89	K2	40	110.5	L2	13,257	EG
ACB530-U1-248A-2+L502	R6	30	96		40	124	M2	13,845	EG

## ACB530 +L502 - 230V, 50/60Hz, 3-Phase

Catalog Number	Heavy Duty				Normal Duty			List Price	Mult. Sym.
	Frame	HP	Cont. Amps	Matched Perf. Motor Code	HP	Cont. Amps	Matched Perf. Motor Code		
ACB530-U1-07A5-2+L502	R1	1.5	6.6	B2	2	7.5	C2	1,291	EG
ACB530-U1-012A-2+L502	R1	2	7.5	C2	3	11.8	D2	1,470	EG
ACB530-U1-017A-2+L502	R1	3	11.8	D2	5	16.7	E2	1,637	EG
ACB530-U1-024A-2+L502	R2	5	16.7	E2	7.5	24.2	F2	1,894	EG
ACB530-U1-031A-2+L502	R2	7.5	24.2	F2	10	30.8	G2	2,378	EG
ACB530-U1-046A-2+L502	R3	10	30.8	G2	15	46.2	H2	2,909	EG
ACB530-U1-059A-2+L502	R3	15	46.2	H2	20	59.4	I2	3,556	EG
ACB530-U1-075A-2+L502	R4	20	59.4	I2	25	74.8	J2	4,537	EG
ACB530-U1-088A-2+L502	R4	25	74.8	J2	30	88.0	K2	5,621	EG
ACB530-U1-114A-2+L502	R4	30	88	K2	40	114.0	L2	7,011	EG
ACB530-U1-143A-2+L502	R6	40	114	L2	50	143.0	M2	8,534	EG
ACB530-U1-178A-2+L502	R6	50	150	M2	60	178.0	N2	10,353	EG
ACB530-U1-221A-2+L502	R6	60	178	N2	75	221.0	P2	13,257	EG
ACB530-U1-248A-2+L502	R6	75	192	P2	100	248.0	Q2	13,845	EG

### ACB530 +L502 - 460V, 50/60Hz, 3-Phase

Catalog Number	Heavy Duty				Normal Duty			List Price	Mult. Sym.
	Frame	HP	Cont. Amps	Matched Perf. Motor Code	HP	Cont. Amps	Matched Perf. Motor Code		
ACB530-U1-04A1-4+L502	R1	1.5	3.3	A4	2	4.1	B4	1,677	EG
ACB530-U1-06A9-4+L502	R1	2	5.4	B4	3	6.9	C4	1,742	EG
ACB530-U1-08A8-4+L502	R1	3	6.9	C4	5	8.8	D4	1,923	EG
ACB530-U1-012A-4+L502	R1	5	8.8	D4	7.5	11.9	E4	2,169	EG
ACB530-U1-015A-4+L502	R2	7.5	11.9	E4	10	15.4	F4	2,494	EG
ACB530-U1-023A-4+L502	R2	10	15.4	F4	15	23.0	G4	2,831	EG
ACB530-U1-031A-4+L502	R3	15	23.0	G4	20	31.0	H4	3,206	EG
ACB530-U1-038A-4+L502	R3	20	31.0	H4	25	38.0	I4	3,893	EG
ACB530-U1-045A-4+L502	R3	25	38.0	I4	30	44.0	J4	4,556	EG
ACB530-U1-059A-4+L502	R4	30	44.0	J4	40	59.0	K4	5,423	EG
ACB530-U1-072A-4+L502	R4	40	59.0	K4	50	72.0	L4	6,641	EG
ACB530-U1-078A-4+L502	R4	50	65.0	L4	60	77.0	M4	8,243	EG
ACB530-U1-097A-4+L502	R4	60	77.0	M4	75	96.0	N4	9,761	EG
ACB530-U1-125A-4+L502	R5	75	96.0	N4	100	124.0	P4	11,437	EG
ACB530-U1-157A-4+L502	R6	100	124.0	P4	125	157.0	Q4	13,212	EG
ACB530-U1-180A-4+L502	R6	125	156.0	Q4	150	180.0	R4	14,000	EG
ACB530-U1-246A-4+L502	R6	150	192.0	R4	200	245.0	S4	18,880	EG
ACB530-PC-316A-4+L502	R8	200	240.0	S4	250	316.0	T4	26,055	EH
ACB530-PC-368A-4+L502	R8	250	302.0	T4	300	368.0	U4	40,059	EH
ACB530-PC-414A-4+L502	R8	300	368.0	U4	350	414.0	V4	45,194	EH
ACB530-PC-486A-4+L502	R8	350	414.0	V4	400	486.0	W4	53,144	EH

### ACB530 - 600V, 50/60Hz, 3-Phase

Catalog Number	Heavy Duty			Normal Duty		List Price	Mult. Sym.
	Frame	HP	Cont. Amps	HP	Cont. Amps		
ACB530-U1-02A7-6+L502	R2	1.5	2.4	2	2.7	1,952	EG
ACB530-U1-03A9-6+L502	R2	2	2.7	3	3.9	2,029	EG
ACB530-U1-06A1-6+L502	R2	3	3.9	5	6.1	2,115	EG
ACB530-U1-09A0-6+L502	R2	5	6.1	7.5	9.0	2,386	EG
ACB530-U1-011A-6+L502	R2	7.5	9.0	10	11.0	2,743	EG
ACB530-U1-017A-6+L502	R2	10	11.0	15	17.0	3,116	EG
ACB530-U1-022A-6+L502	R3	15	17.0	20	22.0	3,905	EG
ACB530-U1-027A-6+L502	R3	20	22.0	25	27.0	4,556	EG
ACB530-U1-032A-6+L502	R4	25	27.0	30	32.0	5,748	EG
ACB530-U1-041A-6+L502	R4	30	32.0	40	41.0	6,725	EG
ACB530-U1-052A-6+L502	R4	40	41.0	50	52.0	8,460	EG
ACB530-U1-062A-6+L502	R4	50	52.0	60	62.0	9,978	EG
ACB530-U1-077A-6+L502	R6	60	62.0	75	77.0	11,334	EG
ACB530-U1-099A-6+L502	R6	75	77.0	100	99.0	13,280	EG
ACB530-U1-125A-6+L502	R6	100	99.0	125	125.0	16,149	EG
ACB530-U1-144A-6+L502	R6	125	125.0	150	144.0	17,112	EG

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## ACB530 +L502 Vector - NEMA 12 Enclosure

ACB530 +L502 - 230V, 50/60Hz,

1-Phase Ratings based on 50% de-rate of 3-Phase Drive

Catalog Number	Heavy Duty				Normal Duty			List Price	Mult. Sym.
	Frame	HP	Cont. Amps	Matched Perf. Motor Code	HP	Cont. Amps	Matched Perf. Motor Code		
ACB530-U1-07A5-2+B055+L502	R1	0.75	3.3	A2	0.75	3.8	A2	1,421	EG
ACB530-U1-012A-2+B055+L502	R1	0.75	3.8	A2	1	5.9	B2	1,950	EG
ACB530-U1-017A-2+B055+L502	R1	1	5.9	B2	2	8.4	C2	2,137	EG
ACB530-U1-024A-2+B055+L502	R2	2	8.4	C2	3	12.1	D2	2,631	EG
ACB530-U1-031A-2+B055+L502	R2	3	12.1	D2	5	15.4	E2	3,130	EG
ACB530-U1-046A-2+B055+L502	R3	5	15.4	E2	7.5	23.1	F2	3,867	EG
ACB530-U1-059A-2+B055+L502	R3	7.5	23.1	F2	10	29.7	G2	4,691	EG
ACB530-U1-075A-2+B055+L502	R4	10	29.7	G2	10	37.4	H2	5,811	EG
ACB530-U1-088A-2+B055+L502	R4	10	37.4	H2	15	44	H2	6,593	EG
ACB530-U1-114A-2+B055+L502	R4	15	44	H2	20	57	I2	7,772	EG
ACB530-U1-143A-2+B055+L502	R6	20	57	I2	25	71.5	J2	9,856	EG
ACB530-U1-178A-2+B055+L502	R6	25	75	J2	30	89	K2	12,177	EG
ACB530-U1-221A-2+B055+L502	R6	30	89	K2	40	110.5	L2	15,699	EG
ACB530-U1-248A-2+B055+L502	R6	30	96		40	124	M2	17,187	EG

## ACB530 +L502 - 230V, 50/60Hz, 3-Phase

Catalog Number	Heavy Duty				Normal Duty			List Price	Mult. Sym.
	Frame	HP	Cont. Amps	Matched Perf. Motor Code	HP	Cont. Amps	Matched Perf. Motor Code		
ACB530-U1-07A5-2+B055+L502	R1	2	6.6	C2	1.5	7.5	B2	1,421	EG
ACB530-U1-012A-2+B055+L502	R1	3	7.5	D2	2	11.8	C2	1,950	EG
ACB530-U1-017A-2+B055+L502	R1	5	11.8	E2	3	16.7	D2	2,137	EG
ACB530-U1-024A-2+B055+L502	R2	7.5	16.7	F2	5	24.2	E2	2,631	EG
ACB530-U1-031A-2+B055+L502	R2	10	24.2	G2	7.5	30.8	F2	3,130	EG
ACB530-U1-046A-2+B055+L502	R3	15	30.8	H2	10	46.2	G2	3,867	EG
ACB530-U1-059A-2+B055+L502	R3	20	46.2	I2	15	59.4	H2	4,691	EG
ACB530-U1-075A-2+B055+L502	R4	25	59.4	J2	20	74.8	I2	5,811	EG
ACB530-U1-088A-2+B055+L502	R4	30	74.8	K2	25	88.0	J2	6,593	EG
ACB530-U1-114A-2+B055+L502	R4	40	88	L2	30	114.0	K2	7,772	EG
ACB530-U1-143A-2+B055+L502	R6	50	114	M2	40	143.0	L2	9,856	EG
ACB530-U1-178A-2+B055+L502	R6	60	150	N2	50	178.0	M2	12,177	EG
ACB530-U1-221A-2+B055+L502	R6	75	178	P2	60	221.0	N2	15,699	EG
ACB530-U1-248A-2+B055+L502	R6	100	192	Q2	75	248.0	P2	17,187	EG

## ACB530 +L502 - 460V, 50/60Hz, 3-Phase

Catalog Number	Heavy Duty				Normal Duty			List Price	Mult. Sym.
	Frame	HP	Cont. Amps	Matched Perf. Motor Code	HP	Cont. Amps	Matched Perf. Motor Code		
ACB530-U1-04A1-4+B055+L502	R1	1.5	3.3	A4	2	4.1	B4	2,118	EG
ACB530-U1-06A9-4+B055+L502	R1	2	5.4	B4	3	6.9	C4	2,196	EG
ACB530-U1-08A8-4+B055+L502	R1	3	6.9	C4	5	8.8	D4	2,421	EG
ACB530-U1-012A-4+B055+L502	R1	5	8.8	D4	7.5	11.9	E4	2,695	EG
ACB530-U1-015A-4+B055+L502	R2	7.5	11.9	E4	10	15.4	F4	3,056	EG
ACB530-U1-023A-4+B055+L502	R2	10	15.4	F4	15	23.0	G4	3,423	EG
ACB530-U1-031A-4+B055+L502	R3	15	23.0	G4	20	31.0	H4	3,968	EG
ACB530-U1-038A-4+B055+L502	R3	20	31.0	H4	25	38.0	I4	5,253	EG
ACB530-U1-045A-4+B055+L502	R3	25	38.0	I4	30	44.0	J4	5,926	EG
ACB530-U1-059A-4+B055+L502	R4	30	44.0	J4	40	59.0	K4	6,789	EG
ACB530-U1-072A-4+B055+L502	R4	40	59.0	K4	50	72.0	L4	8,664	EG
ACB530-U1-078A-4+B055+L502	R4	50	65.0	L4	60	77.0	M4	10,214	EG
ACB530-U1-097A-4+B055+L502	R4	60	77.0	M4	75	96.0	N4	10,838	EG
ACB530-U1-125A-4+B055+L502	R5	75	96.0	N4	100	124.0	P4	12,983	EG
ACB530-U1-157A-4+B055+L502	R6	100	124.0	P4	125	157.0	Q4	16,615	EG
ACB530-U1-180A-4+B055+L502	R6	125	156.0	Q4	150	180.0	R4	17,900	EG
ACB530-U1-246A-4+B055+L502	R6	150	192.0	R4	200	245.0	S4	23,063	EG
ACB530-PC-316A-4+B055+L502	R8	200	240.0	S4	250	316.0	T4	33,815	EH
ACB530-PC-368A-4+B055+L502	R8	250	302.0	T4	300	368.0	U4	44,587	EH
ACB530-PC-414A-4+B055+L502	R8	300	368.0	U4	350	414.0	V4	46,924	EH
ACB530-PC-486A-4+B055+L502	R8	350	414.0	V4	400	486.0	W4	54,519	EH
ACB530-PC-526A-4+B055+L502	R8	400	477	W4	450	526		63,675	EH
ACB530-PC-602A-4+B055+L502	R8	450	515		500	602	X4	65,500	EH
ACB530-PC-645A-4+B055+L502	R8	500	590	X4	550	645		68,661	EH

## ACB530 +L502 - 600V, 50/60Hz, 3-Phase

Catalog Number	Heavy Duty			Normal Duty		List Price	Mult. Sym.
	Frame	HP	Cont. Amps	HP	Cont. Amps		
ACB530-U1-02A7-6+B055+L502	R2	1.5	2.4	2	2.7	3,250	EG
ACB530-U1-03A9-6+B055+L502	R2	2	2.7	3	3.9	3,343	EG
ACB530-U1-06A1-6+B055+L502	R2	3	3.9	5	6.1	3,519	EG
ACB530-U1-09A0-6+B055+L502	R2	5	6.1	7.5	9.0	3,885	EG
ACB530-U1-011A-6+B055+L502	R2	7.5	9.0	10	11.0	4,272	EG
ACB530-U1-017A-6+B055+L502	R2	10	11.0	15	17.0	4,890	EG
ACB530-U1-022A-6+B055+L502	R3	15	17.0	20	22.0	6,237	EG
ACB530-U1-027A-6+B055+L502	R3	20	22.0	25	27.0	7,069	EG
ACB530-U1-032A-6+B055+L502	R4	25	27.0	30	32.0	8,394	EG
ACB530-U1-041A-6+B055+L502	R4	30	32.0	40	41.0	9,459	EG
ACB530-U1-052A-6+B055+L502	R4	40	41.0	50	52.0	11,308	EG
ACB530-U1-062A-6+B055+L502	R4	50	52.0	60	62.0	12,984	EG
ACB530-U1-077A-6+B055+L502	R6	60	62.0	75	77.0	14,426	EG
ACB530-U1-099A-6+B055+L502	R6	75	77.0	100	99.0	17,154	EG
ACB530-U1-125A-6+B055+L502	R6	100	99.0	125	125.0	21,015	EG
ACB530-U1-144A-6+B055+L502	R6	125	125.0	150	144.0	21,869	EG

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## ACB530 and ACB530 +L502 Option Kits

Catalog Number		List Price	Mult. Sym.
<b>OHD1-01</b>	The 115/230V Digital Input Interface module offers six (6) 115V or three (3) 230V rated relays mounted on a common board used to drive DI1 through DI6 of the ACB530. The 115/230V must be provided by the user.	300	EG
<b>OPMP-01</b>	Control Panel Mounting Platform allows remote mounting of the keypad on a large enclosure or remote panel. The kit maintains UL Type 12 integrity of the mounting location. Adapters, 3 m (10ft) cable and mounting hardware are included in this kit. With this mounting arrangement, the keypad is removable from the panel in a fashion identical to a drive-mounted keypad.	138	ES
<b>OCAT-01</b>	7 foot CAT 5 patch cable allows remote operation of the standard panel or connection of the drive to a Personal Computer using the RJ45/DB9 Adapter which must be purchased separately.	40	ES
<b>ACS/H-CP-EXT</b>	Control Panel Mounting Kit for ACB530 drives allows remote mounting of the ACB530 keypad on the door of an enclosure. The kit includes a 10 ft (3 m) CAT 5 patch cable, gasket for NEMA 12, mounting hardware and drilling template.	55	ES
<b>ACS/H-CP-EXT-IP66</b>	Allows remote mounting of the ACB-CP-BA Operator Panels on a larger NEMA 4X (IP66) enclosure or remote panel. The kit maintains NEMA 4X integrity of the mounting location. All necessary hardware and a mounting template are provided in addition to a 3 m panel cable. When mounted, the operator is not removable from the front of the enclosure. The operator panel must be purchased separately.	63	ES
<b>RDNA-01</b>	The DeviceNet network uses a linear bus topology. Terminating resistors are required on each end of the trunk line. Drop lines as long as 6 meters (20 feet) each are permitted, allowing one or more nodes to be attached. DeviceNet allows branching structures only on drop lines.	465	ES
<b>RPBA-01</b>	PROFIBUS is an open serial communication standard that enables data exchange between all kinds of automation components. The physical transmission medium of the bus is a twisted pair cable (according to the RS-485 standard). The maximum length of the bus cable is 100 to 1200 meters, depending on the selected transmission rate. Up to 31 stations can be connected to the same PROFIBUS system without the use of repeaters.	465	ES
<b>RETA-01</b>	The RETA-01 Adapter module supports the Modbus/TCP and EtherNet/IP network protocols. Modbus/TCP is a variant of the Modbus family of simple, vendor-neutral communication protocols intended for supervision and control of automation equipment. The implementation of the Modbus/TCP server in the RETA-01 module is done according to the Modbus/TCP Specification 1.0. The Modbus/TCP protocol allows the RETA-01 module to be used as an Ethernet bridge to control the drive. The RETA-01 module supports eight simultaneous IP connections. Ethernet/IP is based on the Common Industrial Protocol (CIP), which is also the framework for both the ControlNet and DeviceNet networks. Ethernet/IP uses standard Ethernet and TCP/IP technology to transport CIP communication packets. The module fulfills all requirements for certification as an Ethernet/IP device.	465	ES
<b>RCNA-01</b>	The ControlNet network uses an RG-6 quad shielded cable or fibre with support for media redundancy. The RCNA-01 Adapter module supports only RG-6 quad shielded cable (coax) for the bus connection. ControlNet is flexible in topology options (bus, tree, star) to meet various application needs. The fieldbus speed is 5 Mbits/s. The RCNA-01 ControlNet Adapter module can not originate connections on its own, but a scanner node can open a connection towards it. The ControlNet protocol is implemented according to the ControlNet International specification for a Communication adapter.	595	ES
<b>RECA-01</b>	The RECA-01 module supports EtherCAT® network protocol. EtherCAT® is a Real Time Ethernet technology which aims to maximize the use of the full duplex Ethernet bandwidth. It overcomes the overhead normally associated with Ethernet by employing "on the fly" processing hardware. An EtherCAT® bus consists of a master system and up to 65535 slave devices, connected together with standard Ethernet cabling. The RECA-01 supports 10/100 Mbps transfer rate with network connections made with CAT 5 wiring and RJ-45 connectors. Designed for daisy chain configuration on an EtherCAT® network.	525	ES
<b>3AFE64532871</b>	DriveWindow Light is software designed for online drive commissioning and maintenance purposes. It is possible to adjust parameters, read the actual values and control the drive with DriveWindow Light instead of the drive control panel. It is also possible to follow trends and draw graphs. An RJ45 to DB9 adapter cable (OPCA-02) is provided to permit connection between the panel port and a PC.	275	ES
<b>OPCA-01</b>	This adapter converts the drive's panel port RJ45 (CAT 5 cable connector) plug to a 9 pin RS-232 computer serial port connector for connecting the drive to a PC.	50	ES
<b>FMK-A-R1</b>	Flange Mounting Kits for the ACB530 drives allows mounting the drive with the heatsink external to a 3rd party enclosure. Use of the flange kit requires removal of the drive cover, reducing protection to IP00. R1 through R4 flange kits can be used with 3rd party UL Type 1 & 12 (NEMA 1 & 12) enclosures. R5 and R6 kits provide NEMA 1 protection only.	151	EG
<b>FMK-A-R2</b>		192	
<b>FMK-A-R3</b>		250	
<b>FMK-A-R4</b>		319	
<b>AC8-FLNGMT-R5</b>		359	
<b>AC8-FLNGMT-R6</b>		416	



## Series 5 Micro Inverters



**1/2 thru 2 Hp**  
**1/2 thru 2 Hp**  
**2 thru 3 Hp**  
**1 thru 5 Hp**

**97-132 VAC**  
**195-265 VAC**  
**195-265 VAC**  
**323-529 VAC**

**1 Phase - 50/60 Hz**  
**1 Phase - 50/60 Hz**  
**3 Phase - 50/60 Hz**  
**3 Phase - 50/60 Hz**

**Applications:** Variable torque, constant torque or constant horsepower applications. New installations, replacements and original equipment manufacturers (OEM).

**Features:** NEMA 4X or open chassis mount standard.<sup>(1)</sup> Output frequency 0.25 to 120 Hz with peak overload capacity of 150%. Separate accel/decel rates and controlled reversing.

### Design Specifications

- PWM output
- Accel/decel rate adjustment
- Controlled reversing
- Adjustable current limit
- I<sup>2</sup>t motor overload protection
- Adjustable slip compensation
- Min/max output frequency adjustment
- Selectable auto/manual restart

### Operator Interface-Enclosed Units

- Start/Stop command
- NEMA 4X enclosure <sup>(1)</sup>
- Power on/off
- Rotary speed control
- Fwd/Rev optional
- Auto/Manual optional

### Environmental and Operating Conditions

- Input voltage:
  - 1 phase 115 VAC ±15%,
  - 1 phase 230 VAC ±15%
  - 3 phase 230V ±15%
  - 3 phase 460 ± 15%
- Input frequency
  - 50 or 60Hz ±10%
- Service factor - 1.0
- Duty - continuous
- Humidity - 90% max RH non-condensing
- Altitude - 3300 feet max without derate
- Chassis mount or NEMA 4X enclosure as standard <sup>(1)</sup>

### Protective Features

- Selectable automatic restart at momentary power loss
- Power indicator
- Status indicator
- Adjustable time base overload
- Electronic in rush current limiting

<b>Output Ratings</b>	Overload Capacity	150% for 120 seconds		
	Voltage - 3 Phase	0-230 VAC (RMS), 0-460 V AC (RMS)		
<b>Control Spec</b>	Control Method	Sinewave carrier input, PWM output		
	PWM Frequency	Rated 8.0 kHz		
	V/Hz Ratio	Factory set for optimum output		
	Torque Boost	Factory set for 60 Hz motors. Adjustable 6-30% for 50 Hz motors	Adjustable 0-30% max	
	Current Limit	Adjustable 63 to 188% of rated output	0-200%	
	Frequency Setting	0-5 VDC, 0-10 VDC with external resistor network, non-isolated input		
	Accel/Decel	Separate accel/decel rates, 0.3-20 sec for 60 Hz motors	0.3-20 Sec	
<b>Protective Functions</b>	Inverter Trip	Over voltage, over current, under voltage, motor overload, output short circuit		
	Status Indicators	Tricolor LED indicator for status and green LED indicator for power on		
	Short Circuit	Output phase to phase		
<b>Ambient Conditions</b>	Temperature	0-45°C	0-50°C	
	Cooling	Convection 1/2 - 2 Hp; Forced Air 3-5 Hp	Convection	
	Enclosure	Open chassis	NEMA 4X (IP65)	

(1) A NEMA 1 enclosure is available as Catalog Number ID5601-EO. The dimensions and mounting match the BC140 DC drive.

## Series 5 Micro Inverters

Hp/kW	Input Voltage	Output Current		Catalog Number	List Price	Mult. Sym.	Approx. Shpg. Wgt.	Dimensions (inches)				
		Cont.	120 Sec.					Outside			Mounting	
								H	W	D	H	W
<b>Open Chassis Mount – Single Phase Input</b>												
0.5/0.37	115/230	2.4	3.6	<b>ID56F50-CO</b> ◊	395	E9	4	4.3	3.9	2.75	3.8	2.5
1/0.75	115/230	4	6	<b>ID5601-CO</b> ◊	478	E9	5	4.3	3.9	5	3.87	3.7
1.5/1.13-2/1.5 <sup>(2)</sup>	115/230	5.5	8.25	<b>ID5602-CO</b> ◊	621	E9	6	4.67	5.58	5.7	3.87	2.5
<b>Open Chassis Mount – Three Phase Input</b>												
2/1.5	230	6.7	10.1	<b>ID5202-CO</b> ◊	753	E9	5	8.55	4.68	4.5	6.5	3.9
3/2.25	230	8.8	13.2	<b>ID5203-CO</b> ◊	793	E9	5	8.55	4.68	4.5	6.5	3.9
1/0.75	460	2.5	3.75	<b>ID5401-CO</b> ◊	820	E9	5	8.55	4.68	4.5	6.5	3.9
2/1.5	460	4	6	<b>ID5402-CO</b> ◊	842	E9	5	8.55	4.68	4.5	6.5	3.9
3/2.25	460	4.5	6.75	<b>ID5403-CO</b> ◊	866	E9	5	8.55	4.68	4.5	6.5	3.9
5/3.7	460	7.6	11.4	<b>ID5405-CO</b> ◊	1,104	E9	5	8.55	4.68	4.5	6.5	3.9
<b>NEMA 1 Enclosed - Single Phase Input</b>												
1/0.75	115/230	4	6	<b>ID5601-EO</b> ◊	576	E9	6	7.13	6.25	2.75	—	—
<b>NEMA 4X Enclosed – Single Phase Input</b>												
1/0.75	115/230	3.6	5.4	<b>ID5601-WO</b> ◊	763	E9	6	9.53	5.51	5.86	8.85	—
1/0.75	115/230	3.6	5.4	<b>ID5601-BO</b> ◊	715	E9	6	9.53	5.51	5.86	8.85	—
1.5/1.13-2/1.5 <sup>(2)</sup>	115/230	5.5/6.7	8.3/10.0	<b>ID5602-WO</b> ◊	1,076	E9	6	9.8	7.55	7.25	9.25	1
1.5/1.13-2/1.5 <sup>(2)</sup>	115/230	5.5/6.7	8.3/10.0	<b>ID5602-BO</b> ◊	1,015	E9	8	9.8	7.55	7.25	9.25	1
<b>NEMA 4X Enclosed – Three Phase Input</b>												
3/2.25	230	9	13.5	<b>ID5203-WO</b> ◊	1,219	E9	6	9.8	7.55	7.25	9.25	1
3/2.25	230	9	13.5	<b>ID5203-BO</b> ◊	1,159	E9	6	9.8	7.55	7.25	9.25	1
3/2.25 <sup>(1)</sup>	460	4.6	6.9	<b>ID5403-WO</b> ◊	1,291	E9	6	9.8	7.55	7.25	9.25	1
3/2.25 <sup>(1)</sup>	460	4.6	6.9	<b>ID5403-BO</b> ◊	1,230	E9	6	9.8	7.55	7.25	9.25	1
5/3.7	460	8.3	12.45	<b>ID5405-WO</b> ◊	1,373	E9	6	9.8	7.55	7.25	9.25	1
5/3.7	460	8.3	12.45	<b>ID5405-BO</b> ◊	1,315	E9	6	9.8	7.55	7.25	9.25	1

(1) Jumper configurable for 1 HP and 2 HP

(2) ID 5602 is rated 1.5 MP Max with 115 VAC input and 2 HP Max with 230 VAC input

**NOTE:** -WO is white in color -BO is black in color; -EO is NEMA 1.

◊ Stock Model Numbers

## Series 5 Micro Inverter Optional Accessories

Catalog Number	Description	List Price	Mult. Sym.	Approx. Shpg. Wgt.
◊ <b>ID5RGA-1</b>	Dynamic braking kit for open chassis 115/230V 1/2 Hp and 1 Hp rated controls	214	E9	3
◊ <b>ID5SI-1</b>	Signal isolator for open chassis units Provides isolation for up to 24 VDC and 4-20mA command signals and run relay output. Select relay as N.O. or N.C. contacts rated at 125 VAC @ 0.5A	213	E9	4
◊ <b>ID5SI-2</b>	Signal isolator for NEMA 4X enclosed units Provides isolation for up to 24 VDC and 4-20mA command signals and run relay output. Select relay as N.O. or N.C. contacts rated at 125 VAC @ 0.5A	240	E9	1
◊ <b>ID5AMS-1</b>	Auto/Manual selection switch for NEMA 4X enclosed units Allows selection of remote or on-board speed commands	59	E9	1
◊ <b>ID5FRS-1</b>	Forward/Stop/Reverse selection switch for NEMA 4X enclosed units Allows selection of forward or reverse motor direction commands	33	E9	1
◊ <b>ID5FRS-2</b>	Forward/Stop/Reverse selection switch for NEMA 1 enclosed units. Allows selection of forward or reverse motor direction commands.	33	E9	1

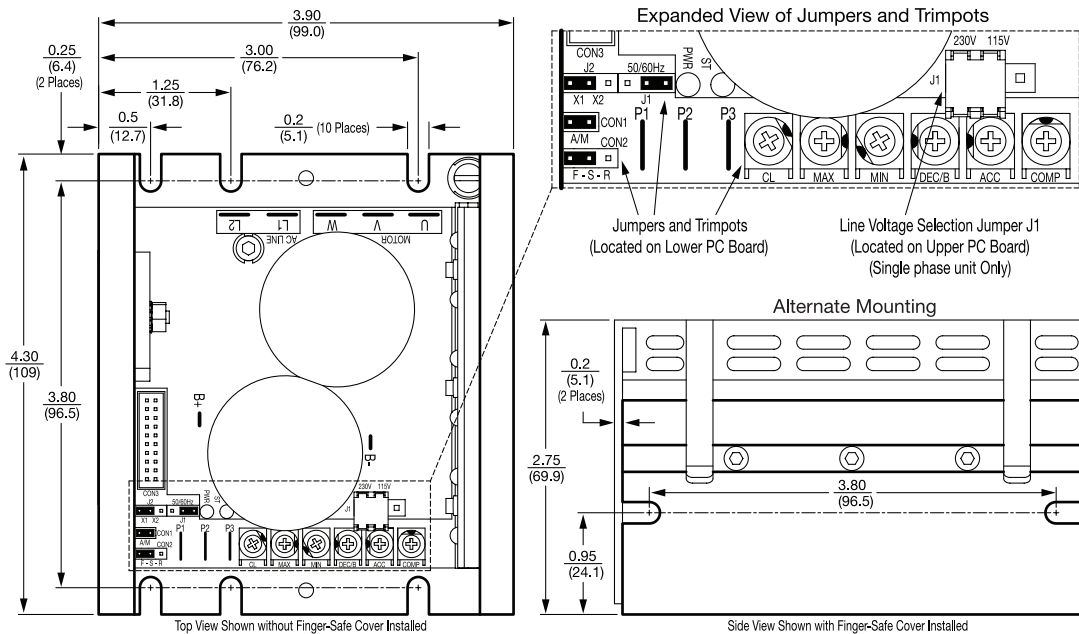
◊ Stock Model Numbers

## Series 5 Micro Inverters

Dimensions: in (mm)

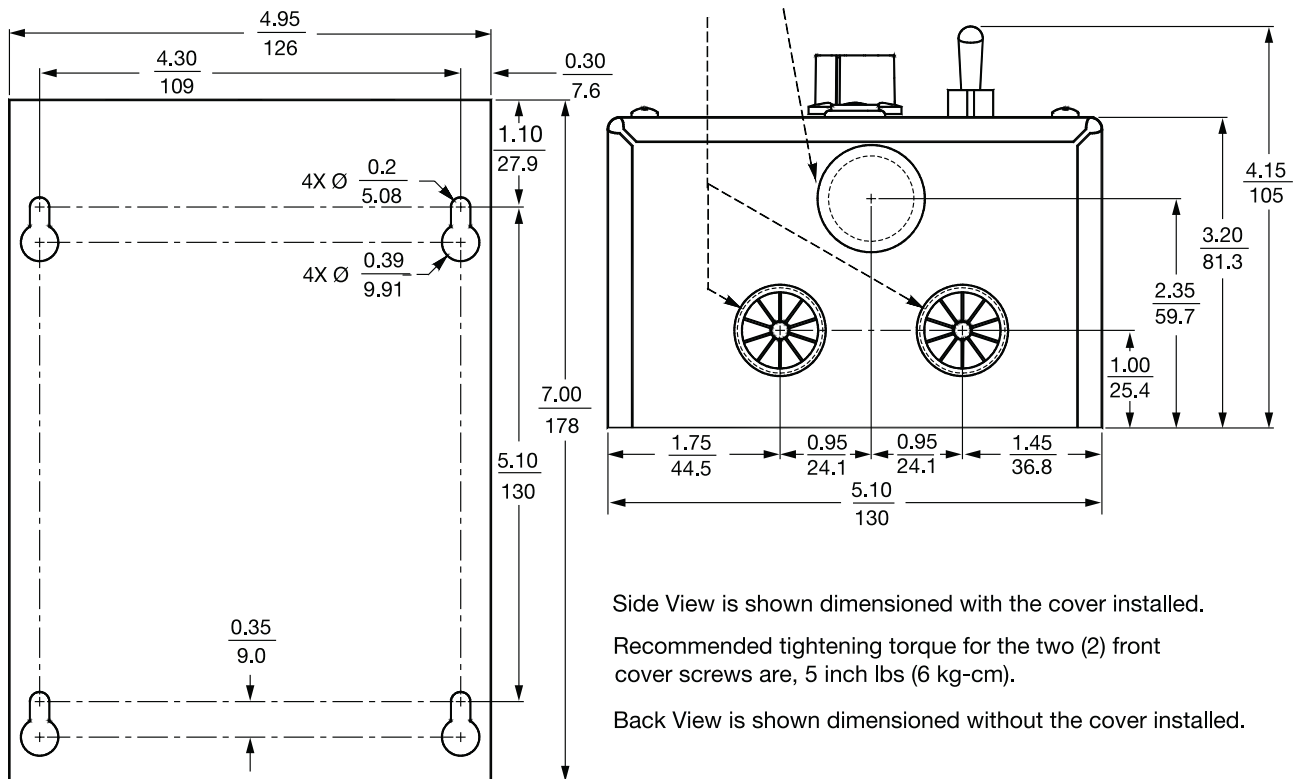
### Series 5 Micro Inverter – Open Chassis

#### Dual Voltage 115/230V Series 5 – 1/2 Hp



### Series 5 Micro Inverter – NEMA 1

“Knockouts” for Standard 3/4-Inch Fittings. Feed-Through Bushing.

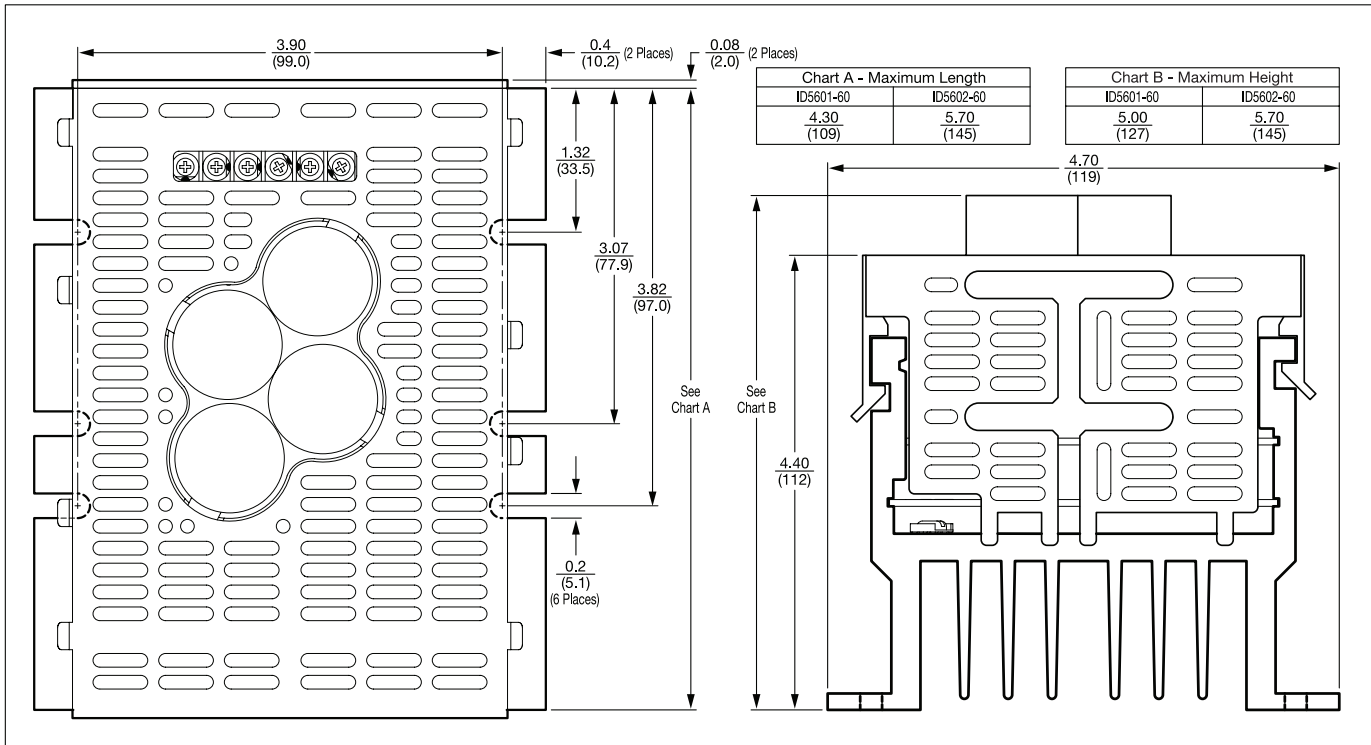


## Series 5 Micro Inverters

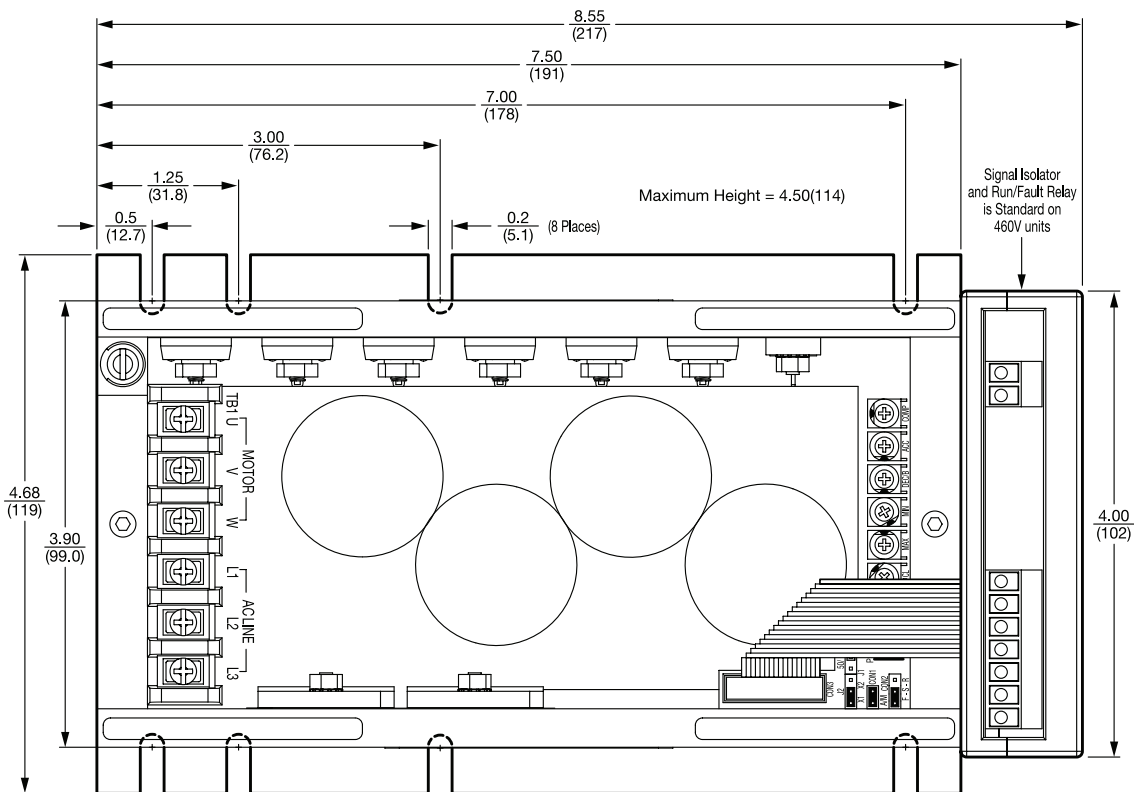
Dimensions: in (mm)

### Series 5 Micro Inverter – Open Chassis

#### Dual Voltage 115/230V Series 5 – 1 & 2 Hp



### Series 5 – All Three Phase

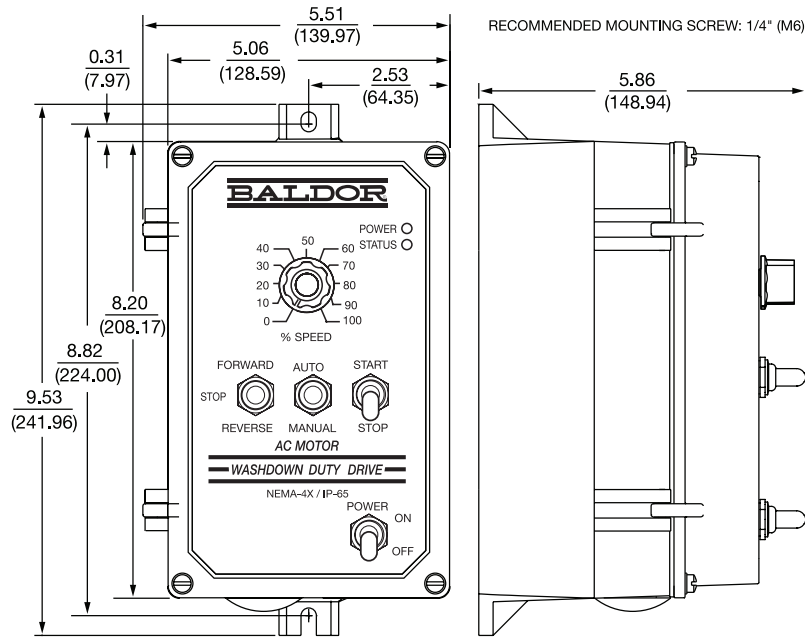


## Series 5 Micro Inverters

Dimensions: in (mm)

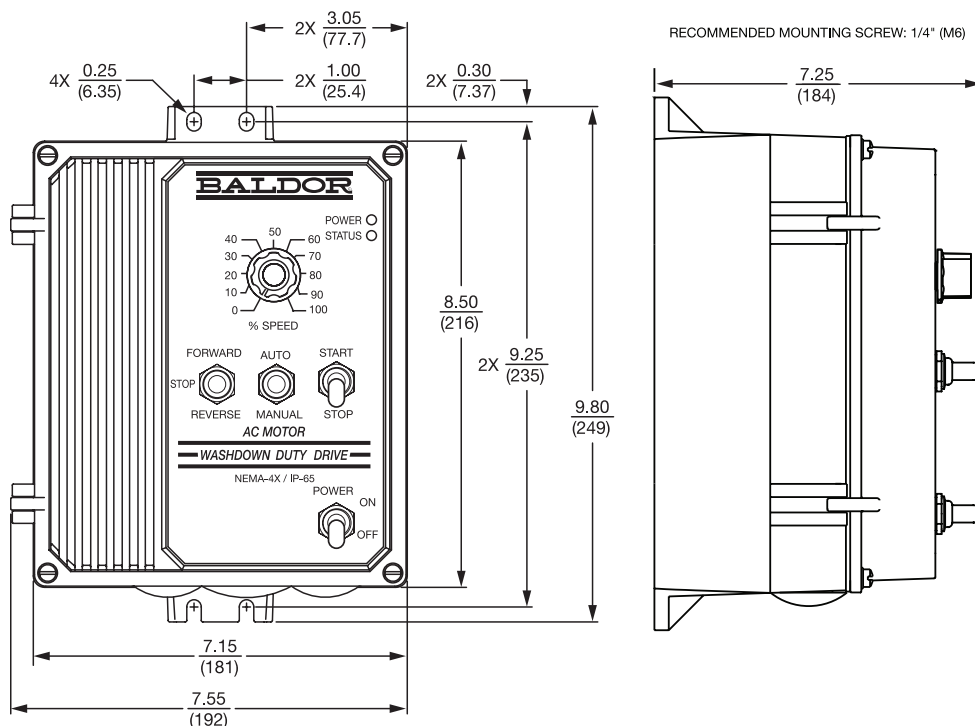
### Series 5 Micro Inverter – Washdown

1 Hp



SHOWN WITH OPTIONAL AUTO/MANUAL AND FORWARD-STOP-REVERSE

2 thru 5 Hp



**NOTE:** Dimensions for reference only. Contact a Baldor District Office or [www.baldor.com](http://www.baldor.com) for the detailed dimension drawing for your specific catalog number.

## NEMA 1 Enclosed DC Controls for PMDC and Shunt Wound Motors

1/100 thru 2 Hp

115/230 VAC Single Phase 50/60 Hz

**Applications:** General purpose industrial use with permanent magnet or shunt wound DC motors.

**Features:** SCR controls have a free-wheeling diode and feature adjustable accel, decel, current limit, IR comp, min. and max speed pots to match applications. The anti-demag feature protects PM motors and helps protect the SCR power bridge against direct shorts. The controls have US and Canadian UL component recognition.

A Plug-in Horsepower Resistor<sup>®</sup> and armature fuse must be ordered and installed in BC138, BC139, BC140, BC140-FBR, BC141 and BC142.



BC140 ENCLOSED (NEMA 1)



BC138 ENCLOSED (NEMA 1)

Hp Range	Catalog Number	Description Input Voltage / Max. Hp	List Price	Mult. Sym.	Input Voltage	Input Current (AC Amps) (d)	Armature Voltage	Cont. Output Current (DC Amps) (d)	Ap'x Shpg. Wgt.
1/100-1/3	<b>BC138</b>	◇ NEMA 1 Enclosed, Single Voltage, 1/100 to 1/3HP	218	E9	115	5.0	90	3.5	1
1/50-3/4	<b>BC139</b>	◇ NEMA 1 Enclosed, Dual Voltage, 1/50 to 3/4HP	218	E9	230	5.0	180	3.5	1
1/100-2 (a) (b)	<b>BC140</b>	◇ NEMA 1 Enclosed, Dual Voltage, 1/100 to 2HP	369	E9	115/230	16.0	90/180	12.0	3
1/100-2 (a) (c)	<b>BC140-FBR</b>	◇ BC140 with BC144 Fwd/Brk/Rev Switch Factory Installed	510	E9	115/230	16.0	90/180	12.0	3

**NOTE:** (a) 1 Hp at 115V and 2 Hp at 230V requires BC143 heatsink kit. FBR=Forward/Brake/Reverse.  
 (b) BC24-LF, BC143 and BC144 options available for BC140.  
 (c) BC24-LF and BC143 only options available for BC140-FBR.  
 (d) Amps Cont. rating with BC143 heatsink installed. (Where applicable.)  
 ◇ Stock Model Number

## DC Control Accessories

Catalog Number	Description	List Price	Mult. Sym.	Approx. Shpg. Wgt.
<b>BC24-LF</b>	◇ Ac Line Filter for use with CE Applications	75	E9	1
<b>BC143</b>	◇ External Heatsink Kit (BC140, BC140-FBR, BC141, BC142, BC204)	72	E9	2
<b>BC144</b>	◇ Forward-Brake-Reverse Switch Kit for BC140	124	E9	1
<b>BC145</b>	◇ Signal Isolator Board	211	E9	1
<b>BC147</b>	◇ Barrier Terminal Board (BC141 and BC142)	30	E9	1
<b>BC148</b>	◇ Replacement Potentiometer Kit (5K ohm)	13	E9	1
<b>BC149</b>	◇ Knob and Dial Kit	15	E9	1
<b>BC152</b>	◇ Barrier Terminal Board With Signal Isolator (BC141 and BC142)	193	E9	1
<b>BC218</b>	◇ DIN-rail mounting kit for BC141, BC142 or BC204	36	E9	1

**NOTE:** BC24-LF is an AC line filter required for applications where CE is required if the control is not filtered elsewhere in the application. This filter may be used on most 115 or 230 VAC, single phase applications where CE is required.  
 ◇ Stock Model Numbers

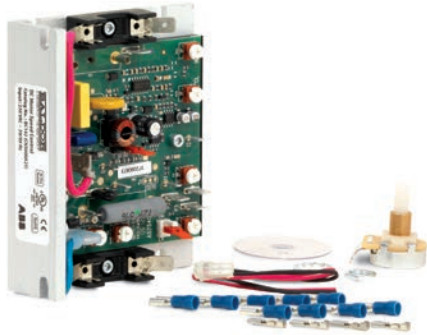
## Chassis Mount DC Controls

1/100 thru 1.5 Hp  
1/50 thru 5 Hp

115 VAC Single Phase 50/60 Hz  
230 VAC Single Phase 50/60 Hz

**Applications:** General purpose industrial use with permanent magnet or shunt wound DC motors.

**Features:** Chassis-mount SCR controls have a free-wheeling diode and feature adjustable accel, decel, current limit, IR comp, min and max speed pots to match applications. The anti-damag feature protects PM motors and helps protect the SCR power bride against direct shorts. The controls have US and Canadian UL component recognition.



BC141 / BC142

Hp Range	Catalog Number	Description Input Voltage / Max. Hp	List Price	Mult. Sym.	Input Voltage	Input Current (AC Amps) (d)	Armature Voltage	Cont. Output Current (DC Amps) (d)	Ap'x Shpg. Wgt.
1/100-1 1/2 (a)	<b>BC141</b> ◊	Chassis Mount, Single Voltage, 1/100 to 1 1/2HP	202	E9	115	24.0	90	16.0 (b)	1
1/100-1 1/2	<b>BC141-SIH</b>	BC141 with BC152 Signal Isolator and BC143 Heatsink factory installed	477	E9	115	24.0	90	16.0	2
1/100-3 (a)	<b>BC142</b> ◊	Chassis Mount, Single Voltage, 1/100 to 3HP	202	E9	230	24.0	90	16.0 (b)	2
1/100 - 3	<b>BC142-SIH</b>	BC142 with BC152 Signal Isolator and BC143 Heatsink factory installed	499	E9	230	24.0	90	16.0	2
1/100-1 1/2 (a) 1/50-3	<b>BC142-5</b> ◊	Chassis Mount, Dual Voltage, 1/100 to 3HP, without fuse holders	225	E9	115/230	24.0	90/180	16.0 (b)	1
1/100 - 1 1/2 (a) 1/50 - 3	<b>BC142-6</b> ◊	Chassis Mount, Dual Voltage, 1/100 to 3HP	224	E9	115/230	24.0	90/180	16.0 (b)	1
1/100 - 1 1/2 1/50 - 3	<b>BC142-6-SIH</b>	BC142-6 with BC152 signal isolator board and BC143 Heatsink factory installed	499	E9	115/230	24.0	90/180	16.0	1
5	<b>BC155</b> ◊	Chassis Mount, Single Voltage, 5 Hp	660	E9	230	38.0	180	26.0	5

**NOTE:** Above controls include 5k speed potentiometer.

(a) 1-1.5 Hp at 115 Volts and 2-3 Hp at 230 Volts, requires BC143 Heatsink kit. BC155 includes integral heatsink.

(b) BC155 includes integral heatsink. No fuses are needed. See specifications at end of catalog section.

(d) Amps Cont. rating with BC143 heatsink installed. (Where applicable.)

◊ Stock Model Number

## Plug-in Horsepower Resistor and Fuse Kit



A Plug-in Horsepower Resistor® and armature fuse must be ordered and installed in BC138, BC139, BC140, BC140-FBR, BC141 and BC142.

These should be selected based on the motor's **rated current**. The price of the Hp resistor and fuse is included in the BC138, BC139, BC140, BC140-FBR, BC141 and BC142 list price. See selection below for catalog number.

Spare resistor kits are available for \$11.00 list, **E9** multiplier.

Motor Hp	Armature Voltage		Plug-In Hp Resistor Resistance Value (Ohms)	Catalog Number	Approx. DC Current (Amps)	DC Fuse Rating For Armature
	90-130V	180V				
1/100		1/50	1.0	<b>BR1000</b> ◇	0.20	0.5
1/50		1/25	0.51	<b>BR0510</b> ◇	0.30	0.5
1/30		1/15	0.35	<b>BR0350</b> ◇	0.33	0.5
1/20		1/10	0.25	<b>BR0250</b> ◇	0.5	0.75
1/15		1/8	0.25	<b>BR0251</b> ◇	0.8	1.0
1/12		1/6	0.18	<b>BR0180</b> ◇	0.85	1.25
1/8		1/4	0.1	<b>BR0100</b> ◇	1.3	2.0
1/6		1/3	0.1	<b>BR0101</b> ◇	2.0	2.5
1/4		1/2	0.05	<b>BR0050</b> ◇	2.5	4.0
1/3		3/4	0.035	<b>BR0035</b> ◇	3.3	5.0
1/2		1	0.025	<b>BR0025</b> ◇	5.0	8.0
3/4		1 1/2	0.015	<b>BR0015SP</b> ◇	7.5	12.0
1 (a)		2 (a)	0.01	<b>BR0010SP</b> ◇	10	15.0
1 1/2 (a)		3 (a)	0.006	<b>BR0006</b> ◇	15	25.0 (b)

**NOTE:**

(a) External Heatsink required.

(b) Also used with AC Line Fuse. For AC line fuse rating see manual.

◇ Stock Model Number

◇ Stock Model Numbers



## NEMA 4X DC Control

1/4 thru 2 Hp  
3 Hp

115/230 VAC  
230 VAC

Single Phase 50/60 Hz  
Single Phase 50/60 Hz



BC254-FBR

**Applications:** Constant torque, new or replacement.

**Features:** BC154, BCWD140 and BC160 are non-regen controls with reversal by means of switching the armature leads (BCWD140 has a forward/brake/reverse switch mounted). BC254 is a line regenerative SCR control that can drive the motor to a timed stop. BC354 is a PWM control that provides low-ripple DC power to the motor allowing more Hp when used with a 130 or 260 VDC motor. All offer a choice of armature or tachometer feedback and a speed or torque mode. No Hp resistors are needed for these controls, current is jumper selectable. BC154, BC160, BC254 and BC354 are painted black and come with a start-stop switch. BCWD140 comes with white epoxy paint and also forward/brake/reverse and run-jog switches. See pages 110-111 for features.

Hp Range	Catalog Number	Description Input Voltage / Max. Hp	List Price	Mult. Sym.	Input Voltage	Input Current (AC Amps) (d)	Armature Voltage	Cont. Output Current (DC Amps) (d)	Ap'x Shpg. Wgt.
<b>NEMA 4X SCR</b>									
1/4-2	<b>BC154</b> ◊	NEMA 4X Enclosed, Dual Voltage, 1/4 to 2 Hp	467	E9	115/230	15.0	90/180	10.2	5
	<b>BC154-P</b> ◊	BC154 with POWER SWITCH instead of START/STOP SW.	467	E9	115/230	15.0	90/180	10.2	5
	<b>BC154-R</b> ◊	BC154 with BC156 - FBR Switch factory installed	616	E9	115/230	15.0	90/180	10.2	5
	<b>BC154-SI</b> ◊	BC154 with BC145 Signal Isolator Board and BC158 Auto/Man Switch Kit factory installed	751	E9	115/230	15.0	90/180	10.2	5
3	<b>BC160</b> ◊	NEMA 4X Enclosed, Dual Voltage, 1.5 Hp to 3 Hp	537	E9	115/230	22.0	90/180	15.0	3
<b>NEMA 4X Washdown Duty SCR</b>									
1/4-2	<b>BCWD140</b> ◊	NEMA 4X Enclosed, Dual Voltage, White Epoxy Coating, 1 to 2HP	625	E9	115/230	15.0	90/180	10.2	6
<b>NEMA 4X Washdown Duty Line Regen SCR</b>									
1/8-2	<b>BC254</b> ◊	NEMA 4X Enclosed, Dual Voltage, 1/8 to 2 Hp (a)	673	E9	115/230	15.0	90/180	11.0	5
	<b>BC254-FBR</b> ◊	BC254 with BC253 FWD-BRAKE-REV Switch factory installed	706	E9	115/230	15.0	90/180	11.0	5
<b>NEMA 4X Washdown Duty PWM DC (b)</b>									
1/4-2	<b>BC354</b> ◊	NEMA 4X Enclosed, Dual Voltage, 1/4 to 2 Hp	723	E9	115/230	11.5	90/180	7.5	5

**NOTES:**

(a) See next page for BC254 accessories.

(b) Output current is 7.5 amps; Output voltage is 130VDC for 115VAC input - 260VDC for 230VAC input. Motors designed for these voltages will give the best performance.

(d) Amps Cont. rating with BC143 heatsink installed. (Where applicable.)

◊ Stock Model Number

## DC SCR NEMA 4X DC Control Accessories

Catalog Number	Description	List Price	Mult. Sym.	Approx. Shpg. Wgt.
<b>BC153</b> ◊	Electronic Forward-Dynamic Brake-Reverse Kit for BC154, BC354	223	E9	1
<b>BC156</b> ◊	Mechanical Forward-Dynamic Brake-Reverse Switch for BC154, BC354	145	E9	1
<b>BC157</b> ◊	Run/Jog switch for BC154 & BC160, BC354	27	E9	1
<b>BC158</b> ◊	Auto/Manual Installation Kit for BC145 signal isolator for BC154, BC160, BC354	60	E9	1
<b>BC159</b> ◊	AC Line Switch Kit for BC154, BCWD140, BC254, BC354	32	E9	1
<b>BC145</b> ◊	Signal Isolator Board	211	E9	1

**NOTE:** BC159 AC Line Switch Kit is factory installed on BC154, BC164, BCWD140, BC354. Listed here as replacement or spare parts.

◊ Stock Model Numbers

## Line Regenerative DC Control

1/4 thru 3 Hp  
5 Hp

115/230 VAC  
230 VAC

Single Phase 50/60 Hz  
Single Phase 50/60 Hz

**Applications:** Frequent start/stop/reverse applications or where controlled braking is required.

**Features:** Single phase line regenerative open chassis control to operate permanent magnet or wound field DC motors. These line regen controls are ideal for applications with overhauling loads. In torque mode, it can be used for tensioning applications. Several accessory boards are available to further customize the control. Includes 5k speed potentiometer. Jumper selectable current settings.



BC254-FBR



BC200 / BC201



BC204

Hp Range	Catalog Number	Description Input Voltage / Max. Hp	List Price	Mult. Sym.	Input Voltage	Input Current (AC Amps) (d)	Armature Voltage	Cont. Output Current (DC Amps) (d)	Ap'x Shpg. Wgt.
<b>Line Regen SCR</b>									
1/8-2 (a)	<b>BC204</b> ◇	Chassis Mount, Dual Voltage, 1/8 to 2 Hp	377	E9	115/230	16.0	90/180	11.0 (b)	3
	<b>BC204-BPSI</b> ◇	BC204 with BC215 Bi-polar Signal Isolator factory installed	487	E9	115/230	16.0	90/180	11.0 (b)	3
1/4-2	<b>BC200</b> ◇	Chassis Mount, Dual Voltage, 1/4 to 2 Hp	704	E9	115/230	16.0	90/180	11.0	4
1/4-3	<b>BC201</b> ◇	Chassis Mount, Dual Voltage, 1/4 to 3 Hp	836	E9	115/230	16.0	90/180	16.0	1
5	<b>BC203</b> ◇	Chassis Mount, Single Voltage, 5Hp	1,052	E9	230	38.0	90/180	25.0	10
<b>NEMA 4X Washdown Duty Line Regen SCR</b>									
1/8-2	<b>BC254</b> ◇	NEMA 4X Enclosed, Dual Voltage, 1/8 to 2 Hp (a)	673	E9	115/230	15.0	90/180	11.0	5
	<b>BC254-FBR</b> ◇	BC254 with Power On/Off Switch instead of Start/Stop switch, and BC253. Forward-Brake-Reverse Switch factory installed	706	E9	115/230	15.0	90/180	11.0	5

**NOTE:**

- (a) 1 Hp at 115 volts and 2 Hp at 230 volts requires BC143 heatsink kit.
- (b) Amps Cont. rating with BC143 heatsink installed.
- (d) Amps Cont. rating with BC143 heatsink installed. (Where applicable.)
- ◇ Stock Model Number

## Line Regenerative DC Control Accessories

Catalog Number	Description	List Price	Mult. Sym.	Approx. Shpg. Wgt.
<b>Accessories for BC200, BC201 and BC203</b>				
<b>BC212</b> (a) ◇	Bipolar signal isolator board	216	E9	1
<b>Accessories for BC204</b>				
<b>BC143</b> ◇	External Heatsink Kit	72	E9	2
<b>BC215</b> (a) ◇	Bipolar signal isolator board	100	E9	3
<b>BC216</b> ◇	Multispeed board for BC204	77	E9	1
<b>BC218</b> ◇	DIN rail mounting kit	36	E9	1
<b>Accessories for BC254</b>				
<b>BC245</b> (a) ◇	Bipolar signal isolator for BC254	213	E9	1
<b>BC253</b> ◇	Forward-Stop-Brake-Reverse Switch for BC254	27	E9	1
<b>BC258</b> ◇	Auto-manual Switch for BC254	60	E9	1
<b>BC259</b> ◇	AC Line Switch for BC254	27	E9	5

**NOTE:**

- (a) Voltage following mode only.
- ◇ Stock Model Numbers

## NEMA Enclosed DC Control Specifications

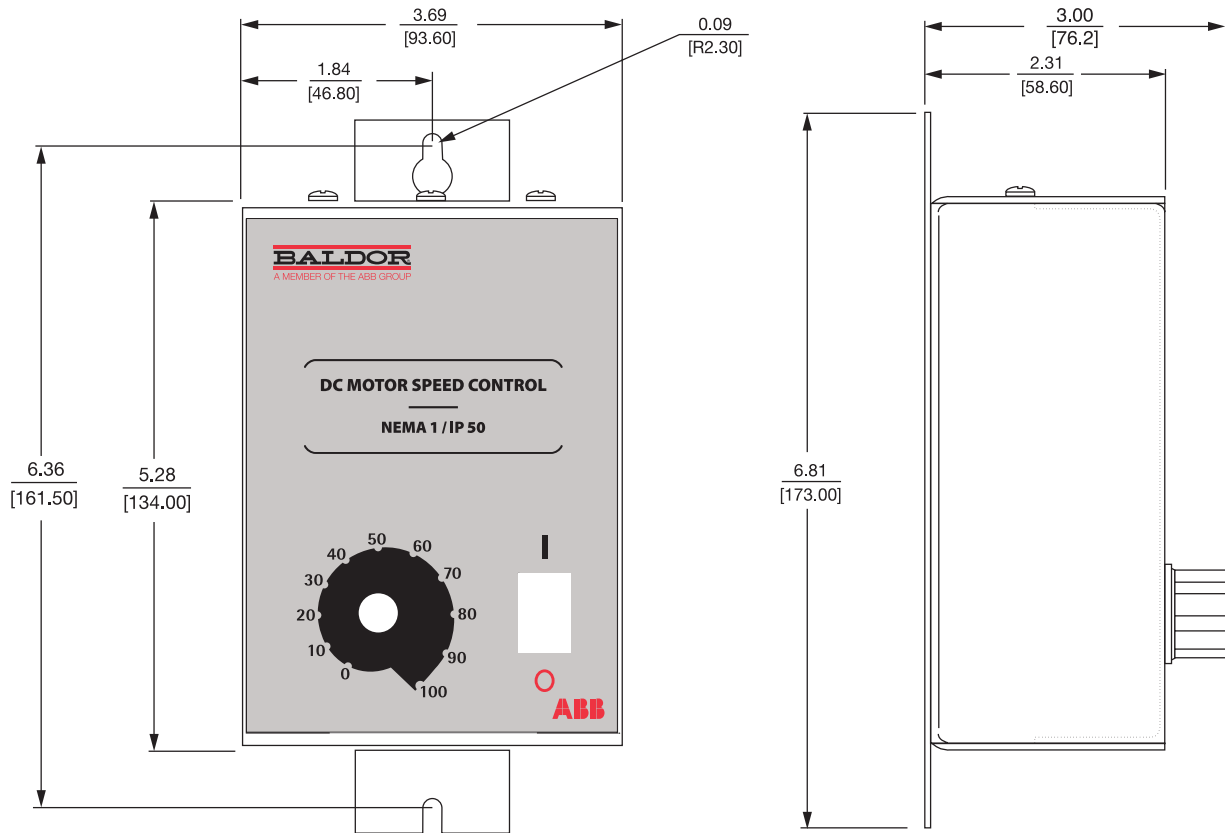
Features	Catalog Number								
	BC138	BC139	BC140 or BC140-FBR		BC154	BC160	BCWD140		
Enclosure	NEMA 1	NEMA 1	NEMA 1		NEMA 4X	NEMA 4X	NEMA 4X Washdown		
Control Type	NEMA K	NEMA K	NEMA K		NEMA K	NEMA K	NEMA K		
AC Line Input	115	230	115	230	115	230	115	230	
DC Armature Voltage Nominal	90	180	90	180	90	180	90	180	
Shunt Field Power Supply Voltage - DC	50/100	100/200	50/100	100/200	50/100	100/200	50/100	100/200	
Rated Horsepower Range	1/100 - 1/3	1/50-3/4	1/100-1	1/50-2	1/50-1	1/25-2	3	1/50-1	1/25-2
External Heat Sink (BC143) Required	No	No	1 Hp	2Hp	Not Required		Not Required	Not Required	
Speed Range (Motor May Be 20: 1 Constant Torque)	50:1	50:1	50:1		50:1		50:1	50:1	
Adjustable Acceleration Time	Yes	Yes	Yes		Yes		Yes	Yes	
Adjustable Deceleration Time	Yes	Yes	Yes		Yes		Yes	Yes	
Minimum Speed Adjustable	Yes	Yes	Yes		Yes		Yes	Yes	
Maximum Speed Adjustable	Yes	Yes	Yes		Yes		Yes	Yes	
Current Limit Adjustable	Yes	Yes	Yes		Yes		Yes	Yes	
Adjustable Current Limit and Trip Out Type	No	No	No		Timed or Non-Timed		Timed or Non-Timed	Timed or Non-Timed	
Control Of Speed or Torque	Speed	Speed	Speed		Speed or Torque		Speed or Torque	Speed or Torque	
IR Compensation Adjustable	Yes	Yes	Yes		Yes		Yes	Yes	
Tachometer Feedback Input	No	No	No		Yes		Yes	Yes	
Plug-In Horsepower Resistor ®	Required	Required	Required		N/A		N/A	N/A	
UL & cUL Listing, CE	Yes	Yes	Yes		Yes		Yes	Yes	
AC Line Fuse	Included	Included	Included		External		External	External	
DC Armature Fuse	Included with Hp Resistor	Included with Hp Resistor	Included with Hp Resistor		Not Supplied with Control		External	Not Supplied with Control	
<b>Options</b>									
AC Line Switch	Standard	Standard	Standard		Opt - BC159		No	Opt-BC159	
Forward/Brake/Reverse Switch									
Mechanical	No	No	Opt-BC144		Opt-BC156		No	Standard	
Electronic	No	No	No		Opt-BC153		No	Opt-BC153	
Run/Jog Switch	No	No	No		Opt-BC157		Opt-BC157	Standard	
Input Signal Following Mode Capability									
Current (1-5, 4-20, 20-50mA)	No	No	External Mount		Internal Mount		Internal Mount	Internal Mount	
Voltage (0-25, 0-120, 0-550 VDC)			Opt-BC145		Opt-BC145		Opt-BC145	Opt-BC145	
Electrical Connection To Control Barrier Terminal Block	Standard	Standard	Standard		Standard		Standard	Standard	
Current Sensing Relay/Overload Protector	No	No	Opt - BC146 Ext. Mount		Standard		Standard	Standard	
AC Line Filter for CE	Opt-BC24-LF	Opt-BC24-LF	Opt-BC24-LF		Opt-BC24-LF		Opt-BC24-LF	Opt-BC24-LF	

## Chassis Mount DC Control Specifications

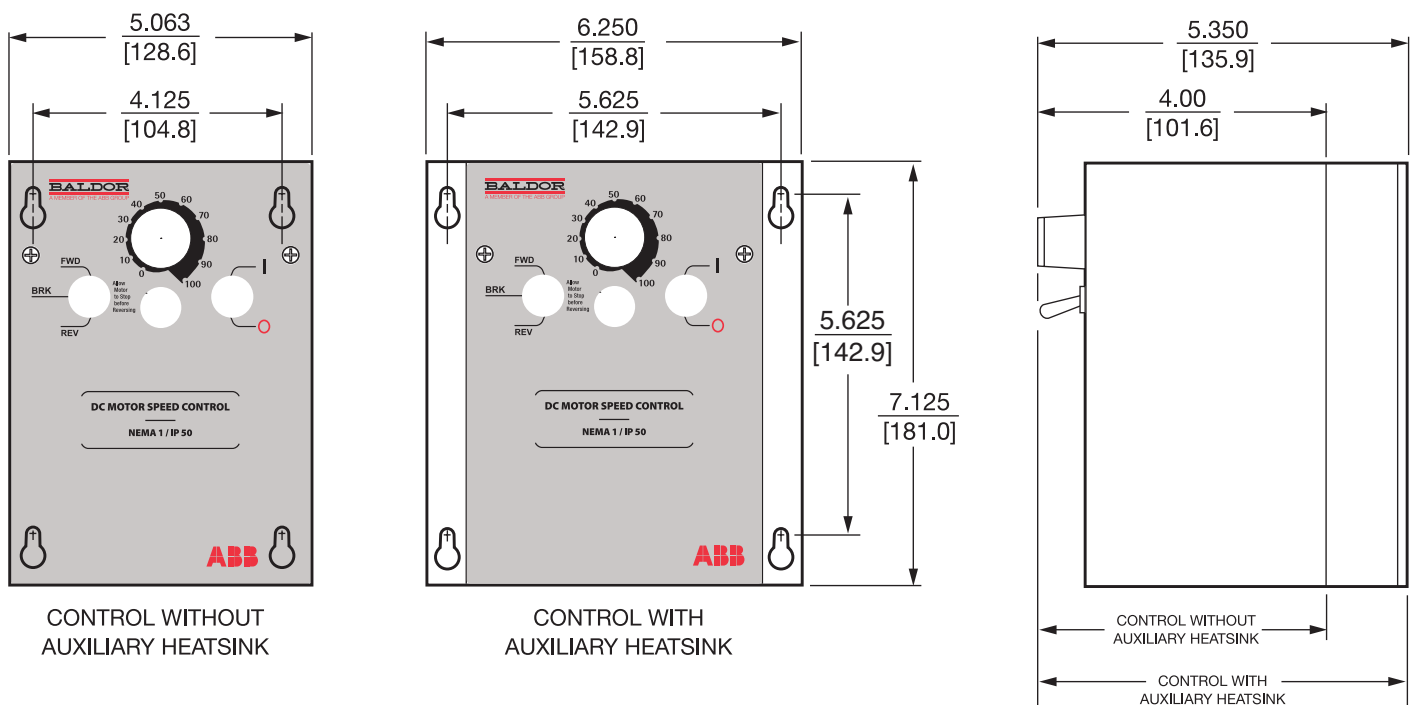
Features	Catalog Number								
	BC141	BC142	BC142-6	BC155	BC204	BC200	BC201	BC203	
Enclosure	Chassis	Chassis	Chassis	Chassis	Chassis	Chassis	Chassis	Chassis	
Control Type	NEMA K	NEMA K	NEMA K	NEMA K	Regenerative	Regenerative	Regenerative	Regenerative	
AC Line Input	115	230	115 230	230	115 230	115 230	115 230	230	
DC Armature Voltage Nominal	90	180	90 180	180	90 180	90 180	90 180	180	
Shunt Field Power Supply Voltage - DC	50/100	100/200	50/100 100/200	50/100 100/200	50/100 100/200	50/100 100/200	100/200	100/200	
Rated Horsepower Range	1/100-1.5	1/50-3	1/100-1 1/2 1/50-3	5	1/8-1 1/4-2	1/4-1 1/2-2	1/4-1-1/2 1/2-3	5	
External Heat Sink (BC143) Required	1 Hp-Up	2 Hp-Up	1/2 Hp-Up 1 Hp-Up	Not Required	90V-1Hp 180V-2Hp	Not Required	Not Required	Not Required	
Speed Range (Motor may be 20:1 Constant Torque)	50:1	50:1	50:1	50:1	50:1	50:1	50:1	50:1	
Adjustable Acceleration	Yes	Yes	Yes	Yes	Yes Fwd & Rev	Yes Fwd & Rev	Yes Fwd & Rev	Yes Fwd & Rev	
Adjustable Deceleration	Yes	Yes	Yes	Yes	Regen	Regen	Regen	Regen	
Min.. Speed Adjustable	Yes	Yes	Yes	Yes	No	No	No	No	
Max. Speed Adjustable	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Adjustable Current Limit and Tripout Type	Non Timed	Non Timed	Non Timed	Non Timed	Non Timed	Timed	Timed	Timed	
Control of Speed or Torque	Speed	Speed	Speed	Speed Torque	Speed or Torque	Speed or Torque	Speed or Torque	Speed	
IR Compensation Adjustment	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Tachometer Feedback Input	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Plug-in Horsepower Resistor®	Required	Required	Required	N/A	N/A	N/A	N/A	N/A	
UL & cUL Listing, CE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
AC Line Fuse	Included	Included	Included	External	External	Included	Included	External	
DC Armature Fuse	Included with Hp Resistor	Included with Hp Resistor	Included with Hp Resistor	Included with Hp Resistor	External	N/A	N/A	External	
<b>Options</b>									
Input Signal Following Mode Capability									
Current (4-20mA)	Plug on Mount Opt-BC152	Plug on Mount Opt-BC152	Plug on Mount Opt-BC152	External Mount Opt-BC145	No	No	No	No	
Current (1-5, 4-20, 20-50mA)	External Mount Opt-BC145	External Mount Opt-BC145	External Mount Opt-BC145	External Mount Opt-BC145					
Input Signal Voltage, (must be isolated)	0-9 VDC Standard	0-9 VDC Standard	0-9 VDC Standard	0-9 VDC Standard	0 to ± 10 VDC Standard	0 to ± 10 VDC Standard	0 to ± 10 VDC Standard	0 to ± 10 VDC Standard	
Voltage (0-5, 0-10, 1-100, 0-200 VDC)	Plug on Mount Opt-BC152	Plug on Mount Opt-BC152	Plug on Mount Opt-BC152	External Mount Opt-BC145	±5 to ±25 VDC Opt-BC215	±5 to ±250 VDC Opt-BC212	±5 to ±250 VDC Opt-BC212	±5 to ±250 VDC Opt-BC212	
Voltage (0-25, 0-120, 0-550 VDC)	External Mount Opt-BC145	External Mount Opt-BC145	External Mount Opt-BC145	External Mount Opt-BC145					
Electrical Connection To Control									
Push-On Quick Connects	Standard	Standard	Standard	No	Standard	No	No	No	
Barrier Terminal Block	Opt-BC147	Opt-BC147	Opt-BC147	Standard	N/A	Standard	Standard	Standard	
Current Sensing Relay/ Overload Protector	Opt-BC146	Opt-BC146	Opt-BC146	Opt-BC146	N/A	Standard	Standard	Standard	
Regenerative Accel / Decel Board	No	No	No	No	No	Opt BC211	Opt BC211	Opt BC211	
AC Line Filter for CE	Opt-BC24-LF	Opt-BC24-LF	Opt-BC24-LF	Opt-BC24-LF	Opt-BC24-LF	Opt-BC24-LF	Opt-BC24-LF	Opt-BC24-LF	

## DC Control Dimension Diagrams

### BC138, BC139



### BC140, BC140-FBR



CONTROL WITHOUT  
AUXILIARY HEATSINK

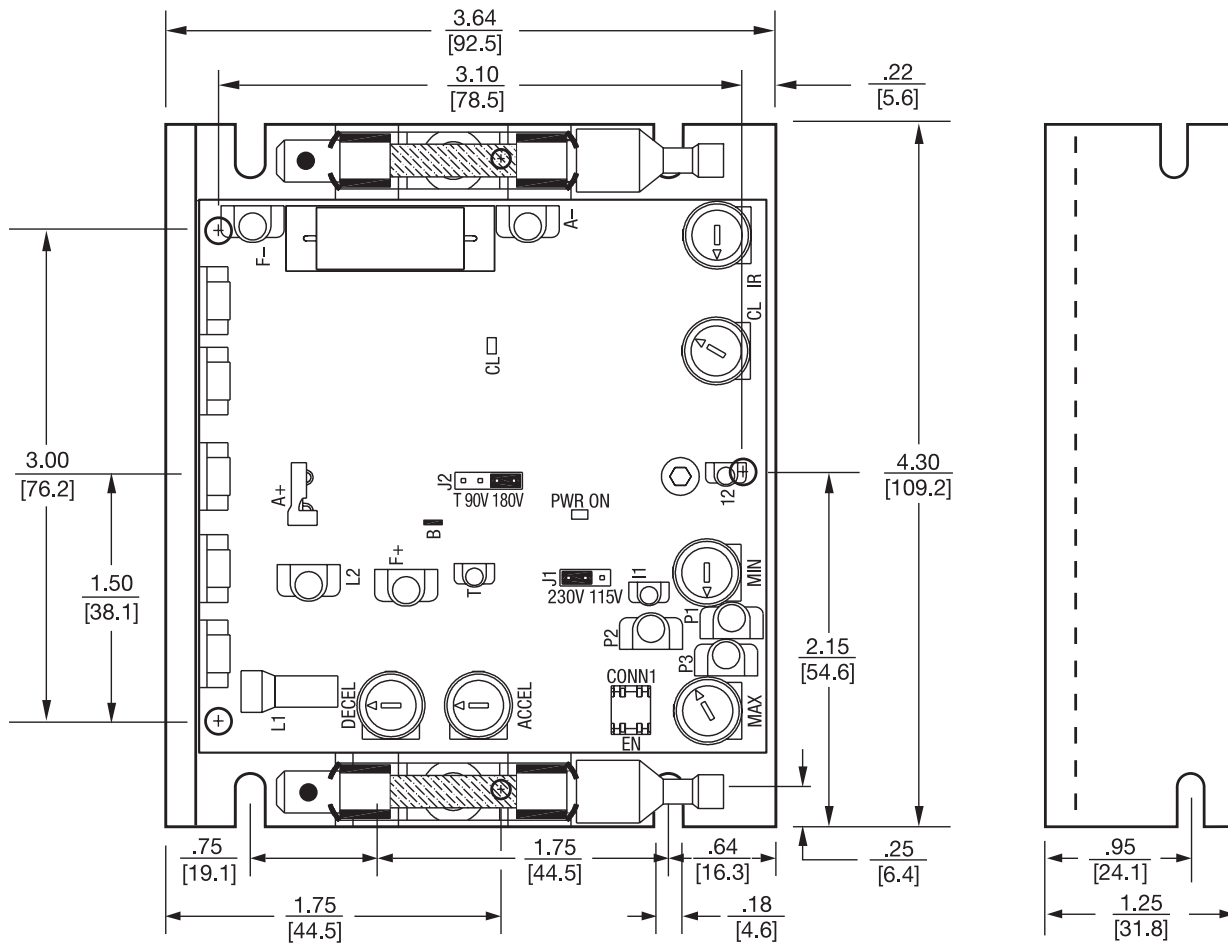
CONTROL WITH  
AUXILIARY HEATSINK

CONTROL WITHOUT  
AUXILIARY HEATSINK

CONTROL WITH  
AUXILIARY HEATSINK

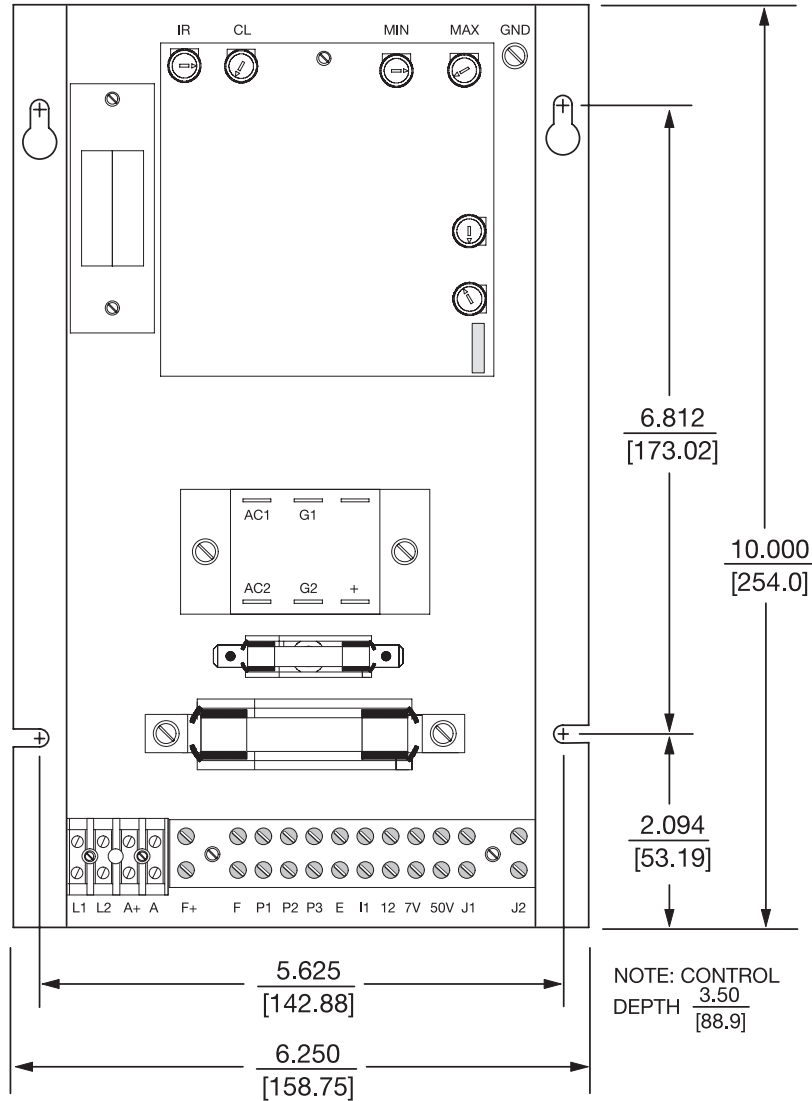
## DC Control Dimension Diagrams

### BC141, BC142, BC142-6



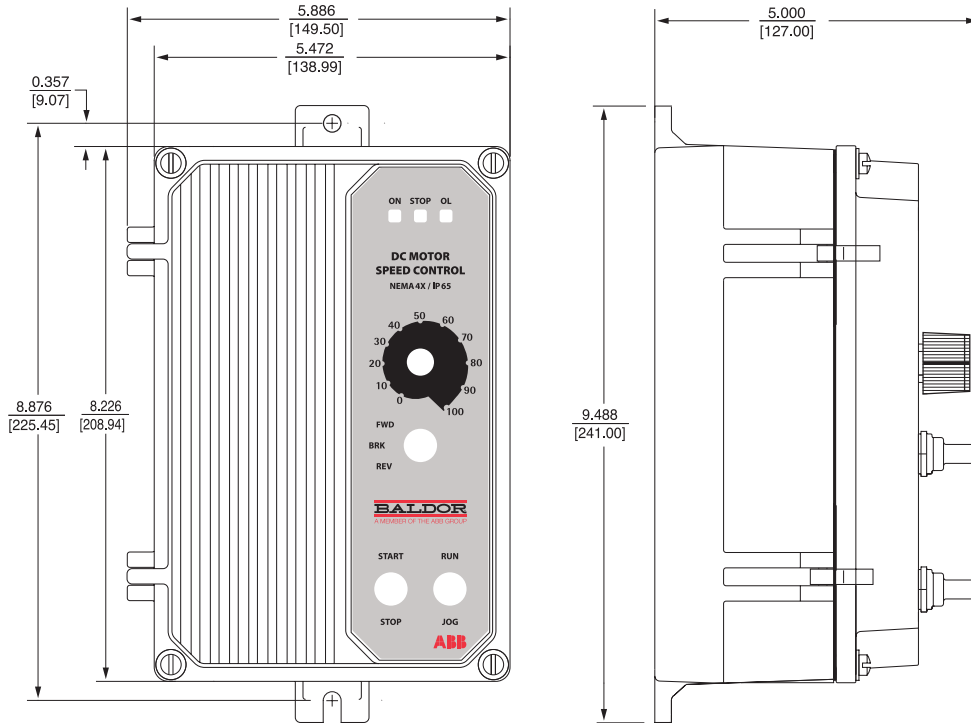
# DC Control Dimension Diagrams

## BC155

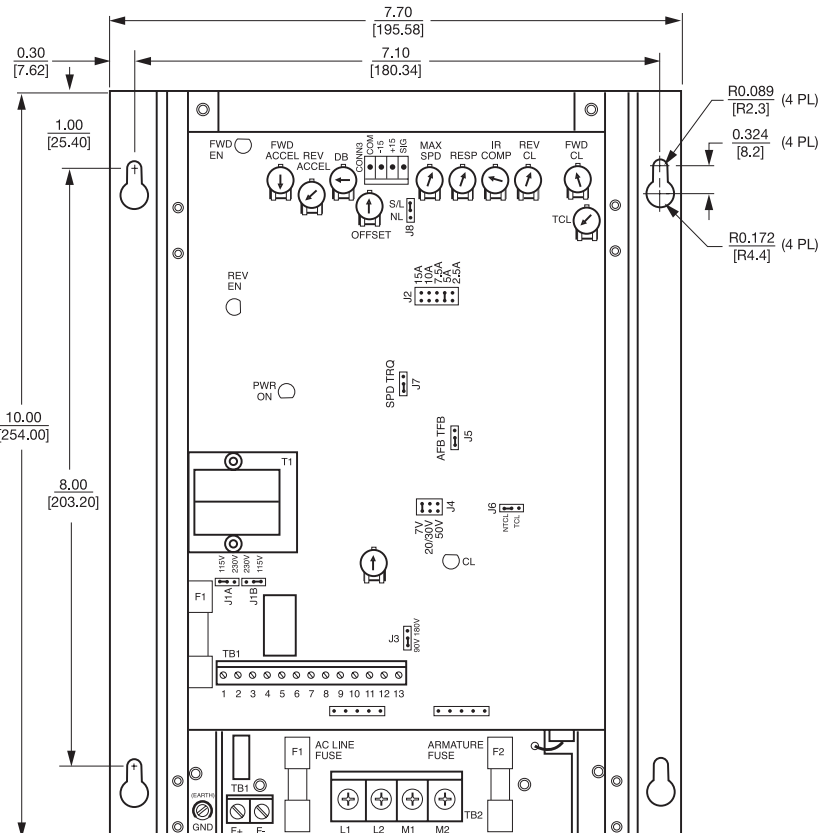


## DC Control Dimension Diagrams

### BC154, BCWD140, BC160, BC254 and BC354



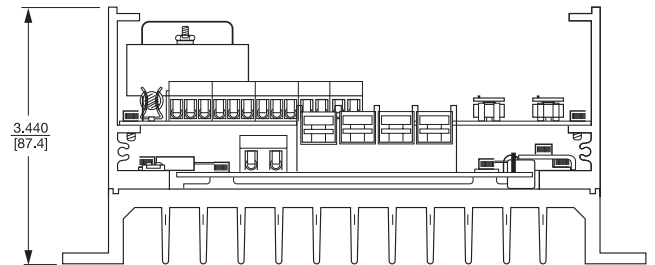
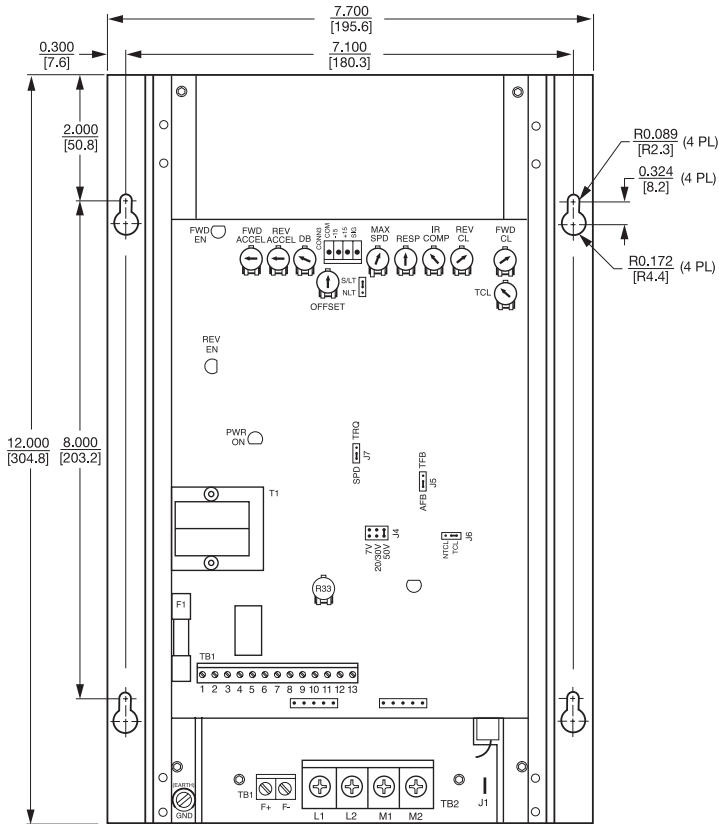
### BC200, BC201





# DC Control Dimension Diagrams

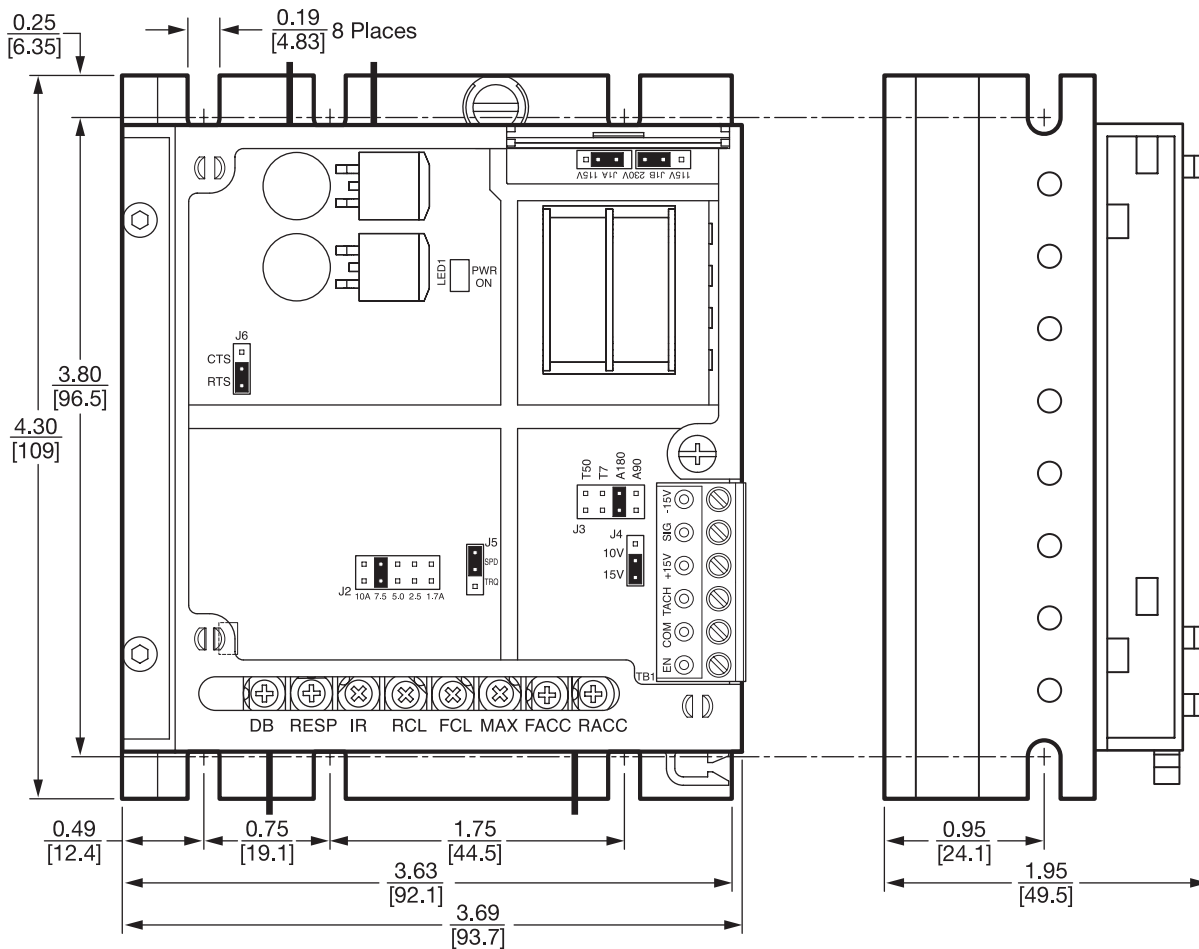
## BC203



- Baldor ACB & ACS Drives
- AC Micro Drives
- AC Inverter Drives
- AC Vector Drives
- Analog AC Drives
- Baldor DC Drives
- ACS Drives
- ACB Drives
- Resistors
- Powerohm
- Input Reactors
- Output Filters
- Application Information
- Cross Reference
- Glossary of Terms
- Part Number Index

## DC Control Dimension Diagrams

### BC204



**DCS800-EP  
DC Panel Drive**

**5 thru 150 Hp  
10 thru 600 Hp**

**230 Vac      3 Phase - 50/60 Hz  
460 Vac      3 Phase - 50/60 Hz**

**Applications:** Constant torque applications. New installations, replacements and original equipment manufacturers (OEM).



**Features:** DC drive power module and associated system components mounted and wired on a sub-panel, ready to be installed in an industrial enclosure. Includes fuses, control transformer and contactor as standard. Blower motor starter, circuit breaker and line reactor available as modifications. Removable keypad can be door-mounted for operator interface and local speed control. Programming by groups makes it easy to navigate and find parameters. A quick start assistant and included PC software DriveWindows Light enables users to program and start using the drive in minutes without need for a User Manual.

**FlexPak 3000 Replacement:** Designed to easily replace a Reliance Electric® FlexPak® 3000 DC Drive.

NOTE: RDIO-01 Digital I/O Extension Module is recommended with FlexPak 3000 replacements.

<b>Input Ratings</b>	Input Voltage range	230 VAC (with +S235), 460 VAC
	Input Voltage tolerance	±10%
	Phase	3 Phase
	Frequency	50 Hz ±2%, 60 Hz ±2%
	Short circuit rating (UL 508a)	65,000 rms symmetrical Amperes
<b>Performance Features</b>	Accel/decel	0.01 to 30,000 sec
	Digital inputs / outputs	8 / 7 plus 1 relay output
	Analog inputs / outputs	4 plus tachometer / 2
	Feedback	Tachometer and digital encoder
<b>Output Ratings</b>	Horsepower	10-600 HP @ 460 VAC, 3PH; 5-150 HP @ 230VAC, 3PH
	Overload capacity: 10-500 HP	150% for 60 seconds every 15 minutes
	Overload capacity: 600 HP	110% for 60 seconds every 10 minutes
	Motor types	DC wound-field motors, DC series-wound motors (manual tuning only)
	Armature Output Voltage	2Q (EP1): 0 to 1.15 * input voltage; 4Q (EP2): 0 to 1.03 * input voltage
	Armature Current	See rating tables and/or hardware manual
<b>Field Ratings</b>	Field Type	Internal, current controlled, full wave half controlled thyristor/diode bridge
	Field Input Voltage	3 phase, internally fused (shares armature line power)
	Field Output Voltage	0 to 1.35 * input voltage
	Field Output current	D1: 0.3 to 6 A; D2: 0.3 to 15 A; D3: 0.3 to 20 A; D4: 0.3 to 25 A
<b>Protective Features</b>	Armature overvoltage	Armature Voltage exceeds limit
	Armature overcurrent	Armature current exceeds limit
	Armature current rise maximum	Change in armature current exceeds limit
	Field undercurrent	Field current below minimum limit
	Field overcurrent	Field current exceeds limit
	Motor thermal protection	Actual or estimated motor temperature exceeds limit
	External fault & alarm	Rising or falling edge of digital input triggers alarm or fault
	Speed feedback monitor	Compares actual speed to speed measured by motor EMF
	Motor overspeed	Motor speed exceeds limit
	Current ripple	Amplitude of AC current component of DC armature current exceeds limit
	Input Voltage monitor	Line voltage above or below normal range
	Local control loss (panel loss)	Loss of signal from control panel while panel is speed reference
	Communication control loss	Loss of signal from fieldbus (e.g., Ethernet IP) while fieldbus is speed reference
<b>Environmental</b>	Temperature	0° to 40° C (32° to 104° F); 0° to 55° C (32° to 132° F) w/ derate
	Cooling	Forced air
	Enclosure	UL Type Open (IP00)
	Altitude	Sea level to 3300 ft (1000m); up to 6600 ft (2000m) derate 1% per 330 ft (100m); up to 10,000 ft (3000m) contact ABB
	Humidity	5% to 95% RH non-condensing down to 5°C; 5% to 50% RH non-condensing 0° to 5° C
	Vibration	1.5mm @ 2 to 9 Hz, 0.5g @ 9 to 200 Hz
	Shock	7 g / 22 msec
<b>Digital Encoder</b>	Encoder Voltage supply	5 Vdc @ 250 mA max; 24 Vdc @ 200 mA max (default is 5 Vdc selected via S4 jumper)
	Encoder mode	Single ended or differential (default is differential selected via S4 jumper)
	Signal sensitivity	5 Vdc or 12/24 Vdc
	Maximum input frequency	300 kHz

AC Micro Drives	<b>Analog Inputs</b>	AI1 & AI2 Voltage config	-10 Vdc to +10 Vdc, Input Resistance RI = 200 kOhms
		AI1 & AI2 current config	0 to 20 mA, Input Resistance RI = 250 Ohms
		AI3 & AI4 Voltage only	-10 Vdc to +10 Vdc, Input Resistance RI = 200 kOhms
		Analog tachometer	±8 to 30Vdc, ±30 to 90Vdc, ±90 to 270Vdc
		Common mode range	±15 V
		Resolution	15 bit + sign bit
		Input update time	AI1 & AI2 = 2.8 msec; AI3 & AI4 = 5 msec
AC Inverter Drives	<b>Analog Outputs</b>	Two (2) programmable Voltage	-10 Vdc to +10 Vdc, maximum load of 5 mA
		One (1) dedicated armature current output	4 Vdc = 325% of rated motor current entered in Parm 99.03
		Resolution	11 bit + sign bit
		Output update time	5 msec
AC Vector Drives	<b>Digital Inputs</b>	Eight (8) digital inputs	24 Vdc, (-15%) to max of 48 Vdc
		Logical switch thresholds	Below 7.3 Vdc = status "0"; above 7.5 Vdc = status "1"
		Input current	5 mA
		Filter time constant	2 msec
		Input update time	DI1 to DI6 = 5 msec, DI7 & DI8 = 2.8 msec
		Internal 24 Vdc for digital inputs	24 Vdc, 125 mA, short circuit proof; external 24 Vdc allowed
Baldor DC Drives	<b>Digital Outputs</b>	Seven (7) Digital Outputs	Transistor for signal driving only
		Signal level	Status 1 = 22 Vdc at no load
		Output updating time	2.8 msec
ACS Drives	<b>Relay Output</b>	One (1) relay output	Normally open (NO) factory set for AC line contactor control
		Maximum switching current	3 A at 24 Vdc or 115/230 Vac; 0.3 A at 120 Vdc
		Isolation test voltage	4 kVac, 1 minute
		Output updating time	2.8 msec

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## DCS800-EP - Ratings & Pricing

### DCS800-EP - 230V, 50/60Hz, 3-Phase UL Type Open

Type	Catalog Number	Frame	Horsepower	Input Current (Amps RMS)	Output Armature Current (Amps DC)	Output Field Current (Amps DC)	List Price	Mult. Sym.
Non-Reversing (2Q)	<b>DCS800-EP1-0020-05+S235</b>	A	5	16	20	6	5,450	EM
Non-Reversing (2Q)	<b>DCS800-EP1-0045-05+S235</b>	A	10	30	37	6	5,704	EM
Non-Reversing (2Q)	<b>DCS800-EP1-0065-05+S235</b>	A	15	44	54	6	6,141	EM
Non-Reversing (2Q)	<b>DCS800-EP1-0090-05+S235</b>	A	20	58	71	6	6,733	EM
Non-Reversing (2Q)	<b>DCS800-EP1-0125-05+S235</b>	A	30	85	105	6	7,114	EM
Non-Reversing (2Q)	<b>DCS800-EP1-0180-05+S235</b>	B	30	102	125	15	8,539	EM
Non-Reversing (2Q)	<b>DCS800-EP1-0230-05+S235</b>	B	60	168	206	15	9,950	EM
Non-Reversing (2Q)	<b>DCS800-EP1-0315-05+S235</b>	B	75	208	255	20	10,796	EM
Non-Reversing (2Q)	<b>DCS800-EP1-0405-05+S235</b>	C	100	278	341	20	16,721	EM
Non-Reversing (2Q)	<b>DCS800-EP1-0470-05+S235</b>	C	125	347	425	20	18,096	EM
Non-Reversing (2Q)	<b>DCS800-EP1-0610-05+S235</b>	C	150	413	506	25	19,340	EM
Reversing (4Q)	<b>DCS800-EP2-0025-05+S235</b>	A	5	16	20	6	6,155	EM
Reversing (4Q)	<b>DCS800-EP2-0050-05+S235</b>	A	10	30	37	6	6,409	EM
Reversing (4Q)	<b>DCS800-EP2-0075-05+S235</b>	A	15	44	54	6	6,846	EM
Reversing (4Q)	<b>DCS800-EP2-0100-05+S235</b>	A	20	58	71	6	7,580	EM
Reversing (4Q)	<b>DCS800-EP2-0140-05+S235</b>	A	30	85	105	6	7,961	EM
Reversing (4Q)	<b>DCS800-EP2-0200-05+S235</b>	B	50	143	175	15	10,655	EM
Reversing (4Q)	<b>DCS800-EP2-0260-05+S235</b>	B	60	168	206	15	11,078	EM
Reversing (4Q)	<b>DCS800-EP2-0350-05+S235</b>	B	75	208	255	20	11,924	EM
Reversing (4Q)	<b>DCS800-EP2-0450-05+S235</b>	C	100	278	341	20	20,335	EM
Reversing (4Q)	<b>DCS800-EP2-0520-05+S235</b>	C	125	347	425	20	22,170	EM
Reversing (4Q)	<b>DCS800-EP2-0680-05+S235</b>	C	150	413	506	25	25,967	EM

## DCS800-EP - 460V, 50/60Hz, 3-Phase UL Type Open

Type	Catalog Number	Frame	Horsepower	Input Current (Amps RMS)	Output Armature Current (Amps DC)	Output Field Current (Amps DC)	List Price	Mult. Sym.
Non-Reversing (2Q)	<b>DCS800-EP1-0020-05</b>	A	10	14	17	6	5,375	EM
Non-Reversing (2Q)	<b>DCS800-EP1-0045-05</b>	A	20	29	35	6	5,629	EM
Non-Reversing (2Q)	<b>DCS800-EP1-0065-05</b>	A	30	43	53	6	6,066	EM
Non-Reversing (2Q)	<b>DCS800-EP1-0090-05</b>	A	40	55	68	6	6,658	EM
Non-Reversing (2Q)	<b>DCS800-EP1-0125-05</b>	A	60	85	104	6	7,039	EM
Non-Reversing (2Q)	<b>DCS800-EP1-0180-05</b>	B	75	102	125	15	8,464	EM
Non-Reversing (2Q)	<b>DCS800-EP1-0230-05</b>	B	125	167	205	15	9,875	EM
Non-Reversing (2Q)	<b>DCS800-EP1-0315-05</b>	B	150	200	245	20	10,721	EM
Non-Reversing (2Q)	<b>DCS800-EP1-0405-05</b>	C	200	265	325	20	16,646	EM
Non-Reversing (2Q)	<b>DCS800-EP1-0470-05</b>	C	250	330	405	20	18,021	EM
Non-Reversing (2Q)	<b>DCS800-EP1-0610-05</b>	C	300	392	480	25	19,265	EM
Non-Reversing (2Q)	<b>DCS800-EP1-0740-05</b>	D	400	522	640	25	25,561	EM
Non-Reversing (2Q)	<b>DCS800-EP1-0900-05</b>	D	500	649	795	25	27,213	EM
Reversing (4Q)	<b>DCS800-EP2-0025-05</b>	A	10	14	17	6	6,080	EM
Reversing (4Q)	<b>DCS800-EP2-0050-05</b>	A	20	29	35	6	6,334	EM
Reversing (4Q)	<b>DCS800-EP2-0075-05</b>	A	30	43	53	6	6,771	EM
Reversing (4Q)	<b>DCS800-EP2-0100-05</b>	A	40	55	68	6	7,505	EM
Reversing (4Q)	<b>DCS800-EP2-0140-05</b>	A	60	85	104	6	7,886	EM
Reversing (4Q)	<b>DCS800-EP2-0200-05</b>	B	100	134	164	15	10,580	EM
Reversing (4Q)	<b>DCS800-EP2-0260-05</b>	B	125	167	205	15	11,003	EM
Reversing (4Q)	<b>DCS800-EP2-0350-05</b>	B	150	200	245	20	11,849	EM
Reversing (4Q)	<b>DCS800-EP2-0450-05</b>	C	200	265	325	20	20,260	EM
Reversing (4Q)	<b>DCS800-EP2-0520-05</b>	C	250	330	405	20	22,095	EM
Reversing (4Q)	<b>DCS800-EP2-0680-05</b>	C	300	392	480	25	25,892	EM
Reversing (4Q)	<b>DCS800-EP2-0820-05</b>	D	400	522	640	25	35,899	EM
Reversing (4Q)	<b>DCS800-EP2-1000-05</b>	D	500	649	795	25	37,409	EM
Reversing (4Q)	<b>DCS800-EP2-1010-05 (110% overload for 1 min)</b>	D	600	775	950	25	40,290	EM

Note 1: All drives can supply 150% overload for 1 minute except as noted.

Note 2: The ratings apply at an ambient temperature of 40 °C (104 °F).

Note 3: 2Q drives CANNOT decelerate a load or power motors in the reverse direction.

Note 4: All DCS800-EP panel drives require a 1 to 5 pct. impedance line reactor or dedicated isolation transformer.

## DCS800-EP Modifications

The modifications listed below can be ordered by adding the modification number to the end of the drive type code preceded by a plus sign. Example: DCS800-EP1-0020-05+E213+0F250. The modification codes should be listed in alphabetical order.

### E213

#### Internal Line Reactor

AC line reactor mounted and wired in the DCS800-EP drive panel. 1.5% impedance at 480 Vac. Increases depth by 5.5 inches on B frame only. NOTICE: An AC Line reactor (1 to 5 pct. impedance) or dedicated isolation transformer is required for each DCS800-EP drive.

Frame	Drive Depth Without Reactor	Drive Depth With Reactor	List Price Per Drive	Mult. Sym.
<b>A</b>	14.4" (366mm)	14.4" (366mm)	See Below	EM
<b>B</b>	13.8" (351mm)	19.3" (491)	See Below	EM
<b>C</b>	-	-	Supplied By Others	EM
<b>D</b>	-	-	Supplied By Others	EM

### F278

#### Circuit Breaker

ABB Tmax circuit breaker, mounted and wired. Breaker can be used as a disconnect and provide 300% instantaneous overload current protection.

### 0F250

#### Without AC Line Contactor

This modification deletes the AC line contactor. This allows for an existing DC motor contactor to be used instead. (Supplied by others.)

Non-Reversing	Reversing	Panel Frame	List Price Per Drive F278 Circuit Breaker	List Price Per Drive 0F250 Without AC Contactor	List Price Per Drive E213 Internal Line Reactor	Mult. Sym.
DCS800-EP1-0020-05	DCS800-EP2-0025-05	A	863	(71)	593	EM
DCS800-EP1-0045-05	DCS800-EP2-0050-05	A	863	(99)	639	EM
DCS800-EP1-0065-05	DCS800-EP2-0075-05	A	863	(158)	670	EM
DCS800-EP1-0090-05	DCS800-EP2-0100-05	A	863	190	722	EM
DCS800-EP1-0125-05	DCS800-EP2-0140-05	A	1,007	(222)	1,273	EM
DCS800-EP1-0180-05	-	B	1,952	(262)	1,435	EM
-	DCS800-EP2-0200-05	B	1,952	(465)	1,993	EM
DCS800-EP1-0230-05	DCS800-EP2-0260-05	B	1,952	(465)	2,117	EM
DCS800-EP1-0315-05	DCS800-EP2-0350-05	B	2,978	(465)	2,117	EM
DCS800-EP1-0405-05	DCS800-EP2-0450-05	C	3,526	(973)	-	EM
DCS800-EP1-0470-05	DCS800-EP2-0520-05	C	5,684	(1,094)	-	EM
DCS800-EP1-0610-05	DCS800-EP2-0680-05	C	5,684	(1,094)	-	EM
DCS800-EP1-0740-05	DCS800-EP2-0820-05	D	7,081	(1,391)	-	EM
DCS800-EP1-0900-05	DCS800-EP2-1000-05	D	7,081	(1,609)	-	EM
-	DCS800-EP2-1010-05	D	10,580	(2,780)	-	EM

### M6

#### Blower motor starter

For control of the blower used to cool the DC motor. Includes contactor, thermal overload relay and fusing. Select the rating based on the current rating of the blower motor.

Frame	Modification Number	Overload Rated Amps - Minimum	Overload Rated Amps - Maximum	List Price Per Drive	Mult. Sym.
A or B	M635	1.0	1.3	619	EM
A or B	M636	1.3	1.7	619	EM
A or B	M637	1.7	2.3	619	EM
A or B	M638	2.3	3.1	619	EM
A or B	M639	3.1	4.2	619	EM
A or B	M640	4.2	5.7	619	EM
A or B	M641	5.7	7.6	619	EM
C or D	M611	1.3	1.8	746	EM
C or D	M612	1.7	2.1	746	EM
C or D	M613	2.2	3.1	746	EM
C or D	M614	2.8	4.0	746	EM
C or D	M615	3.5	5.0	746	EM
C or D	M616	4.5	6.5	746	EM
C or D	M617	6.0	8.5	746	EM
C or D	M618	7.5	11.0	746	EM
C or D	M619	10.0	14.0	746	EM
C or D	M620	13.0	19.0	746	EM
C or D	M621	18.0	25.0	746	EM
C or D	M622	24.0	32.0	746	EM
C or D	M623	29.0	42.0	746	EM

**S235**

**230 Vac Supply**

This modification adjusts the panel drive to operate from a 230 Vac 3 phase power source.

Frame	List Price Per Drive	Mult. Sym.
A	75	EM
B	75	EM
C	75	EM
D	Not Available	EM

**DCS800-EP Option Kits**

Catalog Number	Name		List Price	Mult. Sym.
<b>230 Vac Supply</b>	230 Vac conversion kit	This field kit will allow you to convert a DCS800-EP frame A, B, or C panel drive to operate from a 3-phase 230Vac power source. Not available for frame D. NOTE: If ordering with a drive, use modification code +S235 instead.	75	EM
<b>AIMA-01</b>	I/O Extension Adapter	The I/O extension adapter adds support for 3 additional ( R ) type adapters for the DCS800. This module is mounted by the user external from the drive unit. Adapter is DIN rail mountable . The SDCS-COM-8x is required for support of this option.	730	EM
<b>DCF803-0016</b>	External field supply - 16 Adc	Externally mounted, half controlled 1-phase or 3-phase field exciter with single quadrant operation - 16 Adc. Requires input line reactor, DSL communication cable and SDCS-DSL-4 module.	1073	EM
<b>DCF803-0035</b>	External field supply - 35 Adc	Externally mounted, half controlled 1-phase or 3-phase field exciter with single quadrant operation - 35 Adc. Requires input line reactor, DSL communication cable and SDCS-DSL-4 module.	1,633	EM
<b>DCF803-0050</b>	External field supply - 50 Adc	Externally mounted, half controlled 1-phase field exciter with single quadrant operation - 50 Adc. Requires DSL communication cable and SDCS-DSL-4 module.	2,226	EM
<b>DCF803-0060</b>	External field supply - 60 Adc	Externally mounted, half controlled 1-phase field exciter with single quadrant operation - 60 Adc. Requires DSL communication cable and SDCS-DSL-4 module.	2,669	EM
<b>DCF804-0050</b>	External field supply for field reversal - 50 Adc	Externally mounted, half controlled 1-phase field exciter with four quadrant operation - 50 Adc. Requires DSL communication cable and SDCS-DSL-4 module.	2,602	EM
<b>DCF804-0060</b>	External field supply for field reversal - 60 Adc	Externally mounted, half controlled 1-phase field exciter with four quadrant operation - 60 Adc. Requires DSL communication cable and SDCS-DSL-4 module.	3,112	EM
<b>DCS800 Democase</b>	Demo Case	Powered by 115VAC, the DCS800 Democase includes a DCS800 frame D1 drive mounted in a traveling case with wheels and handles. Includes a motor with analog tachometer and SDCS-COM-81 module.	5,795	EM
<b>DCS800 Democase Light</b>	Demo Case Light	This unit is a DCS800 DC drive controller mounted inside a compact brief case. It is light and easy to carry and can demonstrate most of the features of the DC drive, including: <ul style="list-style-type: none"> <li>• Simulated speed feedback</li> <li>• Interface with Drive Window and Drive Window Light</li> <li>• Adaptive programming</li> <li>• Control panel assistants</li> <li>• Fieldbus interface</li> <li>• Start up assistant (except autotune)</li> </ul>	2,590	EM
<b>DCS800-DSL, Cable P5M</b>	DSL Communication Cable, 0.5M	Network cable for communication from DCS800 to an external field power supply or another DCS800 drive. DSL-4 board is required. 0.5m length.	140	EM
<b>DCS800-DSL, Cable 2M</b>	DSL Communication Cable, 2M	Network cable for communication from DCS800 to an external field power supply or another DCS800 drive. DSL-4 board is required. 2m length.	140	EM
<b>DCS800-DSL, Cable 4M</b>	DSL Communication Cable, 4M	Network cable for communication from DCS800 to an external field power supply or another DCS800 drive. DSL-4 board is required. 4m length.	175	EM
<b>DCS800-DSL, Cable 10M</b>	DSL Communication Cable, 10M	Network cable for communication from DCS800 to an external field power supply or another DCS800 drive. DSL-4 board is required. 10m length.	222	EM
<b>DCS800-DSL, Cable 20M</b>	DSL Communication Cable, 20M	Network cable for communication from DCS800 to an external field power supply or another DCS800 drive. DSL-4 board is required. 20m length.	280	EM

Baldor AFB & ACS Drives  
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Baldor ACB & ACS Drives	<b>DCS-CP-EP</b>	Control Panel	DCS800-EP Control Panel - included with every drive	230	EM
AC Micro Drives	<b>FEA-01</b>	Resolver interface adapter	Required for use of the FEN-21 resolver interface module	465	ES
AC Inverter Drives	<b>FEN-21</b>	Resolver interface module	The FEN-21 resolver interface module offers an improved speed feedback signal compared to the RRIA-01. It should be selected for all applications that require speed feedback from the resolver. The FEA-01 DIN-rail extension adapter is required for mounting the FEN-21 to your panel. FEA-01 converts the signal to fiber optics which is connected to channel 1 of the DCS800's COM-8x board. ALSO REQUIRED: FEA-01, fiber optic cable; SDCS-COM-8x; (24 Vdc power supplied by others).	465	ES
AC Vector Drives	<b>FO NLWC-02</b>	Single plastic fiber optic, Qty 2, 2m	Plastic fiber optic for DDCS communications. Requires SDCS-COM-81 or SDCS-COM-82 communication module. Set of two single conductors, 2m length.	91	EM
AC Vector Drives	<b>FO NLWC-03</b>	Single plastic fiber optic, Qty 2, 3m	Plastic fiber optic for DDCS communications. Requires SDCS-COM-81 or SDCS-COM-82 communication module. Set of two single conductors, 3m length.	117	EM
Analog AC Drives	<b>FO NLWC-05</b>	Single plastic fiber optic, Qty 2, 5m	Plastic fiber optic for DDCS communications. Requires SDCS-COM-81 or SDCS-COM-82 communication module. Set of two single conductors, 5m length.	140	EM
DC Drives	<b>FO NLWC-07</b>	Single plastic fiber optic, Qty 2, 7m	Plastic fiber optic for DDCS communications. Requires SDCS-COM-81 or SDCS-COM-82 communication module. Set of two single conductors, 7m length.	163	EM
Baldor DC Drives	<b>FO NLWC-10</b>	Single plastic fiber optic, Qty 2, 10m	Plastic fiber optic for DDCS communications. Requires SDCS-COM-81 or SDCS-COM-82 communication module. Set of two single conductors, 10m length.	208	EM
ACS Drives	<b>FO Twin Fiber Opt. CA 0,5 M</b>	Double plastic fiber optic, Qty 1, 0.5m	Plastic fiber optic for DDCS communications. Requires SDCS-COM-81 or SDCS-COM-82 communication module. Double conductor, 0.5m length.	140	EM
ACS Drives	<b>FO Twin Fiber Opt. CA 2,0 M</b>	Double plastic fiber optic, Qty 1, 2m	Plastic fiber optic for DDCS communications. Requires SDCS-COM-81 or SDCS-COM-82 communication module. Double conductor, 2m length.	172	EM
ACS Drives	<b>FO Twin Fiber Opt. CA 5,0 M</b>	Double plastic fiber optic, Qty 1, 5m	Plastic fiber optic for DDCS communications. Requires SDCS-COM-81 or SDCS-COM-82 communication module. Double conductor, 5m length.	241	EM
ACS Drives	<b>FO Twin Fiber Opt. CA 10 M</b>	Double plastic fiber optic, Qty 1, 10m	Plastic fiber optic for DDCS communications. Requires SDCS-COM-81 or SDCS-COM-82 communication module. Double conductor, 10m length.	289	EM
ACB Drives	<b>NETA-01</b>	Internet adapter	The NETA-01 Ethernet Adapter module is an optional device for browser-based remote monitoring of ABB drives via Ethernet. Multiple drives (up to 9) can be connected to the network through the DDCS Branching Unit (NDBU-85/95) or using ring topology with the NETA-01 Ethernet Adapter module.	1,550	EM
Resistors	<b>OPMP-01</b>	Panel mounting platform	Control Panel Mounting Platform allows remote mounting of the DCS800-CP-P on an enclosure or remote panel. The kit maintains UL Type 12 integrity of the mounting location. Adapters, 3 m (10 ft) cable and mounting hardware are included in this kit. With this mounting arrangement, the keypad is removable from the panel in a fashion identical to a drive-mounted keypad	138	ES
Powerhm	<b>RAIO-01</b>	Analog I/O extension	The Analog I/O Extension module offers two unipolar current (0[4]...20 mA) or bipolar voltage ( $\pm 0[2]$ ...10 V or $\pm 0$ ...2 V) inputs and two unipolar current (0[4]-20 mA) outputs. Analog unipolar inputs are 12 bit resolution. Bipolar inputs are 11 bit resolution. Analog outputs are 12 bit resolution. The analog inputs and outputs are galvanically isolated as a group, from each other and the power supply.	465	ES
Input Reactors	<b>RCAN-01</b>	Canbus adapter	The RCAN-01 CANopen adapter module enables the connection of the ABB drive to a CANopen system. CANopen is a higher level protocol based on the CAN (Control Area Network) serial bus system and the CAL (CAN Application Layer). The RCAN-01 fulfills CiA (CAN in Application) standard DSP-402 (Drives and Motion Control), supporting the "Manufacturer Specific" operating mode only. The physical medium of CANopen is a differentially drive two-wire bus line with common return according to ISO 11989. The RCAN-01 supports baud rates of 10 kbits/s to 1 Mbits/s. The module provides DIP-switches for selection of the node number and baud rate. The node number and baud rate can alternatively be set via the control panel of the drive.	595	ES
Output Filters	<b>RCNA-01</b>	ControlNet adapter	The ControlNet network uses a RG-6 quad shielded cable or fiber with support for media redundancy. The RCNA-01 adapter module supports only RG-6 quad shielded cable (coax) for the bus connection. ControlNet is flexible in topology options (bus, tree, star) to meet various application needs. The fieldbus speed is 5 Mbits/s. The RCNA-01 ControlNet Adapter module can not originate connections on its own, but a scanner node can open a connection towards it. The ControlNet protocol is implemented according to the ControlNet international specification for a Communication adapter.	595	ES
Application Information	<b>RDIO-01</b>	Digital I/O Extension	RECOMMENDED FOR FLEXPAC 3000 REPLACEMENTS. The Digital I/O Extension module offers three digital inputs (24...250 Vdc or 110...230 Vac) and two relay outputs (1250 VA/250 Vac or 5 A/24 Vdc). The isolation voltage between the digital inputs, digital outputs and power supply is 2.5 kV (1.5 kV between DI2 and DI3).	465	EM



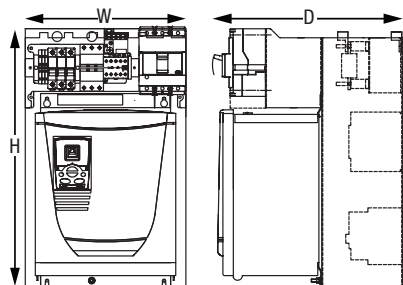
<b>RDNA-01</b>	DeviceNet adapter	The DeviceNet network uses a linear bus topology. Terminating resistors are required on each end of the trunk line. Drop lines as long as 6 meters (20 feet) each are permitted, allowing one or more nodes to be attached. DeviceNet allows branching structures only on drop lines.	465	ES
<b>RECA-01</b>	EtherCAT adapter	The adapter module supports the CANopen DSP 402 (Device Profile Drives and Motion Control) profile or the ABB Drives profile. The RECA-01 implements the EtherCAT state machine, four sync manager channels to control the access to the application memory, two watch dogs and specified EtherCAT services, addressing modes and FMMUs.	525	ES
<b>RETA-01</b>	Ethernet adapter	The RETA-01 module supports the Modbus/TCP and EtherNet/IP network protocols. Modbus/TCP is a variant of the Modbus family of simple, vendor neutral communication protocols intended for supervision and control of automation equipment. EtherNet/IP is based on the Common Industrial Protocol (CIP), which is also the framework for both the ControlNet and DeviceNet networks. The RETA-01 supports 10/100 Mbps transfer rate with network connection made with standard RJ-45 connectors.	465	EG
<b>RETA-02</b>	PROFINET IO adapter	The RETA-02 module supports both Modbus/TCP and PROFINET IO network protocols. Modbus/TCP is a variant of the Modbus family of simple, vendor neutral communication protocols intended for supervision and control of automation equipment. PROFINET IO is an open standard for industrial ethernet, intended for configuration, supervision and control of automation equipment. The RETA-02 supports 10/100 Mbps transfer rate with network connections made with CAT 5 wiring and RJ-45 connectors. Both star and bus topology options are supported.	465	EM
<b>RMBA-01</b>	Modbus RTU adapter	ModBus is a serial, asynchronous protocol. The ModBus protocol does not specify the physical interface. Typical physical interfaces are RS-232 and RS-485. The RMBA-01 provides a galvanically isolated RS-485 interface. ModBus is designed for integration with Modicon PLCs or other automation devices, and the services closely correspond to the PLC architecture. The RMBA-01 supports the RTU protocol only.	465	EM
<b>RPBA-01</b>	Profibus DP adapter	ProfiBus is an open serial communication standard that enables data exchange between automation components. The transmission medium of the bus is a twisted pair cable (according to RS-485 standard). The maximum length of the bus cable is 100 to 1200 meters, depending on the transmission rate. Up to 31 stations can be connected to the same PROFIBUS system without use of repeaters.	465	ES
<b>RRIA-01</b>	Resolver interface adapter	The RRIA-01 resolver interface module offers interface for an analog resolver connection. A resolver may be used to obtain accurate speed and position (angle) feedback from a motor shaft. MUST USE FIRMWARE REVISION 3.6 OR ABOVE.	465	EM
<b>RSCM-01</b>	Resolver signal conditioning module	The resolver signal conditioning (RSCM-01) board modifies the voltage of the signal sent to the resolver (R1, R2), which modifies the voltage of the signals coming back (S1, S3, S2, S4). The switch can be set to one of two positions so the return signals are set to the level that is within the voltage range of the RRIA interface board (1.4 – 4.0 Vrms; 2.0 – 5.6 Volts, peak-to-peak).	210	EM
<b>RTAC-01</b>	15 or 24 Vdc encoder	The Pulse Encoder Interface module offers a differential or single ended interface for a digital pulse encoder. The module is capable of operating from either a 15 or 24Vdc signal with a max frequency of 200kHz. When the drive's internal power supply is used to power the encoder, additional options may not be installed. Check the encoder's power supply requirements prior to installation.	465	EM
<b>RTAC-03</b>	24 Vdc TTL encoder	TTL incremental Pulse Encoder Interface module. The module is capable of operating at 24Vdc with a max frequency of 200kHz.	465	EM
<b>RUSB</b>	DriveWindow with USB Hardware	DriveWindow is software designed for online DCS800 drive commissioning and maintenance. Connection to the drive is from the PC's USB port through high speed fiber optic cable. The drive requires an optional SDCS-COM-8x module to support the fiber optic connection. DriveWindow supports Microsoft Windows operating systems (Windows NT4, 2000, XP, Vista & 7). - Parameter editing and monitoring - Upload/download drive parameter files, save and copy - Compare files - Trending up to six signals - Drive Control for commissioning and test - OPC remote access Includes: DriveWindow install CD; USB to DDCS converter; fiber optic cable (10m)	1,944	EM

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Baldor ACB & ACS Drives	<b>SDCS-COM-81</b>	Fiber optic interface adapter - STANDARD	STANDARD fiber optic communication interface board <ul style="list-style-type: none"> <li>• CH 0 - 10Mb - overriding system control (APC2, AC80, etc.)</li> <li>• CH 1 - 5Mb - is used for DDCS I/O extension. AIMA-01</li> <li>• CH 2 - 10Mb - Master -Follower link (drive to drive)</li> <li>• CH 3 - 10Mb - PC tool such as DriveWindow</li> </ul>	768	EM
AC Micro Drives	<b>SDCS-COM-82</b>	Fiber optic interface adapter - NETA only	Fiber optic communication interface board; USED ONLY IN COMBINATION WITH THE NETA-01 <ul style="list-style-type: none"> <li>• CH 0 - 5Mb - overriding system control (APC2, AC80, Nxxx module)</li> <li>• CH 1 - 5Mb - is used for DDCS I/O extension. AIMA-01</li> <li>• CH 2 - 10Mb - Master -Follower link (drive to drive)</li> <li>• CH 3 - 10Mb - PC tool such as DriveWindow</li> </ul>	768	EM
AC Inverter Drives	<b>SDCS-DSL-4</b>	DCS Link	DCS-LINK drive-to-drive communication board dedicated to the DCS800, based on CAN bus. This communication adapter is used in 12-pulse operation and communication / control of external field supplies (e.g., DCF803-0035, etc.). This board is standard in all D5-D7 frames and all frames rated 600vdc or greater.	234	EM
AC Vector Drives	<b>SDCS-IOB-21</b>	Digital input/output module - 24 Vdc	Includes IOB-21 module and one ribbon cable. Replaces the standard digital inputs and outputs with 8 DI/O points externally mounted with input voltage level of 24...48V DC. The inputs are filtered and galvanically isolated. Terminals X6 & X7 on the main control must not be used when a SDCS-IOB-2x board is installed. Note: If IOB-3 is also required, you must order the combination kit instead. (See below.)	729	EM
Analog AC Drives	<b>SDCS-IOB-22</b>	Digital input/output module - 115 Vac	Includes IOB-22 module and one ribbon cable. Replaces the standard digital inputs and outputs with 8 DI/O points externally mounted with input voltage level of 115 Vac. The inputs are filtered and galvanically isolated. Terminals X6 & X7 on the main control must not be used when a SDCS-IOB-2x board is installed. Note: If IOB-3 is also required, you must order the combination kit instead. (See below.)	729	EM
Baldor DC Drives	<b>SDCS-IOB-23</b>	Digital input/output module - 230 Vac	Includes IOB-23 module and one ribbon cable. Replaces the standard digital inputs and outputs with 8 DI/O points externally mounted with input voltage level of 230 Vac. The inputs are filtered and galvanically isolated. Terminals X6 & X7 on the main control must not be used when a SDCS-IOB-2x board is installed. Note: If IOB-3 is also required, you must order the combination kit instead. (See below.)	729	EM
Resistors	<b>SDCS-IOB-21 / IOB-3</b>	IOB-21 Combination Kit	Kit includes (1) SDCS-IOB-21 module; (1) SDCS-IOB-3 module; set of (3) cables. Please see related descriptions above for specific features.	1,480	EM
Powerhm	<b>SDCS-IOB-22 / IOB-3</b>	IOB-22 Combination Kit	Kit includes (1) SDCS-IOB-22 module; (1) SDCS-IOB-3 module; set of (3) cables. Please see related descriptions above for specific features.	1,480	EM
Input Reactors	<b>SDCS-IOB-23 / IOB-3</b>	IOB-23 Combination Kit	Kit includes (1) SDCS-IOB-23 module; (1) SDCS-IOB-3 module; set of (3) cables. Please see related descriptions above for specific features.	1,480	EM
Output Filters	<b>SDCS-IOB-3</b>	Analog and encoder input/output module	IMPORTANT: FOR STANDALONE IOB-3 MODULE ONLY. Includes IOB-3 and two ribbon cables. This module includes 5 analog inputs; 3 analog outputs; galvanically isolated pulse encoder interface; a current source for temperature measuring devices. If IOB-21, -22 or -23 is also required, order combination kit so as to receive the correct set of cables.	773	EM
Application Information	<b>SDCS-IOB Card Holder</b>	Card Holder for SDCS-IOB-2x & SDCS-IOB-3	This card holder is used to mount the IOB-2x or IOB-3 board to a back panel. With universal Phoenix clamp 1202713, it is possible to mount the card holder to a standard DIN-rail system horizontally or vertically. Includes (6) clamps to attach the flat cables to the card holder. NOTE: Without this card holder, modules can be mounted to the back panel by using stand-offs.	225	EM
Cross Reference	<b>SDCS-SUB-4</b>	Low mains voltage adapter	Adapts the drive to operate with mains voltage between 30 and 120 Vdc. SUB-4 board alters the voltage measurement circuit of the drive to improve mains synchronization and DC measurement resolution. Plugs into existing PIN-4 board. (For D1 - D4 only.)	442	EM
Glossary of Terms	<b>SDCS-UCM-1</b>	External DC Voltage measurement kit	Allows drive frame sizes D1 - D4 to measure the DC motor voltage externally (e.g., "at the motor") instead of at the drive terminals. This, for example, might be beneficial when a DC contactor is in use. Includes a modified SDCS-SUB-4 board.	524	EM
Part Number Index	<b>SECG-01</b>	Ethernet to ControlNet Gateway	SECG-01 (EtherNet/IP to ControlNet) -- will allow a DriveBrowser user to connect a PC's Ethernet port to drives on a ControlNet networks.	3,995	ES
	<b>SEDG-01</b>	Ethernet to DeviceNet Gateway	SEDG-01 (EtherNet/IP to DeviceNet) -- will allow a DriveBrowser user to connect a PC's Ethernet port to drives on a DeviceNet networks	3,995	ES

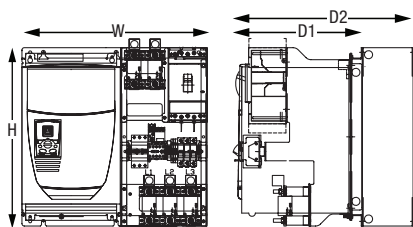
<b>Terminal Shield (D1-D2)</b>	Terminal shield - A to B	For DCS800-EP1-0020 to DCS800-EP2-0260, this safety terminal shield protects against accidental contact with the AC and DC terminals at the base of the drive. See Hardware Manual "Mechanical Installation" for details. (One shield per drive.)	74	EM
<b>Terminal Shield (D3)</b>	Terminal shield - B to C	Safety terminal shield for DCS800-EP1-0315 to DCS800-EP2-0520. One shield per drive.	111	EM
<b>Terminal Shield (D4)</b>	Terminal shield - C to D	Safety terminal shield for DCS800-EP1-0610 to DCS800-EP2-1010. One shield per drive.	137	EM

## DCS800-EP Dimensions



DCS800 – 10-60 HP Frame A

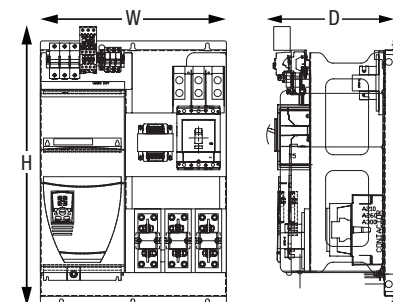
Frame Size	HP		Height		Width		Depth		Weight			
	(230V)	(460V)	(in)	(mm)	(in)	(mm)	(in)	(mm)	w/o Reactor		w/Reactor	
									(lbs)	(kg)	(lbs)	(kg)
A	5	10	18.79	477	12.15	309	14.40	366	54	25	61	28
	10	20	18.79	477	12.15	309	14.40	366	57	26	65	30
	15	30	18.79	477	12.15	309	14.40	366	59	27	67	30
	20	40	18.79	477	12.15	309	14.40	366	62	28	73	33
	30	60	18.79	477	12.15	309	14.40	366	62	28	88	40



DCS800 – 75-150 HP Frame B

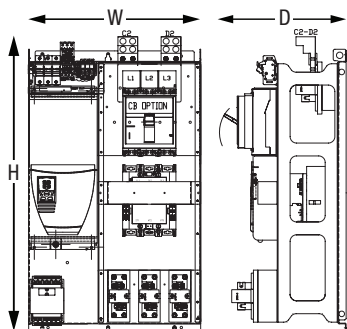
Frame Size	HP		Height		Width		Depth D1		Weight			
	(230V)	(460V)	(in)	(mm)	(in)	(mm)	(in)	(mm)	w/o Reactor		w/Reactor	
									(lbs)	(kg)	(lbs)	(kg)
B	30-50	75-100	19.29	490	20.00	508	13.82"	351	103	47	157	71
	60	125	19.29	490	20.00	508	13.82"	351	103	47	163	74
	75	150	19.29	490	20.00	508	13.82"	351	130	59	185	84

\*19.32 inch (491mm) depth D2 when internal reactor option is included.



DCS800 – 200-300 HP Frame C

Frame Size	HP		Height		Width		Depth		Weight	
	(230V)	(460V)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(lbs)	(kg)
C	100	200	35.32	897	23.58	599	16.17	411	231	105
	125	250	35.32	897	23.58	599	16.17	411	231	105
	150	300	35.32	897	23.58	599	16.17	411	260	118



DCS800 – 400-600 HP Frame D

Frame Size	HP		Height		Width		Depth D1		Depth D2		Weight	
	(230V)	(460V)	(in)	(mm)	(in)	(mm)	w/o Circuit Breaker		w/ Circuit Breaker		w/o Reactor	
							(in)	(mm)	(in)	(mm)	(lbs)	(kg)
D	NA	400	45.66	1160	26.68	678	16.00	406	19.65	499	355	161
	NA	500	45.66	1160	26.68	678	16.00	406	19.65	499	355	161
	NA	600	45.66	1160	26.68	678	16.00	406	19.65	499	355	161

## ACS150 Drives

### Single Phase 200-240V applications, stopping duty only

#### Type CR Resistors (Available for the small HP drives as listed below)

Drive Type Code	HP	Duty Cycle=3sec on/27sec off				Duty Cycle=10sec on/50sec off						Disc. Sym.
		Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	
ACS150-01U-02A4-2	0,5	P14494-CR-02	3AUA0000064050	200	100	88	P14494-CR-02	3AUA0000064050	200	100	88	ES
ACS150-01U-04A7-2	1	P14494-CR-04	3AUA0000064053	100	100	88	P14494-CR-04	3AUA0000064053	100	100	88	ES
ACS150-01U-07A5-2	2	P14494-CR-04	3AUA0000064053	100	100	88	P14494-CR-16	3AUA0000064066	100	200	122	ES
ACS150-01U-09A8-2	3	P14494-CR-12	3AUA0000064062	50	150	104	P14494-CR-24	3AUA0000064074	50	300	140	ES

Drive Type Code	HP	Duty Cycle=30sec on/180sec off				Duty Cycle=60sec on/180sec off						Disc. Sym.
		Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	
ACS150-01U-02A4-2	0,5	P14494-CR-02	3AUA0000064050	200	100	88	P14494-CR-02	3AUA0000064050	200	100	88	ES
ACS150-01U-04A7-2	1	P14494-CR-11	3AUA0000064061	100	150	104	P14494-CR-16	3AUA0000064066	100	200	122	ES
ACS150-01U-07A5-2	2	P14494-CR-22	3AUA0000064072	100	300	140	P14494-CR-30	3AUA0000064080	100	400	174	ES
ACS150-01U-09A8-2	3	P14494-CR-32	3AUA0000064083	50	400	174						ES

#### Standard Enclosed Resistor Packages

Drive Type Code	HP	Duty Cycle=3sec on/27sec off				Duty Cycle=10sec on/50sec off						Disc. Sym.
		Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	
ACS150-01U-02A4-2	0,5	P14494-19	3AUA0000015101	75	300	223	P14494-19	3AUA0000015101	75	300	223	ES
ACS150-01U-04A7-2	1	P14494-24	3AUA0000015106	45	300	223	P14494-24	3AUA0000015106	45	300	223	ES
ACS150-01U-07A5-2	2	P14494-31	3AUA0000015112	35	300	223	P14494-31	3AUA0000015112	35	300	223	ES
ACS150-01U-09A8-2	3	P14494-31	3AUA0000015112	35	300	223	P14494-31	3AUA0000015112	35	300	223	ES

Drive Type Code	HP	Duty Cycle=30sec on/180sec off				Duty Cycle=60sec on/180sec off						Disc. Sym.
		Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	
ACS150-01U-02A4-2	0,5	P14494-19	3AUA0000015101	75	300	223	P14494-19	3AUA0000015101	75	300	223	ES
ACS150-01U-04A7-2	1	P14494-24	3AUA0000015106	45	300	223	P14494-24	3AUA0000015106	45	300	223	ES
ACS150-01U-07A5-2	2	P14494-31	3AUA0000015112	35	300	223	P14494-32	3AUA0000013872	35	820	337	ES
ACS150-01U-09A8-2	3	P14494-32	3AUA0000013872	35	820	337	P14494-32	3AUA0000013872	35	820	337	ES

Notes: 1. To determine resistor type, dimensions and weights refer to Resistor Technical Data Tables.

## ACS150 Drives

### Three Phase 200-240V applications, stopping duty only

#### Type CR Resistors (Available for the small HP drives as listed below)

Drive Type Code	HP	Duty Cycle=3sec on/27sec off			Duty Cycle=10sec on/50sec off			Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	Disc. Sym.
		Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price							
ACS150-03U-02A4-2	0,5	P14494-CR-02	3AUA0000064050	200	100	88	P14494-CR-02	3AUA0000064050	200	100	88	ES	
ACS150-03U-04A7-2	1	P14494-CR-04	3AUA0000064053	100	100	88	P14494-CR-04	3AUA0000064053	100	100	88	ES	
ACS150-03U-07A5-2	2	P14494-CR-06	3AUA0000064055	50	100	88	P14494-CR-18	3AUA0000064068	50	200	122	ES	
ACS150-03U-09A8-2	3	P14494-CR-12	3AUA0000064062	50	150	104	P14494-CR-24	3AUA0000064074	50	300	140	ES	

Drive Type Code	HP	Duty Cycle=30sec on/180sec off			Duty Cycle=60sec on/180sec off			Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	Disc. Sym.
		Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price							
ACS150-03U-02A4-2	0,5	P14494-CR-02	3AUA0000064050	200	100	88	P14494-CR-02	3AUA0000064050	200	100	88	ES	
ACS150-03U-04A7-2	1	P14494-CR-11	3AUA0000064061	100	150	104	P14494-CR-16	3AUA0000064066	100	200	122	ES	
ACS150-03U-07A5-2	2	P14494-CR-24	3AUA0000064074	50	300	140	P14494-CR-32	3AUA0000064083	50	400	17	ES	
ACS150-03U-09A8-2	3	P14494-CR-32	3AUA0000064083	50	400	174						ES	

#### Standard Enclosed Resistor Packages

Drive Type Code	HP	Duty Cycle=3sec on/27sec off			Duty Cycle=10sec on/50sec off			Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	Disc. Sym.
		Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price							
ACS150-03U-02A4-2	0,5	P14494-19	3AUA0000015101	75	300	223	P14494-19	3AUA0000015101	75	300	223	ES	
ACS150-03U-04A7-2	1	P14494-24	3AUA0000015106	45	300	223	P14494-24	3AUA0000015106	45	300	223	ES	
ACS150-03U-07A5-2	2	P14494-31	3AUA0000015112	35	300	223	P14494-31	3AUA0000015112	35	300	223	ES	
ACS150-03U-09A8-2	3	P14494-31	3AUA0000015112	35	300	223	P14494-31	3AUA0000015112	35	300	223	ES	

Drive Type Code	HP	Duty Cycle=30sec on/180sec off			Duty Cycle=60sec on/180sec off			Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	Disc. Sym.
		Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price							
ACS150-03U-02A4-2	0,5	P14494-19	3AUA0000015101	75	300	223	P14494-19	3AUA0000015101	75	300	223	ES	
ACS150-03U-04A7-2	1	P14494-24	3AUA0000015106	45	300	223	P14494-24	3AUA0000015106	45	300	223	ES	
ACS150-03U-07A5-2	2	P14494-31	3AUA0000015112	35	300	223	P14494-32	3AUA0000013872	35	820	337	ES	
ACS150-03U-09A8-2	3	P14494-32	3AUA0000013872	35	820	337	P14494-32	3AUA0000013872	35	820	337	ES	

Notes: 1. To determine resistor type, dimensions and weights refer to Resistor Technical Data Tables.

## ACS150 Drives

### Three Phase 380-480V applications, stopping duty only

#### Type CR Resistors (Available for the small HP drives as listed below)

		Duty Cycle=3sec on/27sec off				Duty Cycle=10sec on/50sec off						Disc. Sym.
Drive Type Code	HP	Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	
ACS150-03U-01A2-4	0,5	P14494-CR-01	3AUA0000064047	500	100	88	P14494-CR-01	3AUA0000064047	500	100	88	ES
ACS150-03U-02A4-4	1	P14494-CR-02	3AUA0000064050	200	100	88	P14494-CR-02	3AUA0000064050	200	100	88	ES
ACS150-03U-04A1-4	2	P14494-CR-03	3AUA0000064052	150	100	88	P14494-CR-15	3AUA0000064065	150	200	122	ES
ACS150-03U-05A6-4	3	P14494-CR-11	3AUA0000064061	100	150	104	P14494-CR-22	3AUA0000064072	100	300	140	ES
ACS150-03U-08A8-4	5	P14494-CR-22	3AUA0000064072	100	300	140	P14494-CR-30	3AUA0000064080	100	400	174	ES

		Duty Cycle=30sec on/180sec off				Duty Cycle=60sec on/180sec off						Disc. Sym.
Drive Type Code	HP	Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	
ACS150-03U-01A2-4	0,5	P14494-CR-01	3AUA0000064047	500	100	88	P14494-CR-01	3AUA0000064047	500	100	88	ES
ACS150-03U-02A4-4	1	P14494-CR-09	3AUA0000064059	200	150	104	P14494-CR-14	3AUA0000064064	200	200	122	ES
ACS150-03U-04A1-4	2	P14494-CR-21	3AUA0000064071	150	300	140	P14494-CR-29	3AUA0000064079	150	400	174	ES
ACS150-03U-05A6-4	3	P14494-CR-30	3AUA0000064080	100	400	174						ES

#### Standard Enclosed Resistor Packages

		Duty Cycle=3sec on/27sec off				Duty Cycle=10sec on/50sec off						Disc. Sym.
Drive Type Code	HP	Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	
ACS150-03U-01A2-4	0,5	P14494-10	3AUA0000015094	350	200	223	P14494-10	3AUA0000015094	350	200	223	ES
ACS150-03U-02A4-4	1	P14494-11	3AUA0000014395	250	300	223	P14494-11	3AUA0000014395	250	300	223	ES
ACS150-03U-04A1-4	2	P14494-15	3AUA0000013679	150	300	223	P14494-15	3AUA0000013679	150	300	223	ES
ACS150-03U-05A6-4	3	P14494-15	3AUA0000013679	150	300	223	P14494-15	3AUA0000013679	150	300	223	ES
ACS150-03U-08A8-4	5	P14494-19	3AUA0000015101	75	300	223	P14494-20	3AUA0000015102	75	600	337	ES

		Duty Cycle=30sec on/180sec off				Duty Cycle=60sec on/180sec off						Disc. Sym.
Drive Type Code	HP	Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	
ACS150-03U-01A2-4	0,5	P14494-10	3AUA0000015094	350	200	223	P14494-10	3AUA0000015094	350	200	223	ES
ACS150-03U-02A4-4	1	P14494-11	3AUA0000014395	250	300	223	P14494-11	3AUA0000014395	250	300	223	ES
ACS150-03U-04A1-4	2	P14494-15	3AUA0000013679	150	300	223	P14494-16	3AUA0000013865	150	600	337	ES
ACS150-03U-05A6-4	3	P14494-16	3AUA0000013865	150	600	337	P14494-16	3AUA0000013865	150	600	337	ES
ACS150-03U-08A8-4	5	P14494-20	3AUA0000015102	75	600	337	P14494-21	3AUA0000015103	75	1000	433	ES

Notes: 1. To determine resistor type, dimensions and weights refer to Resistor Technical Data Tables.

## ACS250 IP20 Drives

### Single Phase 100-120V applications, stopping duty only

#### Type CR Resistors (Available for the small HP drives as listed below)

Drive Type Code	HP	Duty Cycle=3sec on/27sec off				Duty Cycle=10sec on/50sec off						Disc. Sym.
		Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	
ACS250-01U-05A8-1	1.5	P14494-CR-06	3AUA0000064055	50	100	88	P14494-CR-18	3AUA0000064068	50	200	104	ES
ACS250-01U-05A8-1	1.5	P14494-CR-24	3AUA0000064074	50	300	140	P14494-CR-32	3AUA0000064083	50	400	174	ES
ACS250-01U-05A8-1	1.5	P14494-24	3AUA0000015106	45	300	140	P14494-24	3AUA0000015106	45	300	140	ES
ACS250-01U-05A8-1	1.5	P14494-24	3AUA0000015106	45	300	140	P14494-24	3AUA0000015106	45	300	140	ES
ACS250-03U-02A1-6	1.5	P14494-CR-02	3AUA0000064050	200	100	88	P14494-CR-13	3AUA0000064063	250	200	122	ES
ACS250-03U-03A1-6	2	P14494-CR-08	3AUA0000064058	250	150	104	P14494-CR-19	3AUA0000064069	250	300	140	ES
ACS250-03U-04A1-6	3	P14494-CR-22	3AUA0000064072	100	300	140	P14494-CR-30	3AUA0000064080	100	400	174	ES
ACS250-03U-06A5-6	5	P14494-CR-22	3AUA0000064072	100	300	140						ES
ACS250-03U-02A1-6	1.5	P14494-CR-19	3AUA0000064069	250	300	140	P14494-CR-27	3AUA0000064077	250	400	174	ES
ACS250-03U-03A1-6	2	P14494-CR-19	3AUA0000064069	250	300	140	P14494-CR-27	3AUA0000064077	250	400	174	ES
ACS250-03U-04A1-6	3	P14494-CR-27	3AUA0000064077	250	400	174						ES
ACS250-03U-02A1-6	1.5	P14494-11	3AUA0000014395	250	300	223	P14494-11	3AUA0000014395	250	300	223	ES
ACS250-03U-03A1-6	2	P14494-11	3AUA0000014395	250	300	223	P14494-11	3AUA0000014395	250	300	223	ES
ACS250-03U-04A1-6	3	P14494-11	3AUA0000014395	250	300	223	P14494-11	3AUA0000014395	250	300	223	ES
ACS250-03U-06A5-6	5	P14494-13	3AUA0000015096	200	300	223	P14494-14	3AUA0000015097	200	600	338	ES
ACS250-03U-02A1-6	1.5	P14494-11	3AUA0000014395	250	300	223	P14494-11	3AUA0000014395	250	300	223	ES
ACS250-03U-03A1-6	2	P14494-11	3AUA0000014395	250	300	223	P14494-11	3AUA0000014395	250	300	223	ES
ACS250-03U-04A1-6	3	P14494-12	3AUA0000015095	250	600	338	P14494-12	3AUA0000015095	250	600	338	ES
ACS250-03U-04A1-6	3	P14494-12	3AUA0000015095	250	600	338	P14494-12	3AUA0000015095	250	600	338	ES
ACS250-03U-06A5-6	5	P14494-14	3AUA0000015097	200	600	338	P14494-18	3AUA0000015100	150	1200	528	ES
ACS250-03U-09A0-6	7.5	ABB-48431-052	3AUA0000015300	80	800	337	P14494-63	3AUA0000064025	80	1050	433	ES
ACS250-03U-12A0-6	10	P14494-62	3AUA0000064023	63	800	337	ABB-48431-140	3AUA0000015345	63	1200	433	ES
ACS250-03U-17A0-6	15	ABB-41163	3AUA0000015149	35	900	433	P14494-34	3AUA0000015114	35	1600	529	ES
ACS250-03U-22A0-6	20	P14494-33	3AUA0000015113	35	1200	433	ABB-44534	3AUA0000015265	40	2010	626	ES

**ACS250 IP66 Drives**

**Single Phase 100-120V applications, stopping duty only**

**Type CR Resistors (Available for the small HP drives as listed below)**

Drive Type Code	HP	Duty Cycle=3sec on/27sec off					Duty Cycle=10sec on/50sec off					Disc. Sym.
		Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	
ACS250-01U-05A8-1+B063	1.5	P14494-CR-06	3AUA0000064055	50	100	88	P14494-CR-18	3AUA0000064068	50	200	104	ES
ACS250-01U-05A8-1+B063	1.5	P14494-CR-24	3AUA0000064074	50	300	140	P14494-CR-32	3AUA0000064083	50	400	174	ES
ACS250-01U-05A8-1+B063	1.5	P14494-24	3AUA0000015106	45	300	140	P14494-24	3AUA0000015106	45	300	140	ES
ACS250-01U-05A8-1+B063	1.5	P14494-24	3AUA0000015106	45	300	140	P14494-24	3AUA0000015106	45	300	140	ES
ACS250-01U-10A5-2+B063	3	P14494-CR-12	3AUA0000064062	50	150	104	P14494-CR-24	3AUA0000064074	50	300	140	ES
ACS250-01U-10A5-2+B063	3	P14494-CR-32	3AUA0000064083	50	400	174						ES
ACS250-01U-10A5-2+B063	3	P14494-31	3AUA0000015112	35	300	223	P14494-31	3AUA0000015112	35	300	223	ES
ACS250-01U-10A5-2+B063	3	P14494-32	3AUA0000013872	35	820	338	P14494-32	3AUA0000013872	35	820	338	ES
ACS250-03U-07A0-2+B063	2	P14494-CR-06	3AUA0000064055	50	100	88	P14494-CR-18	3AUA0000064068	50	200	122	ES
ACS250-03U-10A5-2+B063	3	P14494-CR-12	3AUA0000064062	50	150	104	P14494-CR-24	3AUA0000064074	50	300	140	ES
ACS250-03U-18A0-2+B063	5	P14494-CR-26	3AUA0000064076	40	300	140	P14494-CR-34	3AUA0000064085	40	400	174	ES
ACS250-03U-07A0-2+B063	2	P14494-CR-24	3AUA0000064074	50	300	140	P14494-CR-32	3AUA0000064083	50	400	174	ES
ACS250-03U-10A5-2+B063	3	P14494-CR-32	3AUA0000064083	50	400	174						ES
ACS250-03U-07A0-2+B063	2	P14494-31	3AUA0000015112	35	300	223	P14494-31	3AUA0000015112	35	300	223	ES
ACS250-03U-10A5-2+B063	3	P14494-31	3AUA0000015112	35	300	223	P14494-31	3AUA0000015112	35	300	223	ES
ACS250-03U-18A0-2+B063	5	P14494-31	3AUA0000015112	35	300	223	P14494-32	3AUA0000013872	35	820	338	ES
ACS250-01U-07A0-2+B063	2	P14494-31	3AUA0000015112	35	300	223	P14494-32	3AUA0000013872	35	820	338	ES
ACS250-01U-10A5-2+B063	3	P14494-32	3AUA0000013872	35	820	338	P14494-32	3AUA0000013872	35	820	338	ES
ACS250-03U-18A0-2+B063	5	P14494-32	3AUA0000013872	35	820	338	P14494-32	3AUA0000013872	35	820	338	ES
ACS250-03U-04A1-4+B063	2	P14494-CR-03	3AUA0000064052	150	100	88	P14494-CR-15	3AUA0000064065	150	200	122	ES
ACS250-03U-05A8-4+B063	3	P14494-CR-11	3AUA0000064061	100	150	104	P14494-CR-22	3AUA0000064072	100	300	140	ES
ACS250-03U-09A5-4+B063	5	P14494-CR-22	3AUA0000064072	100	300	140	P14494-CR-30	3AUA0000064080	100	400	174	ES
ACS250-03U-14A0-4+B063	7.5	P14494-CR-32	3AUA0000064083	50	400	174						ES
ACS250-03U-04A1-4+B063	2	P14494-CR-21	3AUA0000064071	150	300	140	P14494-CR-29	3AUA0000064079	150	400	174	ES
ACS250-03U-05A8-4+B063	3	P14494-CR-30	3AUA0000064080	100	400	174						ES
ACS250-03U-04A1-4+B063	2	P14494-15	3AUA0000013679	150	300	223	P14494-15	3AUA0000013679	150	300	223	ES
ACS250-03U-05A8-4+B063	3	P14494-15	3AUA0000013679	150	300	223	P14494-15	3AUA0000013679	150	300	223	ES
ACS250-03U-09A5-4+B063	5	P14494-19	3AUA0000015101	75	300	223	P14494-20	3AUA0000015102	75	600	337	ES
ACS250-03U-14A0-4+B063	7.5	P14494-25	3AUA0000015107	45	800	337	P14494-25	3AUA0000015107	45	800	337	ES
ACS250-03U-18A0-4+B063	10	P14494-25	3AUA0000015107	45	800	337	P14494-26	3AUA0000013807	45	1260	433	ES
ACS250-03U-04A1-4+B063	2	P14494-15	3AUA0000013679	150	300	223	P14494-16	3AUA0000013865	150	600	338	ES
ACS250-03U-05A8-4+B063	3	P14494-16	3AUA0000013865	150	600	338	P14494-16	3AUA0000013865	150	600	338	ES
ACS250-03U-09A5-4+B063	5	P14494-20	3AUA0000015102	75	600	337	P14494-21	3AUA0000015103	75	1000	432	ES
ACS250-03U-14A0-4+B063	7.5	P14494-26	3AUA0000013807	45	1260	432	P14494-27	3AUA0000015081	45	1920	626	ES
ACS250-03U-02A1-6+B063	1.5	P14494-CR-02	3AUA0000064050	200	100	88	P14494-CR-13	3AUA0000064063	250	200	122	ES
ACS250-03U-03A1-6+B063	2	P14494-CR-08	3AUA0000064058	250	150	104	P14494-CR-19	3AUA0000064069	250	300	140	ES
ACS250-03U-04A1-6+B063	3	P14494-CR-22	3AUA0000064072	100	300	140	P14494-CR-30	3AUA0000064080	100	400	174	ES
ACS250-03U-06A5-6+B063	5	P14494-CR-22	3AUA0000064072	100	300	140						ES
ACS250-03U-02A1-6+B063	1.5	P14494-CR-19	3AUA0000064069	250	300	140	P14494-CR-27	3AUA0000064077	250	400	174	ES
ACS250-03U-03A1-6+B063	2	P14494-CR-19	3AUA0000064069	250	300	140	P14494-CR-27	3AUA0000064077	250	400	174	ES
ACS250-03U-04A1-6+B063	3	P14494-CR-27	3AUA0000064077	250	400	174						ES
ACS250-03U-02A1-6+B063	1.5	P14494-11	3AUA0000014395	250	300	223	P14494-11	3AUA0000014395	250	300	223	ES
ACS250-03U-03A1-6+B063	2	P14494-11	3AUA0000014395	250	300	223	P14494-11	3AUA0000014395	250	300	223	ES
ACS250-03U-04A1-6+B063	3	P14494-11	3AUA0000014395	250	300	223	P14494-11	3AUA0000014395	250	300	223	ES
ACS250-03U-06A5-6+B063	5	P14494-13	3AUA0000015096	200	300	223	P14494-14	3AUA0000015097	200	600	338	ES
ACS250-03U-02A1-6+B063	1.5	P14494-11	3AUA0000014395	250	300	223	P14494-11	3AUA0000014395	250	300	223	ES
ACS250-03U-03A1-6+B063	2	P14494-11	3AUA0000014395	250	300	223	P14494-11	3AUA0000014395	250	300	223	ES
ACS250-03U-04A1-6+B063	3	P14494-12	3AUA0000015095	250	600	338	P14494-12	3AUA0000015095	250	600	338	ES
ACS250-03U-04A1-6+B063	3	P14494-12	3AUA0000015095	250	600	338	P14494-12	3AUA0000015095	250	600	338	ES
ACS250-03U-06A5-6+B063	5	P14494-14	3AUA0000015097	200	600	338	P14494-18	3AUA0000015100	150	1200	528	ES
ACS250-03U-09A0-6+B063	7.5	ABB-48431-052	3AUA0000015300	80	800	337	P14494-63	3AUA0000064025	80	1050	433	ES
ACS250-03U-12A0-6+B063	10	P14494-62	3AUA0000064023	63	800	337	ABB-48431-140	3AUA0000015345	63	1200	433	ES
ACS250-03U-17A0-6+B063	15	ABB-41163	3AUA0000015149	35	900	433	P14494-34	3AUA0000015114	35	1600	529	ES



## ACS250 IP66 Drives

### Single Phase 100-120V applications, stopping duty only

#### Type CR Resistors (Available for the small HP drives as listed below)

Drive Type Code	HP	Duty Cycle=3sec on/27sec off					Duty Cycle=10sec on/50sec off					Disc. Sym.
		Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	
ACS250-01U-05A8-1+B063+F278	1.5	P14494-CR-06	3AUA0000064055	50	100	88	P14494-CR-18	3AUA0000064068	50	200	104	ES
ACS250-01U-05A8-1+B063+F278	1.5	P14494-CR-24	3AUA0000064074	50	300	140	P14494-CR-32	3AUA0000064083	50	400	174	ES
ACS250-01U-05A8-1+B063+F278	1.5	P14494-24	3AUA0000015106	45	300	140	P14494-24	3AUA0000015106	45	300	140	ES
ACS250-01U-05A8-1+B063+F278	1.5	P14494-24	3AUA0000015106	45	300	140	P14494-24	3AUA0000015106	45	300	140	ES
ACS250-01U-10A5-2+B063+F278	3	P14494-CR-12	3AUA0000064062	50	150	104	P14494-CR-24	3AUA0000064074	50	300	140	ES
ACS250-01U-10A5-2+B063+F278	3	P14494-CR-32	3AUA0000064083	50	400	174						ES
ACS250-01U-10A5-2+B063+F278	3	P14494-31	3AUA0000015112	35	300	223	P14494-31	3AUA0000015112	35	300	223	ES
ACS250-01U-10A5-2+B063+F278	3	P14494-32	3AUA0000013872	35	820	338	P14494-32	3AUA0000013872	35	820	338	ES
ACS250-03U-07A0-2+B063+F278	2	P14494-CR-06	3AUA0000064055	50	100	88	P14494-CR-18	3AUA0000064068	50	200	122	ES
ACS250-03U-10A5-2+B063+F278	3	P14494-CR-12	3AUA0000064062	50	150	104	P14494-CR-24	3AUA0000064074	50	300	140	ES
ACS250-03U-18A0-2+B063+F278	5	P14494-CR-26	3AUA0000064076	40	300	140	P14494-CR-34	3AUA0000064085	40	400	174	ES
ACS250-03U-07A0-2+B063+F278	2	P14494-CR-24	3AUA0000064074	50	300	140	P14494-CR-32	3AUA0000064083	50	400	174	ES
ACS250-03U-10A5-2+B063+F278	3	P14494-CR-32	3AUA0000064083	50	400	174						ES
ACS250-03U-07A0-2+B063+F278	2	P14494-31	3AUA0000015112	35	300	223	P14494-31	3AUA0000015112	35	300	223	ES
ACS250-03U-10A5-2+B063+F278	3	P14494-31	3AUA0000015112	35	300	223	P14494-31	3AUA0000015112	35	300	223	ES
ACS250-03U-18A0-2+B063+F278	5	P14494-31	3AUA0000015112	35	300	223	P14494-32	3AUA0000013872	35	820	338	ES
ACS250-01U-07A0-2+B063+F278	2	P14494-31	3AUA0000015112	35	300	223	P14494-32	3AUA0000013872	35	820	338	ES
ACS250-01U-10A5-2+B063+F278	3	P14494-32	3AUA0000013872	35	820	338	P14494-32	3AUA0000013872	35	820	338	ES
ACS250-03U-18A0-2+B063+F278	5	P14494-32	3AUA0000013872	35	820	338	P14494-32	3AUA0000013872	35	820	338	ES
ACS250-03U-04A1-4+B063+F278	2	P14494-CR-03	3AUA0000064052	150	100	88	P14494-CR-15	3AUA0000064065	150	200	122	ES
ACS250-03U-05A8-4+B063+F278	3	P14494-CR-11	3AUA0000064061	100	150	104	P14494-CR-22	3AUA0000064072	100	300	140	ES
ACS250-03U-09A5-4+B063+F278	5	P14494-CR-22	3AUA0000064072	100	300	140	P14494-CR-30	3AUA0000064080	100	400	174	ES
ACS250-03U-14A0-4+B063+F278	7.5	P14494-CR-32	3AUA0000064083	50	400	174						ES
ACS250-03U-04A1-4+B063+F278	2	P14494-CR-21	3AUA0000064071	150	300	140	P14494-CR-29	3AUA0000064079	150	400	174	ES
ACS250-03U-05A8-4+B063+F278	3	P14494-CR-30	3AUA0000064080	100	400	174						ES
ACS250-03U-04A1-4+B063+F278	2	P14494-15	3AUA0000013679	150	300	223	P14494-15	3AUA0000013679	150	300	223	ES
ACS250-03U-05A8-4+B063+F278	3	P14494-15	3AUA0000013679	150	300	223	P14494-15	3AUA0000013679	150	300	223	ES
ACS250-03U-09A5-4+B063+F278	5	P14494-19	3AUA0000015101	75	300	223	P14494-20	3AUA0000015102	75	600	337	ES
ACS250-03U-14A0-4+B063+F278	7.5	P14494-25	3AUA0000015107	45	800	337	P14494-25	3AUA0000015107	45	800	337	ES
ACS250-03U-18A0-4+B063+F278	10	P14494-25	3AUA0000015107	45	800	337	P14494-26	3AUA0000013807	45	1260	433	ES
ACS250-03U-04A1-4+B063+F278	2	P14494-15	3AUA0000013679	150	300	223	P14494-16	3AUA0000013865	150	600	338	ES
ACS250-03U-05A8-4+B063+F278	3	P14494-16	3AUA0000013865	150	600	338	P14494-16	3AUA0000013865	150	600	338	ES
ACS250-03U-09A5-4+B063+F278	5	P14494-20	3AUA0000015102	75	600	337	P14494-21	3AUA0000015103	75	1000	432	ES
ACS250-03U-14A0-4+B063+F278	7.5	P14494-26	3AUA0000013807	45	1260	432	P14494-27	3AUA0000015081	45	1920	626	ES
ACS250-03U-02A1-6+B063+F278	1.5	P14494-CR-02	3AUA0000064050	200	100	88	P14494-CR-13	3AUA0000064063	250	200	122	ES
ACS250-03U-03A1-6+B063+F278	2	P14494-CR-08	3AUA0000064058	250	150	104	P14494-CR-19	3AUA0000064069	250	300	140	ES
ACS250-03U-04A1-6+B063+F278	3	P14494-CR-22	3AUA0000064072	100	300	140	P14494-CR-30	3AUA0000064080	100	400	174	ES
ACS250-03U-06A5-6+B063+F278	5	P14494-CR-22	3AUA0000064072	100	300	140						ES
ACS250-03U-02A1-6+B063+F278	1.5	P14494-CR-19	3AUA0000064069	250	300	140	P14494-CR-27	3AUA0000064077	250	400	174	ES
ACS250-03U-03A1-6+B063+F278	2	P14494-CR-19	3AUA0000064069	250	300	140	P14494-CR-27	3AUA0000064077	250	400	174	ES
ACS250-03U-04A1-6+B063+F278	3	P14494-CR-27	3AUA0000064077	250	400	174						ES
ACS250-03U-02A1-6+B063+F278	1.5	P14494-11	3AUA0000014395	250	300	223	P14494-11	3AUA0000014395	250	300	223	ES
ACS250-03U-03A1-6+B063+F278	2	P14494-11	3AUA0000014395	250	300	223	P14494-11	3AUA0000014395	250	300	223	ES
ACS250-03U-04A1-6+B063+F278	3	P14494-11	3AUA0000014395	250	300	223	P14494-11	3AUA0000014395	250	300	223	ES
ACS250-03U-06A5-6+B063+F278	5	P14494-13	3AUA0000015096	200	300	223	P14494-14	3AUA0000015097	200	600	338	ES
ACS250-03U-02A1-6+B063+F278	1.5	P14494-11	3AUA0000014395	250	300	223	P14494-11	3AUA0000014395	250	300	223	ES
ACS250-03U-03A1-6+B063+F278	2	P14494-11	3AUA0000014395	250	300	223	P14494-11	3AUA0000014395	250	300	223	ES
ACS250-03U-04A1-6+B063+F278	3	P14494-12	3AUA0000015095	250	600	338	P14494-12	3AUA0000015095	250	600	338	ES
ACS250-03U-04A1-6+B063+F278	3	P14494-12	3AUA0000015095	250	600	338	P14494-12	3AUA0000015095	250	600	338	ES
ACS250-03U-06A5-6+B063+F278	5	P14494-14	3AUA0000015097	200	600	338	P14494-18	3AUA0000015100	150	1200	528	ES
ACS250-03U-09A0-6+B063+F278	7.5	ABB-48431-052	3AUA0000015300	80	800	337	P14494-63	3AUA0000064025	80	1050	433	ES
ACS250-03U-12A0-6+B063+F278	10	P14494-62	3AUA0000064023	63	800	337	ABB-48431-140	3AUA0000015345	63	1200	433	ES
ACS250-03U-17A0-6+B063+F278	15	ABB-41163	3AUA0000015149	35	900	433	P14494-34	3AUA0000015114	35	1600	529	ES

Baldor ACB & ACS Drives  
AC Micro Drives  
AC Inverter Drives  
AC Vector Drives  
Analog AC Drives  
Baldor DC Drives  
ACS Drives  
ACB Drives  
Resistors  
Powerohm  
Input Reactors  
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Application Information  
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## ACS355 IP20 Drives

### Single Phase 200-240V applications, stopping duty only

#### Type CR Resistors (Available for the small HP drives as listed below)

Drive Type Code	HP	Duty Cycle=3sec on/27sec off					Duty Cycle=10sec on/50sec off					Disc. Sym.
		Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	
ACS355-01U-02A4-2	0,5	P14494-CR-02	3AUA0000064050	200	100	88	P14494-CR-02	3AUA0000064050	200	100	88	ES
ACS355-01U-04A7-2	1	P14494-CR-04	3AUA0000064053	100	100	88	P14494-CR-04	3AUA0000064053	100	100	88	ES
ACS355-01U-07A5-2	2	P14494-CR-04	3AUA0000064053	100	100	88	P14494-CR-16	3AUA0000064066	100	200	122	ES
ACS355-01U-09A8-2	3	P14494-CR-12	3AUA0000064062	50	150	104	P14494-CR-24	3AUA0000064074	50	300	140	ES

Drive Type Code	HP	Duty Cycle=30sec on/180sec off					Duty Cycle=60sec on/180sec off					Disc. Sym.
		Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	
ACS355-01U-02A4-2	0,5	P14494-CR-02	3AUA0000064050	200	100	88	P14494-CR-02	3AUA0000064050	200	100	88	ES
ACS355-01U-04A7-2	1	P14494-CR-11	3AUA0000064061	100	150	104	P14494-CR-16	3AUA0000064066	100	200	122	ES
ACS355-01U-07A5-2	2	P14494-CR-22	3AUA0000064072	100	300	140	P14494-CR-30	3AUA0000064080	100	400	174	ES
ACS355-01U-09A8-2	3	P14494-CR-32	3AUA0000064083	50	400	174						ES

#### Standard Enclosed Resistor Packages

Drive Type Code	HP	Duty Cycle=3sec on/27sec off					Duty Cycle=10sec on/50sec off					Disc. Sym.
		Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	
ACS355-01U-02A4-2	0,5	P14494-19	3AUA0000015101	75	300	223	P14494-19	3AUA0000015101	75	300	223	ES
ACS355-01U-04A7-2	1	P14494-24	3AUA0000015106	45	300	223	P14494-24	3AUA0000015106	45	300	223	ES
ACS355-01U-07A5-2	2	P14494-31	3AUA0000015112	35	300	223	P14494-31	3AUA0000015112	35	300	223	ES
ACS355-01U-09A8-2	3	P14494-31	3AUA0000015112	35	300	223	P14494-31	3AUA0000015112	35	300	223	ES

Drive Type Code	HP	Duty Cycle=30sec on/180sec off					Duty Cycle=60sec on/180sec off					Disc. Sym.
		Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	
ACS355-01U-02A4-2	0,5	P14494-19	3AUA0000015101	75	300	223	P14494-19	3AUA0000015101	75	300	223	ES
ACS355-01U-04A7-2	1	P14494-24	3AUA0000015106	45	300	223	P14494-24	3AUA0000015106	45	300	223	ES
ACS355-01U-07A5-2	2	P14494-31	3AUA0000015112	35	300	223	P14494-32	3AUA0000013872	35	820	337	ES
ACS355-01U-09A8-2	3	P14494-32	3AUA0000013872	35	820	337	P14494-32	3AUA0000013872	35	820	337	ES

Notes: 1. To determine resistor type, dimensions and weights refer to Resistor Technical Data Tables.

## ACS355 IP20 Drives

### Three Phase 200-240V applications, stopping duty only

#### Type CR Resistors (Available for the small HP drives as listed below)

Drive Type Code	HP	Duty Cycle=3sec on/27sec off			Duty Cycle=10sec on/50sec off			Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	Disc. Sym.
		Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price							
ACS355-03U-02A4-2	0,5	P14494-CR-02	3AUA0000064050	200	100	88	P14494-CR-02	3AUA0000064050	200	100	88	ES	
ACS355-03U-04A7-2	1	P14494-CR-04	3AUA0000064053	100	100	88	P14494-CR-04	3AUA0000064053	100	100	88	ES	
ACS355-03U-07A5-2	2	P14494-CR-06	3AUA0000064055	50	100	88	P14494-CR-18	3AUA0000064068	50	200	122	ES	
ACS355-03U-09A8-2	3	P14494-CR-12	3AUA0000064062	50	150	104	P14494-CR-24	3AUA0000064074	50	300	140	ES	
ACS355-03U-17A6-2	5	P14494-CR-26	3AUA0000064076	40	300	140	P14494-CR-34	3AUA0000064085	40	400	174	ES	

Drive Type Code	HP	Duty Cycle=30sec on/180sec off			Duty Cycle=60sec on/180sec off			Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	Disc. Sym.
		Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price							
ACS355-03U-02A4-2	0,5	P14494-CR-02	3AUA0000064050	200	100	88	P14494-CR-02	3AUA0000064050	200	100	88	ES	
ACS355-03U-04A7-2	1	P14494-CR-11	3AUA0000064061	100	150	104	P14494-CR-16	3AUA0000064066	100	200	122	ES	
ACS355-03U-07A5-2	2	P14494-CR-24	3AUA0000064074	50	300	140	P14494-CR-32	3AUA0000064083	50	400	17	ES	
ACS355-03U-09A8-2	3	P14494-CR-32	3AUA0000064083	50	400	174						ES	

#### Standard Enclosed Resistor Packages

Drive Type Code	HP	Duty Cycle=3sec on/27sec off			Duty Cycle=10sec on/50sec off			Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	Disc. Sym.
		Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price							
ACS355-03U-02A4-2	0,5	P14494-19	3AUA0000015101	75	300	223	P14494-19	3AUA0000015101	75	300	223	ES	
ACS355-03U-04A7-2	1	P14494-24	3AUA0000015106	45	300	223	P14494-24	3AUA0000015106	45	300	223	ES	
ACS355-03U-07A5-2	2	P14494-31	3AUA0000015112	35	300	223	P14494-31	3AUA0000015112	35	300	223	ES	
ACS355-03U-09A8-2	3	P14494-31	3AUA0000015112	35	300	223	P14494-31	3AUA0000015112	35	300	223	ES	
ACS355-03U-17A6-2	5	P14494-31	3AUA0000015112	35	300	223	P14494-32	3AUA0000013872	35	820	337	ES	
ACS355-03U-24A4-2	7,5	P14494-40	3AUA0000041877	21	750	337	P14494-40	3AUA0000041877	21	750	337	ES	
ACS355-03U-31A0-2	10	P14494-46	3AUA0000041879	15,0	750	337	P14494-47	3AUA0000041880	15,0	1150	433	ES	
ACS355-03U-46A2-2	15	P14494-56	3AUA0000041888	10,0	720	337	P14494-57	3AUA0000041889	10,0	1250	433	ES	

Drive Type Code	HP	Duty Cycle=30sec on/180sec off			Duty Cycle=60sec on/180sec off			Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	Disc. Sym.
		Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price							
ACS355-03U-02A4-2	0,5	P14494-19	3AUA0000015101	75	300	223	P14494-19	3AUA0000015101	75	300	223	ES	
ACS355-03U-04A7-2	1	P14494-24	3AUA0000015106	45	300	223	P14494-24	3AUA0000015106	45	300	223	ES	
ACS355-03U-07A5-2	2	P14494-31	3AUA0000015112	35	300	223	P14494-32	3AUA0000013872	35	820	337	ES	
ACS355-03U-09A8-2	3	P14494-32	3AUA0000013872	35	820	337	P14494-32	3AUA0000013872	35	820	337	ES	
ACS355-03U-17A6-2	5	P14494-32	3AUA0000013872	35	820	337	P14494-33	3AUA0000015113	35	1200	433	ES	
ACS355-03U-24A4-2	7,5	P14494-41	3AUA0000041878	21	1050	433	P14494-42	3AUA0000041892	21	1500	529	ES	
ACS355-03U-31A0-2	10	P14494-48	3AUA0000041881	15,0	1550	529	P14494-49	3AUA0000041882	15,0	2160	722	ES	
ACS355-03U-46A2-2	15	P14494-58	3AUA0000041890	10,0	1800	626	P14494-59	3AUA0000041891	10,0	3600	789	ES	

Notes: 1. To determine resistor type, dimensions and weights refer to Resistor Technical Data Tables.

## ACS355 IP20 Drives

### Three Phase 380-480V applications, stopping duty only

#### Type CR Resistors (Available for the small HP drives as listed below)

Drive Type Code	HP	Duty Cycle=3sec on/27sec off					Duty Cycle=10sec on/50sec off					Disc. Sym.
		Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	
ACS355-03U-01A2-4	0,5	P14494-CR-01	3AUA0000064047	500	100	88	P14494-CR-01	3AUA0000064047	500	100	88	ES
ACS355-03U-02A4-4	1	P14494-CR-02	3AUA0000064050	200	100	88	P14494-CR-02	3AUA0000064050	200	100	88	ES
ACS355-03U-04A1-4	2	P14494-CR-03	3AUA0000064052	150	100	88	P14494-CR-15	3AUA0000064065	150	200	122	ES
ACS355-03U-05A6-4	3	P14494-CR-11	3AUA0000064061	100	150	104	P14494-CR-22	3AUA0000064072	100	300	140	ES
ACS355-03U-08A8-4	5	P14494-CR-22	3AUA0000064072	100	300	140	P14494-CR-30	3AUA0000064080	100	400	174	ES
ACS355-03U-12A5-4	7,5	P14494-CR-32	3AUA0000064083	50	400	174						ES

Drive Type Code	HP	Duty Cycle=30sec on/180sec off					Duty Cycle=60sec on/180sec off					Disc. Sym.
		Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	
ACS355-03U-01A2-4	0,5	P14494-CR-01	3AUA0000064047	500	100	88	P14494-CR-01	3AUA0000064047	500	100	88	ES
ACS355-03U-02A4-4	1	P14494-CR-09	3AUA0000064059	200	150	104	P14494-CR-14	3AUA0000064064	200	200	122	ES
ACS355-03U-04A1-4	2	P14494-CR-21	3AUA0000064071	150	300	140	P14494-CR-29	3AUA0000064079	150	400	174	ES
ACS355-03U-05A6-4	3	P14494-CR-30	3AUA0000064080	100	400	174						ES

#### Standard Enclosed Resistor Packages

Drive Type Code	HP	Duty Cycle=3sec on/27sec off					Duty Cycle=10sec on/50sec off					Disc. Sym.
		Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	
ACS355-03U-01A2-4	0,5	P14494-10	3AUA0000015094	350	200	223	P14494-10	3AUA0000015094	350	200	223	ES
ACS355-03U-02A4-4	1	P14494-11	3AUA0000014395	250	300	223	P14494-11	3AUA0000014395	250	300	223	ES
ACS355-03U-04A1-4	2	P14494-15	3AUA0000013679	150	300	223	P14494-15	3AUA0000013679	150	300	223	ES
ACS355-03U-05A6-4	3	P14494-15	3AUA0000013679	150	300	223	P14494-15	3AUA0000013679	150	300	223	ES
ACS355-03U-12A5-4	5	P14494-19	3AUA0000015101	75	300	223	P14494-20	3AUA0000015102	75	600	337	ES
ACS355-03U-12A5-4	7,5	P14494-25	3AUA0000015107	45	800	337	P14494-25	3AUA0000015107	45	800	337	ES
ACS355-03U-15A6-4	10	P14494-25	3AUA0000015107	45	800	337	P14494-26	3AUA0000013807	45	1260	433	ES
ACS355-03U-23A1-4	15	P14494-32	3AUA0000013872	35	820	337	P14494-33	3AUA0000015113	35	1200	433	ES
ACS355-03U-31A0-4	20	P14494-41	3AUA0000041878	21	1050	433	P14494-43	3AUA0000041895	21	2000	626	ES
ACS355-03U-38A0-4	25	P14494-47	3AUA0000041880	15,0	1150	433	P14494-49	3AUA0000041882	15,0	2160	722	ES
ACS355-03U-44A0-4	30	P14494-48	3AUA0000041881	15,0	1550	529	P14494-50	3AUA0000041883	15,0	2450	817	ES

Drive Type Code	HP	Duty Cycle=30sec on/180sec off					Duty Cycle=60sec on/180sec off					Disc. Sym.
		Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	
ACS355-03U-01A2-4	0,5	P14494-10	3AUA0000015094	350	200	223	P14494-10	3AUA0000015094	350	200	223	ES
ACS355-03U-02A4-4	1	P14494-11	3AUA0000014395	250	300	223	P14494-11	3AUA0000014395	250	300	223	ES
ACS355-03U-04A1-4	2	P14494-15	3AUA0000013679	150	300	223	P14494-16	3AUA0000013865	150	600	337	ES
ACS355-03U-05A6-4	3	P14494-16	3AUA0000013865	150	600	337	P14494-16	3AUA0000013865	150	600	337	ES
ACS355-03U-12A5-4	5	P14494-20	3AUA0000015102	75	600	337	P14494-21	3AUA0000015103	75	1000	433	ES
ACS355-03U-12A5-4	7,5	P14494-26	3AUA0000013807	45	1260	433	P14494-27	3AUA0000015081	45	1920	626	ES
ACS355-03U-15A6-4	10	P14494-26	3AUA0000013807	45	1260	433	P14494-27	3AUA0000015081	45	1920	626	ES
ACS355-03U-23A1-4	15	P14494-38	3AUA0000036829	35	1865	626	P14494-36	3AUA0000041894	35	3600	972	ES
ACS355-03U-31A0-4	20	P14494-44	3AUA0000041093	21	2600	817	P14494-45	3AUA0000041896	21	4400	972	ES
ACS355-03U-38A0-4	25	P14494-53	3AUA0000041885	15,0	3600	789	P14494-54	3AUA0000041886	15,0	5000	972	ES
ACS355-03U-44A0-4	30	P14494-53	3AUA0000041885	15,0	3600	789	P14494-55	3AUA0000041887	15,0	6000	1,297	ES

Notes: 1. To determine resistor type, dimensions and weights refer to Resistor Technical Data Tables.

## ACS355 IP66 Drives

### Three Phase 200-240V applications, stopping duty only

#### Type CR Resistors (Available for the small HP drives as listed below)

Drive Type Code	HP	Duty Cycle=3sec on/27sec off					Duty Cycle=10sec on/50sec off					Disc. Sym.
		Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	
ACS355-03U-02A4-2+B063	0,5	P14494-CR-02	3AUA0000064050	200	100	88	P14494-CR-02	3AUA0000064050	200	100	88	ES
ACS355-03U-04A7-2+B063	1	P14494-CR-04	3AUA0000064053	100	100	88	P14494-CR-04	3AUA0000064053	100	100	88	ES
ACS355-03U-07A5-2+B063	2	P14494-CR-06	3AUA0000064055	50	100	88	P14494-CR-18	3AUA0000064068	50	200	122	ES
ACS355-03U-09A8-2+B063	3	P14494-CR-12	3AUA0000064062	50	150	104	P14494-CR-24	3AUA0000064074	50	300	140	ES
ACS355-03U-17A6-2+B063	5	P14494-CR-26	3AUA0000064076	40	300	140	P14494-CR-34	3AUA0000064085	40	400	174	ES

Drive Type Code	HP	Duty Cycle=30sec on/180sec off					Duty Cycle=60sec on/180sec off					Disc. Sym.
		Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	
ACS355-03U-02A4-2+B063	0,5	P14494-CR-02	3AUA0000064050	200	100	88	P14494-CR-02	3AUA0000064050	200	100	88	ES
ACS355-03U-04A7-2+B063	1	P14494-CR-11	3AUA0000064061	100	150	104	P14494-CR-16	3AUA0000064066	100	200	122	ES
ACS355-03U-07A5-2+B063	2	P14494-CR-24	3AUA0000064074	50	300	140	P14494-CR-32	3AUA0000064083	50	400	17	ES
ACS355-03U-09A8-2+B063	3	P14494-CR-32	3AUA0000064083	50	400	174						ES

#### Standard Enclosed Resistor Packages

Drive Type Code	HP	Duty Cycle=3sec on/27sec off					Duty Cycle=10sec on/50sec off					Disc. Sym.
		Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	
ACS355-03U-02A4-2+B063	0,5	P14494-19	3AUA0000015101	75	300	223	P14494-19	3AUA0000015101	75	300	223	ES
ACS355-03U-04A7-2+B063	1	P14494-24	3AUA0000015106	45	300	223	P14494-24	3AUA0000015106	45	300	223	ES
ACS355-03U-07A5-2+B063	2	P14494-31	3AUA0000015112	35	300	223	P14494-31	3AUA0000015112	35	300	223	ES
ACS355-03U-09A8-2+B063	3	P14494-31	3AUA0000015112	35	300	223	P14494-31	3AUA0000015112	35	300	223	ES
ACS355-03U-17A6-2+B063	5	P14494-31	3AUA0000015112	35	300	223	P14494-32	3AUA0000013872	35	820	337	ES

Drive Type Code	HP	Duty Cycle=30sec on/180sec off					Duty Cycle=60sec on/180sec off					Disc. Sym.
		Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	
ACS355-03U-02A4-2+B063	0,5	P14494-19	3AUA0000015101	75	300	223	P14494-19	3AUA0000015101	75	300	223	ES
ACS355-03U-04A7-2+B063	1	P14494-24	3AUA0000015106	45	300	223	P14494-24	3AUA0000015106	45	300	223	ES
ACS355-03U-07A5-2+B063	2	P14494-31	3AUA0000015112	35	300	223	P14494-32	3AUA0000013872	35	820	337	ES
ACS355-03U-09A8-2+B063	3	P14494-32	3AUA0000013872	35	820	337	P14494-32	3AUA0000013872	35	820	337	ES
ACS355-03U-17A6-2+B063	5	P14494-32	3AUA0000013872	35	820	337	P14494-33	3AUA0000015113	35	1200	433	ES

Notes: 1. To determine resistor type, dimensions and weights refer to Resistor Technical Data Tables.

## ACS355 IP66 Drives

### Three Phase 380-480V applications, stopping duty only

#### Type CR Resistors (Available for the small HP drives as listed below)

Drive Type Code	HP	Duty Cycle=3sec on/27sec off					Duty Cycle=10sec on/50sec off					Disc. Sym.
		Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	
ACS355-03U-01A2-4+B063	0,5	P14494-CR-01	3AUA0000064047	500	100	88	P14494-CR-01	3AUA0000064047	500	100	88	ES
ACS355-03U-02A4-4+B063	1	P14494-CR-02	3AUA0000064050	200	100	88	P14494-CR-02	3AUA0000064050	200	100	88	ES
ACS355-03U-04A1-4+B063	2	P14494-CR-03	3AUA0000064052	150	100	88	P14494-CR-15	3AUA0000064065	150	200	122	ES
ACS355-03U-05A6-4+B063	3	P14494-CR-11	3AUA0000064061	100	150	104	P14494-CR-22	3AUA0000064072	100	300	140	ES
ACS355-03U-08A8-4+B063	5	P14494-CR-22	3AUA0000064072	100	300	140	P14494-CR-30	3AUA0000064080	100	400	174	ES
ACS355-03U-12A5-4+B063	7,5	P14494-CR-32	3AUA0000064083	50	400	174						ES

Drive Type Code	HP	Duty Cycle=30sec on/180sec off					Duty Cycle=60sec on/180sec off					Disc. Sym.
		Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	
ACS355-03U-01A2-4+B063	0,5	P14494-CR-01	3AUA0000064047	500	100	88	P14494-CR-01	3AUA0000064047	500	100	88	ES
ACS355-03U-02A4-4+B063	1	P14494-CR-09	3AUA0000064059	200	150	104	P14494-CR-14	3AUA0000064064	200	200	122	ES
ACS355-03U-04A1-4+B063	2	P14494-CR-21	3AUA0000064071	150	300	140	P14494-CR-29	3AUA0000064079	150	400	174	ES
ACS355-03U-05A6-4+B063	3	P14494-CR-30	3AUA0000064080	100	400	174						ES

#### Standard Enclosed Resistor Packages

Drive Type Code	HP	Duty Cycle=3sec on/27sec off					Duty Cycle=10sec on/50sec off					Disc. Sym.
		Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	
ACS355-03U-01A2-4+B063	0,5	P14494-10	3AUA0000015094	350	200	223	P14494-10	3AUA0000015094	350	200	223	ES
ACS355-03U-02A4-4+B063	1	P14494-11	3AUA0000014395	250	300	223	P14494-11	3AUA0000014395	250	300	223	ES
ACS355-03U-04A1-4+B063	2	P14494-15	3AUA0000013679	150	300	223	P14494-15	3AUA0000013679	150	300	223	ES
ACS355-03U-05A6-4+B063	3	P14494-15	3AUA0000013679	150	300	223	P14494-15	3AUA0000013679	150	300	223	ES
ACS355-03U-08A8-4+B063	5	P14494-19	3AUA0000015101	75	300	223	P14494-20	3AUA0000015102	75	600	337	ES
ACS355-03U-12A5-4+B063	7,5	P14494-25	3AUA0000015107	45	800	337	P14494-25	3AUA0000015107	45	800	337	ES
ACS355-03U-15A6-4+B063	10	P14494-25	3AUA0000015107	45	800	337	P14494-26	3AUA0000013807	45	1260	433	ES

Drive Type Code	HP	Duty Cycle=30sec on/180sec off					Duty Cycle=60sec on/180sec off					Disc. Sym.
		Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	
ACS355-03U-01A2-4+B063	0,5	P14494-10	3AUA0000015094	350	200	223	P14494-10	3AUA0000015094	350	200	223	ES
ACS355-03U-02A4-4+B063	1	P14494-11	3AUA0000014395	250	300	223	P14494-11	3AUA0000014395	250	300	223	ES
ACS355-03U-04A1-4+B063	2	P14494-15	3AUA0000013679	150	300	223	P14494-16	3AUA0000013865	150	600	337	ES
ACS355-03U-05A6-4+B063	3	P14494-16	3AUA0000013865	150	600	337	P14494-16	3AUA0000013865	150	600	337	ES
ACS355-03U-12A5-4+B063	5	P14494-20	3AUA0000015102	75	600	337	P14494-21	3AUA0000015103	75	1000	433	ES
ACS355-03U-12A5-4+B063	7,5	P14494-26	3AUA0000013807	45	1260	433	P14494-27	3AUA0000015081	45	1920	626	ES
ACS355-03U-15A6-4+B063	10	P14494-26	3AUA0000013807	45	1260	433	P14494-27	3AUA0000015081	45	1920	626	ES

Notes: 1. To determine resistor type, dimensions and weights refer to Resistor Technical Data Tables.

## ACS355 IP66 Drives

### Three Phase 200-240V applications, stopping duty only

#### Type CR Resistors (Available for the small HP drives as listed below)

Drive Type Code	HP	Duty Cycle=3sec on/27sec off					Duty Cycle=10sec on/50sec off					Disc. Sym.
		Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	
ACS355-03U-02A4-2+B063+F278	0,5	P14494-CR-02	3AUA0000064050	200	100	88	P14494-CR-02	3AUA0000064050	200	100	88	ES
ACS355-03U-04A7-2+B063+F278	1	P14494-CR-04	3AUA0000064053	100	100	88	P14494-CR-04	3AUA0000064053	100	100	88	ES
ACS355-03U-07A5-2+B063+F278	2	P14494-CR-06	3AUA0000064055	50	100	88	P14494-CR-18	3AUA0000064068	50	200	122	ES
ACS355-03U-09A8-2+B063+F278	3	P14494-CR-12	3AUA0000064062	50	150	104	P14494-CR-24	3AUA0000064074	50	300	140	ES
ACS355-03U-17A6-2+B063+F278	5	P14494-CR-26	3AUA0000064076	40	300	140	P14494-CR-34	3AUA0000064085	40	400	174	ES

Drive Type Code	HP	Duty Cycle=30sec on/180sec off					Duty Cycle=60sec on/180sec off					Disc. Sym.
		Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	
ACS355-03U-02A4-2+B063+F278	0,5	P14494-CR-02	3AUA0000064050	200	100	88	P14494-CR-02	3AUA0000064050	200	100	88	ES
ACS355-03U-04A7-2+B063+F278	1	P14494-CR-11	3AUA0000064061	100	150	104	P14494-CR-16	3AUA0000064066	100	200	122	ES
ACS355-03U-07A5-2+B063+F278	2	P14494-CR-24	3AUA0000064074	50	300	140	P14494-CR-32	3AUA0000064083	50	400	17	ES
ACS355-03U-09A8-2+B063+F278	3	P14494-CR-32	3AUA0000064083	50	400	174						ES

#### Standard Enclosed Resistor Packages

Drive Type Code	HP	Duty Cycle=3sec on/27sec off					Duty Cycle=10sec on/50sec off					Disc. Sym.
		Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	
ACS355-03U-02A4-2+B063+F278	0,5	P14494-19	3AUA0000015101	75	300	223	P14494-19	3AUA0000015101	75	300	223	ES
ACS355-03U-04A7-2+B063+F278	1	P14494-24	3AUA0000015106	45	300	223	P14494-24	3AUA0000015106	45	300	223	ES
ACS355-03U-07A5-2+B063+F278	2	P14494-31	3AUA0000015112	35	300	223	P14494-31	3AUA0000015112	35	300	223	ES
ACS355-03U-09A8-2+B063+F278	3	P14494-31	3AUA0000015112	35	300	223	P14494-31	3AUA0000015112	35	300	223	ES
ACS355-03U-17A6-2+B063+F278	5	P14494-31	3AUA0000015112	35	300	223	P14494-32	3AUA0000013872	35	820	337	ES

Drive Type Code	HP	Duty Cycle=30sec on/180sec off					Duty Cycle=60sec on/180sec off					Disc. Sym.
		Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	
ACS355-03U-02A4-2+B063+F278	0,5	P14494-19	3AUA0000015101	75	300	223	P14494-19	3AUA0000015101	75	300	223	ES
ACS355-03U-04A7-2+B063+F278	1	P14494-24	3AUA0000015106	45	300	223	P14494-24	3AUA0000015106	45	300	223	ES
ACS355-03U-07A5-2+B063+F278	2	P14494-31	3AUA0000015112	35	300	223	P14494-32	3AUA0000013872	35	820	337	ES
ACS355-03U-09A8-2+B063+F278	3	P14494-32	3AUA0000013872	35	820	337	P14494-32	3AUA0000013872	35	820	337	ES
ACS355-03U-17A6-2+B063+F278	5	P14494-32	3AUA0000013872	35	820	337	P14494-33	3AUA0000015113	35	1200	433	ES

Notes: 1. To determine resistor type, dimensions and weights refer to Resistor Technical Data Tables.

**ACS355 IP66 Drives**

**Three Phase 380-480V applications, stopping duty only**

**Type CR Resistors (Available for the small HP drives as listed below)**

Drive Type Code	HP	Duty Cycle=3sec on/27sec off					Duty Cycle=10sec on/50sec off					Disc. Sym.
		Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	
ACS355-03U-01A2-4+B063+F278	0,5	P14494-CR-01	3AUA0000064047	500	100	88	P14494-CR-01	3AUA0000064047	500	100	88	ES
ACS355-03U-02A4-4+B063+F278	1	P14494-CR-02	3AUA0000064050	200	100	88	P14494-CR-02	3AUA0000064050	200	100	88	ES
ACS355-03U-04A1-4+B063+F278	2	P14494-CR-03	3AUA0000064052	150	100	88	P14494-CR-15	3AUA0000064065	150	200	122	ES
ACS355-03U-05A6-4+B063+F278	3	P14494-CR-11	3AUA0000064061	100	150	104	P14494-CR-22	3AUA0000064072	100	300	140	ES
ACS355-03U-08A8-4+B063+F278	5	P14494-CR-22	3AUA0000064072	100	300	140	P14494-CR-30	3AUA0000064080	100	400	174	ES
ACS355-03U-12A5-4+B063+F278	7,5	P14494-CR-32	3AUA0000064083	50	400	174						ES

Drive Type Code	HP	Duty Cycle=30sec on/180sec off					Duty Cycle=60sec on/180sec off					Disc. Sym.
		Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	
ACS355-03U-01A2-4+B063+F278	0,5	P14494-CR-01	3AUA0000064047	500	100	88	P14494-CR-01	3AUA0000064047	500	100	88	ES
ACS355-03U-02A4-4+B063+F278	1	P14494-CR-09	3AUA0000064059	200	150	104	P14494-CR-14	3AUA0000064064	200	200	122	ES
ACS355-03U-04A1-4+B063+F278	2	P14494-CR-21	3AUA0000064071	150	300	140	P14494-CR-29	3AUA0000064079	150	400	174	ES
ACS355-03U-05A6-4+B063+F278	3	P14494-CR-30	3AUA0000064080	100	400	174						

**Standard Enclosed Resistor Packages**

Drive Type Code	HP	Duty Cycle=3sec on/27sec off					Duty Cycle=10sec on/50sec off					Disc. Sym.
		Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	
ACS355-03U-01A2-4+B063+F278	0,5	P14494-10	3AUA0000015094	350	200	223	P14494-10	3AUA0000015094	350	200	223	ES
ACS355-03U-02A4-4+B063+F278	1	P14494-11	3AUA0000014395	250	300	223	P14494-11	3AUA0000014395	250	300	223	ES
ACS355-03U-04A1-4+B063+F278	2	P14494-15	3AUA0000013679	150	300	223	P14494-15	3AUA0000013679	150	300	223	ES
ACS355-03U-05A6-4+B063+F278	3	P14494-15	3AUA0000013679	150	300	223	P14494-15	3AUA0000013679	150	300	223	ES
ACS355-03U-08A8-4+B063+F278	5	P14494-19	3AUA0000015101	75	300	223	P14494-20	3AUA0000015102	75	600	337	ES
ACS355-03U-12A5-4+B063+F278	7,5	P14494-25	3AUA0000015107	45	800	337	P14494-25	3AUA0000015107	45	800	337	ES
ACS355-03U-15A6-4+B063+F278	10	P14494-25	3AUA0000015107	45	800	337	P14494-26	3AUA0000013807	45	1260	433	ES

Drive Type Code	HP	Duty Cycle=30sec on/180sec off					Duty Cycle=60sec on/180sec off					Disc. Sym.
		Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	
ACS355-03U-01A2-4+B063+F278	0,5	P14494-10	3AUA0000015094	350	200	223	P14494-10	3AUA0000015094	350	200	223	ES
ACS355-03U-02A4-4+B063+F278	1	P14494-11	3AUA0000014395	250	300	223	P14494-11	3AUA0000014395	250	300	223	ES
ACS355-03U-04A1-4+B063+F278	2	P14494-15	3AUA0000013679	150	300	223	P14494-16	3AUA0000013865	150	600	337	ES
ACS355-03U-05A6-4+B063+F278	3	P14494-16	3AUA0000013865	150	600	337	P14494-16	3AUA0000013865	150	600	337	ES
ACS355-03U-12A5-4+B063+F278	5	P14494-20	3AUA0000015102	75	600	337	P14494-21	3AUA0000015103	75	1000	433	ES
ACS355-03U-12A5-4+B063+F278	7,5	P14494-26	3AUA0000013807	45	1260	433	P14494-27	3AUA0000015081	45	1920	626	ES
ACS355-03U-15A6-4+B063+F278	10	P14494-26	3AUA0000013807	45	1260	433	P14494-27	3AUA0000015081	45	1920	626	ES

Notes: 1. To determine resistor type, dimensions and weights refer to Resistor Technical Data Tables.



## ACB530 Drives

### Three Phase 200-240V applications, stopping duty only

#### Type CR Resistors (Available for the small HP drives as listed below)

		DutyCycle=3sec on/27sec off								Disc. Sym.
Drive Type Code	HP HD	Brake Module	Brake Module Catalog Number	List Price	CR Resistor	Resistor Catalog Number	Ohms	Watts	List Price	
ACB530-U1-07A5-2	1.5	Internal		N/A	P14494-CR-04	3AUA0000064053	100	100	88	ES
ACB530-U1-012A-2	2	Internal		N/A	P14494-CR-12	3AUA0000064062	50	150	104	ES
ACB530-U1-017A-2	3	Internal		N/A	P14494-CR-25	3AUA0000064075	45	300	140	ES
		DutyCycle=10sec on/50sec off								Disc. Sym.
Drive Type Code	HP HD	Brake Module	Brake Module Catalog Number	List Price	CR Resistor	Resistor Catalog Number	Ohms	Watts	List Price	
ACB530-U1-07A5-2	1,5	Internal		N/A	P14494-CR-16	3AUA0000064066	100	200	122	ES
ACB530-U1-012A-2	2	Internal		N/A	P14494-CR-24	3AUA0000064074	50	300	140	ES
ACB530-U1-017A-2	3	Internal		N/A	P14494-CR-33	3AUA0000064084	45	400	174	ES

#### Standard Enclosed Resistor Packages

		DutyCycle=3sec on/27sec off								Disc. Sym.
Drive Type Code	HP HD	Brake Module	Brake Module Catalog Number	List Price	Resistor	Resistor Catalog Number	Ohms	Watts	List Price	
ACB530-U1-07A5-2	1.5	Internal		N/A	ABB-48431-020	3AUA0000014990	44	324	223	ES
ACB530-U1-012A-2	2	Internal		N/A	ABB-48431-020	3AUA0000014990	44	324	223	ES
ACB530-U1-017A-2	3	Internal		N/A	ABB-48431-020	3AUA0000014990	44	324	223	ES
ACB530-U1-024A-2	5	Internal		N/A	ABB-48431-080	3AUA0000015321	30	800	337	ES
ACB530-U1-031A-2	7.5	Internal		N/A	ABB-48431-002	3AUA0000015285	22	819	337	ES
ACB530-U1-046A-2	10	NBBM-V230-A30	3AUA0000064091	2,080	ABB-48431-061	3AUA0000015308	11.0	704	337	ES
ACB530-U1-059A-2	15	NBBM-V230-A30	3AUA0000064091	2,080	ABB-48431-092	3AUA0000015325	8.5	937	433	ES
ACB530-U1-075A-2	20	NBBM-V230-A30	3AUA0000064091	2,080	ABB-48431-153	3AUA0000015354	5.3	1193	433	ES
ACB530-U1-088A-2	25	NBBM-V230-A30	3AUA0000064091	2,080	ABB-41136	3AUA0000015122	3.0	1500	529	ES
ACB530-U1-114A-2	30	NBBM-V230-A30	3AUA0000064091	2,080	ABB-41137	3AUA0000015123	3.0	1800	624	ES
ACB530-U1-143A-2	40	NBBM-V230-A30	3AUA0000064091	2,080	ABB-41138	3AUA0000015124	3.0	2100	624	ES
ACB530-U1-178A-2	50	NBBM-V230-A30	3AUA0000064091	2,080	ABB-48431-301	3AUA0000015398	2.5	2723	753	ES
ACB530-U1-221A-2	60	NBBM-V230-A30	3AUA0000064091	2,080	ABB-48431-303	3AUA0000015399	2.5	3610	836	ES
ACB530-U1-248A-2	75	NBBM-V230-A300	3AUA0000064142	8,587	P14494-74	3AUA0000064038	1.8	4476	982	ES
		DutyCycle=10sec on/50sec off								Disc. Sym.
Drive Type Code	HP HD	Brake Module	Brake Module Catalog Number	List Price	Resistor	Resistor Catalog Number	Ohms	Watts	List Price	
ACB530-U1-07A5-2	1,5	Internal		N/A	ABB-48431-020	3AUA0000014990	44	324	223	ES
ACB530-U1-012A-2	2	Internal		N/A	ABB-48431-020	3AUA0000014990	44	324	223	ES
ACB530-U1-017A-2	3	Internal		N/A	ABB-48431-021	3AUA0000015004	44	800	337	ES
ACB530-U1-024A-2	5	Internal		N/A	ABB-48431-080	3AUA0000015321	30	800	337	ES
ACB530-U1-031A-2	7,5	Internal		N/A	ABB-48431-003	3AUA0000015286	22	1140	433	ES
ACB530-U1-046A-2	10	NBBM-V230-A30		2,080	ABB-48431-064	3AUA0000015311	11.0	1584	529	ES
ACB530-U1-059A-2	15	NBBM-V230-A30		2,080	ABB-48431-154	3AUA0000015355	5.3	1717	626	ES
ACB530-U1-075A-2	20	NBBM-V230-A30		2,080	ABB-48431-155	3AUA0000015356	5.3	2565	753	ES
ACB530-U1-088A-2	25	NBBM-V230-A30		2,080	ABB-48431-155	3AUA0000015356	5.3	2565	753	ES
ACB530-U1-114A-2	30	NBBM-V230-A30		2,080	ABB-48431-156	3AUA0000015357	5.3	3313	789	ES
ACB530-U1-143A-2	40	NBBM-V230-A30		2,080	P14494-75	3AUA0000064039	3.3	4316	982	ES
ACB530-U1-178A-2	50	NBBM-V230-A80		2,308	ABB-48431-270	3AUA0000015390	2.9	5614	1,050	ES
ACB530-U1-221A-2	60	NBBM-V230-A80		2,308	ABB-48431-304	3AUA0000015400	2.5	6250	1,238	ES
ACB530-U1-248A-2	75	NBBM-V230-A300		8,587	ABB-48431-390	3AUA0000015418	1.7	8330	1,544	ES

Notes: 1. To determine resistor type, dimensions and weights refer to Resistor Data Tables

2. The Brake Chopper is internal to the drive up to 7.5 HP. An external braking chopper must be used for 10 HP and above.

## ACB530 Drives

### Three Phase 200-240V applications, stopping duty only

#### Type CR Resistors (Available for the small HP drives as listed below)

DutyCycle=30sec on/180sec off										
Drive Type Code	HP HD	Brake Module	Brake Module Catalog Number	List Price	CR Resistor	Resistor Catalog Number	Ohms	Watts	List Price	Disc. Sym.
ACB530-U1-07A5-2	1.5	Internal		N/A	P14494-CR-22	3AUA0000064072	100	300	140	ES
ACB530-U1-012A-2	2	Internal		N/A	P14494-CR-32	3AUA0000064083	50	400	174	ES
DutyCycle=60sec on/180sec off										
ACB530-U1-07A5-2	1,5	Internal		N/A	P14494-CR-30	3AUA0000064080	100	400	174	ES

#### Standard Enclosed Resistor Packages

DutyCycle=30sec on/180sec off										
Drive Type Code	HP HD	Brake Module	Brake Module Catalog Number	List Price	Resistor	Resistor Catalog Number	Ohms	Watts	List Price	Disc. Sym.
ACB530-U1-07A5-2	1.5	Internal		N/A	ABB-48431-020	3AUA0000014990	44	324	223	ES
ACB530-U1-012A-2	2	Internal		N/A	ABB-48431-021	3AUA0000015004	44	800	337	ES
ACB530-U1-017A-2	3	Internal		N/A	ABB-48431-021	3AUA0000015004	44	800	337	ES
ACB530-U1-024A-2	5	Internal		N/A	P14494-60	3AUA0000133471	30	1050	433	ES
ACB530-U1-031A-2	7.5	Internal		N/A	ABB-48431-003	3AUA0000015286	22	1140	433	ES
ACB530-U1-046A-2	10	NBBM-V230-A30	3AUA0000064091	2,080	ABB-48431-065	3AUA0000015312	11.0	1859	626	ES
ACB530-U1-059A-2	15	NBBM-V230-A30	3AUA0000064091	2,080	ABB-48431-155	3AUA0000015356	5.3	2565	753	ES
ACB530-U1-075A-2	20	NBBM-V230-A30	3AUA0000064091	2,080	ABB-48431-156	3AUA0000015357	5.3	3313	789	ES
ACB530-U1-088A-2	25	NBBM-V230-A30	3AUA0000064091	2,080	ABB-48431-158	3AUA0000015358	5.3	3864	789	ES
ACB530-U1-114A-2	30	NBBM-V230-A30	3AUA0000064091	2,080	ABB-48431-160	3AUA0000015360	5.3	5772	1,141	ES
ACB530-U1-143A-2	40	NBBM-V230-A80	3AUA0000064094	2,308	ABB-41150	3AUA0000015136	4.0	5600	1,050	ES
ACB530-U1-178A-2	50	NBBM-V230-A80	3AUA0000064094	2,308	ABB-49173-007	3AUA0000015474	2.0	8600	1,734	ES
ACB530-U1-221A-2	60	NBBM-V230-A80	3AUA0000064094	2,308	ABB-49173-007	3AUA0000015474	2.0	8600	1,734	ES
ACB530-U1-248A-2	75	NBBM-V230-A300	3AUA0000064142	8,587	ABB-49173-009	3AUA0000015476	1.4	13000	2,168	ES
DutyCycle=60sec on/180sec off										
ACB530-U1-07A5-2	1,5	Internal		N/A	ABB-48431-021	3AUA0000015004	44	800	337	ES
ACB530-U1-012A-2	2	Internal		N/A	ABB-48431-021	3AUA0000015004	44	800	337	ES
ACB530-U1-017A-2	3	Internal		N/A	ABB-48431-022	3AUA0000015005	44	1263	433	ES
ACB530-U1-024A-2	5	Internal		N/A	ABB-48431-081	3AUA0000015322	30	1600	529	ES
ACB530-U1-031A-2	7,5	Internal		N/A	ABB-48431-006	3AUA0000015289	22	2200	722	ES
ACB530-U1-046A-2	10	NBBM-V230-A30		2,080	ABB-41169	3AUA0000015153	11.0	3700	789	ES
ACB530-U1-059A-2	15	NBBM-V230-A30		2,080	ABB-48431-159	3AUA0000015359	5.3	4770	972	ES
ACB530-U1-075A-2	20	NBBM-V230-A30		2,080	ABB-48431-160	3AUA0000015360	5.3	5772	1,141	ES
ACB530-U1-088A-2	25	NBBM-V230-A30		2,080	ABB-48431-161	3AUA0000015361	5.3	7653	1,328	ES
ACB530-U1-114A-2	30	NBBM-V230-A80		2,308	ABB-48431-161	3AUA0000015361	5.3	7653	1,328	ES
ACB530-U1-143A-2	40	NBBM-V230-A80		2,308	P14494-76	3AUA0000064040	3.4	12312	1,845	ES
ACB530-U1-178A-2	50	NBBM-V230-A80		2,308	ABB-42778	3AUA0000015168	2.7	13500	2,168	ES
ACB530-U1-221A-2	60	NBBM-V230-A80		2,308	ABB-48431-305	3AUA0000015401	2.5	16000	2,770	ES
ACB530-U1-248A-2	75	NBBM-V230-A300		8,587	ABB-42685	3AUA0000015165	1.7	21000	3,664	ES

Notes: 1. To determine resistor type, dimensions and weights refer to Resistor Data Tables

2. The Brake Chopper is internal to the drive up to 7.5 HP. An external braking chopper must be used for 10 HP and above.





## ACB530 Drives

### Three Phase 575-600V applications, stopping duty only

#### Type CR Resistors (Available for the small HP drives as listed below)

DutyCycle=3sec on/27sec off										
Drive Type Code	HP HD	Brake Module	Brake Module Catalog Number	List Price	CR Resistor	Resistor Catalog Number	Ohms	Watts	List Price	Disc. Sym.
ACB530-U1-02A7-6	1.5	Internal		N/A	P14494-CR-02	3AUA0000064050	200	100	88	ES
ACB530-U1-03A9-6	2	Internal		N/A	P14494-CR-08	3AUA0000064058	250	150	104	ES
ACB530-U1-06A1-6	3	Internal		N/A	P14494-CR-22	3AUA0000064072	100	300	140	ES
ACB530-U1-09A0-6	5	Internal		N/A	P14494-CR-30	3AUA0000064080	100	400	174	ES
DutyCycle=10sec on/50sec off										
ACB530-U1-02A7-6	1,5	Internal		N/A	P14494-CR-13	3AUA0000064063	250	200	122	ES
ACB530-U1-03A9-6	2	Internal		N/A	P14494-CR-19	3AUA0000064069	250	300	140	ES
ACB530-U1-06A1-6	3	Internal		N/A	P14494-CR-30	3AUA0000064080	100	400	174	ES

#### Standard Enclosed Resistor Packages

DutyCycle=3sec on/27sec off										
Drive Type Code	HP HD	Brake Module	Brake Module Catalog Number	List Price	Resistor	Resistor Catalog Number	Ohms	Watts	List Price	Disc. Sym.
ACB530-U1-02A7-6	1.5	Internal		N/A	P14494-11	3AUA0000014395	250	300	223	ES
ACB530-U1-03A9-6	2	Internal		N/A	P14494-11	3AUA0000014395	250	300	223	ES
ACB530-U1-06A1-6	3	Internal		N/A	P14494-13	3AUA0000015096	200	300	223	ES
ACB530-U1-09A0-6	5	Internal		N/A	ABB-48431-052	3AUA0000015300	80	800	337	ES
ACB530-U1-011A-6	7.5	Internal		N/A	ABB-48431-052	3AUA0000015300	80	800	337	ES
ACB530-U1-017A-6	10	Internal		N/A	P14494-62	3AUA0000064023	63	800	337	ES
ACB530-U1-022A-6	15	NBBM-V600-A30	3AUA0000064093	2,080	ABB-41163	3AUA0000015149	35	900	433	ES
ACB530-U1-027A-6	20	NBBM-V600-A30	3AUA0000064093	2,080	P14494-33	3AUA0000015113	35	1200	433	ES
ACB530-U1-032A-6	25	NBBM-V600-A30	3AUA0000064093	2,080	P14494-34	3AUA0000015114	35	1600	529	ES
ACB530-U1-041A-6	30	NBBM-V600-A30	3AUA0000064093	2,080	ABB-48431-005	3AUA0000015288	22	1862	626	ES
ACB530-U1-052A-6	40	NBBM-V600-A30	3AUA0000064093	2,080	ABB-48431-006	3AUA0000015289	22	2200	722	ES
ACB530-U1-062A-6	50	NBBM-V600-A30	3AUA0000064093	2,080	ABB-44494	3AUA0000015229	13.0	3333	789	ES
ACB530-U1-077A-6	60	NBBM-V600-A30	3AUA0000064093	2,080	ABB-44494	3AUA0000015229	13.0	3333	789	ES
ACB530-U1-099A-6	75	NBBM-V600-A30	3AUA0000064093	2,080	ABB-48431-068	3AUA0000015315	11.0	4400	909	ES
ACB530-U1-125A-6	100	NBBM-V600-A30	3AUA0000064093	2,080	ABB-48431-098	3AUA0000015331	8.5	6197	1,141	ES
ACB530-U1-144A-6	125	NBBM-V600-A80	3AUA0000064141	2,308	ABB-48431-161	3AUA0000015361	5.3	7653	1,328	ES
DutyCycle=10sec on/50sec off										
ACB530-U1-02A7-6	1,5	Internal		N/A	P14494-11	3AUA0000014395	250	300	223	ES
ACB530-U1-03A9-6	2	Internal		N/A	P14494-11	3AUA0000014395	250	300	223	ES
ACB530-U1-06A1-6	3	Internal		N/A	P14494-14	3AUA0000015097	200	600	337	ES
ACB530-U1-09A0-6	5	Internal		N/A	P14494-63	3AUA0000064025	80	1050	433	ES
ACB530-U1-011A-6	7,5	Internal		N/A	P14494-63	3AUA0000064025	80	1050	433	ES
ACB530-U1-017A-6	10	Internal		N/A	ABB-48431-140	3AUA0000015345	63	1200	433	ES
ACB530-U1-022A-6	15	NBBM-V600-A30		2,080	P14494-34	3AUA0000015114	35	1600	529	ES
ACB530-U1-027A-6	20	NBBM-V600-A30		2,080	ABB-44534	3AUA0000015265	40	2010	626	ES
ACB530-U1-032A-6	25	NBBM-V600-A30		2,080	P14494-35	3AUA0000015115	35	2500	817	ES
ACB530-U1-041A-6	30	NBBM-V600-A30		2,080	ABB-48431-008	3AUA0000014919	22	3168	876	ES
ACB530-U1-052A-6	40	NBBM-V600-A30		2,080	ABB-48431-009	3AUA0000014956	22	5632	972	ES
ACB530-U1-062A-6	50	NBBM-V600-A30		2,080	P14494-54	3AUA0000041886	15.0	5000	972	ES
ACB530-U1-077A-6	60	NBBM-V600-A30		2,080	ABB-48431-036	3AUA0000015290	13.0	6292	1,224	ES
ACB530-U1-099A-6	75	NBBM-V600-A30		2,080	ABB-48431-070	3AUA0000015317	11.0	8019	1,224	ES
ACB530-U1-125A-6	100	NBBM-V600-A30		2,080	ABB-44541	3AUA0000015272	8.4	12590	1,563	ES
ACB530-U1-144A-6	125	NBBM-V600-A80		2,308	ABB-48431-162	3AUA0000015362	5.3	13250	2,307	ES

Notes: 1. To determine resistor type, dimensions and weights refer to Resistor Data Tables  
2. The Brake Chopper is internal to the drive up to 15 HP. An external braking chopper must be used for 15 HP and above.

**ACB530 Drives**

**Three Phase 575-600V applications, stopping duty only**

**Type CR Resistors (Available for the small HP drives as listed below)**

DutyCycle=30sec on/180sec off										
Drive Type Code	HP HD	Brake Module	Brake Module Catalog Number	List Price	CR Resistor	Resistor Catalog Number	Ohms	Watts	List Price	Disc. Sym.
ACB530-U1-02A7-6	1.5	Internal		N/A	P14494-CR-19	3AUA0000064069	250	300	140	ES
ACB530-U1-03A9-6	2	Internal		N/A	P14494-CR-27	3AUA0000064077	250	400	174	ES
DutyCycle=60sec on/180sec off										
ACB530-U1-02A7-6	1,5	Internal		N/A	P14494-CR-27	3AUA0000064077	250	400	174	ES

**Standard Enclosed Resistor Packages**

DutyCycle=30sec on/180sec off										
Drive Type Code	HP HD	Brake Module	Brake Module Catalog Number	List Price	Resistor	Resistor Catalog Number	Ohms	Watts	List Price	Disc. Sym.
ACB530-U1-02A7-6	1.5	Internal		N/A	P14494-11	3AUA0000014395	250	300	223	ES
ACB530-U1-03A9-6	2	Internal		N/A	P14494-12	3AUA0000015095	250	600	337	ES
ACB530-U1-06A1-6	3	Internal		N/A	P14494-14	3AUA0000015097	200	600	337	ES
ACB530-U1-09A0-6	5	Internal		N/A	P14494-63	3AUA0000064025	80	1050	433	ES
ACB530-U1-011A-6	7.5	Internal		N/A	ABB-48431-053	3AUA0000015301	80	1600	529	ES
ACB530-U1-017A-6	10	Internal		N/A	P14494-64	3AUA0000064026	63	1850	626	ES
ACB530-U1-022A-6	15	NBBM-V600-A30	3AUA0000064093	2,080	P14494-35	3AUA0000015115	35	2500	817	ES
ACB530-U1-027A-6	20	NBBM-V600-A30	3AUA0000064093	2,080	ABB-43167	3AUA0000015183	40	2890	817	ES
ACB530-U1-032A-6	25	NBBM-V600-A30	3AUA0000064093	2,080	P14494-36	3AUA0000041894	35	3600	972	ES
ACB530-U1-041A-6	30	NBBM-V600-A30	3AUA0000064093	2,080	ABB-44537	3AUA0000015268	22	4823	972	ES
ACB530-U1-052A-6	40	NBBM-V600-A30	3AUA0000064093	2,080	P14494-55	3AUA0000041887	15.0	6000	1,297	ES
ACB530-U1-062A-6	50	NBBM-V600-A30	3AUA0000064093	2,080	ABB-44518	3AUA0000015251	13.3	6955	1,224	ES
ACB530-U1-077A-6	60	NBBM-V600-A80	3AUA0000064141	2,308	ABB-44541	3AUA0000015272	8.4	12590	1,563	ES
ACB530-U1-099A-6	75	NBBM-V600-A80	3AUA0000064141	2,308	ABB-44541	3AUA0000015272	8.4	12590	1,563	ES
ACB530-U1-125A-6	100	NBBM-V600-A80	3AUA0000064141	2,308	ABB-44542	3AUA0000015273	8.5	15547	2,307	ES
ACB530-U1-144A-6	125	NBBM-V600-A80	3AUA0000064141	2,308	ABB-44543	3AUA0000015274	6.4	18031	2,566	ES
DutyCycle=60sec on/180sec off										
ACB530-U1-02A7-6	1,5	Internal		N/A	P14494-11	3AUA0000014395	250	300	223	ES
ACB530-U1-03A9-6	2	Internal		N/A	P14494-12	3AUA0000015095	250	600	337	ES
ACB530-U1-06A1-6	3	Internal		N/A	P14494-18	3AUA0000015100	150	1200	529	ES
ACB530-U1-09A0-6	5	Internal		N/A	ABB-48431-053	3AUA0000015301	80	1600	529	ES
ACB530-U1-011A-6	7,5	Internal		N/A	P14494-23	3AUA0000015105	80	2400	722	ES
ACB530-U1-017A-6	10	Internal		N/A	ABB-48431-141	3AUA0000015346	63	3000	876	ES
ACB530-U1-022A-6	15	NBBM-V600-A30		2,080	P14494-54	3AUA0000041886	15.0	5000	972	ES
ACB530-U1-027A-6	20	NBBM-V600-A30		2,080	P14494-54	3AUA0000041886	15.0	5000	972	ES
ACB530-U1-032A-6	25	NBBM-V600-A80		2,308	ABB-48431-070	3AUA0000015317	11.0	8019	1,224	ES
ACB530-U1-041A-6	30	NBBM-V600-A80		2,308	ABB-48431-070	3AUA0000015317	11.0	8019	1,224	ES
ACB530-U1-052A-6	40	NBBM-V600-A80		2,308	ABB-44540	3AUA0000015271	8.3	10834	1,563	ES
ACB530-U1-062A-6	50	NBBM-V600-A80		2,308	ABB-44541	3AUA0000015272	8.4	12590	1,563	ES
ACB530-U1-077A-6	60	NBBM-V600-A80		2,308	ABB-48431-072	3AUA0000015319	11.0	15884	2,307	ES
ACB530-U1-099A-6	75	NBBM-V600-A80		2,308	ABB-48431-102	3AUA0000015335	8.5	21250	3,351	ES
ACB530-U1-125A-6	100	NBBM-V600-A80		2,308	ABB-43160	3AUA0000015178	8.5	25992	3,351	ES
ACB530-U1-144A-6	125	NBBM-V600-A300		8,587	ABB-48431-165	3AUA0000015365	5.3	29813	3,907	ES

Notes: 1. To determine resistor type, dimensions and weights refer to Resistor Technical Data Tables  
2. The Brake Chopper is internal to the drive up to 15 HP. An external braking chopper must be used for 15 HP and above.

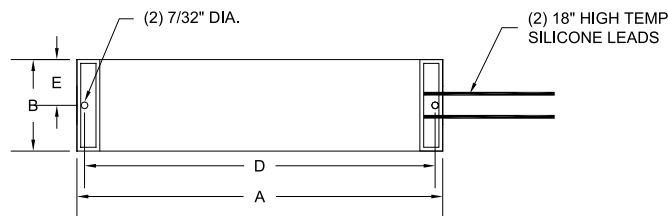
## Type CR Case Resistor Information and Dimensions

Powerohm's Type CR resistors are manufactured with quality components for superior performance and increased life expectancy. Our case resistors feature a nickel-chromium wire helically wound, then placed inside a ceramic fixture and inserted into a corrosion resistant aluminum case. Each coil end is terminated to high temperature wire leads and encapsulated with a ceramic potting material. The result is a resistor element electrically isolated, but thermally bound to the outer case to allow the element heat to transfer to the metallic case and efficiently cool. The units are supplied with 18" wire leads, and the case is machined to include two mounting holes for easy installation.

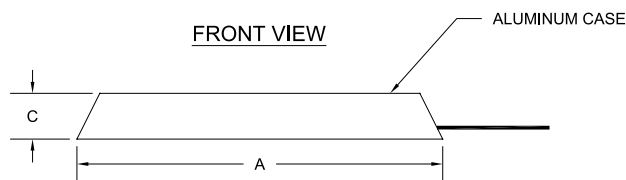
ELECTRICAL RATINGS & DIMENSIONS OF STANDARD SIZE CASE RESISTORS

WATTAGE	DIMENSIONS IN INCHES"				
	A	B	C	D	E
100	6	1-1/2	3/4	5-1/2	3/4
150	9	1-1/2	3/4	8-1/2	3/4
200	6	3	1-1/2	5-1/2	1-1/2
300	9	3	1-1/2	8-1/2	1-1/2
400	12	3	1-1/2	11-1/2	1-1/2

TOP VIEW



FRONT VIEW



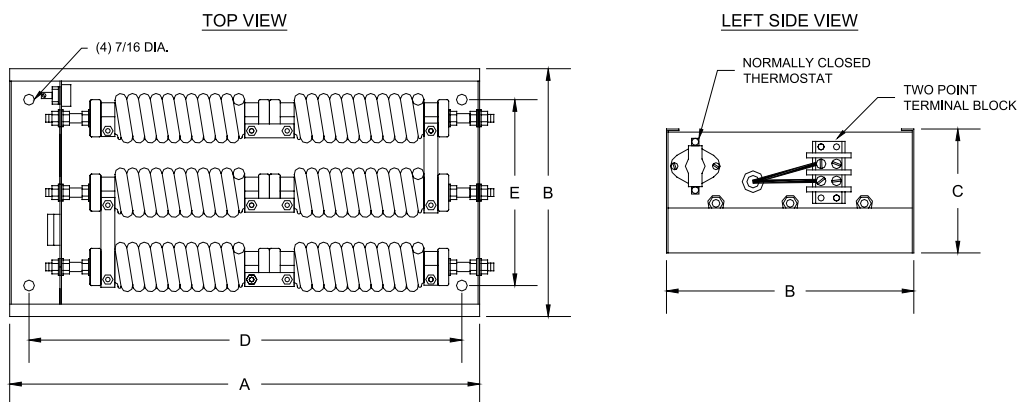
## Type GCE Resistor Information and Dimensions

The type GCE enclosures are heavy gage screened enclosures featuring a solid bottom and a built-in wiring compartment separated from the resistor assembly. The resistors are factory wired to a terminal block mounted in this compartment using high temperature Teflon or silicone wire. The terminal compartment also houses a normally closed thermal switch used for detecting resistor temperature overloads. During installation, standard 90°C rated wire is routed into the compartment through the removable 1/2 inch conduit knockouts and connected to the factory wired terminal block.

Our standard unit includes a screened cover which is CNC punched to obtain maximum cooling and professional aesthetics. Mounting holes are located inside the enclosure and can be easily accessed by removing the cover. Resistor coils are interconnected using stainless steel bus bars, producing a corrosion resistant current path to withstand nearly any harsh industrial environment. The standard finish is galvanized, but an optional powder coated, aluminum or stainless steel finish is available upon request. As shown in the table below, the size of the enclosure will vary depending on the number of resistor coils required for your application. Units are available with louvered covers; add "-W" to the part number and note that the 'A' and 'B' dimensions will increase by an inch. Please do not hesitate to call the factory if you need assistance.

GCE ENCLOSURE DIMENSIONS AND COIL OPTIONS

PART NUMBER	MAX. Number WR COLS	MAX Number SXR,VR or ER	DIMENSIONS IN INCHES				
			A	B	C	D	E
GCE1	1	(1) Size 2	12	5	5	10-1/2	---
GCE2	2	(2) Size 2	12	7	5	10-1/2	4-1/2
GCE3	3	(3) Size 2	12	10	5	10-1/2	7-1/2
GCE4	4	(4) Size 2	12	13	5	10-1/2	10-1/2
GCE5	5	(5) Size 2	12	16	5	10-1/2	13-1/2
GCE6	6	(3) Size 5	19	10	5	17-1/2	7-1/2
GCE8	8	(4) Size 5	19	13	5	17-1/2	10-1/2
GCE9	9	(3) Size 7	26-1/2	10	5	25	7-1/2
GCE10	10	(5) Size 5	19	16	5	17-1/2	13-1/2
GCE12	12	(4) Size 7	26-1/2	13	5	25	10-1/2
GCE15	15	(5) Size 7	26-1/2	16	5	25	13-1/2
GCE18	18	(6) Size 7	28	10	10	26-1/2	7-1/2
GCE24	24	(8) Size 7	28	13	10	26-1/2	10-1/2
GCE30	30	(10) Size 7	28	16	10	26-1/2	13-1/2





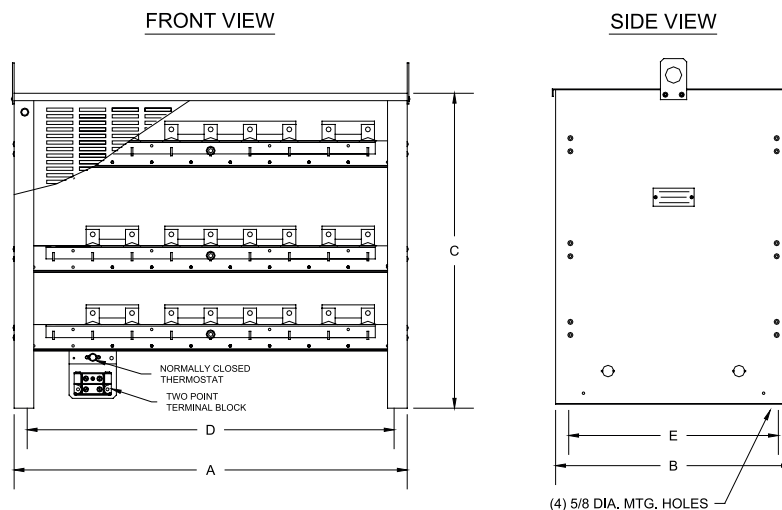
## Type ED Information and Dimensions

The type ED enclosures are designed for applications requiring a large number of Type SXR, WR, VR and/or ER resistor coils. In addition to the large capacity, these units are supplied with terminal connections up to 400 amps continuous located on a terminal plate in the bottom of the enclosure. These factory wired connections allow standard 90°C rated wire to be used if routed along the enclosure bottom. If installing without the optional terminal connections, always use 200°C rated silicone or Teflon wire when attaching directly to resistors. A normally closed thermal switch is also provided, which is used to detect resistor temperature overloads.

These rigid enclosures include a screened top and removable front and back screened covers. The enclosure sides are solid and the bottom is open and furnished with two lifting eyes. Mounting holes are located inside the enclosure and can be easily accessed by removing the front or rear cover. Resistor coils are interconnected using all stainless steel bus bars, producing a corrosion resistant current path to withstand nearly any harsh industrial environment. The standard finish is galvanized, but an optional powder coated, aluminum or stainless steel finish is available upon request. As shown in the table below, the size of the enclosure will vary depending on the number of resistor coils required for your application. Units are available with louvered covers; add "-W" to the part number. Please do not hesitate to call the factory if you need assistance.

ED ENCLOSURE DIMENSIONS AND COIL OPTIONS

PART NUMBER	MAX. Number WR COLS	MAX Number SXR,VR or ER	DIMENSIONS IN INCHES				
			A	B	C	D	E
ED1	18	(9) Size 5	30	18	10	26	16
ED2	36	(18) Size 5	30	18	16	26	16
ED3	54	(27) Size 5	30	18	24	26	16
ED4	72	(36) Size 5	30	18	32	26	16
ED5	90	(45) Size 5	30	18	40	26	16
ED6	108	(54) Size 5	30	18	48	26	16
ED7	126	(63) Size 5	30	18	56	26	16
ED8	144	(72) Size 5	30	18	64	26	16



## Resistor Technical Data (cont.)

### By Part Number

Part Number	Ohms	Watts	Encl	Dimensions WDH(Inches)	Weight LBS	List Price	Disc Sym
P14494-35	35,00	2500	GCE8	19W x 13D x 5H	24	817	EG
P14494-36	35,00	3600	GCE9	26.5W x 10D x 5H	28	972	EF
P14494-38	35,00	1865	GCE5	12W x 16D x 5H	18	626	EF
P14494-40	21,00	750	GCE2	12W x 7D x 5H	10	337	EF
P14494-41	21,00	1050	GCE3	12W x 10D x 5H	13	433	EF
P14494-42	21,00	1500	GCE4	12W x 13D x 5H	16	529	EF
P14494-43	21,00	2000	GCE5	12W x 16D x 5H	18	626	EF
P14494-44	21,00	2600	GCE8	19W x 13D x 5H	24	817	EF
P14494-45	21,00	4400	GCE9	26.5W x 10D x 5H	23	972	EF
P14494-46	15,00	750	GCE2	12W x 7D x 5H	10	337	EF
P14494-47	15,00	1150	GCE3	12W x 10D x 5H	13	433	EF
P14494-48	15,00	1550	GCE4	12W x 13D x 5H	16	529	EF
P14494-49	15,00	2160	GCE6	19W x 10D x 5H	20	722	EF
P14494-50	15,00	2450	GCE8	19W x 13D x 5H	24	817	EF
P14494-53	15,00	3600	GCE6	19W x 10D x 5H	19	789	EF
P14494-54	15,00	5000	GCE9	26.5W x 10D x 5H	23	972	EF
P14494-55	15,00	6000	GCE12	26.5W x 13D x 5H	31	1,297	EF
P14494-56	10,00	720	GCE2	12W x 7D x 5H	10	337	EF
P14494-57	10,00	1250	GCE3	12W x 10D x 5H	13	433	EF
P14494-58	10,00	1800	GCE5	12W x 16D x 5H	18	626	EF
P14494-59	10,00	3600	GCE6	19W x 10D x 5H	19	789	EF
P14494-60	30,00	1050	GCE3	12W x 10D x 5H	13	433	EG
P14494-62	63,00	800	GCE2	12W x 7D x 5H	10	337	EG
P14494-63	80,00	1050	GCE3	12W x 10D x 5H	13	433	EG
P14494-64	63,00	1850	GCE5	12W x 16D x 5H	18	626	EG
P14494-65	63,00	2100	GCE6	19W x 10D x 5H	20	722	EG
P14494-73	30,00	350	GCE1	12W x 5D x 5H	7	223	EG
P14494-74	1,79	4476	GCE9	26.5W x 10D x 5H	30	982	EG
P14494-75	3,33	4316	GCE9	26.5W x 10D x 5H	27	982	EG
P14494-CR-01	500	100	CR100	6W x 1.5D x 0.75H	1	87	EF
P14494-CR-02	200	100	CR100	6W x 1.5D x 0.75H	1	87	EF
P14494-CR-03	150	100	CR100	6W x 1.5D x 0.75H	1	87	EF
P14494-CR-04	100	100	CR100	6W x 1.5D x 0.75H	1	87	EF
P14494-CR-06	50	100	CR100	6W x 1.5D x 0.75H	1	87	EF
P14494-CR-07	500	150	CR150	9W x 1.5D x 0.75H	1	104	EF
P14494-CR-08	250	150	CR150	9W x 1.5D x 0.75H	1	104	EG
P14494-CR-09	200	150	CR150	9W x 1.5D x 0.75H	1	104	EF
P14494-CR-10	150	150	CR150	9W x 1.5D x 0.75H	1	104	EG
P14494-CR-11	100	150	CR150	9W x 1.5D x 0.75H	1	104	EF
P14494-CR-12	50	150	CR150	9W x 1.5D x 0.75H	1	104	EF
P14494-CR-13	250	200	CR200	6W x 3D x 1.5H	2	122	EG
P14494-CR-14	200	200	CR200	6W x 3D x 1.5H	2	122	EF
P14494-CR-15	150	200	CR200	6W x 3D x 1.5H	2	122	EF
P14494-CR-16	100	200	CR200	6W x 3D x 1.5H	2	122	EF
P14494-CR-18	50	200	CR200	6W x 3D x 1.5H	2	122	EF
P14494-CR-19	250	300	CR300	9W x 3D x 1.5H	3	139	EF
P14494-CR-20	200	300	CR300	9W x 3D x 1.5H	3	139	EF
P14494-CR-21	150	300	CR300	9W x 3D x 1.5H	3	139	EF
P14494-CR-22	100	300	CR300	9W x 3D x 1.5H	3	139	EF
P14494-CR-24	50	300	CR300	9W x 3D x 1.5H	3	139	EF
P14494-CR-25	45	300	CR300	9W x 3D x 1.5H	3	139	EG
P14494-CR-26	40	300	CR300	9W x 3D x 1.5H	3	139	EF
P14494-CR-27	250	400	CR400	12W x 3D x 1.5H	4	174	EG
P14494-CR-28	200	400	CR400	12W x 3D x 1.5H	4	174	EG
P14494-CR-29	150	400	CR400	12W x 3D x 1.5H	4	174	EF
P14494-CR-30	100	400	CR400	12W x 3D x 1.5H	4	174	EF
P14494-CR-31	75	400	CR400	12W x 3D x 1.5H	4	174	EF
P14494-CR-32	50	400	CR400	12W x 3D x 1.5H	4	174	EF
P14494-CR-33	45	400	CR400	12W x 3D x 1.5H	4	174	EG
P14494-CR-34	40	400	CR400	12W x 3D x 1.5H	4	174	EF



## Powerohm Type BM Braking Modules

### Overview

Powerohm Type BM Braking Modules can be used in conjunction with ABB drives to monitor the DC bus of the drive and activate external braking resistor as needed not only to avoid over-voltage trips, but to greatly improve the performance of the drive system. The use of Braking Modules and resistors increase the braking torque capability of a variable frequency drive, allowing faster and more controlled deceleration times.

To accommodate system horsepower requirements beyond the capability of a single Module, the Modules are all Master/Slave programmable. This allows an arrangement of multiple Modules to effectively function as a single higher rated module.

### General Specifications

The Powerohm Type BM Braking Module is available in three different voltage classes including 240, 480 and 600 volts.

Powerohm Part Number	Nominal AC Line Voltage	RMS Continuous Load Current	Max Peak Current
NBBM-V230-A30	200-240	50	200
NBBM-V230-A80	200-240	115	200
NBBM-V230-A300	200-240	300	450

Note: Refer to Brake Module Technical Data for additional details.

Powerohm Part Number	Nominal AC Line Voltage	RMS Continuous Load Current	Max Peak Current
NBBM-V460-A30	380-480	50	200
NBBM-V460-A80	380-480	115	200
NBBM-V460-A300	380-480	300	450
NBBM-V460-A600	380-480	600	900

Note: Refer to Brake Module Technical Data for additional details.

Powerohm Part Number	Nominal AC Line Voltage	RMS Continuous Load Current	Max Peak Current
NBBM-V600-A30	500-600	50	200
NBBM-V600-A80	500-600	115	200
NBBM-V600-A300	500-600	300	450
NBBM-V600-A600	500-600	600	900

Note: Refer to Brake Module Technical Data for additional details.



## Installation instructions for Powerohm Brake Resistors

Smaller 28 inch wide enclosures have convenient conduit knockouts for easy connection. Remove the proper knockout after determining a suitable entry point. Larger units may require field punching for conduit entry. It is preferable to route conduit near the bottom of the resistor enclosure. After attaching conduit, pull wiring into the enclosure for connection to resistor. If connecting directly to the terminals on the resistor elements, it is necessary to use high temperature silicon or Teflon wire rated 200°C. Try to route wiring along the bottom of the enclosure and avoid running the wiring across the top or near the resistor elements. Units are supplied with either #10, 3/8 or 1/2 inch terminal hardware. If you choose to use the factory installed terminal block, then you may connect to it using standard 90°C rated wire. Be sure to properly ground the resistor enclosure to prevent electrical shock.

A normally closed thermal switch is included with the unit, featuring 1/4 inch quick connect terminals. After installing and wiring to your Powerohm Braking Resistor, return the ventilated cover to its proper position. Securely tighten cover hardware (do not exceed 20 inch-pounds of torque).

**MAINTENANCE:** Periodically check the unit for loose connections and an accumulation of dust or dirt on the inside and outside of the resistor enclosure. Be sure to allow the unit to cool before servicing (contact may result in burn injury). Remove all power before servicing unit to avoid electrical shock. Allow at least one minute after input power has been removed for the bus voltage to discharge. Electric shock can cause injury or death. Resistor elements should not glow red under normal operating conditions. If the resistor elements glow red you may need a higher rated braking resistor.

**TECHNICAL SUPPORT:** If you have any questions about your braking resistor, contact Powerohm for assistance at (800) 838-4694.

## Installation instructions for Powerohm Brake Resistors

**CONSTRUCTION:** Powerohm braking resistors consists of smoothwound, wirewound or edgewound type resistor coils mounted in ventilated enclosures. All current carrying components used to manufacture our resistor coils including the elements and terminals are stainless steel for maximum corrosion resistance. Standard enclosures will be mill galvanized with terminals factory wired to a terminal block and normally closed thermal switch. Braking resistors are available with a variety of options such as special enclosure finishes and outdoor ratings.

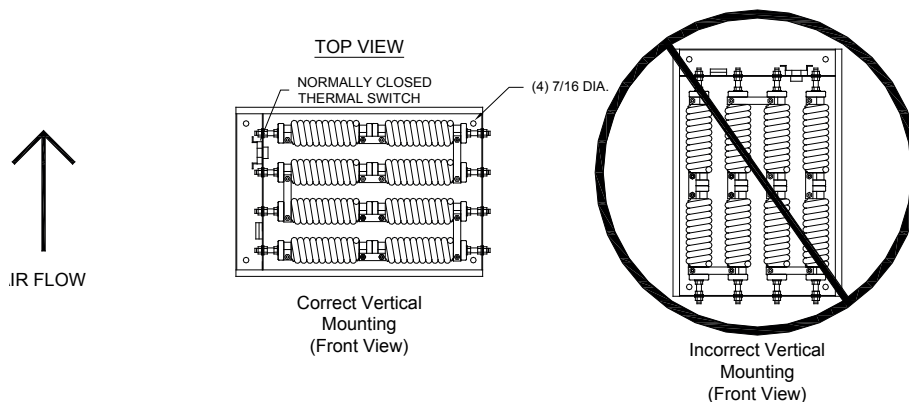
**INSPECTION:** Upon receipt of your Powerohm Braking Resistor, be sure to inspect the unit carefully for any shipping damage. After unpacking, check the unit for loose, broken, bent or otherwise damaged parts due to shipping. Report any shipping damage immediately to the freight carrier. Be sure to verify that the part number and ratings listed on the nameplate conform to the order specification. The ohm rating listed on the nameplate is critical (too low of an ohm value may cause damage to the drive).

### INSTALLATION:

**IMPORTANT:** The National Electric Code (NEC) and local regulations govern the installation and wiring of electrical equipment such as braking resistors. DC power wiring, AC power wiring, control wiring and conduit must be installed in accordance with these codes.

Powerohm braking assemblies cool by natural convection causing hot air to rise vertically from the enclosure. Braking resistors should be mounted in a well ventilated location free of any combustible materials or equipment affected by heat. Units should be installed with at least 24 inches of free space above the enclosure top and 6 inches of free space surrounding the enclosure sides. If necessary, units can be mounted on spacers or channels to limit heat from conducting from the resistor enclosure to its mounting surface.

Braking resistor enclosures 28 inches or less in width, can be mounted vertically or horizontally. If the unit is mounted vertically, it is important that the resistor coils remain in a horizontal position. Also, if a thermal switch is included with the unit, position the equipment so the switch remains near the top of the enclosure. See below for vertical mounting details.



To install the unit, first remove the ventilated cover. Units 28 inches or less in width require a 5/16 inch wrench, while larger units require a 7/16 inch wrench to remove the cover hardware. Mounting holes can be found on the inside of the braking resistor enclosure. Units that are 28 inches or smaller have 7/16 inch diameter mounting holes designed for 3/8 inch hardware. 30 inch wide units have 5/8 inch diameter mounting holes designed for 1/2 inch hardware. Be sure to fasten the unit securely in place.

## Brake Module Technical Data

P/N	Voltage Class	Minimum Ohms	Continuous Amps	Peak Amps	Dimensions (inches)	Weight (lbs)	List Price	Discount Symbol
NBBM-V230-A30	200-240	0.48	50	200	7"W x 5"D 11"H	8	2,080	EG
NBBM-V460-A30	380-480	0.95	50	200	7"W x 5"D 11"H	8	2,080	EG
NBBM-V600-A30	500-600	1.18	50	200	7"W x 5"D 11"H	8	2,080	EG
NBBM-V230-A80	200-240	1.09	115	200	7"W x 5"D 13"H	10	2,308	EG
NBBM-V460-A80	380-480	2.19	115	200	7"W x 5"D 13"H	10	2,308	EG
NBBM-V600-A80	500-600	2.70	115	200	7"W x 5"D 13"H	10	2,308	EG
NBBM-V230-A300	200-240	0.87	300	450	7.125"W x 10"D 22"H	32	8,587	EG
NBBM-V460-A300	380-480	1.67	300	450	7.125"W x 10"D 22"H	32	8,587	EG
NBBM-V600-A300	500-600	2.07	300	450	7.125"W x 10"D 22"H	32	8,587	EG
NBBM-V230-A600	200-240	0.42	600	900	7.125"W x 10"D 22"H	35	11,203	EG
NBBM-V460-A600	380-480	0.87	600	900	7.125"W x 10"D 22"H	35	11,203	EG
NBBM-V600-A600	500-600	1.07	600	900	7.125"W x 10"D 22"H	35	11,203	EG
NBBM-V230-A900	200-240	0.28	900	1350	10.125"W x 10"D 24"H	60	15,030	EH
NBBM-V460-A900	395-480	0.58	900	1350	10.125"W x 10"D 24"H	60	15,030	EH
NBBM-V600-A900	500-600	0.71	900	1350	10.125"W x 10"D 24"H	60	15,030	EH
NBBM-V230-A1200	200-240	0.21	1200	1800	10.125"W x 10"D 24"H	65	19,830	EH
NBBM-V460-A1200	395-480	0.43	1200	1800	10.125"W x 10"D 24"H	65	19,830	EH
NBBM-V600-A1200	500-600	0.53	1200	1800	10.125"W x 10"D 24"H	65	19,830	EH

## Input Reactors for ACS150 and ACS355 Drives / High Impedance



**Applications:** Line side power conditioning for AC motor controls to prevent unwanted harmonics and nuisance drive trips as well as to prevent excess current during line disturbances that can damage power semi-conductors. There should be a minimum impedance associated with the drive using either AC or DC magnetics. In many applications, this impedance can come from a supply transformer, or if long enough, the supply cable themselves. In most cases, however, the use of an additional input reactor is recommended. If any of the following conditions exist use of at least a 3% line reactor is recommended.

1. Installation has voltage spikes in excess of 6000V peak or lightning strikes.
2. Installation has switched power factor correction capacitors.
3. Installation has power interruptions or voltage sags in excess of 200Vac.
4. When the distribution system kVA is more than 10 times larger than the drive kVA .

**Features:** Open, UL Type 1 and UL Type 3R construction with connection terminals. 3% and 5% impedance rating at rated current.

## Input Reactors for Single Phase 200-240V applications (connect to terminals A and C) Standard Enclosed Resistor Packages

Drive Part No. ACSx50-01U-	HP ND	Output Current	KDR UR 5%, Open, Not UL		KDR UR 5%, NEMA 1, Not UL		KDR 5%, UL Listed, Open					Disc. Sym.
			Part Number	List Price	Part Number	List Price	Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
02A4-2	0,5	2,4	KDRA25H	127	KDRA25HC1	251	KDRULA25H	14	4.00x4.18x3.75	4	130	ES
04A7-2	1	4,7	KDRA27H	138	KDRA27HC1	262	KDRULA27H	23,6	4.00x4.18x3.75	4	141	ES
06A7-2	1,5	6,7	KDRA28H	157	KDRA28HC1	282	KDRULA28H	30,6	4.00x4.18x3.75	4	161	ES
07A5-2	2	7,5	KDRD22H	312	KDRD22HC2	460	KDRULD22H	30,5	4.00x4.18x3.75	4	323	ES
09A8-2	3	9,8	KDRD22H	312	KDRD22HC2	460	KDRULD22H	43,1	4.00x4.18x3.75	4	323	ES

Drive Part No. ACSx50-01U-	HP ND	Output Current	KDR 5%, UL Type 1 Enclosure					KDR 5%, UL Type 3R Enclosure					Disc. Sym.
			Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
02A4-2	0,5	2,4	KDRULA25HE01	14	4.00x4.18x3.75	4	352	KDRULA25HE3R	14	4.00x4.18x3.75	4	466	ES
04A7-2	1	4,7	KDRULA27HE01	23,6	4.00x4.18x3.75	4	364	KDRULA27HE3R	23,6	4.00x4.18x3.75	4	478	ES
06A7-2	1,5	6,7	KDRULA28HE01	30,6	4.00x4.18x3.75	4	382	KDRULA28HE3R	30,6	4.00x4.18x3.75	4	496	ES
07A5-2	2	7,5	KDRULD22HE01	30,5	4.00x4.18x3.75	4	546	KDRULD22HE3R	30,5	4.00x4.18x3.75	4	660	ES
09A8-2	3	9,8	KDRULD22HE01	43,1	4.00x4.18x3.75	4	546	KDRULD22HE3R	43,1	4.00x4.18x3.75	4	660	ES

For specific mounting dimension go to <http://www.transcoil.com/home.htm>



## Input Reactors for ACS150 and ACS355 Drives / High Impedance (Cont.)

### Input Reactors for Three Phase 200-240V applications

Drive Part No. ACSx5x-03U-	HP ND	Output Current	KDR UR 5%, Open, Not UL		KDR UR 5%, NEMA 1, Not UL		KDR 5%, UL Listed, Open					Disc. Sym.
			Part Number	List Price	Part Number	List Price	Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
02A4-2	0,5	2,4	KDRA25H	127	KDRA25HC1	251	KDRULA25H	23,6	4x4.18x3.75	4	130	ES
03A5-2	0,75	3,5	KDRA27H	138	KDRA27HC1	262	KDRULA27H	30,6	4x4.18x3.75	4	141	ES
04A7-2	1	4,7	KDRA26H	143	KDRA26HC1	267	KDRULA26H	30,5	4x4.18x3.75	4	146	ES
06A7-2	1,5	6,7	KDRB25H	197	KDRB25HC1	320	KDRULB25H	53,1	5x6x4	8	199	ES
07A5-2	2	7,5	KDRB25H	197	KDRB25HC1	320	KDRULB25H	53,1	5x6x4	8	199	ES
09A8-2	3	9,8	KDRB26H	235	KDRB26HC1	360	KDRULB26H	66,5	5x6x4	8	240	ES
13A3-2	3	13,3	KDRB26H	235	KDRB26HC1	360	KDRULB26H	66,5	5x6x4	8	240	ES
17A6-2	5	17,6	KDRD21H	239	KDRD21HC2	388	KDRULD21H	91,8	5.75x7.2x4.25	12	244	ES
24A4-2	7,5	24,4	KDRD22H	312	KDRD22HC2	460	KDRULD22H	107,8	5.75x7.2x4.25	12	323	ES
31A0-2	10	31	KDRC22H	352	KDRC22HC2	501	KDRULC22H	113,1	5.75x7.2x5	15	367	ES
46A2-2	15	46,2	KDRF25H	428	KDRF25HC4	781	KDRULF25H	179,2	7x9x7	67	514	ES

Drive Part No. ACSx5x-03U-	HP ND	Output Current	KDR 5%, UL Type 1 Enclosure					KDR 5%, UL Type 3R Enclosure					Disc. Sym.
			Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
02A4-2	0,5	2,4	KDRULA25HE01	23,6	12.25x12.5x6.75	14,5	352	KDRULA25HE3R	23,6	11.5x10x12	19	466	ES
03A5-2	0,75	3,5	KDRULA27HE01	30,6	12.25x12.5x6.75	14,5	364	KDRULA27HE3R	30,6	11.5x10x12	19	478	ES
04A7-2	1	4,7	KDRULA26HE01	30,5	12.25x12.5x6.75	14,5	368	KDRULA26HE3R	30,5	11.5x10x12	19	482	ES
06A7-2	1,5	6,7	KDRULB25HE01	53,1	12.25x12.5x6.75	18,5	421	KDRULB25HE3R	53,1	11.5x10x12	23	535	ES
07A5-2	2	7,5	KDRULB25HE01	53,1	12.25x12.5x6.75	18,5	421	KDRULB25HE3R	53,1	11.5x10x12	23	535	ES
09A8-2	3	9,8	KDRULB26HE01	66,5	12.25x12.5x6.75	18,5	463	KDRULB26HE3R	66,5	11.5x10x12	23	577	ES
13A3-2	3	13,3	KDRULB26HE01	66,5	12.25x12.5x6.75	18,5	463	KDRULB26HE3R	66,5	11.5x10x12	23	577	ES
17A6-2	5	17,6	KDRULD21HE01	91,8	12.25x12.5x6.75	22,5	466	KDRULD21HE3R	91,8	11.5x10x12	27	580	ES
24A4-2	7,5	24,4	KDRULD22HE01	107,8	12.25x12.5x6.75	22,5	546	KDRULD22HE3R	107,8	11.5x10x12	27	660	ES
31A0-2	10	31	KDRULC22HE01	113,1	12.25x12.5x6.75	25,5	588	KDRULC22HE3R	113,1	11.5x10x12	30	703	ES
46A2-2	15	46,2	KDRULF25HE01	179,2	19.13x15.43x15.43	67	945	KDRULF25HE3R	179,2	19.18x15.62x19.50	67	1,034	ES

For specific mounting dimension go to <http://www.transcoil.com/home.htm>

## Input Reactors for ACS150 and ACS355 Drives / High Impedance(Cont.)

### Input Reactors for Three Phase 380-480V applications

Drive Part No. ACSx50-03U-	HP ND	Output Current	KDR UR 5%, Open, Not UL		KDR UR 5%, NEMA 1, Not UL		KDR 5%, UL Listed, Open					Disc. Sym.
			Part Number	List Price	Part Number	List Price	Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
01A2-4	0,5	1,2	KDRA8H	123	KDRA8HC1	248	KDRULA8H	12	4x4.18x3.75	4	129	ES
01A9-4	0,75	1,9	KDRA9H	124	KDRA9HC1	249	KDRULA9H	23	4x4.18x3.75	4	130	ES
02A4-4	1	2,4	KDRA1H	129	KDRA1HC1	252	KDRULA1H	33	4x4.18x3.75	4	134	ES
03A3-4	1,5	3,3	KDRA2H	165	KDRA2HC1	289	KDRULA2H	38	4x4.18x3.75	4	172	ES
04A1-4	2	4,1	KDRA2H	165	KDRA2HC1	289	KDRULA2H	38	4x4.18x3.75	4	172	ES
05A6-4	3	5,6	KDRA4H	214	KDRA4HC1	338	KDRULA4H	77	4x4.18x3.75	5	223	ES
08A8-4	5	8,8	KDRA5H	266	KDRA5HC1	390	KDRULA5H	111	4x4.18x3.75	5	279	ES
12A5-4	7,5	12,5	KDRB2H	273	KDRB2HC1	398	KDRULB2H	133	5x6x4	7	284	ES
15A6-4	10	15,6	KDRB2H	273	KDRB2HC1	398	KDRULB2H	133	5x6x4	7	284	ES
23A1-4	15	23,1	KDRE2H	418	KDRE2HC2	566	KDRULE2H	141	5.75x7.2x5	16	435	ES
31A0-4	20	31	KDRF4H	435	KDRF4HC3	646	KDRULF4H	169	7x9x6	25	454	ES
38A0-4	25	38	KDRF4H	435	KDRF4HC3	646	KDRULF4H	169	7x9x6	25	454	ES
44A0-4	30	44	KDRF1H	600	KDRF1HC3	810	KDRULF1H	191	7x9x6	25	626	ES

Drive Part No. ACSx50-03U-	HP ND	Output Current	KDR 5%, UL Type 1 Enclosure					KDR 5%, UL Type 3R Enclosure					Disc. Sym.
			Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
01A2-4	0,5	1,2	KDRULA8HE01	12	12.25x12.5x6.75	14,5	351	KDRULA8HE3R	12	11.5x10x12	19	465	ES
01A9-4	0,75	1,9	KDRULA9HE01	23	12.25x12.5x6.75	14,5	352	KDRULA9HE3R	23	11.5x10x12	19	466	ES
02A4-4	1	2,4	KDRULA1HE01	33	12.25x12.5x6.75	14,5	355	KDRULA1HE3R	33	11.5x10x12	19	470	ES
03A3-4	1,5	3,3	KDRULA2HE01	38	12.25x12.5x6.75	14,5	394	KDRULA2HE3R	38	11.5x10x12	19	509	ES
04A1-4	2	4,1	KDRULA2HE01	38	12.25x12.5x6.75	14,5	394	KDRULA2HE3R	38	11.5x10x12	19	509	ES
05A6-4	3	5,6	KDRULA4HE01	77	12.25x12.5x6.75	15,5	445	KDRULA4HE3R	77	11.5x10x12	20	560	ES
08A8-4	5	8,8	KDRULA5HE01	111	12.25x12.5x6.75	15,5	500	KDRULA5HE3R	111	11.5x10x12	20	615	ES
12A5-4	7,5	12,5	KDRULB2HE01	133	12.25x12.5x6.75	17,5	506	KDRULB2HE3R	133	11.5x10x12	22	620	ES
15A6-4	10	15,6	KDRULB2HE01	133	12.25x12.5x6.75	17,5	506	KDRULB2HE3R	133	11.5x10x12	22	620	ES
23A1-4	15	23,1	KDRULE2HE01	141	12.25x12.5x6.75	26,5	656	KDRULE2HE3R	141	11.5x10x12	31	770	ES
31A0-4	20	31	KDRULF4HE01	169	19.13x15.43x15.43	67	885	KDRULF4HE3R	169	19.18x15.62x19.5	63	974	ES
38A0-4	25	38	KDRULF4HE01	169	19.13x15.43x15.43	67	885	KDRULF4HE3R	169	19.18x15.62x19.5	63	974	ES
44A0-4	30	44	KDRULF1HE01	191	19.13x15.43x15.43	67	1 057	KDRULF1HE3R	191	19.18x15.62x19.5	63	1,147	ES

For specific mounting dimension go to <http://www.transcoil.com/home.htm>

## Input Reactors for ACS310 Drives / High Impedance



**Applications:** Line side power conditioning for AC motor controls to prevent unwanted harmonics and nuisance drive trips as well as to prevent excess current during line disturbances that can damage power semi-conductors. There should be a minimum impedance associated with the drive using either AC or DC magnetics. In many applications, this impedance can come from a supply transformer, or if long enough, the supply cable themselves. In most cases, however, the use of an additional input reactor is recommended. If any of the following conditions exist use of at least a 3% line reactor is recommended.

1. Installation has voltage spikes in excess of 6000V peak or lightning strikes.
2. Installation has switched power factor correction capacitors.
3. Installation has power interruptions or voltage sags in excess of 200Vac.
4. When the distribution system kVA is more than 10 times larger than the drive kVA .

**Features:** Open, UL Type 1 and UL Type 3R construction with connection terminals. 3% and 5% impedance rating at rated current.

## Input Reactors for Single Phase 200-240V applications (connect to terminals A and C)

Drive Part No. ACS310-01U-	HP ND	Output Current	KDR UR 5%, Open, Not UL		KDR UR 5%, NEMA 1, Not UL		KDR 5%, UL Listed, Open					Disc. Sym.
			Part Number	List Price	Part Number	List Price	Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
02A4-2	0,5	2,4	KDRA25H	127	KDRA26HC1	267	KDRULA25H	23,6	4x4.18x3.75	4	130	ES
04A7-2	1	4,7	KDRA26H	143	KDRB25HC1	320	KDRULA26H	30,5	4x4.18x3.75	4	146	ES
06A7-2	1,5	6,7	KDRB25H	197	KDRB26HC1	360	KDRULB25H	53,1	5x6x4	8	199	ES
07A5-2	2	7,5	KDRB25H	197	KDRB26HC1	360	KDRULB25H	53,1	5x6x4	8	199	ES
09A8-2	3	9,8	KDRB25H	197	KDRB26HC1	360	KDRULB25H	53,1	5x6x4	8	199	ES

Drive Part No. ACSx50-01U-	HP ND	Output Current	KDR 5%, UL Type 1 Enclosure					KDR 5%, UL Type 3R Enclosure					Disc. Sym.
			Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
02A4-2	0,5	2,4	KDRULA25HE01	23,6	12.25x12.5x6.75	14,5	352	KDRULA25HE3R	23,6	11.5x10x12	19	466	ES
04A7-2	1	4,7	KDRULA26HE01	30,5	12.25x12.5x6.75	14,5	368	KDRULA26HE3R	30,5	11.5x10x12	19	482	ES
06A7-2	1,5	6,7	KDRULB25HE01	53,1	12.25x12.5x6.75	18,5	421	KDRULB25HE3R	53,1	11.5x10x12	23	535	ES
07A5-2	2	7,5	KDRULB25HE01	53,1	12.25x12.5x6.75	18,5	421	KDRULB25HE3R	53,1	11.5x10x12	23	535	ES
09A8-2	3	9,8	KDRULB25HE01	53,1	12.25x12.5x6.75	18,5	421	KDRULB25HE3R	53,1	11.5x10x12	23	535	ES

For specific mounting dimension go to <http://www.transcoil.com/home.htm>

## Input Reactors for ACS310 / High Impedance(Cont.)

### Input Reactors for Three Phase 200-240V applications

Drive Part No. ACS310-03U-	HP ND	Output Current	KDR UR 5%, Open, Not UL		KDR UR 5%, NEMA 1, Not UL		KDR 5%, UL Listed, Open					Disc. Sym.
			Part Number	List Price	Part Number	List Price	Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
02A6-2	0,5	2,6	KDRA54H	120	KDRA54HC1	244	KDRULA54H	14	4x4.18x3.75	4	121	ES
03A9-2	0,75	3,9	KDRA53H	124	KDRA53HC1	249	KDRULA53H	16,8	4x4.18x3.75	4	127	ES
05A2-2	1	5,2	KDRA25H	127	KDRA25HC1	251	KDRULA25H	23,6	4x4.18x3.75	4	130	ES
07A4-2	1,5	7,4	KDRA27H	138	KDRA8LC1	230	KDRULA27H	30,6	4x4.18x3.75	4	141	ES
08A3-2	2	8,3	KDRA26H	143	KDRA1LC1	236	KDRULA26H	30,5	4x4.18x3.75	4	146	ES
10A8-2	3	10,8	KDRA28H	157	KDRA2LC1	246	KDRULA28H	43,1	4x4.18x3.75	4	161	ES
19A4-2	5	19,4	KDRB25H	197	KDRA3LC1	252	KDRULB25H	53,1	5x6x4	8	199	ES
26A8-2	7,5	26,8	KDRB26H	235	KDRA4LC1	267	KDRULB26H	66,5	5x6x4	8	240	ES
34A1-2	10	34,1	KDRD21H	239	KDRA5LC1	304	KDRULD21H	91,8	5.75x7.2x4.25	12	244	ES
50A8-2	15	50,8	KDRD22H	312	KDRD22HC2	460	KDRULD22H	107,8	5.75x7.2x4.25	12	323	ES

Drive Part No. ACS310-03U-	HP ND	Output Current	KDR 5%, UL Type 1 Enclosure					KDR 5%, UL Type 3R Enclosure					Disc. Sym.
			Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
02A6-2	0,5	2,6	KDRULA54HE01	14	12.25x12.5x6.75	14,5	343	KDRULA54HE3R	14	11.5x10x12	19	456	ES
03A9-2	0,75	3,9	KDRULA53HE01	16,8	12.25x12.5x6.75	14,5	348	KDRULA53HE3R	16,8	11.5x10x12	19	463	ES
05A2-2	1	5,2	KDRULA25HE01	23,6	12.25x12.5x6.75	14,5	352	KDRULA25HE3R	23,6	11.5x10x12	19	466	ES
07A4-2	1,5	7,4	KDRULA27HE01	30,6	12.25x12.5x6.75	14,5	364	KDRULA27HE3R	30,6	11.5x10x12	19	478	ES
08A3-2	2	8,3	KDRULA26HE01	30,5	12.25x12.5x6.75	14,5	368	KDRULA26HE3R	30,5	11.5x10x12	19	482	ES
10A8-2	3	10,8	KDRULA28HE01	43,1	12.25x12.5x6.75	14,5	382	KDRULA28HE3R	43,1	11.5x10x12	19	496	ES
19A4-2	5	19,4	KDRULB25HE01	53,1	12.25x12.5x6.75	18,5	421	KDRULB25HE3R	53,1	11.5x10x12	23	535	ES
26A8-2	7,5	26,8	KDRULB26HE01	66,5	12.25x12.5x6.75	18,5	463	KDRULB26HE3R	66,5	11.5x10x12	23	577	ES
34A1-2	10	34,1	KDRULD21HE01	91,8	12.25x12.5x6.75	22,5	466	KDRULD21HE3R	91,8	11.5x10x12	27	580	ES
50A8-2	15	50,8	KDRULD22HE01	107,8	12.25x12.5x6.75	22,5	546	KDRULD22HE3R	107,8	11.5x10x12	27	660	ES

For specific mounting dimension go to <http://www.transcoil.com/home.htm>

## Input Reactors for ACS310 / High Impedance(Cont.)

### Input Reactors for Three Phase 380-480V applications

Drive Part No. ACS310-03U-	HP ND	Output Current	KDR UR 5%, Open, Not UL		KDR UR 5%, NEMA 1, Not UL		KDR 5%, UL Listed, Open					Disc. Sym.
			Part Number	List Price	Part Number	List Price	Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
01A3-4	0,5	1,3	KDRA6H	112	KDRA6HC1	236	KDRULA6H	9	4x4.18x3.75	4	118	ES
02A1-4	0,75	2,1	KDRA7H	122	KDRA7HC1	247	KDRULA7H	15	4x4.18x3.75	4	128	ES
02A6-4	1	2,6	KDRA8H	123	KDRA8HC1	248	KDRULA8H	12	4x4.18x3.75	4	129	ES
03A6-4	1,5	3,6	KDRA9H	124	KDRA9HC1	249	KDRULA9H	23	4x4.18x3.75	4	130	ES
04A5-4	2	4,5	KDRA1H	129	KDRA1HC1	252	KDRULA1H	33	4x4.18x3.75	4	134	ES
06A2-4	3	6,2	KDRA2H	165	KDRA2HC1	289	KDRULA2H	38	4x4.18x3.75	4	172	ES
09A7-4	5	9,7	KDRA3H	190	KDRA3HC1	315	KDRULA3H	80	4x4.18x3.75	4	199	ES
13A8-4	7,5	13,8	KDRA4H	214	KDRA4HC1	338	KDRULA4H	77	4x4.18x3.75	5	223	ES
17A2-4	10	17,2	KDRA5H	266	KDRA5HC1	390	KDRULA5H	111	4x4.18x3.75	5	279	ES
25A4-4	15	25,4	KDRB2H	273	KDRB2HC1	398	KDRULB2H	133	5x6x4	7	284	ES
34A1-4	20	34,1	KDRC3H	307	KDRC3HC2	455	KDRULC3H	108	5.75x7.2x5	15	319	ES
41A8-4	25	41,8	KDRC1H	368	KDRC1HC2	516	KDRULC1H	112	5.75x7.2x5	15	383	ES
48A4-4	30	48,4	KDRE2H	418	KDRE2HC2	566	KDRULE2H	141	5.75x7.2x5	16	435	ES

Drive Part No. ACS310-03U-	HP ND	Output Current	KDR 5%, UL Type 1 Enclosure					KDR 5%, UL Type 3R Enclosure					Disc. Sym.
			Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
01A3-4	0,5	1,3	KDRULA6HE01	9	12.25x12.5x6.75	13,5	340	KDRULA6HE3R	9	11.5x10x12	19	454	ES
02A1-4	0,75	2,1	KDRULA7HE01	15	12.25x12.5x6.75	14,5	350	KDRULA7HE3R	15	11.5x10x12	19	464	ES
02A6-4	1	2,6	KDRULA8HE01	12	12.25x12.5x6.75	14,5	351	KDRULA8HE3R	12	11.5x10x12	19	465	ES
03A6-4	1,5	3,6	KDRULA9HE01	23	12.25x12.5x6.75	14,5	352	KDRULA9HE3R	23	11.5x10x12	19	466	ES
04A5-4	2	4,5	KDRULA1HE01	33	12.25x12.5x6.75	14,5	355	KDRULA1HE3R	33	11.5x10x12	19	470	ES
06A2-4	3	6,2	KDRULA2HE01	38	12.25x12.5x6.75	14,5	394	KDRULA2HE3R	38	11.5x10x12	19	509	ES
09A7-4	5	9,7	KDRULA3HE01	80	12.25x12.5x6.75	14,5	421	KDRULA3HE3R	80	11.5x10x12	19	535	ES
13A8-4	7,5	13,8	KDRULA4HE01	77	12.25x12.5x6.75	15,5	445	KDRULA4HE3R	77	11.5x10x12	20	560	ES
17A2-4	10	17,2	KDRULA5HE01	111	12.25x12.5x6.75	15,5	500	KDRULA5HE3R	111	11.5x10x12	20	615	ES
25A4-4	15	25,4	KDRULB2HE01	133	12.25x12.5x6.75	17,5	506	KDRULB2HE3R	133	11.5x10x12	22	620	ES
34A1-4	20	34,1	KDRULC3HE01	108	12.25x12.5x6.75	25,5	541	KDRULC3HE3R	108	11.5x10x12	30	655	ES
41A8-4	25	41,8	KDRULC1HE01	112	12.25x12.5x6.75	25,5	604	KDRULC1HE3R	112	11.5x10x12	30	719	ES
48A4-4	30	48,4	KDRULE2HE01	141	12.25x12.5x6.75	26,5	656	KDRULE2HE3R	141	11.5x10x12	31	770	ES

For specific mounting dimension go to <http://www.transcoil.com/home.htm>

## Input Reactors for ACS250 Drives / High Impedance



**Applications:** Line side power conditioning for AC motor controls to prevent unwanted harmonics and nuisance drive trips as well as to prevent excess current during line disturbances that can damage power semi-conductors. There should be a minimum impedance associated with the drive using either AC or DC magnetics. In many applications, this impedance can come from a supply transformer, or if long enough, the supply cable themselves. In most cases, however, the use of an additional input reactor is recommended. If any of the following conditions exist use of at least a 3% line reactor is recommended.

1. Installation has voltage spikes in excess of 6000V peak or lightning strikes.
2. Installation has switched power factor correction capacitors.
3. Installation has power interruptions or voltage sags in excess of 200Vac.
4. When the distribution system kVA is more than 10 times larger than the drive kVA .

**Features:** Features: Open, UL Type 1 and UL Type 3R construction with connection terminals. 3% and 5% impedance rating at rated current.

### Input Reactors for Single Phase 200-240V applications (connect to terminals A and C)

Drive Part No. ACS250-01U-	HP ND	Output Current	KDR UR 5%, Open, Not UL		KDR UR 5%, NEMA 1, Not UL		KDR 5%, UL Listed, Open					Disc. Sym.
			Part Number	List Price	Part Number	List Price	Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
02A3-2	0,5	2,3	KDRA53H	124	KDRA53HC1	249	KDRULA53H	16,8	4x4.18x3.75	4	127	ES
04A3-2	1	4,3	KDRA26H	143	KDRA26HC1	267	KDRULA26H	30,5	4x4.18x3.75	4	146	ES
07A0-2	2	7	KDRB25H	197	KDRB25HC1	320	KDRULB25H	53,1	5x6x4	8	199	ES
10A5-2	3	10,5	KDRB26H	235	KDRB26HC1	360	KDRULB26H	66,5	5x6x4	8	240	ES

Drive Part No. ACS250-01U-	HP ND	Output Current	KDR 5%, UL Type 1 Enclosure					KDR 5%, UL Type 3R Enclosure					Disc. Sym.
			Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
02A3-2	0,5	2,3	KDRULA53HE01	16,8	12.25x12.5x6.75	14,5	348	KDRULA53HE3R	16,8	11.5x10x12	19	463	ES
04A3-2	1	4,3	KDRULA26HE01	30,5	12.25x12.5x6.75	14,5	368	KDRULA26HE3R	30,5	11.5x10x12	19	482	ES
07A0-2	2	7	KDRULB25HE01	53,1	12.25x12.5x6.75	18,5	421	KDRULB25HE3R	53,1	11.5x10x12	23	535	ES
10A5-2	3	10,5	KDRULB26HE01	66,5	12.25x12.5x6.75	18,5	463	KDRULB26HE3R	66,5	11.5x10x12	23	577	ES

For specific mounting dimension go to <http://www.transcoil.com/home.htm>

## Input Reactors for ACS250 Drives / High Impedance (Cont.)

### Input Reactors for Three Phase 200-240V applications

Drive Part No. ACS250-03U-	HP ND	Output Current	KDR UR 5%, Open, Not UL		KDR UR 5%, NEMA 1, Not UL		KDR 5%, UL Listed, Open					Disc. Sym.
			Part Number	List Price	Part Number	List Price	Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
02A3-2	0,5	2,3	KDRA54H	120	KDRA54HC1	244	KDRULA54H	14	4x4.18x3.75	4	121	ES
04A3-2	1	4,3	KDRA25H	127	KDRA25HC1	251	KDRULA25H	23,6	4x4.18x3.75	4	130	ES
07A0-2	2	7	KDRA26H	143	KDRA26HC1	267	KDRULA26H	30,5	4x4.18x3.75	4	146	ES
10A5-2	3	10,5	KDRA28H	157	KDRA28HC1	282	KDRULA28H	43,1	4x4.18x3.75	4	161	ES
18A0-2	5	18	KDRB25H	197	KDRB25HC1	320	KDRULB25H	53,1	5x6x4	8	199	ES

Drive Part No. ACS250-03U-	HP ND	Output Current	KDR 5%, UL Type 1 Enclosure					KDR 5%, UL Type 3R Enclosure					Disc. Sym.
			Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
02A3-2	0,5	2,3	KDRULA54HE01	14	12.25x12.5x6.75	14,5	343	KDRULA54HE3R	14	11.5x10x12	19	456	ES
04A3-2	1	4,3	KDRULA25HE01	23,6	12.25x12.5x6.75	14,5	352	KDRULA25HE3R	23,6	11.5x10x12	19	466	ES
07A0-2	2	7	KDRULA26HE01	30,5	12.25x12.5x6.75	14,5	368	KDRULA26HE3R	30,5	11.5x10x12	19	482	ES
10A5-2	3	10,5	KDRULA28HE01	43,1	12.25x12.5x6.75	14,5	382	KDRULA28HE3R	43,1	11.5x10x12	19	496	ES
18A0-2	5	18	KDRULB25HE01	53,1	12.25x12.5x6.75	18,5	421	KDRULB25HE3R	53,1	11.5x10x12	23	535	ES

For specific mounting dimension go to <http://www.transcoil.com/home.htm>

### Input Reactors for Three Phase 380-480V applications

Drive Part No. ACS250-03U-	HP ND	Output Current	KDR UR 5%, Open, Not UL		KDR UR 5%, NEMA 1, Not UL		KDR 5%, UL Listed, Open					Disc. Sym.
			Part Number	List Price	Part Number	List Price	Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
02A2-4	1	2,2	KDRA8H	123	KDRA8HC1	248	KDRULA8H	12	4x4.18x3.75	4	129	ES
04A1-4	2	4,1	KDRA1H	129	KDRA1HC1	252	KDRULA1H	33	4x4.18x3.75	4	134	ES
05A8-4	3	5,8	KDRA2H	165	KDRA2HC1	289	KDRULA2H	38	4x4.18x3.75	4	172	ES
09A5-4	5	9,5	KDRA3H	190	KDRA3HC1	315	KDRULA3H	80	4x4.18x3.75	4	199	ES
14A0-4	7,5	14	KDRA4H	214	KDRA4HC1	338	KDRULA4H	77	4x4.18x3.75	5	223	ES
18A0-4	10	18	KDRA5H	266	KDRA5HC1	390	KDRULA5H	111	4x4.18x3.75	5	279	ES

Drive Part No. ACS250-03U-	HP ND	Output Current	KDR 5%, UL Type 1 Enclosure					KDR 5%, UL Type 3R Enclosure					Disc. Sym.
			Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
02A2-4	1	2,2	KDRULA8HE01	12	12.25x12.5x6.75	14,5	351	KDRULA8HE3R	12	11.5x10x12	19	465	ES
04A1-4	2	4,1	KDRULA1HE01	33	12.25x12.5x6.75	14,5	355	KDRULA1HE3R	33	11.5x10x12	19	470	ES
05A8-4	3	5,8	KDRULA2HE01	38	12.25x12.5x6.75	14,5	394	KDRULA2HE3R	38	11.5x10x12	19	509	ES
09A5-4	5	9,5	KDRULA3HE01	80	12.25x12.5x6.75	14,5	421	KDRULA3HE3R	80	11.5x10x12	19	535	ES
14A0-4	7,5	14	KDRULA4HE01	77	12.25x12.5x6.75	15,5	445	KDRULA4HE3R	77	11.5x10x12	20	560	ES
18A0-4	10	18	KDRULA5HE01	111	12.25x12.5x6.75	15,5	500	KDRULA5HE3R	111	11.5x10x12	20	615	ES

For specific mounting dimension go to <http://www.transcoil.com/home.htm>

## Input Reactors for ACS250 Drives / High Impedance (Cont.)

### Input Reactors for Three Phase 550-600V applications

Drive Part No. ACS250-03U-	HP ND	Output Current	KDR UR 5%, Open, Not UL		KDR UR 5%, NEMA 1, Not UL		KDR 5%, UL Listed, Open					Disc. Sym.
			Part Number	List Price	Part Number	List Price	Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
02A1-6	1	2,1	KDRA50H	134	KDRA50HC1	259	KDRULA50H	17	4x4.18x3.75	4	139	ES
03A1-6	2	3,1	KDRA43H	139	KDRA43HC1	264	KDRULA43H	23	4x4.18x3.75	4	145	ES
04A1-6	3	4,1	KDRA44H	140	KDRA44HC1	265	KDRULA44H	34	4x4.18x3.75	4	146	ES
06A5-6	5	6,5	KDRA45H	202	KDRA45HC1	326	KDRULA45H	47	4x4.18x3.75	4	210	ES
09A0-6	7,5	9	KDRB42H	250	KDRB42HC2	399	KDRULB42H	61	5x6x4	8	261	ES
12A0-6	10	12	KDRB43H	282	KDRB43HC2	430	KDRULB43H	70	5x6x4	8	295	ES
17A0-6	15	17	KDRB44H	289	KDRB44HC2	437	KDRULB44H	73	5x6x4	8	302	ES

Drive Part No. ACS250-03U-	HP ND	Output Current	KDR 5%, UL Type 1 Enclosure					KDR 5%, UL Type 3R Enclosure					Disc. Sym.
			Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
02A1-6	1	2,1	KDRULA50HE01	17	12.25x12.5x6.75	14,5	361	KDRULA50HE3R	17	11.5x10x12	19	476	ES
03A1-6	2	3,1	KDRULA43HE01	23	12.25x12.5x6.75	14,5	367	KDRULA43HE3R	23	11.5x10x12	19	481	ES
04A1-6	3	4,1	KDRULA44HE01	34	12.25x12.5x6.75	14,5	368	KDRULA44HE3R	34	11.5x10x12	19	482	ES
06A5-6	5	6,5	KDRULA45HE01	47	12.25x12.5x6.75	14,5	431	KDRULA45HE3R	47	11.5x10x12	19	546	ES
09A0-6	7,5	9	KDRULB42HE01	61	12.25x12.5x6.75	18,5	482	KDRULB42HE3R	61	11.5x10x12	23	597	ES
12A0-6	10	12	KDRULB43HE01	70	12.25x12.5x6.75	18,5	516	KDRULB43HE3R	70	11.5x10x12	23	631	ES
17A0-6	15	17	KDRULB44HE01	73	12.25x12.5x6.75	18,5	524	KDRULB44HE3R	73	11.5x10x12	23	638	ES

For specific mounting dimension go to <http://www.transcoil.com/home.htm>



## Input Reactors for ACB530 Drives / High Impedance



**Applications:** Line side power conditioning for AC motor controls to prevent unwanted harmonics and nuisance drive trips as well as to prevent excess current during line disturbances that can damage power semi-conductors. There should be a minimum impedance associated with the drive using either AC or DC magnetics. In many applications, this impedance can come from a supply transformer, or if long enough, the supply cable themselves. In most cases, however, the use of an additional input reactor is recommended. If any of the following conditions exist use of at least a 3% line reactor is recommended.

1. Installation has voltage spikes in excess of 6000V peak or lightning strikes.
2. Installation has switched power factor correction capacitors.
3. Installation has power interruptions or voltage sags in excess of 200Vac.
4. When the distribution system kVA is more than 10 times larger than the drive kVA .

**Features:** Open, UL Type 1 and UL Type 3R construction with connection terminals. 3% and 5% impedance rating at rated current.

### Input Reactors for Three Phase 200-240V applications

Drive Part No. ACB530-U1-	HP ND	Output Current	KDR UR 5%, Open, Not UL		KDR UR 5%, NEMA 1, Not UL		KDR 5%, UL Listed, Open					Disc. Sym.
			Part Number	List Price	Part Number	List Price	Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
04A6-2	1	4,6	KDRA25H	127	KDRA25HC1	251	KDRULA25H	23,6	4x4.18x3.75	4	130	ES
06A6-2	1,5	6,6	KDRA27H	138	KDRA27HC1	262	KDRULA27H	30,6	4x4.18x3.75	4	141	ES
07A5-2	2	7,5	KDRA26H	143	KDRA26HC1	267	KDRULA26H	30,5	4x4.18x3.75	4	146	ES
012A-2	3	11,8	KDRA28H	157	KDRA28HC1	282	KDRULA28H	43,1	4x4.18x3.75	4	161	ES
017A-2	5	16,7	KDRB25H	197	KDRB25HC1	320	KDRULB25H	53,1	5x6x4	8	199	ES
024A-2	7,5	24,2	KDRB26H	235	KDRB26HC1	360	KDRULB26H	66,5	5x6x4	8	240	ES
031A-2	10	30,8	KDRD21H	239	KDRD21HC2	388	KDRULD21H	91,8	5.75x7.2x4.25	12	244	ES
046A-2	15	46,2	KDRD22H	312	KDRD22HC2	460	KDRULD22H	107,8	5.75x7.2x4.25	12	323	ES
059A-2	20	59,4	KDRC22H	352	KDRC22HC2	501	KDRULC22H	113,1	5.75x7.2x5	15	367	ES
075A-2	25	74,8	KDRF28H	415	KDRF28HC3	626	KDRULF28H	151,0	7x9x6	30	439	ES
088A-2	30	88	KDRF25H	428	KDRF25HC4	781	KDRULF25H	179,2	7x9x7	67	514	ES
114A-2	40	114	KDRF26H	576	KDRF26HC4	929	KDRULF26H	192,8	7x9x7	33	669	ES
143A-2	50	143	KDRH24H	690	KDRH24HC4	1,044	KDRULH24H	201,0	9x11x7	40	799	ES
178A-2	60	178	KDRH23H	804	KDRH23HC4	1,159	KDRULH23H	220,0	9x11x7.5	51	914	ES
221A-2	75	221	KDRI22H	991	KDRI22HC4	1,346	KDRULI22H	311,5	9x11x8.25	56	1,115	ES
248A-2	100	248	KDRI21H	1,221	KDRI21HC4	1,574	KDRULI21H	296,4	9x11x8.25	56	1,353	ES

Drive Part No. ACB530-U1-	HP ND	Output Current	KDR 5%, UL Type 1 Enclosure					KDR 5%, UL Type 3R Enclosure					Disc. Sym.
			Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
04A6-2	1	4,6	KDRULA25HE01	23,6	12.25x12.5x6.75	14,5	352	KDRULA25HE3R	23,6	11.5x10x12	19	466	ES
06A6-2	1,5	6,6	KDRULA27HE01	30,6	12.25x12.5x6.75	14,5	364	KDRULA27HE3R	30,6	11.5x10x12	19	478	ES
07A5-2	2	7,5	KDRULA26HE01	30,5	12.25x12.5x6.75	14,5	368	KDRULA26HE3R	30,5	11.5x10x12	19	482	ES
012A-2	3	11,8	KDRULA28HE01	43,1	12.25x12.5x6.75	14,5	382	KDRULA28HE3R	43,1	11.5x10x12	19	496	ES
017A-2	5	16,7	KDRULB25HE01	53,1	12.25x12.5x6.75	18,5	421	KDRULB25HE3R	53,1	11.5x10x12	23	535	ES
024A-2	7,5	24,2	KDRULB26HE01	66,5	12.25x12.5x6.75	18,5	463	KDRULB26HE3R	66,5	11.5x10x12	23	577	ES
031A-2	10	30,8	KDRULD21HE01	91,8	12.25x12.5x6.75	22,5	466	KDRULD21HE3R	91,8	11.5x10x12	27	580	ES
046A-2	15	46,2	KDRULD22HE01	107,8	12.25x12.5x6.75	22,5	546	KDRULD22HE3R	107,8	11.5x10x12	27	660	ES
059A-2	20	59,4	KDRULC22HE01	113,1	12.25x12.5x6.75	25,5	588	KDRULC22HE3R	113,1	11.5x10x12	30	703	ES
075A-2	25	74,8	KDRULF28HE01	151,0	19.13x15.43x15.43	67	870	KDRULF28HE3R	151,0	19.18x15.62x19.5	67	960	ES
088A-2	30	88	KDRULF25HE01	179,2	19.13x15.43x15.43	67	945	KDRULF25HE3R	179,2	19.18x15.62x19.5	67	1,034	ES
114A-2	40	114	KDRULF26HE01	192,8	19.13x15.43x15.43	67	1,100	KDRULF26HE3R	192,8	19.18x15.62x19.5	67	1,189	ES
143A-2	50	143	KDRULH24HE01	201,0	19.13x15.43x15.43	70	1,230	KDRULH24HE3R	201,0	19.18x15.62x19.5	72	1,319	ES
178A-2	60	178	KDRULH23HE01	220,0	19.13x15.43x15.43	81	1,345	KDRULH23HE3R	220,0	19.18x15.62x19.5	81	1,434	ES
221A-2	75	221	KDRULI22HE01	311,5	22.12x20.43x24.37	117	1,907	KDRULI22HE3R	311,5	22.15x20.62x28.5	126	2,034	ES
248A-2	100	248	KDRULI21HE01	296,4	22.12x20.43x24.37	117	2,146	KDRULI21HE3R	296,4	22.15x20.62x28.5	126	2,272	ES

For specific mounting dimension go to <http://www.transcoil.com/home.htm>

# Input Reactors for ACB530 / High Impedance(Cont.)

## Input Reactors for Three Phase 380-480V applications

Drive Part No. ACB530-U1-	HP ND	Output Current	KDR UR 5%, Open, Not UL		KDR UR 5%, NEMA 1, Not UL		KDR 5%, UL Listed, Open					Disc. Sym.
			Part Number	List Price	Part Number	List Price	Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
03A3-4	1,5	3,3	KDRA9H	124	KDRA9HC1	249	KDRULA9H	23	4x4.18x3.75	4	130	ES
04A1-4	2	4,1	KDRA1H	129	KDRA1HC1	252	KDRULA1H	33	4x4.18x3.75	4	134	ES
05A4-4	3	5,4	KDRA2H	165	KDRA2HC1	289	KDRULA2H	38	4x4.18x3.75	4	172	ES
06A9-4	3	6,9	KDRA2H	165	KDRA2HC1	289	KDRULA2H	38	4x4.18x3.75	4	172	ES
08A8-4	5	8,8	KDRA3H	190	KDRA3HC1	315	KDRULA3H	80	4x4.18x3.75	4	199	ES
012A-4	7,5	11,9	KDRA4H	214	KDRA4HC1	338	KDRULA4H	77	4x4.18x3.75	5	223	ES
015A-4	10	15,4	KDRA5H	266	KDRA5HC1	390	KDRULA5H	111	4x4.18x3.75	5	279	ES
023A-4	15	23	KDRB2H	273	KDRB2HC1	398	KDRULB2H	133	5x6x4	7	284	ES
031A-4	20	31	KDRC3H	307	KDRC3HC2	455	KDRULC3H	108	5.75x7.2x5	15	319	ES
038A-4	25	38	KDRC1H	368	KDRC1HC2	516	KDRULC1H	112	5.75x7.2x5	15	383	ES
045A-4	30	44	KDRE2H	418	KDRE2HC2	566	KDRULE2H	141	5.75x7.2x5	16	435	ES
059A-4	40	59	KDRF4H	435	KDRF4HC3	646	KDRULF4H	169	7x9x6	25	454	ES
072A-4	50	72	KDRF1H	600	KDRF1HC3	810	KDRULF1H	191	7x9x6	25	626	ES
078A-4	60	77	KDRF2H	621	KDRF2HC3	832	KDRULF2H	226	7x9x6	25	648	ES
097A-4	75	96	KDRH2H	706	KDRH2HC4	1,060	KDRULH2H	212	9x11x7.25	52	804	ES
125A-4	100	124	KDRI2H	845	KDRI2HC4	1,198	KDRULI2H	362	9x11x7	52	947	ES
157A-4	125	157	KDRG3H	950	KDRG3HC4	1,303	KDRULG3H	274	9x11x8	57	1,065	ES
180A-4	150	180	KDRG1H	1,160	KDRG1HC4	1,513	KDRULG1H	359	9x11x8.12	60	1,283	ES
246A-4	200	245	KDRJ1H	1,541	KDRJ1HC5	2,014	KDRULJ1H	420	9x11x9.75	75	1,772	ES
316A-4	250	316	KDRL1H	1,681	KDRL1HC5	2,153	KDRULL1H	548	11.38x14.5x9.31	105	1,905	ES
368A-4	300	368	KDRL2H	1,693	KDRL2HC5	2,164	KDRULL2H	786	11.38x14.5x11	105	1,927	ES
414A-4	350	414	KDRL3H	1,930	KDRL3HC5	2,401	KDRULL3H	750	11.38x14.5x9.31	109	2,220	ES
486A-4	400	486	KDRL4H	2,554	KDRL4HC5	3,027	KDRULL4H	730	11.38x15x12	135	2,872	ES
526A-4	450	526	KDRL5H	2,663	KDRL5HC5	3,135	KDRULL5H	774	11.38x15x12.25	135	2,985	ES
602A-4	500	602	KDRL6H	3,367	KDRL6HC5	3,838	KDRULL6H	697	11.38x15x12.25	135	3,719	ES
645A-4	550	645	KDRS1H	4,052	KDRS1HC7	5,237	KDRULS1H	1246	11.38x15x13.25	272	4,600	ES

Drive Part No. ACB530-U1-	HP ND	Output Current	KDR 5%, UL Type 1 Enclosure					KDR 5%, UL Type 3R Enclosure					Disc. Sym.
			Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
03A3-4	1,5	3,3	KDRULA9HE01	23	12.25x12.5x6.75	14,5	352	KDRULA9HE3R	23	11.5x10x12	19	466	ES
04A1-4	2	4,1	KDRULA1HE01	33	12.25x12.5x6.75	14,5	355	KDRULA1HE3R	33	11.5x10x12	19	470	ES
05A4-4	3	5,4	KDRULA2HE01	38	12.25x12.5x6.75	14,5	394	KDRULA2HE3R	38	11.5x10x12	19	509	ES
06A9-4	3	6,9	KDRULA2HE01	38	12.25x12.5x6.75	14,5	394	KDRULA2HE3R	38	11.5x10x12	19	509	ES
08A8-4	5	8,8	KDRULA3HE01	80	12.25x12.5x6.75	14,5	421	KDRULA3HE3R	80	11.5x10x12	19	535	ES
012A-4	7,5	11,9	KDRULA4HE01	77	12.25x12.5x6.75	15,5	445	KDRULA4HE3R	77	11.5x10x12	20	560	ES
015A-4	10	15,4	KDRULA5HE01	111	12.25x12.5x6.75	15,5	500	KDRULA5HE3R	111	11.5x10x12	20	615	ES
023A-4	15	23	KDRULB2HE01	133	12.25x12.5x6.75	17,5	506	KDRULB2HE3R	133	11.5x10x12	22	620	ES
031A-4	20	31	KDRULC3HE01	108	12.25x12.5x6.75	25,5	541	KDRULC3HE3R	108	11.5x10x12	30	655	ES
038A-4	25	38	KDRULC1HE01	112	12.25x12.5x6.75	25,5	604	KDRULC1HE3R	112	11.5x10x12	30	719	ES
045A-4	30	44	KDRULE2HE01	141	12.25x12.5x6.75	26,5	656	KDRULE2HE3R	141	11.5x10x12	31	770	ES
059A-4	40	59	KDRULF4HE01	169	19.13x15.43x15.43	67	885	KDRULF4HE3R	169	19.18x15.62x19.5	63	974	ES
072A-4	50	72	KDRULF1HE01	191	19.13x15.43x15.43	67	1,057	KDRULF1HE3R	191	19.18x15.62x19.5	63	1,147	ES
078A-4	60	77	KDRULF2HE01	226	19.13x15.43x15.43	67	1,079	KDRULF2HE3R	226	19.18x15.62x19.5	63	1,168	ES
097A-4	75	96	KDRULH2HE01	212	19.13x15.43x15.43	82	1,236	KDRULH2HE3R	212	19.18x15.62x19.5	82	1,326	ES
125A-4	100	124	KDRULI2HE01	362	19.13x15.43x15.43	82	1,379	KDRULI2HE3R	362	19.18x15.62x19.5	82	1,468	ES
157A-4	125	157	KDRULG3HE01	274	22.12x20.43x24.37	122	1,857	KDRULG3HE3R	274	22.15x20.62x28.5	127	1,984	ES
180A-4	150	180	KDRULG1HE01	359	22.12x20.43x24.37	127	2,076	KDRULG1HE3R	359	22.15x20.62x28.5	127	2,202	ES
246A-4	200	245	KDRULJ1HE01	420	22.12x20.43x24.37	136	2,565	KDRULJ1HE3R	420	22.15x20.62x28.5	145	2,691	ES
316A-4	250	316	KDRULL1HE01	548	22.12x20.43x24.37	162	2,698	KDRULL1HE3R	548	22.12x20.43x24.37	175	2,824	ES
368A-4	300	368	KDRULL2HE01	786	22.12x20.43x24.37	162	2,718	KDRULL2HE3R	786	22.12x20.43x24.37	175	2,845	ES
414A-4	350	414	KDRULL3HE01	750	22.12x20.43x24.37	166	3,013	KDRULL3HE3R	750	22.15x20.62x28.5	180	3,139	ES
486A-4	400	486	KDRULL4HE01	730	22.12x20.43x24.37	176	3,665	KDRULL4HE3R	730	22.15x20.62x28.5	205	3,791	ES
526A-4	450	526	KDRULL5HE01	774	36x28.39x30.19	295	4,632	KDRULL5HE3R	774	36x28.39x36.86	305	5,252	ES
602A-4	500	602	KDRULL6HE01	697	36x28.39x30.19	295	5,366	KDRULL6HE3R	697	36x28.39x36.86	305	5,986	ES
645A-4	550	645	KDRULS1HE01	1246	48x36.27x36.27	685	7,260					ES	

For specific mounting dimension go to <http://www.transcoil.com/home.htm>

## Input Reactors for ACB530 / High Impedance(Cont.)

### Input Reactors for Three Phase 550-600V applications

Drive Part No. ACB530-U1-	HP ND	Output Current	KDR UR 5%, Open, Not UL		KDR UR 5%, NEMA 1, Not UL		KDR 5%, UL Listed, Open					Disc. Sym.
			Part Number	List Price	Part Number	List Price	Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
02A7-6	2	2,7	KDRA43H	139	KDRA43HC1	264	KDRULA43H	23	4x4.18x3.75	4	145	ES
03A9-6	3	3,9	KDRA44H	140	KDRA44HC1	265	KDRULA44H	34	4x4.18x3.75	4	146	ES
06A1-6	5	6,1	KDRA45H	202	KDRA45HC1	326	KDRULA45H	47	4x4.18x3.75	4	210	ES
09A0-6	7,5	9	KDRB42H	250	KDRB42HC2	399	KDRULB42H	61	5x6x4	8	261	ES
011A-6	10	11	KDRB43H	282	KDRB43HC2	430	KDRULB43H	70	5x6x4	8	295	ES
017A-6	15	17	KDRB44H	289	KDRB44HC2	437	KDRULB44H	73	5x6x4	8	302	ES
022A-6	20	22	KDRD41H	307	KDRD41HC2	455	KDRULD41H	105	5.75x7.2x4.25	12	319	ES
027A-6	25	27	KDRC43H	333	KDRC43HC2	481	KDRULC43H	107	5.75x7.2x5	15	345	ES
032A-6	30	32	KDRE42H	387	KDRE42HC2	535	KDRULE42H	140	5.75x7.2x5	16	403	ES
041A-6	40	41	KDRF44H	461	KDRF44HC3	671	KDRULF44H	172	7x9x6	30	480	ES
052A-6	50	52	KDRF45H	588	KDRF45HC3	799	KDRULF45H	165	7x9x6	30	613	ES
062A-6	60	62	KDRH43H	633	KDRH43HC4	986	KDRULH43H	205	9x11x6	45	659	ES
077A-6	75	77	KDRH42H	660	KDRH42HC4	1,013	KDRULH42H	251	9x11x6	45	691	ES
099A-6	100	99	KDRI41H	960	KDRI41HC4	1,313	KDRULI41H	268	9x11x7.25	53	1,068	ES
125A-6	125	125	KDRG44H	1,011	KDRG44HC4	1,364	KDRULG44H	381	9x11x8	68	1,121	ES
144A-6	150	144	KDRG45H	1,056	KDRG45HC4	1,410	KDRULG45H	405	9x11x8.12	71	1,176	ES

Drive Part No. ACB530-U1-	HP ND	Output Current	KDR 5%, UL Type 1 Enclosure					KDR 5%, UL Type 3R Enclosure					Disc. Sym.
			Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
02A7-6	2	2,7	KDRULA43HE01	23	12.25x12.5x6.75	14,5	367	KDRULA43HE3R	23	11.5x10x12	19	481	ES
03A9-6	3	3,9	KDRULA44HE01	34	12.25x12.5x6.75	14,5	368	KDRULA44HE3R	34	11.5x10x12	19	482	ES
06A1-6	5	6,1	KDRULA45HE01	47	12.25x12.5x6.75	14,5	431	KDRULA45HE3R	47	11.5x10x12	19	546	ES
09A0-6	7,5	9	KDRULB42HE01	61	12.25x12.5x6.75	18,5	482	KDRULB42HE3R	61	11.5x10x12	23	597	ES
011A-6	10	11	KDRULB43HE01	70	12.25x12.5x6.75	18,5	516	KDRULB43HE3R	70	11.5x10x12	23	631	ES
017A-6	15	17	KDRULB44HE01	73	12.25x12.5x6.75	18,5	524	KDRULB44HE3R	73	11.5x10x12	23	638	ES
022A-6	20	22	KDRULD41HE01	105	12.25x12.5x6.75	22,5	541	KDRULD41HE3R	105	11.5x10x12	27	655	ES
027A-6	25	27	KDRULC43HE01	107	12.25x12.5x6.75	25,5	567	KDRULC43HE3R	107	11.5x10x12	30	681	ES
032A-6	30	32	KDRULE42HE01	140	12.25x12.5x6.75	26,5	624	KDRULE42HE3R	140	11.5x10x12	31	739	ES
041A-6	40	41	KDRULF44HE01	172	19.13x15.43x15.43	67	911	KDRULF44HE3R	172	19.18x15.62x19.5	68	1,000	ES
052A-6	50	52	KDRULF45HE01	165	19.13x15.43x15.43	67	1,044	KDRULF45HE3R	165	19.18x15.62x19.5	68	1,133	ES
062A-6	60	62	KDRULH43HE01	205	19.13x15.43x15.43	82	1,089	KDRULH43HE3R	205	19.18x15.62x19.5	85	1,180	ES
077A-6	75	77	KDRULH42HE01	251	19.13x15.43x15.43	82	1,118	KDRULH42HE3R	251	19.18x15.62x19.5	85	1,207	ES
099A-6	100	99	KDRULI41HE01	268	19.13x15.43x15.43	87	1,500	KDRULI41HE3R	268	19.18x15.62x19.5	90	1,589	ES
125A-6	125	125	KDRULG44HE01	381	22.12x20.43x24.37	102	1,553	KDRULG44HE3R	381	19.18x15.62x19.5	106	1,643	ES
144A-6	150	144	KDRULG45HE01	405	22.12x20.43x24.37	135	1,968	KDRULG45HE3R	405	22.15x20.62x28.5	135	2,095	ES

For specific mounting dimension go to <http://www.transcoil.com/home.htm>

## Input Current Ratings with and without AC Line Reactor

Type ACS150- ACS355-	ACS150	ACS355	Input without Reactor	Input with 5% Reactor	Type ACS310-	Input without Reactor	Input with 5% Reactor	Type ACS250-	Input without Reactor	Input with 3% Reactor
			Input A	Input A		Input A	Input A		Input A	Input A
<b>Single Phase Drive - 200-240 V Applications</b>										
01x-02A4-2	x	x	6,1	4,5	01x-02A4-2	6,1	4,6	01x-02A3-2	6,4	5,0
01x-04A7-2	x	x	11	8,1	01x-04A7-2	11	9,4	01x-04A3-2	8,5	7,5
01x-06A7-2	x	x	16	11	01x-06A7-2	16	14	01x-07A0-2	15,2	13,5
01x-07A5-2	x	x	17	12	01x-07A5-2	17	15	01x-10A5-2	19,5	17,3
01x-09A8-2	x	x	21	15	01x-09A8-2	21	19			
<b>Three Phase Drive - 200-240 V Applications</b>										
03x-02A4-2	x	x	4,3	2,2	03x-02A6-2	4,7	2,6	03x-02A3-2	3,8	3,1
03x-03A5-2	x	x	6,1	3,5	03x-03A9-2	6,7	3,6	03x-04A3-2	4,5	3,5
03x-04A7-2	x	x	7,6	4,2	03x-05A2-2	8,4	4,8	03x-07A0-2	7,0	5,5
03x-06A7-2	x	x	12	6,1	03x-07A4-2	13	7,2	03x-10A5-2	10,5	8,6
03x-07A5-2	x	x	12	6,9	03x-08A3-2	13	8,2	03x-18A0-2	18,0	15,0
03x-09A8-2	x	x	14	9,2	03x-10A8-2	16	11,0			
03x-13A3-2		x	22	13	03x-14A6-2	24	14			
03x-17A6-2		x	24,8	14	03x-19A4-2	27,3	18			
03x-24A4-2		x	41	21	03x-26A8-2	45	27			
03x-31A0-2		x	50	26	03x-34A1-2	55	34			
03x-46A2-2		x	69	41	03x-50A8-2	76	47			
<b>Three Phase Drive - 380-480 V Applications</b>										
03x-01A2-4	x	x	1,8	0,9	03x-01A3-4	2,0	1,1	03x-02A2-4	2,9	2,2
03x-01A9-4	x	x	3,0	1,5	03x-02A1-4	3,3	1,7	03x-04A1-4	5,1	4,1
03x-02A4-4	x	x	3,4	1,9	03x-02A6-4	3,8	2,1	03x-05A8-4	7,5	5,5
03x-03A3-4	x	x	5,0	2,6	03x-03A6-4	5,5	2,9	03x-09A5-4	11,2	9,0
03x-04A1-4	x	x	5,8	2,9	03x-04A5-4	6,3	3,2	03x-14A0-4	19,0	16,0
03x-05A6-4	x	x	8,0	4,0	03x-06A2-4	8,8	4,4	03x-18A0-4	21,0	17,0
03x-07A3-4	x	x	9,7	5,1	03x-08A0-4	10,6	5,7			
03x-08A8-4	x	x	11	6,4	03x-09A7-4	12	7,2			
03x-12A5-4		x	16	9,5	03x-13A8-4	17	10,3			
03x-15A6-4		x	18	10	03x-17A2-4	20	11			
03x-23A1-4		x	26	15	03x-25A4-4	28	17			
03x-31A0-4		x	43	20	03x-34A1-4	48	22			
03x-38A0-4		x	51	26	03x-41A8-4	56	29			
03x-44A0-4		x	56	32	03x-48A4-4	61	35			
<b>Three Phase Drive - 550-600 V Applications</b>										
								03x-02A1-6	2,7	2,1
								03x-03A1-6	3,7	3,1
								03x-04A1-6	4,8	4,1
								03x-06A5-6	7,1	6,5
								03x-09A0-6	10,2	9,0
								03x-12A0-6	14,4	12,0
								03x-17A0-6	19,1	17,0

## Input Reactors for ACS150 and ACS355 Drives / Low Impedance



**Applications:** Line side power conditioning for AC motor controls to prevent unwanted harmonics and nuisance drive trips as well as to prevent excess current during line disturbances that can damage power semi-conductors. There should be a minimum impedance associated with the drive using either AC or DC magnetics. In many applications, this impedance can come from a supply transformer, or if long enough, the supply cable themselves. In most cases, however, the use of an additional input reactor is recommended. If any of the following conditions exist use of at least a 3% line reactor is recommended.

1. Installation has voltage spikes in excess of 6000V peak or lightning strikes.
2. Installation has switched power factor correction capacitors.
3. Installation has power interruptions or voltage sags in excess of 200Vac.
4. When the distribution system kVA is more than 10 times larger than the drive kVA .

**Features:** Open, UL Type 1 and UL Type 3R construction with connection terminals. 3% and 5% impedance rating at rated current.

### Input Reactors for Single Phase 200-240V applications (connect to terminals A and C) Standard Enclosed Resistor Packages

Drive Part No. ACSx50-01U-	HP ND	Output Current	KDR UR 3%, Open, Not UL		KDR UR 3%, NEMA 1, Not UL		KDR 3%, UL Listed, Open					Disc. Sym.
			Part Number	List Price	Part Number	List Price	Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
02A4-2	0,5	2,4	KDRA25L	107	KDRA25LC1	231	KDRULA25L	7	4.00x4.18x3.75	4	113	ES
04A7-2	1	4,7	KDRA27L	114	KDRA27LC1	238	KDRULA27L	11	4.00x4.18x3.75	4	121	ES
06A7-2	1,5	6,7	KDRA28L	133	KDRA28LC1	256	KDRULA28L	18	4.00x4.18x3.75	4	135	ES
07A5-2	2	7,5	KDRB22L	176	KDRB22LC1	300	KDRULB22L	21	4.00x4.18x3.75	4	179	ES
09A8-2	3	9,8	KDRB22L	176	KDRB22LC1	300	KDRULB22L	29	4.00x4.18x3.75	4	179	ES

Drive Part No. ACSx50-01U-	HP ND	Output Current	KDR 3%, UL Type 1 Enclosure					KDR 3%, UL Type 3R Enclosure					Disc. Sym.
			Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
02A4-2	0,5	2,4	KDRULA25LE01	7	12.25x12.5x6.75	14,5	335	KDRULA25LE3R	7	4.00x4.18x3.75	4	449	ES
04A7-2	1	4,7	KDRULA27LE01	11	12.25x12.5x6.75	14,5	343	KDRULA27LE3R	11	4.00x4.18x3.75	4	457	ES
06A7-2	1,5	6,7	KDRULA28LE01	18	12.25x12.5x6.75	14,5	356	KDRULA28LE3R	18	4.00x4.18x3.75	4	471	ES
07A5-2	2	7,5	KDRULB22LE01	21	12.25x12.5x6.75	18,5	400	KDRULB22LE3R	21	4.00x4.18x3.75	4	515	ES
09A8-2	3	9,8	KDRULB22LE01	29	12.25x12.5x6.75	18,5	400	KDRULB22LE3R	29	4.00x4.18x3.75	4	515	ES

For specific mounting dimension go to <http://www.transcoil.com/home.htm>

## Input Reactors for ACS150 and ACS355 Drives / Low Impedance (Cont.)

### Input Reactors for Three Phase 200-240V applications

Drive Part No. ACSx5x-03U-	HP ND	Output Current	KDR UR 3%, Open, Not UL		KDR UR 3%, NEMA 1, Not UL		KDR 3%, UL Listed, Open					Disc. Sym.
			Part Number	List Price	Part Number	List Price	Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
02A4-2	0,5	2,4	KDRA25L	107	KDRA25LC1	231	KDRULA25L	11	4x4.18x3.75	4	113	ES
03A5-2	0,75	3,5	KDRA26L	112	KDRA26LC1	236	KDRULA26L	18	4x4.18x3.75	4	117	ES
04A7-2	1	4,7	KDRA27L	114	KDRA27LC1	238	KDRULA27L	21	4x4.18x3.75	4	121	ES
06A7-2	1,5	6,7	KDRA28L	133	KDRA28LC1	256	KDRULA28L	29	4x4.18x3.75	4	135	ES
07A5-2	2	7,5	KDRB22L	176	KDRB22LC1	300	KDRULB22L	38	5x6x4	8	179	ES
09A8-2	3	9,8	KDRB22L	176	KDRB22LC1	300	KDRULB22L	38	5x6x4	8	179	ES
13A3-2	3	13,3	KDRB22L	176	KDRB22LC1	300	KDRULB22L	38	5x6x4	8	179	ES
17A6-2	5	17,6	KDRD25L	207	KDRD25LC2	356	KDRULD25L	64	5.75x7.2x4.25	12	211	ES
24A4-2	7,5	24,4	KDRD24L	256	KDRD24LC2	404	KDRULD24L	85	5.75x7.2x4.25	12	266	ES
31A0-2	10	31	KDRD26L	272	KDRD26LC2	421	KDRULD26L	94	5.75x7.2x4.25	12	283	ES
46A2-2	15	46,2	KDRF24L	371	KDRF24LC4	724	KDRULF24L	135	7x9x7	33	456	ES

Drive Part No. ACSx5x-03U-	HP ND	Output Current	KDR 3%, UL Type 1 Enclosure					KDR 3%, UL Type 3R Enclosure					Disc. Sym.
			Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
02A4-2	0,5	2,4	KDRULA25LE01	11	12.25x12.5x6.75	14,5	335	KDRULA25LE3R	11	11.5x10x12	19	449	ES
03A5-2	0,75	3,5	KDRULA26LE01	18	12.25x12.5x6.75	14,5	338	KDRULA26LE3R	18	11.5x10x12	19	453	ES
04A7-2	1	4,7	KDRULA27LE01	21	12.25x12.5x6.75	14,5	343	KDRULA27LE3R	21	11.5x10x12	19	457	ES
06A7-2	1,5	6,7	KDRULA28LE01	29	12.25x12.5x6.75	18,5	356	KDRULA28LE3R	29	11.5x10x12	19	471	ES
07A5-2	2	7,5	KDRULB22LE01	38	12.25x12.5x6.75	18,5	400	KDRULB22LE3R	38	11.5x10x12	23	515	ES
09A8-2	3	9,8	KDRULB22LE01	38	12.25x12.5x6.75	18,5	400	KDRULB22LE3R	38	11.5x10x12	23	515	ES
13A3-2	3	13,3	KDRULB22LE01	38	12.25x12.5x6.75	18,5	400	KDRULB22LE3R	38	11.5x10x12	23	515	ES
17A6-2	5	17,6	KDRULD25LE01	64	12.25x12.5x6.75	22,5	433	KDRULD25LE3R	64	11.5x10x12	27	547	ES
24A4-2	7,5	24,4	KDRULD24LE01	85	12.25x12.5x6.75	22,5	488	KDRULD24LE3R	85	11.5x10x12	27	602	ES
31A0-2	10	31	KDRULD26LE01	94	12.25x12.5x6.75	22,5	504	KDRULD26LE3R	94	11.5x10x12	27	619	ES
46A2-2	15	46,2	KDRULF24LE01	135	19.13x15.43x15.43	67	887	KDRULF24LE3R	135	19.18x15.62x19.5	67	977	ES

For specific mounting dimension go to <http://www.transcoil.com/home.htm>

## Input Reactors for ACS150 and ACS355 Drives / Low Impedance (Cont.)

### Input Reactors for Three Phase 380-480V applications

Drive Part No. ACSx50-03U-	HP ND	Output Current	KDR UR 3%, Open, Not UL		KDR UR 3%, NEMA 1, Not UL		KDR 3%, UL Listed, Open					Disc. Sym.
			Part Number	List Price	Part Number	List Price	Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
01A2-4	0,5	1,2	KDRA8L	105	KDRA8LC1	230	KDRULA8L	10,4	4x4.18x3.75	4	111	ES
01A9-4	0,75	1,9	KDRA9L	106	KDRA9LC1	231	KDRULA9L	17	4x4.18x3.75	4	113	ES
02A4-4	1	2,4	KDRA1L	112	KDRA1LC1	236	KDRULA1L	19	4x4.18x3.75	4	117	ES
03A3-4	1,5	3,3	KDRA1L	112	KDRA1LC1	236	KDRULA1L	19	4x4.18x3.75	4	117	ES
04A1-4	2	4,1	KDRA1L	112	KDRA1LC1	236	KDRULA1L	19	4x4.18x3.75	4	117	ES
05A6-4	3	5,6	KDRA3L	128	KDRA3LC1	252	KDRULA3L	49	4x4.18x3.75	4	134	ES
08A8-4	5	8,8	KDRA4L	143	KDRA4LC1	267	KDRULA4L	40	4x4.18x3.75	4	150	ES
12A5-4	7,5	12,5	KDRB2L	212	KDRB2LC1	335	KDRULB2L	65	5x6x4	8	221	ES
15A6-4	10	15,6	KDRB2L	212	KDRB2LC1	335	KDRULB2L	65	5x6x4	8	221	ES
23A1-4	15	23,1	KDRB2L	212	KDRB2LC1	335	KDRULB2L	65	5x6x4	8	221	ES
31A0-4	20	31	KDRC1L	344	KDRC1LC2	493	KDRULC1L	114	5.75x7.2x5	15	357	ES
38A0-4	25	38	KDRF2L	402	KDRF2LC3	613	KDRULF2L	114	7x9x6	25	419	ES
44A0-4	30	44	KDRF4L	415	KDRF4LC3	626	KDRULF4L	169	7x9x6	25	432	ES

Drive Part No. ACSx50-03U-	HP ND	Output Current	KDR 3%, UL Type 1 Enclosure					KDR 3%, UL Type 3R Enclosure					Disc. Sym.
			Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
01A2-4	0,5	1,2	KDRULA8LE01	10,4	12.25x12.5x6.75	14,5	332	KDRULA8LE3R	10,4	11.5x10x12	19	447	ES
01A9-4	0,75	1,9	KDRULA9LE01	17	12.25x12.5x6.75	14,5	335	KDRULA9LE3R	17	11.5x10x12	19	449	ES
02A4-4	1	2,4	KDRULA1LE01	19	12.25x12.5x6.75	14,5	339	KDRULA1LE3R	19	11.5x10x12	19	453	ES
03A3-4	1,5	3,3	KDRULA1LE01	19	12.25x12.5x6.75	14,5	339	KDRULA1LE3R	19	11.5x10x12	19	453	ES
04A1-4	2	4,1	KDRULA1LE01	19	12.25x12.5x6.75	14,5	339	KDRULA1LE3R	19	11.5x10x12	19	453	ES
05A6-4	3	5,6	KDRULA3LE01	49	12.25x12.5x6.75	14,5	356	KDRULA3LE3R	49	11.5x10x12	19	470	ES
08A8-4	5	8,8	KDRULA4LE01	40	12.25x12.5x6.75	14,5	371	KDRULA4LE3R	40	11.5x10x12	19	486	ES
12A5-4	7,5	12,5	KDRULB2LE01	65	12.25x12.5x6.75	18,5	444	KDRULB2LE3R	65	11.5x10x12	23	557	ES
15A6-4	10	15,6	KDRULB2LE01	65	12.25x12.5x6.75	18,5	444	KDRULB2LE3R	65	11.5x10x12	23	557	ES
23A1-4	15	23,1	KDRULB2LE01	65	12.25x12.5x6.75	18,5	444	KDRULB2LE3R	65	11.5x10x12	23	557	ES
31A0-4	20	31	KDRULC1LE01	114	12.25x12.5x6.75	25,5	580	KDRULC1LE3R	114	11.5x10x12	30	694	ES
38A0-4	25	38	KDRULF2LE01	114	19.13x15.43x15.43	67	850	KDRULF2LE3R	114	19.18x15.62x19.5	63	939	ES
44A0-4	30	44	KDRULF4LE01	169	19.13x15.43x15.43	67	864	KDRULF4LE3R	169	19.18x15.62x19.5	63	953	ES

For specific mounting dimension go to <http://www.transcoil.com/home.htm>

## Input Reactors for ACS310 Drives / Low Impedance



**Applications:** Line side power conditioning for AC motor controls to prevent unwanted harmonics and nuisance drive trips as well as to prevent excess current during line disturbances that can damage power semi-conductors. There should be a minimum impedance associated with the drive using either AC or DC magnetics. In many applications, this impedance can come from a supply transformer, or if long enough, the supply cable themselves. In most cases, however, the use of an additional input reactor is recommended. If any of the following conditions exist use of at least a 3% line reactor is recommended.

1. Installation has voltage spikes in excess of 6000V peak or lightning strikes.
2. Installation has switched power factor correction capacitors.
3. Installation has power interruptions or voltage sags in excess of 200Vac.
4. When the distribution system kVA is more than 10 times larger than the drive kVA .

**Features:** Open, UL Type 1 and UL Type 3R construction with connection terminals. 3% and 5% impedance rating at rated current.

## Input Reactors for Single Phase 200-240V applications (connect to terminals A and C)

Drive Part No. ACS310-01U-	HP ND	Output Current	KDR UR 3%, Open, Not UL		KDR UR 3%, NEMA 1, Not UL		KDR 3%, UL Listed, Open					Disc. Sym.
			Part Number	List Price	Part Number	List Price	Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
02A4-2	0,5	2,4	KDRA25L	107	KDRA25LC1	231	KDRULA25L	11	4x4.18x3.75	4	113	ES
04A7-2	1	4,7	KDRA27L	114	KDRA27LC1	238	KDRULA27L	21	4x4.18x3.75	4	121	ES
06A7-2	1,5	6,7	KDRA28L	133	KDRB22LC1	256	KDRULA28L	29	4x4.18x3.75	4	135	ES
07A5-2	2	7,5	KDRB22L	176	KDRB22LC1	300	KDRULB22L	38	5x6x4	8	179	ES
09A8-2	3	9,8	KDRB22L	176	KDRB22LC1	300	KDRULB22L	38	5x6x4	8	179	ES

Drive Part No. ACS310-01U-	HP ND	Output Current	KDR 3%, UL Type 1 Enclosure					KDR 3%, UL Type 3R Enclosure					Disc. Sym.
			Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
02A4-2	0,5	2,4	KDRULA25LE01	11	12.25x12.5x6.75	14,5	335	KDRULA25LE3R	11	11.5x10x12	19	449	ES
04A7-2	1	4,7	KDRULA27LE01	21	12.25x12.5x6.75	14,5	343	KDRULA27LE3R	21	11.5x10x12	19	457	ES
06A7-2	1,5	6,7	KDRULA28LE01	29	12.25x12.5x6.75	18,5	356	KDRULA28LE3R	29	11.5x10x12	19	471	ES
07A5-2	2	7,5	KDRULB22LE01	38	12.25x12.5x6.75	18,5	400	KDRULB22LE3R	38	11.5x10x12	23	515	ES
09A8-2	3	9,8	KDRULB22LE01	38	12.25x12.5x6.75	18,5	400	KDRULB22LE3R	38	11.5x10x12	23	515	ES

For specific mounting dimension go to <http://www.transcoil.com/home.htm>



## Input Reactors for ACS310 Drives / Low Impedance (Cont.)

### Input Reactors for Three Phase 200-240V applications

Drive Part No. ACS310-03U-	HP ND	Output Current	KDR UR 3%, Open, Not UL		KDR UR 3%, NEMA 1, Not UL		KDR 3%, UL Listed, Open					Disc. Sym.
			Part Number	List Price	Part Number	List Price	Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
02A6-2	0,5	2,6	KDRA54L	96	KDRA27LC1	238	KDRULA54L	7	4x4.18x3.75	4	101	ES
03A9-2	0,75	3,9	KDRA53L	105	KDRA28LC1	256	KDRULA53L	12	4x4.18x3.75	4	112	ES
05A2-2	1	5,2	KDRA25L	107	KDRB22LC1	300	KDRULA25L	11	4x4.18x3.75	4	113	ES
07A4-2	1,5	7,4	KDRA26L	112	KDRA26LC1	236	KDRULA26L	18	4x4.18x3.75	4	117	ES
08A3-2	2	8,3	KDRA27L	114	KDRA27LC1	238	KDRULA27L	21	4x4.18x3.75	4	121	ES
10A8-2	3	10,8	KDRA28L	133	KDRA28LC1	256	KDRULA28L	29	4x4.18x3.75	4	135	ES
19A4-2	5	19,4	KDRB22L	176	KDRA54HC1	244	KDRULB22L	38	5x6x4	8	179	ES
26A8-2	7,5	26,8	KDRB23L	183	KDRA25HC1	251	KDRULB23L	48	5x6x4	8	190	ES
34A1-2	10	34,1	KDRD25L	207	KDRA26HC1	267	KDRULD25L	64	5.75x7.2x4.25	12	211	ES
50A8-2	15	50,8	KDRD24L	256	KDRA28HC1	282	KDRULD24L	85	5.75x7.2x4.25	12	266	ES

Drive Part No. ACS310-03U-	HP ND	Output Current	KDR 3%, UL Type 1 Enclosure					KDR 3%, UL Type 3R Enclosure					Disc. Sym.
			Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
02A6-2	0,5	2,6	KDRULA54LE01	7	12.25x12.5x6.75	14,5	323	KDRULA54LE3R	7	11.5x10x12	19	437	ES
03A9-2	0,75	3,9	KDRULA53LE01	12	12.25x12.5x6.75	14,5	334	KDRULA53LE3R	12	11.5x10x12	19	448	ES
05A2-2	1	5,2	KDRULA25LE01	11	12.25x12.5x6.75	14,5	335	KDRULA25LE3R	11	11.5x10x12	19	449	ES
07A4-2	1,5	7,4	KDRULA26LE01	18	12.25x12.5x6.75	14,5	338	KDRULA26LE3R	18	11.5x10x12	19	453	ES
08A3-2	2	8,3	KDRULA27LE01	21	12.25x12.5x6.75	14,5	343	KDRULA27LE3R	21	11.5x10x12	19	457	ES
10A8-2	3	10,8	KDRULA28LE01	29	12.25x12.5x6.75	18,5	356	KDRULA28LE3R	29	11.5x10x12	19	471	ES
19A4-2	5	19,4	KDRULB22LE01	38	12.25x12.5x6.75	18,5	400	KDRULB22LE3R	38	11.5x10x12	23	515	ES
26A8-2	7,5	26,8	KDRULB23LE01	48	12.25x12.5x6.75	18,5	412	KDRULB23LE3R	48	11.5x10x12	23	526	ES
34A1-2	10	34,1	KDRULD25LE01	64	12.25x12.5x6.75	22,5	433	KDRULD25LE3R	64	11.5x10x12	27	547	ES
50A8-2	15	50,8	KDRULD24LE01	85	12.25x12.5x6.75	22,5	488	KDRULD24LE3R	85	11.5x10x12	27	602	ES

For specific mounting dimension go to <http://www.transcoil.com/home.htm>

## Input Reactors for ACS310 Drives / Low Impedance (Cont.)

### Input Reactors for Three Phase 380-480V applications

Drive Part No. ACS310-03U-	HP ND	Output Current	KDR UR 3%, Open, Not UL		KDR UR 3%, NEMA 1, Not UL		KDR 3%, UL Listed, Open					Disc. Sym.
			Part Number	List Price	Part Number	List Price	Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
01A3-4	0,5	1,3	KDRA6L	98	KDRA6LC1	221	KDRULA6L	5,6	4x4.18x3.75	4	104	ES
02A1-4	0,75	2,1	KDRA7L	103	KDRA7LC1	228	KDRULA7L	10	4x4.18x3.75	4	109	ES
02A6-4	1	2,6	KDRA8L	105	KDRA8LC1	230	KDRULA8L	10,4	4x4.18x3.75	4	111	ES
03A6-4	1,5	3,6	KDRA9L	106	KDRA9LC1	231	KDRULA9L	17	4x4.18x3.75	4	113	ES
04A5-4	2	4,5	KDRA1L	112	KDRA1LC1	236	KDRULA1L	19	4x4.18x3.75	4	117	ES
06A2-4	3	6,2	KDRA2L	122	KDRA2LC1	246	KDRULA2L	23	4x4.18x3.75	4	130	ES
09A7-4	5	9,7	KDRA3L	128	KDRA3LC1	252	KDRULA3L	49	4x4.18x3.75	4	134	ES
13A8-4	7,5	13,8	KDRA4L	143	KDRA4LC1	267	KDRULA4L	40	4x4.18x3.75	4	150	ES
17A2-4	10	17,2	KDRA5L	180	KDRA5LC1	304	KDRULA5L	64	4x4.18x3.75	5	190	ES
25A4-4	15	25,4	KDRB2L	212	KDRB2LC1	335	KDRULB2L	65	5x6x4	8	221	ES
34A1-4	20	34,1	KDRB1L	234	KDRB1LC1	359	KDRULB1L	79	5x6x4	8	244	ES
41A8-4	25	41,8	KDRD1L	246	KDRD1LC2	395	KDRULD1L	96	5.75x7.2x4.25	10	259	ES
48A4-4	30	48,4	KDRD2L	312	KDRD2LC2	460	KDRULD2L	105	5.75x7.2x4.25	10	323	ES

Drive Part No. ACSx5x-03U-	HP ND	Output Current	KDR 3%, UL Type 1 Enclosure					KDR 3%, UL Type 3R Enclosure					Disc. Sym.
			Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
01A3-4	0,5	1,3	KDRULA6LE01	5,6	12.25x12.5x6.75	14,5	326	KDRULA6LE3R	5,6	11.5x10x12	19	439	ES
02A1-4	0,75	2,1	KDRULA7LE01	10	12.25x12.5x6.75	14,5	330	KDRULA7LE3R	10	11.5x10x12	19	445	ES
02A6-4	1	2,6	KDRULA8LE01	10,4	12.25x12.5x6.75	14,5	332	KDRULA8LE3R	10,4	11.5x10x12	19	447	ES
03A6-4	1,5	3,6	KDRULA9LE01	17	12.25x12.5x6.75	14,5	335	KDRULA9LE3R	17	11.5x10x12	19	449	ES
04A5-4	2	4,5	KDRULA1LE01	19	12.25x12.5x6.75	14,5	339	KDRULA1LE3R	19	11.5x10x12	19	453	ES
06A2-4	3	6,2	KDRULA2LE01	23	12.25x12.5x6.75	14,5	352	KDRULA2LE3R	23	11.5x10x12	19	466	ES
09A7-4	5	9,7	KDRULA3LE01	49	12.25x12.5x6.75	14,5	356	KDRULA3LE3R	49	11.5x10x12	19	470	ES
13A8-4	7,5	13,8	KDRULA4LE01	40	12.25x12.5x6.75	14,5	371	KDRULA4LE3R	40	11.5x10x12	19	486	ES
17A2-4	10	17,2	KDRULA5LE01	64	12.25x12.5x6.75	14,5	413	KDRULA5LE3R	64	11.5x10x12	19	527	ES
25A4-4	15	25,4	KDRULB2LE01	65	12.25x12.5x6.75	18,5	444	KDRULB2LE3R	65	11.5x10x12	23	557	ES
34A1-4	20	34,1	KDRULB1LE01	79	12.25x12.5x6.75	18,5	466	KDRULB1LE3R	79	11.5x10x12	23	580	ES
41A8-4	25	41,8	KDRULD1LE01	96	12.25x12.5x6.75	20,5	480	KDRULD1LE3R	96	11.5x10x12	25	595	ES
48A4-4	30	48,4	KDRULD2LE01	105	12.25x12.5x6.75	20,5	546	KDRULD2LE3R	105	11.5x10x12	25	660	ES

For specific mounting dimension go to <http://www.transcoil.com/home.htm>

## Input Reactors for ACS250 Drives / Low Impedance



**Applications:** Line side power conditioning for AC motor controls to prevent unwanted harmonics and nuisance drive trips as well as to prevent excess current during line disturbances that can damage power semi-conductors. There should be a minimum impedance associated with the drive using either AC or DC magnetics. In many applications, this impedance can come from a supply transformer, or if long enough, the supply cable themselves. In most cases, however, the use of an additional input reactor is recommended. If any of the following conditions exist use of at least a 3% line reactor is recommended.

1. Installation has voltage spikes in excess of 6000V peak or lightning strikes.
2. Installation has switched power factor correction capacitors.
3. Installation has power interruptions or voltage sags in excess of 200Vac.
4. When the distribution system kVA is more than 10 times larger than the drive kVA.

**Features:** Open, UL Type 1 and UL Type 3R construction with connection terminals. 3% and 5% impedance rating at rated current.

### Input Reactors for Single Phase 200-240V applications (connect to terminals A and C)

Drive Part No. ACS250-01U-	HP ND	Output Current	KDR UR 3%, Open, Not UL		KDR UR 3%, NEMA 1, Not UL		KDR 3%, UL Listed, Open					Disc. Sym.
			Part Number	List Price	Part Number	List Price	Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
02A3-2	0,5	2,3	KDRA25L	107	KDRA25LC1	231	KDRULA25L	11	4x4.18x3.75	4	113	ES
04A3-2	1	4,3	KDRA27L	114	KDRA27LC1	238	KDRULA27L	21	4x4.18x3.75	4	121	ES
07A0-2	2	7	KDRB22L	176	KDRB22LC1	300	KDRULB22L	38	5x6x4	8	179	ES
10A5-2	3	10,5	KDRB22L	176	KDRB22LC1	300	KDRULB22L	38	5x6x4	8	179	ES

Drive Part No. ACS310-01U-	HP ND	Output Current	KDR 3%, UL Type 1 Enclosure					KDR 3%, UL Type 3R Enclosure					Disc. Sym.
			Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
02A3-2	0,5	2,3	KDRULA25LE01	11	12.25x12.5x6.75	14,5	335	KDRULA25LE3R	11	11.5x10x12	19	449	ES
04A3-2	1	4,3	KDRULA27LE01	21	12.25x12.5x6.75	14,5	343	KDRULA27LE3R	21	11.5x10x12	19	457	ES
07A0-2	2	7	KDRULB22LE01	38	12.25x12.5x6.75	18,5	400	KDRULB22LE3R	38	11.5x10x12	23	515	ES
10A5-2	3	10,5	KDRULB22LE01	38	12.25x12.5x6.75	18,5	400	KDRULB22LE3R	38	11.5x10x12	23	515	ES

For specific mounting dimension go to <http://www.transcoil.com/home.htm>

## Input Reactors for ACS250 Drives / Low Impedance (Cont.)

### Input Reactors for Three Phase 200-240V applications

Drive Part No. ACS250-03U	HP ND	Output Current	KDR UR 3%, Open, Not UL		KDR UR 3%, NEMA 1, Not UL		KDR 3%, UL Listed, Open					Disc. Sym.
			Part Number	List Price	Part Number	List Price	Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
02A3-2	0,5	2,3	KDRA54L	96	KDRA54LC1	219	KDRULA54L	7	4x4.18x3.75	4	101	ES
04A3-2	1	4,3	KDRA25L	107	KDRA25LC1	231	KDRULA25L	11	4x4.18x3.75	4	113	ES
07A0-2	2	7	KDRA27L	114	KDRA27LC1	238	KDRULA27L	21	4x4.18x3.75	4	121	ES
10A5-2	3	10,5	KDRA28L	133	KDRA28LC1	256	KDRULA28L	29	4x4.18x3.75	4	135	ES
18A0-2	5	18	KDRB22L	176	KDRB22LC1	300	KDRULB22L	38	5x6x4	8	179	ES

Drive Part No. ACSx5x-03U-	HP ND	Output Current	KDR 3%, UL Type 1 Enclosure					KDR 3%, UL Type 3R Enclosure					Disc. Sym.
			Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
02A3-2	0,5	2,3	KDRULA54LE01	7	12.25x12.5x6.75	14,5	323	KDRULA54LE3R	7	11.5x10x12	19	437	ES
04A3-2	1	4,3	KDRULA25LE01	11	12.25x12.5x6.75	14,5	335	KDRULA25LE3R	11	11.5x10x12	19	449	ES
07A0-2	2	7	KDRULA27LE01	21	12.25x12.5x6.75	14,5	343	KDRULA27LE3R	21	11.5x10x12	19	457	ES
10A5-2	3	10,5	KDRULA28LE01	29	12.25x12.5x6.75	18,5	356	KDRULA28LE3R	29	11.5x10x12	19	471	ES
18A0-2	5	18	KDRULB22LE01	38	12.25x12.5x6.75	18,5	400	KDRULB22LE3R	38	11.5x10x12	23	515	ES

For specific mounting dimension go to <http://www.transcoil.com/home.htm>

### Input Reactors for Three Phase 380-480V applications

Drive Part No. ACS250-03U	HP ND	Output Current	KDR UR 3%, Open, Not UL		KDR UR 3%, NEMA 1, Not UL		KDR 3%, UL Listed, Open					Disc. Sym.
			Part Number	List Price	Part Number	List Price	Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
02A2-4	1	2,2	KDRA8L	105	KDRA8LC1	230	KDRULA8L	10,4	4x4.18x3.75	4	111	ES
04A1-4	2	4,1	KDRA1L	112	KDRA1LC1	236	KDRULA1L	19	4x4.18x3.75	4	117	ES
05A8-4	3	5,8	KDRA2L	122	KDRA2LC1	246	KDRULA2L	23	4x4.18x3.75	4	130	ES
09A5-4	5	9,5	KDRA3L	128	KDRA3LC1	252	KDRULA3L	49	4x4.18x3.75	4	134	ES
14A0-4	7,5	14	KDRA4L	143	KDRA4LC1	267	KDRULA4L	40	4x4.18x3.75	4	150	ES
18A0-4	10	18	KDRA5L	180	KDRA5LC1	304	KDRULA5L	64	4x4.18x3.75	5	190	ES

Drive Part No. ACS250-03U-	HP ND	Output Current	KDR 3%, UL Type 1 Enclosure					KDR 3%, UL Type 3R Enclosure					Disc. Sym.
			Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
02A2-4	1	2,2	KDRULA8LE01	10,4	12.25x12.5x6.75	14,5	332	KDRULA8LE3R	10,4	11.5x10x12	19	447	ES
04A1-4	2	4,1	KDRULA1LE01	19	12.25x12.5x6.75	14,5	339	KDRULA1LE3R	19	11.5x10x12	19	453	ES
05A8-4	3	5,8	KDRULA2LE01	23	12.25x12.5x6.75	14,5	352	KDRULA2LE3R	23	11.5x10x12	19	466	ES
09A5-4	5	9,5	KDRULA3LE01	49	12.25x12.5x6.75	14,5	356	KDRULA3LE3R	49	11.5x10x12	19	470	ES
14A0-4	7,5	14	KDRULA4LE01	40	12.25x12.5x6.75	14,5	371	KDRULA4LE3R	40	11.5x10x12	19	486	ES
18A0-4	10	18	KDRULA5LE01	64	12.25x12.5x6.75	14,5	413	KDRULA5LE3R	64	11.5x10x12	19	527	ES

## Input Reactors for ACS250 Drives / Low Impedance (Cont.)

### Input Reactors for Three Phase 550-600V applications

Drive Part No. ACS250-03U-	HP ND	Output Current	KDR UR 3%, Open, Not UL		KDR UR 3%, NEMA 1, Not UL		KDR 3%, UL Listed, Open					Disc. Sym.
			Part Number	List Price	Part Number	List Price	Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
02A1-6	1	2,1	KDRA50L	123	KDRA50LC1	247	KDRULA50L	12	4x4.18x3.75	4	128	ES
03A1-6	2	3,1	KDRA46L	128	KDRA46LC1	251	KDRULA46L	22	4x4.18x3.75	4	134	ES
04A1-6	3	4,1	KDRA52L	134	KDRA52LC1	259	KDRULA52L	23,3	4x4.18x3.75	4	139	ES
06A5-6	5	6,5	KDRA47L	140	KDRA47LC1	265	KDRULA47L	34,7	4x4.18x3.75	4	146	ES
09A0-6	7,5	9	KDRA48L	166	KDRA48LC1	290	KDRULA48L	42,9	4x4.18x3.75	4	173	ES
12A0-6	10	12	KDRA49L	185	KDRA49LC1	310	KDRULA49L	43,8	4x4.18x3.75	5	193	ES
17A0-6	15	17	KDRB45L	211	KDRB45LC1	335	KDRULB45L	66,2	5x6x4	8	219	ES

Drive Part No. ACS250-03U-	HP ND	Output Current	KDR 3%, UL Type 1 Enclosure					KDR 3%, UL Type 3R Enclosure					Disc. Sym.
			Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
02A1-6	1	2,1	KDRULA50LE01	12	12.25x12.5x6.75	14,5	350	KDRULA50LE3R	12	11.5x10x12	19	464	ES
03A1-6	2	3,1	KDRULA46LE01	22	12.25x12.5x6.75	14,5	355	KDRULA46LE3R	22	11.5x10x12	19	469	ES
04A1-6	3	4,1	KDRULA52LE01	23,3	12.25x12.5x6.75	14,5	361	KDRULA52LE3R	23,3	11.5x10x12	19	476	ES
06A5-6	5	6,5	KDRULA47LE01	34,7	12.25x12.5x6.75	14,5	368	KDRULA47LE3R	34,7	11.5x10x12	19	482	ES
09A0-6	7,5	9	KDRULA48LE01	42,9	12.25x12.5x6.75	14,5	395	KDRULA48LE3R	42,9	11.5x10x12	19	510	ES
12A0-6	10	12	KDRULA49LE01	43,8	12.25x12.5x6.75	14,5	414	KDRULA49LE3R	43,8	11.5x10x12	19	529	ES
17A0-6	15	17	KDRULB45LE01	66,2	12.25x12.5x6.75	18,5	441	KDRULB45LE3R	66,2	11.5x10x12	23	555	ES

For specific mounting dimension go to <http://www.transcoil.com/home.htm>

## Input Reactors for ACB530 Drives / Low Impedance



**Applications:** Line side power conditioning for AC motor controls to prevent unwanted harmonics and nuisance drive trips as well as to prevent excess current during line disturbances that can damage power semi-conductors. There should be a minimum impedance associated with the drive using either AC or DC magnetics. In many applications, this impedance can come from a supply transformer, or if long enough, the supply cable themselves. In most cases, however, the use of an additional input reactor is recommended. If any of the following conditions exist use of at least a 3% line reactor is recommended.

1. Installation has voltage spikes in excess of 6000V peak or lightning strikes.
2. Installation has switched power factor correction capacitors.
3. Installation has power interruptions or voltage sags in excess of 200Vac.
4. When the distribution system kVA is more than 10 times larger than the drive kVA .

**Features:** Open, UL Type 1 and UL Type 3R construction with connection terminals. 3% and 5% impedance rating at rated current.

## Input Reactors for Three Phase 200-240V applications

Drive Part No. ACB530-U1-	HP ND	Output Current	KDR UR 3%, Open, Not UL		KDR UR 3%, NEMA 1, Not UL		KDR 3%, UL Listed, Open					Disc. Sym.
			Part Number	List Price	Part Number	List Price	Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
04A6-2	1	4,6	KDRA25L	107	KDRA25LC1	231	KDRULA25L	11	4x4.18x3.75	4	113	ES
06A6-2	1,5	6,6	KDRA26L	112	KDRA26LC1	236	KDRULA26L	18	4x4.18x3.75	4	117	ES
07A5-2	2	7,5	KDRA27L	114	KDRA27LC1	238	KDRULA27L	21	4x4.18x3.75	4	121	ES
012A-2	3	11,8	KDRA28L	133	KDRA28LC1	256	KDRULA28L	29	4x4.18x3.75	4	135	ES
017A-2	5	16,7	KDRB22L	176	KDRB22LC1	300	KDRULB22L	38	5x6x4	8	179	ES
024A-2	7,5	24,2	KDRB23L	183	KDRB23LC2	332	KDRULB23L	48	5x6x4	8	190	ES
031A-2	10	30,8	KDRD25L	207	KDRD25LC2	356	KDRULD25L	64	5.75x7.2x4.25	12	211	ES
046A-2	15	46,2	KDRD24L	256	KDRD24LC2	404	KDRULD24L	85	5.75x7.2x4.25	12	266	ES
059A-2	20	59,4	KDRD26L	272	KDRD26LC2	421	KDRULD26L	94,0	5.75x7.2x4.25	12	283	ES
075A-2	25	74,8	KDRC22L	364	KDRC22LC2	512	KDRULC22L	114,0	5.75x7.2x5	15	431	ES
088A-2	30	88	KDRF24L	371	KDRF24LC4	724	KDRULF24L	135,0	7x9x7	33	456	ES
114A-2	40	114	KDRF25L	550	KDRF25LC4	903	KDRULF25L	149,0	7x9x7	33	643	ES
143A-2	50	143	KDRF26L	646	KDRF26LC4	1,000	KDRULF26L	154,0	7x9x7	36	750	ES
178A-2	60	178	KDRH22L	754	KDRH22LC4	1,109	KDRULH22L	209,0	9x11x7.5	51	863	ES
221A-2	75	221	KDRI23L	769	KDRI23LC4	1,122	KDRULI23L	294,0	9x11x8.25	56	886	ES
248A-2	100	248	KDRI24L	860	KDRI24LC4	1,214	KDRULI24L	276,0	9x11x7.5	56	978	ES

Drive Part No. ACB530-U1-	HP ND	Output Current	KDR 3%, UL Type 1 Enclosure					KDR 3%, UL Type 3R Enclosure					Disc. Sym.
			Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
04A6-2	1	4,6	KDRULA25LE01	11	12.25x12.5x6.75	14,5	335	KDRULA25LE3R	11	11.5x10x12	19	449	ES
06A6-2	1,5	6,6	KDRULA26LE01	18	12.25x12.5x6.75	14,5	338	KDRULA26LE3R	18	11.5x10x12	19	453	ES
07A5-2	2	7,5	KDRULA27LE01	21	12.25x12.5x6.75	14,5	343	KDRULA27LE3R	21	11.5x10x12	19	457	ES
012A-2	3	11,8	KDRULA28LE01	29	12.25x12.5x6.75	18,5	356	KDRULA28LE3R	29	11.5x10x12	19	471	ES
017A-2	5	16,7	KDRULB22LE01	38	12.25x12.5x6.75	18,5	400	KDRULB22LE3R	38	11.5x10x12	23	515	ES
024A-2	7,5	24,2	KDRULB23LE01	48	12.25x12.5x6.75	18,5	412	KDRULB23LE3R	48	11.5x10x12	23	526	ES
031A-2	10	30,8	KDRULD25LE01	64	12.25x12.5x6.75	22,5	433	KDRULD25LE3R	64	11.5x10x12	27	547	ES
046A-2	15	46,2	KDRULD24LE01	85	12.25x12.5x6.75	22,5	488	KDRULD24LE3R	85	11.5x10x12	27	602	ES
059A-2	20	59,4	KDRULD26LE01	94,0	12.25x12.5x6.75	22,5	504	KDRULD26LE3R	94,0	11.5x10x12	27	619	ES
075A-2	25	74,8	KDRULC22LE01	114,0	12.25x12.5x6.75	25,5	653	KDRULC22LE3R	114,0	11.5x10x12	30	767	ES
088A-2	30	88	KDRULF24LE01	135,0	19.13x15.43x15.43	67	887	KDRULF24LE3R	135,0	19.18x15.62x19.5	67	977	ES
114A-2	40	114	KDRULF25LE01	149,0	19.13x15.43x15.43	67	1,074	KDRULF25LE3R	149,0	19.18x15.62x19.5	67	1,164	ES
143A-2	50	143	KDRULF26LE01	154,0	19.13x15.43x15.43	67	1,182	KDRULF26LE3R	154,0	19.18x15.62x19.5	67	1,271	ES
178A-2	60	178	KDRULH22LE01	209,0	22.12x20.43x24.37	113	1,654	KDRULH22LE3R	209,0	22.15x20.62x28.5	116	1,781	ES
221A-2	75	221	KDRULI23LE01	294,0	22.12x20.43x24.37	117	1,679	KDRULI23LE3R	294,0	22.15x20.62x28.5	126	1,805	ES
248A-2	100	248	KDRULI24LE01	276,0	22.12x20.43x24.37	117	1,770	KDRULI24LE3R	276,0	22.15x20.62x28.5	126	1,897	ES

For specific mounting dimension go to <http://www.transcoil.com/home.htm>

## Input Reactors for ACB530 Drives / Low Impedance (Cont.)

### Input Reactors for Three Phase 380-480V applications

Drive Part No. ACB530-U1-	HP ND	Output Current	KDR UR 3%, Open, Not UL		KDR UR 3%, NEMA 1, Not UL		KDR 3%, UL Listed, Open					Disc. Sym.
			Part Number	List Price	Part Number	List Price	Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
03A3-4	1,5	3,3	KDRA9L	106	KDRA9LC1	231	KDRULA9L	17	4x4.18x3.75	4	113	ES
04A1-4	2	4,1	KDRA1L	112	KDRA1LC1	236	KDRULA1L	19	4x4.18x3.75	4	117	ES
05A4-4	3	5,4	KDRA2L	122	KDRA2LC1	246	KDRULA2L	23	4x4.18x3.75	4	130	ES
06A9-4	3	6,9	KDRA2L	122	KDRA2LC1	246	KDRULA2L	23	4x4.18x3.75	4	130	ES
08A8-4	5	8,8	KDRA3L	128	KDRA3LC1	252	KDRULA3L	49	4x4.18x3.75	4	134	ES
012A-4	7,5	11,9	KDRA4L	143	KDRA4LC1	267	KDRULA4L	40	4x4.18x3.75	4	150	ES
015A-4	10	15,4	KDRA5L	180	KDRA5LC1	304	KDRULA5L	64	4x4.18x3.75	5	190	ES
023A-4	15	23	KDRB2L	212	KDRB2LC1	335	KDRULB2L	65	5x6x4	8	221	ES
031A-4	20	31	KDRB1L	234	KDRB1LC1	359	KDRULB1L	79	5x6x4	8	244	ES
038A-4	25	38	KDRD1L	246	KDRD1LC2	395	KDRULD1L	96	5.75x7.2x4.25	10	259	ES
045A-4	30	44	KDRD2L	312	KDRD2LC2	460	KDRULD2L	105	5.75x7.2x4.25	10	323	ES
059A-4	40	59	KDRC1L	344	KDRC1LC2	493	KDRULC1L	114	5.75x7.2x5	15	357	ES
072A-4	50	72	KDRF2L	402	KDRF2LC3	613	KDRULF2L	114	7x9x6	25	419	ES
078A-4	60	77	KDRF4L	415	KDRF4LC3	626	KDRULF4L	169	7x9x6	25	432	ES
097A-4	75	96	KDRF3L	552	KDRF3LC4	905	KDRULF3L	193	7x9x7	33	653	ES
125A-4	100	124	KDRH3L	639	KDRH3LC4	993	KDRULH3L	225	9x11x7.5	46	741	ES
157A-4	125	157	KDRH2L	789	KDRH2LC4	1,143	KDRULH2L	254	9x11x7.5	46	899	ES
180A-4	150	180	KDRH1L	926	KDRH1LC4	1,279	KDRULH1L	299	9x11x7.5	46	1,040	ES
246A-4	200	245	KDRG3L	1,176	KDRG3LC4	1,530	KDRULG3L	280	9x11x9	74	1,387	ES
316A-4	250	316	KDRG1L	1,295	KDRG1LC4	1,648	KDRULG1L	337	9x11x9	74	1,495	ES
368A-4	300	368	KDRG2L	1,324	KDRG2LC4	1,678	KDRULG2L	381	9x11x9	74	1,527	ES
414A-4	350	414	KDRJ2L	1,534	KDRJ2LC5	2,005	KDRULJ2L	465	9x12x11.5	80	1,809	ES
486A-4	400	486	KDRJ1L	1,693	KDRJ1LC5	2,164	KDRULJ1L	470	9x12x11.5	80	1,973	ES
526A-4	450	526	KDRL1L	1,962	KDRL1LC5	2,434	KDRULL1L	509	11.38x15.12	120	2,297	ES
602A-4	500	602	KDRL2L	2,981	KDRL2LC5	3,453	KDRULL2L	518	11.38x15.12	120	3,357	ES
645A-4	550	645	KDRL3L	3,776	KDRL3LC5	4,248	KDRULL3L	748	11.38x14.5x9.5	164	4,498	ES

Drive Part No. ACB530-U1-	HP ND	Output Current	KDR 3%, UL Type 1 Enclosure					KDR 3%, UL Type 3R Enclosure					Disc. Sym.
			Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
03A3-4	1,5	3,3	KDRULA9LE01	17	12.25x12.5x6.75	14,5	335	KDRULA9LE3R	17	11.5x10x12	19	449	ES
04A1-4	2	4,1	KDRULA1LE01	19	12.25x12.5x6.75	14,5	339	KDRULA1LE3R	19	11.5x10x12	19	453	ES
05A4-4	3	5,4	KDRULA2LE01	23	12.25x12.5x6.75	14,5	352	KDRULA2LE3R	23	11.5x10x12	19	466	ES
06A9-4	3	6,9	KDRULA2LE01	23	12.25x12.5x6.75	14,5	352	KDRULA2LE3R	23	11.5x10x12	19	466	ES
08A8-4	5	8,8	KDRULA3LE01	49	12.25x12.5x6.75	14,5	356	KDRULA3LE3R	49	11.5x10x12	19	470	ES
012A-4	7,5	11,9	KDRULA4LE01	40	12.25x12.5x6.75	14,5	371	KDRULA4LE3R	40	11.5x10x12	19	486	ES
015A-4	10	15,4	KDRULA5LE01	64	12.25x12.5x6.75	14,5	413	KDRULA5LE3R	64	11.5x10x12	19	527	ES
023A-4	15	23	KDRULB2LE01	65	12.25x12.5x6.75	18,5	444	KDRULB2LE3R	65	11.5x10x12	23	557	ES
031A-4	20	31	KDRULB1LE01	79	12.25x12.5x6.75	18,5	466	KDRULB1LE3R	79	11.5x10x12	23	580	ES
038A-4	25	38	KDRULD1LE01	96	12.25x12.5x6.75	20,5	480	KDRULD1LE3R	96	11.5x10x12	25	595	ES
045A-4	30	44	KDRULD2LE01	105	12.25x12.5x6.75	20,5	546	KDRULD2LE3R	105	11.5x10x12	25	660	ES
059A-4	40	59	KDRULC1LE01	114	12.25x12.5x6.75	25,5	580	KDRULC1LE3R	114	11.5x10x12	30	694	ES
072A-4	50	72	KDRULF2LE01	114	19.13x15.43x15.43	67	850	KDRULF2LE3R	114	19.18x15.62x19.5	63	939	ES
078A-4	60	77	KDRULF4LE01	169	19.13x15.43x15.43	67	864	KDRULF4LE3R	169	19.18x15.62x19.5	63	953	ES
097A-4	75	96	KDRULF3LE01	193	19.13x15.43x15.43	67	1,084	KDRULF3LE3R	193	19.18x15.62x19.5	67	1,173	ES
125A-4	100	124	KDRULH3LE01	225	19.13x15.43x15.43	78	1,172	KDRULH3LE3R	225	19.18x15.62x19.5	78	1,262	ES
157A-4	125	157	KDRULH2LE01	254	19.13x15.43x15.43	78	1,330	KDRULH2LE3R	254	19.18x15.62x19.5	78	1,419	ES
180A-4	150	180	KDRULH1LE01	299	22.12x20.43x24.37	108	1,832	KDRULH1LE3R	299	22.15x20.62x28.5	116	1,959	ES
246A-4	200	245	KDRULG3LE01	280	22.12x20.43x24.37	131	2,180	KDRULG3LE3R	280	22.15x20.62x28.5	114	2,306	ES
316A-4	250	316	KDRULG1LE01	337	22.12x20.43x24.37	132	2,287	KDRULG1LE3R	337	22.15x20.62x28.5	145	2,414	ES
368A-4	300	368	KDRULG2LE01	381	22.12x20.43x24.37	132	2,319	KDRULG2LE3R	381	22.15x20.62x28.5	145	2,446	ES
414A-4	350	414	KDRULJ2LE01	465	22.12x20.43x24.37	150	2,601	KDRULJ2LE3R	465	22.15x20.62x28.5	150	2,728	ES
486A-4	400	486	KDRULJ1LE01	470	22.12x20.43x24.37	150	2,766	KDRULJ1LE3R	470	22.15x20.62x28.5	150	2,893	ES
526A-4	450	526	KDRULL1LE01	509	22.12x20.43x24.37	190	3,088	KDRULL1LE3R	509	22.15x20.62x28.5	190	3,215	ES
602A-4	500	602	KDRULL2LE01	518	22.12x20.43x24.37	190	4,150	KDRULL2LE3R	518	22.15x20.62x28.5	190	4,277	ES
645A-4	550	645	KDRULL3LE01	748	48x36.27x36.27	475	7,157					ES	

For specific mounting dimension go to <http://www.transcoil.com/home.htm>

## Input Reactors for ACB530 Drives / Low Impedance (Cont.)

### Input Reactors for Three Phase 380-480V applications

Drive Part No. ACB530-U1-	HP ND	Output Current	KDR UR 3%, Open, Not UL		KDR UR 3%, NEMA 1, Not UL		KDR 3%, UL Listed, Open					Disc. Sym.
			Part Number	List Price	Part Number	List Price	Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
02A7-6	2	2,7	KDRA46L	128	KDRA46LC1	251	KDRULA46L	22	4x4.18x3.75	4	134	ES
03A9-6	3	3,9	KDRA52L	134	KDRA52LC1	259	KDRULA52L	23,3	4x4.18x3.75	4	139	ES
06A1-6	5	6,1	KDRA47L	140	KDRA47LC1	265	KDRULA47L	34,7	4x4.18x3.75	4	146	ES
09A0-6	7,5	9	KDRA48L	166	KDRA48LC1	290	KDRULA48L	42,9	4x4.18x3.75	4	173	ES
011A-6	10	11	KDRA49L	185	KDRA49LC1	310	KDRULA49L	43,8	4x4.18x3.75	5	193	ES
017A-6	15	17	KDRB45L	211	KDRB45LC1	335	KDRULB45L	66,2	5x6x4	8	219	ES
022A-6	20	22	KDRB44L	222	KDRB44LC1	347	KDRULB44L	71,2	5x6x4	8	233	ES
027A-6	25	27	KDRB43L	243	KDRB43LC1	367	KDRULB43L	76,7	5x6x4	8	253	ES
032A-6	30	32	KDRD42L	246	KDRD42LC2	395	KDRULD42L	106	5.75x7.2x4.25	12	259	ES
041A-6	40	41	KDRC43L	267	KDRC43LC2	416	KDRULC43L	109	5.75x7.2x5	15	280	ES
052A-6	50	52	KDRC44L	288	KDRC44LC2	436	KDRULC44L	123	5.75x7.2x5	15	300	ES
062A-6	60	62	KDRF46L	383	KDRF46LC3	594	KDRULF46L	181	7x9x6	30	400	ES
077A-6	75	77	KDRF47L	398	KDRF47LC3	609	KDRULF47L	194	7x9x6	30	414	ES
099A-6	100	99	KDRF45L	552	KDRF45LC4	905	KDRULF45L	194	7x9x7	33	645	ES
125A-6	125	125	KDRH43L	628	KDRH43LC4	981	KDRULH43L	261	9x11x7.25	48	722	ES
144A-6	150	144	KDRH44L	780	KDRH44LC4	1,134	KDRULH44L	253	9x11x7.5	51	889	ES

Drive Part No. ACB530-U1-	HP ND	Output Current	KDR 3%, UL Type 1 Enclosure					KDR 3%, UL Type 3R Enclosure					Disc. Sym.
			Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
02A7-6	2	2,7	KDRULA46LE01	22	12.25x12.5x6.75	14,5	355	KDRULA46LE3R	22	11.5x10x12	19	469	ES
03A9-6	3	3,9	KDRULA52LE01	23,3	12.25x12.5x6.75	14,5	361	KDRULA52LE3R	23,3	11.5x10x12	19	476	ES
06A1-6	5	6,1	KDRULA47LE01	34,7	12.25x12.5x6.75	14,5	368	KDRULA47LE3R	34,7	11.5x10x12	19	482	ES
09A0-6	7,5	9	KDRULA48LE01	42,9	12.25x12.5x6.75	14,5	395	KDRULA48LE3R	42,9	11.5x10x12	19	510	ES
011A-6	10	11	KDRULA49LE01	43,8	12.25x12.5x6.75	14,5	414	KDRULA49LE3R	43,8	11.5x10x12	19	529	ES
017A-6	15	17	KDRULB45LE01	66,2	12.25x12.5x6.75	18,5	441	KDRULB45LE3R	66,2	11.5x10x12	23	555	ES
022A-6	20	22	KDRULB44LE01	71,2	12.25x12.5x6.75	18,5	455	KDRULB44LE3R	71,2	11.5x10x12	23	569	ES
027A-6	25	27	KDRULB43LE01	76,7	12.25x12.5x6.75	18,5	476	KDRULB43LE3R	76,7	11.5x10x12	23	589	ES
032A-6	30	32	KDRULD42LE01	106	12.25x12.5x6.75	22,5	480	KDRULD42LE3R	106	11.5x10x12	27	595	ES
041A-6	40	41	KDRULC43LE01	109	12.25x12.5x6.75	25,5	501	KDRULC43LE3R	109	11.5x10x12	30	616	ES
052A-6	50	52	KDRULC44LE01	123	12.25x12.5x6.75	25,5	521	KDRULC44LE3R	123	11.5x10x12	30	636	ES
062A-6	60	62	KDRULF46LE01	181	19.13x15.43x15.43	67	831	KDRULF46LE3R	181	19.18x15.62x19.5	68	920	ES
077A-6	75	77	KDRULF47LE01	194	19.13x15.43x15.43	67	846	KDRULF47LE3R	194	19.18x15.62x19.5	68	935	ES
099A-6	100	99	KDRULF45LE01	194	19.13x15.43x15.43	67	1,077	KDRULF45LE3R	194	19.18x15.62x19.5	67	1,166	ES
125A-6	125	125	KDRULH43LE01	261	19.13x15.43x15.43	82	1,153	KDRULH43LE3R	261	19.18x15.62x19.5	82	1,243	ES
144A-6	150	144	KDRULH44LE01	253	19.13x15.43x15.43	82	1,320	KDRULH44LE3R	253	19.18x15.62x19.5	82	1,411	ES

For specific mounting dimension go to <http://www.transcoil.com/home.htm>



## Input Current Ratings with and without AC Line Reactors

Type ACS150- ACS355-	ACS150	ACS355	Input without Reactor	Input with 5% Reactor	Type ACS310-	Input without Reactor	Input with 5% Reactor	Type ACS250-	Input without Reactor	Input with 3% Reactor
			Input A	Input A		Input A	Input A		Input A	Input A
<b>Single Phase Drive - 200-240 V Applications</b>										
01x-02A4-2	x	x	6,1	4,5	01x-02A4-2	6,1	4,6	01x-02A3-2	6,4	5,0
01x-04A7-2	x	x	11	8,1	01x-04A7-2	11	9,4	01x-04A3-2	8,5	7,5
01x-06A7-2	x	x	16	11	01x-06A7-2	16	14	01x-07A0-2	15,2	13,5
01x-07A5-2	x	x	17	12	01x-07A5-2	17	15	01x-10A5-2	19,5	17,3
01x-09A8-2	x	x	21	15	01x-09A8-2	21	19			
<b>Three Phase Drive - 200-240 V Applications</b>										
03x-02A4-2	x	x	4,3	2,2	03x-02A6-2	4,7	2,6	03x-02A3-2	3,8	3,1
03x-03A5-2	x	x	6,1	3,5	03x-03A9-2	6,7	3,6	03x-04A3-2	4,5	3,5
03x-04A7-2	x	x	7,6	4,2	03x-05A2-2	8,4	4,8	03x-07A0-2	7,0	5,5
03x-06A7-2	x	x	12	6,1	03x-07A4-2	13	7,2	03x-10A5-2	10,5	8,6
03x-07A5-2	x	x	12	6,9	03x-08A3-2	13	8,2	03x-18A0-2	18,0	15,0
03x-09A8-2	x	x	14	9,2	03x-10A8-2	16	11,0			
03x-13A3-2		x	22	13	03x-14A6-2	24	14			
03x-17A6-2		x	24,8	14	03x-19A4-2	27,3	18			
03x-24A4-2		x	41	21	03x-26A8-2	45	27			
03x-31A0-2		x	50	26	03x-34A1-2	55	34			
03x-46A2-2		x	69	41	03x-50A8-2	76	47			
<b>Three Phase Drive - 380-480 V Applications</b>										
03x-01A2-4	x	x	1,8	0,9	03x-01A3-4	2,0	1,1	03x-02A2-4	2,9	2,2
03x-01A9-4	x	x	3,0	1,5	03x-02A1-4	3,3	1,7	03x-04A1-4	5,1	4,1
03x-02A4-4	x	x	3,4	1,9	03x-02A6-4	3,8	2,1	03x-05A8-4	7,5	5,5
03x-03A3-4	x	x	5,0	2,6	03x-03A6-4	5,5	2,9	03x-09A5-4	11,2	9,0
03x-04A1-4	x	x	5,8	2,9	03x-04A5-4	6,3	3,2	03x-14A0-4	19,0	16,0
03x-05A6-4	x	x	8,0	4,0	03x-06A2-4	8,8	4,4	03x-18A0-4	21,0	17,0
03x-07A3-4	x	x	9,7	5,1	03x-08A0-4	10,6	5,7			
03x-08A8-4	x	x	11	6,4	03x-09A7-4	12	7,2			
03x-12A5-4		x	16	9,5	03x-13A8-4	17	10,3			
03x-15A6-4		x	18	10	03x-17A2-4	20	11			
03x-23A1-4		x	26	15	03x-25A4-4	28	17			
03x-31A0-4		x	43	20	03x-34A1-4	48	22			
03x-38A0-4		x	51	26	03x-41A8-4	56	29			
03x-44A0-4		x	56	32	03x-48A4-4	61	35			
<b>Three Phase Drive - 550-600 V Applications</b>										
								03x-02A1-6	2,7	2,1
								03x-03A1-6	3,7	3,1
								03x-04A1-6	4,8	4,1
								03x-06A5-6	7,1	6,5
								03x-09A0-6	10,2	9,0
								03x-12A0-6	14,4	12,0
								03x-17A0-6	19,1	17,0

## ACS150 and ACS355 Drives dv/dt Output Filters



**Applications:** V1k Output Filters provide motor protection by limiting voltage spikes to 1,000 volts, or below, for long motor cable applications. Greatly extends the life of the motor and cable for all applications up to 1000 feet. For multi-motor applications note that motor lead length is cumulative and the 1000 foot limit still applies. 30% reduction in common mode current

**Features:** UL Open, UL Type 1 and UL Type 3R construction with connection terminals.

**Note:** The drives internal EMC filter must remain disconnected when using these filters. When applying these output filters the drive output frequency is limited to 60Hz.

### Output Filters for Single Phase 200-240V applications

Drive Part No. ACSx5x-01U-	HP ND	Output Current	V1K UL Open					V1K UL Type 1 Enclosure					Disc. Sym.
			Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
02A4-2	0,5	2,4	V1K3A00	75	9.00x5.50x7.25	8	457	V1K3A01	75	9.00x5.50x10.00	11	717	ES
04A7-2	1	4,7	V1K6A00	80	9.00x5.50x7.25	8	480	V1K6A01	80	9.00x5.50x10.00	11	734	ES
06A7-2	1,5	6,7	V1K6A00	80	9.00x5.50x7.25	8	480	V1K6A01	80	9.00x5.50x10.00	11	734	ES
07A5-2	2	7,5	V1K8A00	90	9.00x5.50x7.25	8	488	V1K8A01	90	9.00x5.50x10.00	11	750	ES
09A8-2	3	9,8	V1K12A00	95	9.00x5.50x7.25	8	507	V1K12A01	95	9.00x5.50x10.00	11	784	ES

Drive Part No. ACSx5x-01U-	HP ND	Output Current	V1k UL Type 3R Enclosure					Disc. Sym.
			Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
02A4-2	0,5	2,4	V1K3A03	75	11.45x10.00x12.00	25	839	ES
04A7-2	1	4,7	V1K6A03	80	11.45x10.00x12.00	25	859	ES
06A7-2	1,5	6,7	V1K6A03	80	11.45x10.00x12.00	25	859	ES
07A5-2	2	7,5	V1K8A03	90	11.45x10.00x12.00	25	878	ES
09A8-2	3	9,8	V1K12A03	95	11.45x10.00x12.00	25	917	ES

For specific mounting dimension go to <http://www.transcoil.com/home.htm>

## ACS150 and ACS355 Drives dv/dt Output Filters (Cont.)

### Output Filters for Three Phase 200-240V applications

Drive Part No. ACSx5x-03U-	HP ND	Output Current	V1K UL Open					V1K UL Type 1 Enclosure					Disc. Sym.
			Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
02A4-2	0,5	2,4	V1K3A00	75	9.00x5.50x7.25	8	457	V1K3A01	75	9.00x5.50x10.00	11	717	ES
03A5-2	0,75	3,5	V1K4A00	75	9.00x5.50x7.25	8	468	V1K4A01	75	9.00x5.50x10.00	11	721	ES
04A7-2	1	4,7	V1K6A00	80	9.00x5.50x7.25	8	480	V1K6A01	80	9.00x5.50x10.00	11	734	ES
06A7-2	1,5	6,7	V1K6A00	80	9.00x5.50x7.25	8	480	V1K6A01	80	9.00x5.50x10.00	11	734	ES
07A5-2	2	7,5	V1K8A00	90	9.00x5.50x7.25	8	488	V1K8A01	90	9.00x5.50x10.00	11	750	ES
09A8-2	3	9,8	V1K12A00	95	9.00x5.50x7.25	8	507	V1K12A01	95	9.00x5.50x10.00	11	784	ES
13A3-2	3	13,3	V1K12A00	95	9.00x5.50x7.25	8	507	V1K12A01	95	9.00x5.50x10.00	11	784	ES
17A6-2	5	17,6	V1K16A00	95	9.00x5.50x8.25	12	513	V1K16A01	95	9.00x5.50x10.00	15	799	ES
24A4-2	7,5	24,4	V1K25A00	110	9.00x5.50x8.25	12	684	V1K25A01	110	9.00x5.50x10.00	15	886	ES
31A0-2	10	31	V1K35A00	130	12.00x8.00x9.00	17	741	V1K35A01	130	12.00x8.00x11.50	23	951	ES
46A2-2	15	46,2	V1K45A00	135	12.00x8.00x9.00	17	770	V1K45A01	135	12.00x8.00x11.50	23	982	ES

Drive Part No. ACSx5x-03U-	HP ND	Output Current	V1k UL Type 3R Enclosure					Disc. Sym.
			Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
02A4-2	0,5	2,4	V1K3A03	75	11.45x10.00x12.00	25	839	ES
03A5-2	0,75	3,5	V1K4A03	75	11.45x10.00x12.00	25	844	ES
04A7-2	1	4,7	V1K6A03	80	11.45x10.00x12.00	25	859	ES
06A7-2	1,5	6,7	V1K6A03	80	11.45x10.00x12.00	25	859	ES
07A5-2	2	7,5	V1K8A03	90	11.45x10.00x12.00	25	878	ES
09A8-2	3	9,8	V1K12A03	95	11.45x10.00x12.00	25	917	ES
13A3-2	3	13,3	V1K12A03	95	11.45x10.00x12.00	25	917	ES
17A6-2	5	17,6	V1K16A03	95	11.45x10.00x12.00	29	935	ES
24A4-2	7,5	24,4	V1K25A03	110	11.45x10.00x12.00	29	1,037	ES
31A0-2	10	31	V1K35A03	130	19.18x15.62x19.50	56	1,113	ES
46A2-2	15	46,2	V1K45A03	135	19.18x15.62x19.50	56	1,149	ES

For specific mounting dimension go to <http://www.transcoil.com/home.htm>

## ACS150 and ACS355 Drives dv/dt Output Filters (Cont.)

### Output Filters for Three Phase 380-480V applications

Drive Part No. ACSx50-03U-	HP ND	Output Current	V1K UL Open					V1K UL Type 1 Enclosure					Disc. Sym.
			Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
01A2-4	0,5	1,2	V1K2A00	75	9.00x5.50x7.25	8	448	V1K2A01	75	9.00x5.50x10.00	11	712	ES
01A9-4	0,75	1,9	V1K2A00	75	9.00x5.50x7.25	8	448	V1K2A01	75	9.00x5.50x10.00	11	712	ES
02A4-4	1	2,4	V1K3A00	75	9.00x5.50x7.25	8	457	V1K3A01	75	9.00x5.50x10.00	11	717	ES
03A3-4	1,5	3,3	V1K3A00	75	9.00x5.50x7.25	8	457	V1K3A01	75	9.00x5.50x10.00	11	717	ES
04A1-4	2	4,1	V1K4A00	75	9.00x5.50x7.25	8	468	V1K4A01	75	9.00x5.50x10.00	11	721	ES
05A6-4	3	5,6	V1K6A00	80	9.00x5.50x7.25	8	480	V1K6A01	80	9.00x5.50x10.00	11	734	ES
08A8-4	5	8,8	V1K8A00	90	9.00x5.50x7.25	8	488	V1K8A01	90	9.00x5.50x10.00	11	750	ES
12A5-4	7,5	12,5	V1K12A00	95	9.00x5.50x7.25	8	507	V1K12A01	95	9.00x5.50x10.00	11	784	ES
15A6-4	10	15,6	V1K16A00	95	9.00x5.50x8.25	12	513	V1K16A01	95	9.00x5.50x10.00	15	799	ES
23A1-4	15	23,1	V1K21A00	110	9.00x5.50x8.25	12	640	V1K21A01	110	9.00x5.50x10.00	15	867	ES
31A0-4	20	31	V1K27A00	110	9.00x5.50x8.25	14	711	V1K27A01	110	9.00x5.50x10.00	15	919	ES
38A0-4	25	38	V1K35A00	130	12.00x8.00x9.00	17	741	V1K35A01	130	12.00x8.00x11.50	23	951	ES
44A0-4	30	44	V1K45A00	135	12.00x8.00x9.00	17	770	V1K45A01	135	12.00x8.00x11.50	23	982	ES

Drive Part No. ACSx50-03U-	HP ND	Output Current	V1k UL Type 3R Enclosure					Disc. Sym.
			Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
01A2-4	0,5	1,2	V1K2A03	11	11.45x10.00x12.00	25	833	ES
01A9-4	0,75	1,9	V1K2A03	11	11.45x10.00x12.00	25	833	ES
02A4-4	1	2,4	V1K3A03	11	11.45x10.00x12.00	25	839	ES
03A3-4	1,5	3,3	V1K3A03	11	11.45x10.00x12.00	25	839	ES
04A1-4	2	4,1	V1K4A03	11	11.45x10.00x12.00	25	844	ES
05A6-4	3	5,6	V1K6A03	11	11.45x10.00x12.00	25	859	ES
08A8-4	5	8,8	V1K8A03	11	11.45x10.00x12.00	25	878	ES
12A5-4	7,5	12,5	V1K12A03	11	11.45x10.00x12.00	25	917	ES
15A6-4	10	15,6	V1K16A03	15	11.45x10.00x12.00	29	935	ES
23A1-4	15	23,1	V1K21A03	15	11.45x10.00x12.00	29	1,015	ES
31A0-4	20	31	V1K27A03	15	19.18x15.62x19.50	29	1,076	ES
38A0-4	25	38	V1K35A03	23	19.18x15.62x19.50	56	1,113	ES
44A0-4	30	44	V1K45A03	23	19.18x15.62x19.50	56	1,149	ES

For specific mounting dimension go to <http://www.transcoil.com/home.htm>

## ACS310 Drives dv/dt Output Filters



**Applications:** “Applications: V1k Output Filters provide motor protection by limiting voltage spikes to 1,000 volts, or below, for long motor cable applications. Greatly extends the life of the motor and cable for all applications up to 1000 feet. For multi-motor applications note that motor lead length is cumulative and the 1000 foot limit still applies. 30% reduction in common mode current

**Features:** UL Open, UL Type 1 and UL Type 3R construction with connection terminals.

**Note:** The drives internal EMC filter must remain disconnected when using these filters. When applying these output filters the drive output frequency is limited to 60Hz.

### Output Filters for Single Phase 200-240V applications

Drive Part No. ACS310-01U-	HP ND	Output Current	V1K UL Open					V1K UL Type 1 Enclosure					Disc. Sym.
			Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
02A4-2	0,5	2,4	V1K3A00	75	9.00x5.50x7.25	8	457	V1K3A01	75	9.00x5.50x10.00	11	717	ES
04A7-2	1	4,7	V1K6A00	80	9.00x5.50x7.25	8	480	V1K6A01	80	9.00x5.50x10.00	11	734	ES
06A7-2	1,5	6,7	V1K6A00	80	9.00x5.50x7.25	8	480	V1K6A01	80	9.00x5.50x10.00	11	734	ES
07A5-2	2	7,5	V1K8A00	90	9.00x5.50x7.25	8	488	V1K8A01	90	9.00x5.50x10.00	11	750	ES
09A8-2	3	9,8	V1K12A00	95	9.00x5.50x7.25	8	507	V1K12A01	95	9.00x5.50x10.00	11	784	ES

Drive Part No. ACS310-01U-	HP ND	Output Current	V1k UL Type 3R Enclosure					Disc. Sym.
			Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
02A4-2	0,5	2,4	V1K3A03	75	11.45x10.00x12.00	25	839	ES
04A7-2	1	4,7	V1K6A03	80	11.45x10.00x12.00	25	859	ES
06A7-2	1,5	6,7	V1K6A03	80	11.45x10.00x12.00	25	859	ES
07A5-2	2	7,5	V1K8A03	90	11.45x10.00x12.00	25	878	ES
09A8-2	3	9,8	V1K12A03	95	11.45x10.00x12.00	25	917	ES

For specific mounting dimension go to <http://www.transcoil.com/home.htm>

## ACS310 Drives dv/dt Output Filters (Cont.)

### Output Filters for Three Phase 380-480V applications

Drive Part No. ACS310-03U-	HP ND	Output Current	V1K UL Open					V1K UL Type 1 Enclosure					Disc. Sym.
			Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
02A6-2	0,5	2,6	V1K3A00	75	9.00x5.50x7.25	8	457	V1K3A01	75	9.00x5.50x10.00	11	717	ES
03A9-2	0,75	3,9	V1K4A00	75	9.00x5.50x7.25	8	468	V1K4A01	75	9.00x5.50x10.00	11	721	ES
05A2-2	1	5,2	V1K6A00	80	9.00x5.50x7.25	8	480	V1K6A01	80	9.00x5.50x10.00	11	734	ES
07A4-2	1,5	7,4	V1K8A00	80	9.00x5.50x7.25	8	488	V1K6A01	80	9.00x5.50x10.00	11	734	ES
08A3-2	2	8,3	V1K8A00	90	9.00x5.50x7.25	8	488	V1K8A01	90	9.00x5.50x10.00	11	750	ES
10A8-2	3	10,8	V1K12A00	95	9.00x5.50x7.25	8	507	V1K12A01	95	9.00x5.50x10.00	11	784	ES
19A4-2	5	19,4	V1K18A00	110	9.00x5.50x8.25	12	566	V1K18A01	110	9.00x5.50x10.00	15	833	ES
26A8-2	7,5	26,8	V1K25A00	110	9.00x5.50x8.25	12	684	V1K25A01	110	9.00x5.50x10.00	15	886	ES
34A1-2	10	34,1	V1K35A00	130	12.00x8.00x9.00	17	741	V1K35A01	130	12.00x8.00x11.50	23	951	ES
50A8-2	15	50,8	V1K45A00	135	12.00x8.00x9.00	17	770	V1K45A01	135	12.00x8.00x11.50	23	982	ES

Drive Part No. ACS310-03U-	HP ND	Output Current	V1k UL Type 3R Enclosure					Disc. Sym.
			Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
02A6-2	0,5	2,6	V1K3A03	75	11.45x10.00x12.00	25	839	ES
03A9-2	0,75	3,9	V1K4A03	75	11.45x10.00x12.00	25	844	ES
05A2-2	1	5,2	V1K6A03	80	11.45x10.00x12.00	25	859	ES
07A4-2	1,5	7,4	V1K6A03	80	11.45x10.00x12.00	25	859	ES
08A3-2	2	8,3	V1K8A03	90	11.45x10.00x12.00	25	878	ES
10A8-2	3	10,8	V1K12A03	95	11.45x10.00x12.00	25	917	ES
19A4-2	5	19,4	V1K18A03	110	11.45x10.00x12.00	25	974	ES
26A8-2	7,5	26,8	V1K25A03	110	11.45x10.00x12.00	29	1 037	ES
34A1-2	10	34,1	V1K35A03	130	19.18x15.62x19.50	56	1 113	ES
50A8-2	15	50,8	V1K45A03	135	19.18x15.62x19.50	56	1 149	ES

For specific mounting dimension go to <http://www.transcoil.com/home.htm>

## ACS310 Drives dv/dt Output Filters (Cont.)

### Output Filters for Three Phase 380-480V applications

Drive Part No. ACS310-03U-	HP ND	Output Current	V1K UL Open					V1K UL Type 1 Enclosure					Disc. Sym.
			Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
01A3-4	0,5	1,3	V1K2A00	75	9.00x5.50x7.25	8	448	V1K2A01	75	9.00x5.50x10.00	11	712	ES
02A1-4	0,75	2,1	V1K2A00	75	9.00x5.50x7.25	8	448	V1K2A01	75	9.00x5.50x10.00	11	712	ES
02A6-4	1	2,6	V1K3A00	75	9.00x5.50x7.25	8	457	V1K3A01	75	9.00x5.50x10.00	11	717	ES
03A6-4	1,5	3,6	V1K3A00	75	9.00x5.50x7.25	8	457	V1K3A01	75	9.00x5.50x10.00	11	717	ES
04A5-4	2	4,5	V1K4A00	75	9.00x5.50x7.25	8	468	V1K4A01	75	9.00x5.50x10.00	11	721	ES
06A2-4	3	6,2	V1K6A00	80	9.00x5.50x7.25	8	480	V1K6A01	80	9.00x5.50x10.00	11	734	ES
09A7-4	5	9,7	V1K8A00	90	9.00x5.50x7.25	8	488	V1K8A01	90	9.00x5.50x10.00	11	750	ES
13A8-4	7,5	13,8	V1K12A00	95	9.00x5.50x7.25	8	507	V1K12A01	95	9.00x5.50x10.00	11	784	ES
17A2-4	10	17,2	V1K16A00	95	9.00x5.50x8.25	12	513	V1K16A01	95	9.00x5.50x10.00	15	799	ES
25A4-4	15	25,4	V1K25A00	110	9.00x5.50x8.25	12	684	V1K25A01	110	9.00x5.50x10.00	15	886	ES
34A1-4	20	34,1	V1K27A00	110	9.00x5.50x8.25	14	711	V1K27A01	110	9.00x5.50x10.00	15	919	ES
41A8-4	25	41,8	V1K35A00	130	12.00x8.00x9.00	17	741	V1K35A01	130	12.00x8.00x11.50	23	951	ES
48A4-4	30	48,4	V1K45A00	135	12.00x8.00x9.00	17	770	V1K45A01	135	12.00x8.00x11.50	23	982	ES

Drive Part No. ACS310-03U-	HP ND	Output Current	V1k UL Type 3R Enclosure					Disc. Sym.
			Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
01A3-4	0,5	1,3	V1K2A03	11	11.45x10.00x12.00	25	833	ES
02A1-4	0,75	2,1	V1K2A03	11	11.45x10.00x12.00	25	833	ES
02A6-4	1	2,6	V1K3A03	11	11.45x10.00x12.00	25	839	ES
03A6-4	1,5	3,6	V1K3A03	11	11.45x10.00x12.00	25	839	ES
04A5-4	2	4,5	V1K4A03	11	11.45x10.00x12.00	25	844	ES
06A2-4	3	6,2	V1K6A03	11	11.45x10.00x12.00	25	859	ES
09A7-4	5	9,7	V1K8A03	11	11.45x10.00x12.00	25	878	ES
13A8-4	7,5	13,8	V1K12A03	11	11.45x10.00x12.00	25	917	ES
17A2-4	10	17,2	V1K16A03	15	11.45x10.00x12.00	29	935	ES
25A4-4	15	25,4	V1K25A03	110	11.45x10.00x12.00	29	1 037	ES
34A1-4	20	34,1	V1K27A03	110	19.18x15.62x19.50	29	1 076	ES
41A8-4	25	41,8	V1K35A03	130	19.18x15.62x19.50	56	1 113	ES
48A4-4	30	48,4	V1K45A03	135	19.18x15.62x19.50	56	1 149	ES

For specific mounting dimension go to <http://www.transcoil.com/home.htm>

## ACS310 Drives dv/dt Output Filters (Cont.)

### Output Filters for Three Phase 380-480V applications

Drive Part No. ACS310-03U-	HP ND	Output Current	V1K UL Open					V1K UL Type 1 Enclosure					Disc. Sym.
			Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
01A3-4	0,5	1,3	V1K2A00	75	9.00x5.50x7.25	8	448	V1K2A01	75	9.00x5.50x10.00	11	712	ES
02A1-4	0,75	2,1	V1K2A00	75	9.00x5.50x7.25	8	448	V1K2A01	75	9.00x5.50x10.00	11	712	ES
02A6-4	1	2,6	V1K3A00	75	9.00x5.50x7.25	8	457	V1K3A01	75	9.00x5.50x10.00	11	717	ES
03A6-4	1,5	3,6	V1K3A00	75	9.00x5.50x7.25	8	457	V1K3A01	75	9.00x5.50x10.00	11	717	ES
04A5-4	2	4,5	V1K4A00	75	9.00x5.50x7.25	8	468	V1K4A01	75	9.00x5.50x10.00	11	721	ES
06A2-4	3	6,2	V1K6A00	80	9.00x5.50x7.25	8	480	V1K6A01	80	9.00x5.50x10.00	11	734	ES
09A7-4	5	9,7	V1K8A00	90	9.00x5.50x7.25	8	488	V1K8A01	90	9.00x5.50x10.00	11	750	ES
13A8-4	7,5	13,8	V1K12A00	95	9.00x5.50x7.25	8	507	V1K12A01	95	9.00x5.50x10.00	11	784	ES
17A2-4	10	17,2	V1K16A00	95	9.00x5.50x8.25	12	513	V1K16A01	95	9.00x5.50x10.00	15	799	ES
25A4-4	15	25,4	V1K25A00	110	9.00x5.50x8.25	12	684	V1K25A01	110	9.00x5.50x10.00	15	886	ES
34A1-4	20	34,1	V1K27A00	110	9.00x5.50x8.25	14	711	V1K27A01	110	9.00x5.50x10.00	15	919	ES
41A8-4	25	41,8	V1K35A00	130	12.00x8.00x9.00	17	741	V1K35A01	130	12.00x8.00x11.50	23	951	ES
48A4-4	30	48,4	V1K45A00	135	12.00x8.00x9.00	17	770	V1K45A01	135	12.00x8.00x11.50	23	982	ES

Drive Part No. ACS310-03U-	HP ND	Output Current	V1k UL Type 3R Enclosure					Disc. Sym.
			Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
01A3-4	0,5	1,3	V1K2A03	11	11.45x10.00x12.00	25	833	ES
02A1-4	0,75	2,1	V1K2A03	11	11.45x10.00x12.00	25	833	ES
02A6-4	1	2,6	V1K3A03	11	11.45x10.00x12.00	25	839	ES
03A6-4	1,5	3,6	V1K3A03	11	11.45x10.00x12.00	25	839	ES
04A5-4	2	4,5	V1K4A03	11	11.45x10.00x12.00	25	844	ES
06A2-4	3	6,2	V1K6A03	11	11.45x10.00x12.00	25	859	ES
09A7-4	5	9,7	V1K8A03	11	11.45x10.00x12.00	25	878	ES
13A8-4	7,5	13,8	V1K12A03	11	11.45x10.00x12.00	25	917	ES
17A2-4	10	17,2	V1K16A03	15	11.45x10.00x12.00	29	935	ES
25A4-4	15	25,4	V1K25A03	110	11.45x10.00x12.00	29	1 037	ES
34A1-4	20	34,1	V1K27A03	110	19.18x15.62x19.50	29	1 076	ES
41A8-4	25	41,8	V1K35A03	130	19.18x15.62x19.50	56	1 113	ES
48A4-4	30	48,4	V1K45A03	135	19.18x15.62x19.50	56	1 149	ES

For specific mounting dimension go to <http://www.transcoil.com/home.htm>



## ACS250 Drives dv/dt Output Filters



**Applications:** V1k Output Filters provide motor protection by limiting voltage spikes to 1,000 volts, or below, for long motor cable applications. Greatly extends the life of the motor and cable for all applications up to 1000 feet. For multi-motor applications note that motor lead length is cumulative and the 1000 foot limit still applies. 30% reduction in common mode current

**Features:** UL Open, UL Type 1 and UL Type 3R construction with connection terminals.

### Output Filters for Single Phase 200-240V applications

Drive Part No. ACS250-01U-	HP ND	Output Current	V1K UL Open					V1K UL Type 1 Enclosure					Disc. Sym.
			Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
02A3-2	0,5	2,3	V1K3A00	75	9.00x5.50x7.25	8	457	V1K3A01	75	9.00x5.50x10.00	11	717	ES
04A3-2	1	4,3	V1K6A00	80	9.00x5.50x7.25	8	480	V1K6A01	80	9.00x5.50x10.00	11	734	ES
07A0-2	2	7	V1K8A00	90	9.00x5.50x7.25	8	488	V1K8A01	90	9.00x5.50x10.00	11	750	ES
10A5-2	3	10,5	V1K12A00	95	9.00x5.50x7.25	8	507	V1K12A01	95	9.00x5.50x10.00	11	784	ES

Drive Part No. ACS250-01U-	HP ND	Output Current	V1k UL Type 3R Enclosure					Disc. Sym.
			Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
02A3-2	0,5	2,3	V1K3A03	75	11.45x10.00x12.00	25	839	ES
04A3-2	1	4,3	V1K6A03	80	11.45x10.00x12.00	25	859	ES
07A0-2	2	7	V1K8A03	90	11.45x10.00x12.00	25	878	ES
10A5-2	3	10,5	V1K12A03	95	11.45x10.00x12.00	25	917	ES

### Output Filters for Three Phase 200-240V applications

Drive Part No. ACS250-03U-	HP ND	Output Current	V1K UL Open					V1K UL Type 1 Enclosure					Disc. Sym.
			Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
02A3-2	0,5	2,3	V1K3A00	75	9.00x5.50x7.25	8	457	V1K3A01	75	9.00x5.50x10.00	11	717	ES
04A3-2	1	4,3	V1K6A00	80	9.00x5.50x7.25	8	480	V1K6A01	80	9.00x5.50x10.00	11	734	ES
07A0-2	2	7	V1K8A00	90	9.00x5.50x7.25	8	488	V1K8A01	90	9.00x5.50x10.00	11	750	ES
10A5-2	3	10,5	V1K12A00	95	9.00x5.50x7.25	8	507	V1K12A01	95	9.00x5.50x10.00	11	784	ES
18A0-2	5	18	V1K16A00	95	9.00x5.50x8.25	12	513	V1K16A01	95	9.00x5.50x10.00	15	799	ES

Drive Part No. ACS310-01U-	HP ND	Output Current	V1k UL Type 3R Enclosure					Disc. Sym.
			Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
02A3-2	0,5	2,3	V1K3A03	75	11.45x10.00x12.00	25	839	ES
04A3-2	1	4,3	V1K6A03	80	11.45x10.00x12.00	25	859	ES
07A0-2	2	7	V1K8A03	90	11.45x10.00x12.00	25	878	ES
10A5-2	3	10,5	V1K12A03	95	11.45x10.00x12.00	25	917	ES
18A0-2	5	18	V1K16A03	95	11.45x10.00x12.00	29	935	ES

For specific mounting dimension go to <http://www.transcoil.com/home.htm>

**ACS250 Drives  
dv/dt Output Filters (Cont.)**

**Output Filters for Three Phase 380-480V applications**

Drive Part No. ACS250-03U-	HP ND	Output Current	V1K UL Open					V1K UL Type 1 Enclosure					Disc. Sym.
			Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
02A2-4	1	2,2	V1K3A00	75	9.00x5.50x7.25	8	457	V1K3A01	75	9.00x5.50x10.00	11	717	ES
04A1-4	2	4,1	V1K4A00	75	9.00x5.50x7.25	8	468	V1K4A01	75	9.00x5.50x10.00	11	721	ES
05A8-4	3	5,8	V1K6A00	80	9.00x5.50x7.25	8	480	V1K6A01	80	9.00x5.50x10.00	11	734	ES
09A5-4	5	9,5	V1K8A00	90	9.00x5.50x7.25	8	488	V1K8A01	90	9.00x5.50x10.00	11	750	ES
14A0-4	7,5	14	V1K12A00	95	9.00x5.50x7.25	8	507	V1K12A01	95	9.00x5.50x10.00	11	784	ES
18A0-4	10	18	V1K16A00	95	9.00x5.50x8.25	12	513	V1K16A01	95	9.00x5.50x10.00	15	799	ES

Drive Part No. ACS250-03U-	HP ND	Output Current	V1k UL Type 3R Enclosure					Disc. Sym.
			Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
02A2-4	1	2,2	V1K3A03	11	11.45x10.00x12.00	25	839	ES
04A1-4	2	4,1	V1K4A03	11	11.45x10.00x12.00	25	844	ES
05A8-4	3	5,8	V1K6A03	11	11.45x10.00x12.00	25	859	ES
09A5-4	5	9,5	V1K8A03	11	11.45x10.00x12.00	25	878	ES
14A0-4	7,5	14	V1K12A03	11	11.45x10.00x12.00	25	917	ES
18A0-4	10	18	V1K16A03	15	11.45x10.00x12.00	29	935	ES

**Output Filters for Three Phase 550-600V applications**

Drive Part No. ACS250-03U-	HP ND	Output Current	V1K UL Open					V1K UL Type 1 Enclosure					Disc. Sym.
			Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
02A1-6	1	2,1	V1K2A00	75	9.00x5.50x7.25	8	448	V1K2A01	75	9.00x5.50x10.00	11	712	ES
03A1-6	2	3,1	V1K3A00	75	9.00x5.50x7.25	8	457	V1K3A01	75	9.00x5.50x10.00	11	717	ES
04A1-6	3	4,1	V1K4A00	75	9.00x5.50x7.25	8	468	V1K4A01	75	9.00x5.50x10.00	11	721	ES
06A5-6	5	6,5	V1K8A00	90	9.00x5.50x7.25	8	488	V1K8A01	90	9.00x5.50x10.00	11	750	ES
09A0-6	7,5	9	V1K12A00	95	9.00x5.50x7.25	8	507	V1K12A01	95	9.00x5.50x10.00	11	784	ES
12A0-6	10	12	V1K12A00	95	9.00x5.50x7.25	8	507	V1K12A01	95	9.00x5.50x10.00	11	784	ES
17A0-6	15	17	V1K18A00	110	9.00x5.50x8.25	12	566	V1K18A01	110	9.00x5.50x10.00	15	833	ES

Drive Part No. ACS250-03U-	HP ND	Output Current	V1k UL Type 3R Enclosure					Disc. Sym.
			Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
02A1-6	1	2,1	V1K2A03	11	11.45x10.00x12.00	25	833	ES
03A1-6	2	3,1	V1K3A03	11	11.45x10.00x12.00	25	839	ES
04A1-6	3	4,1	V1K4A03	11	11.45x10.00x12.00	25	844	ES
06A5-6	5	6,5	V1K8A03	11	11.45x10.00x12.00	25	878	ES
09A0-6	7,5	9	V1K12A03	11	11.45x10.00x12.00	25	917	ES
12A0-6	10	12	V1K12A03	95	11.45x10.00x12.00	25	917	ES
17A0-6	15	17	V1K18A03	110	11.45x10.00x12.00	25	974	ES

For specific mounting dimension go to <http://www.transcoil.com/home.htm>

## ACB530 Drives dv/dt Output Filters



**Applications:** “Applications: V1k Output Filters provide motor protection by limiting voltage spikes to 1,000 volts, or below, for long motor cable applications. Greatly extends the life of the motor and cable for all applications up to 1000 feet. For multi-motor applications note that motor lead length is cumulative and the 1000 foot limit still applies. 30% reduction in common mode current

**Features:** UL Open, UL Type 1 and UL Type 3R construction with connection terminals.

**Note:** The drives internal EMC filter must remain disconnected when using these filters. When applying these output filters the drive output frequency is limited to 60Hz.

### Output Filters for Three Phase 200-240V applications

Drive Part No. ACB530-U1-	HP ND	Output Current	V1K UL Open					V1K UL Type 1 Enclosure					Disc. Sym.
			Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
04A6-2	1	4,6	V1K6A00	80	9.00x5.50x7.25	8	480	V1K6A01	80	9.00x5.50x10.00	11	734	ES
06A6-2	1,5	6,6	V1K6A00	80	9.00x5.50x7.25	8	480	V1K6A01	80	9.00x5.50x10.00	11	734	ES
07A5-2	2	7,5	V1K8A00	90	9.00x5.50x7.25	8	488	V1K8A01	90	9.00x5.50x10.00	11	750	ES
012A-2	3	11,8	V1K12A00	95	9.00x5.50x7.25	8	507	V1K12A01	95	9.00x5.50x10.00	11	784	ES
017A-2	5	16,7	V1K16A00	95	9.00x5.50x8.25	12	513	V1K16A01	95	9.00x5.50x10.00	15	799	ES
024A-2	7,5	24,2	V1K25A00	110	9.00x5.50x8.25	12	684	V1K25A01	110	9.00x5.50x10.00	15	886	ES
031A-2	10	30,8	V1K35A00	130	12.00x8.00x9.00	17	741	V1K35A01	130	12.00x8.00x11.50	23	951	ES
046A-2	15	46,2	V1K45A00	135	12.00x8.00x9.00	17	770	V1K45A01	135	12.00x8.00x11.50	23	982	ES
059A-2	20	59,4	V1K55A00	145	12.00x8.00x9.00	23	795	V1K55A01	145	12.00x8.00x11.50	23	1,071	ES
075A-2	25	74,8	V1K80A00	255	12.00x8.00x9.00	23	1,121	V1K80A01	255	12.00x8.00x11.50	29	1,395	ES
088A-2	30	88	V1K80A00	255	12.00x8.00x9.00	23	1,121	V1K80A01	255	12.00x8.00x11.50	29	1,395	ES
114A-2	40	114	V1K110A00	245	12.00x8.00x10.25	40	1,317	V1K110A01	245	16.50x18.00x15.00	68	1,914	ES
143A-2	50	143	V1K130A00	270	8.50x11.00x9.50	55	1,540	V1K130A01	270	16.50x18.00x15.00	83	2,157	ES
178A-2	60	178	V1K160A00	260	8.50x11.00x10.50	60	1,698	V1K160A01	260	16.50x18.00x15.00	83	2,317	ES
221A-2	75	221	V1K200A00	265	8.50x11.00x10.25	60	1,850	V1K200A01	265	16.50x18.00x15.00	93	2,413	ES
248A-2	100	248	V1K250A00	290	8.50x11.00x10.25	65	1,901	V1K250A01	290	16.50x18.00x15.00	93	2,460	ES

Drive Part No. ACB530-U1-	HP ND	Output Current	V1k UL Type 3R Enclosure					Disc. Sym.
			Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
04A6-2	1	4,6	V1K6A03	80	11.45x10.00x12.00	25	859	ES
06A6-2	1,5	6,6	V1K6A03	80	11.45x10.00x12.00	25	859	ES
07A5-2	2	7,5	V1K8A03	90	11.45x10.00x12.00	25	878	ES
012A-2	3	11,8	V1K12A03	95	11.45x10.00x12.00	25	917	ES
017A-2	5	16,7	V1K16A03	95	11.45x10.00x12.00	29	935	ES
024A-2	7,5	24,2	V1K25A03	110	11.45x10.00x12.00	29	1,037	ES
031A-2	10	30,8	V1K35A03	130	19.18x15.62x19.50	56	1,113	ES
046A-2	15	46,2	V1K45A03	135	19.18x15.62x19.50	56	1,149	ES
059A-2	20	59,4	V1K55A03	145	19.18x15.62x19.50	56	1,253	ES
075A-2	25	74,8	V1K80A03	255	19.18x15.62x19.50	62	1,632	ES
088A-2	30	88	V1K80A03	255	19.18x15.62x19.50	62	1,632	ES
114A-2	40	114	V1K110A03	245	19.18x15.62x19.50	74	2,010	ES
143A-2	50	143	V1K130A03	270	19.18x15.62x19.50	89	2,265	ES
178A-2	60	178	V1K160A03	260	19.18x15.62x19.50	99	2,433	ES
221A-2	75	221	V1K200A03	265	19.18x15.62x19.50	99	2,533	ES
248A-2	100	248	V1K250A03	290	19.18x15.62x19.50	99	2,583	ES

For specific mounting dimension go to <http://www.transcoil.com/home.htm>

**ACB530 Drives**  
**dv/dt Output Filters (Cont.)**

**Output Filters for Three Phase 380-480V applications**

Drive Part No. ACB530-U1-	HP ND	Output Current	V1K UL Open					V1K UL Type 1 Enclosure					Disc. Sym.
			Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
03A3-4	1,5	3,3	V1K3A00	75	9.00x5.50x7.25	8	457	V1K3A01	75	9.00x5.50x10.00	11	717	ES
04A1-4	2	4,1	V1K4A00	75	9.00x5.50x7.25	8	468	V1K4A01	75	9.00x5.50x10.00	11	721	ES
05A4-4	3	5,4	V1K6A00	80	9.00x5.50x7.25	8	480	V1K6A01	80	9.00x5.50x10.00	11	734	ES
06A9-4	3	6,9	V1K6A00	80	9.00x5.50x7.25	8	480	V1K6A01	80	9.00x5.50x10.00	11	734	ES
08A8-4	5	8,8	V1K8A00	90	9.00x5.50x7.25	8	488	V1K8A01	90	9.00x5.50x10.00	11	750	ES
012A-4	7,5	11,9	V1K12A00	95	9.00x5.50x7.25	8	507	V1K12A01	95	9.00x5.50x10.00	11	784	ES
015A-4	10	15,4	V1K18A00	110	9.00x5.50x8.25	12	566	V1K18A01	110	9.00x5.50x10.00	15	833	ES
023A-4	15	23	V1K25A00	110	9.00x5.50x8.25	12	684	V1K25A01	110	9.00x5.50x10.00	15	886	ES
031A-4	20	31	V1K27A00	110	9.00x5.50x8.25	14	711	V1K27A01	110	9.00x5.50x10.00	15	919	ES
038A-4	25	38	V1K35A00	130	12.00x8.00x9.00	17	741	V1K35A01	130	12.00x8.00x11.50	23	951	ES
045A-4	30	44	V1K45A00	135	12.00x8.00x9.00	17	770	V1K45A01	135	12.00x8.00x11.50	23	982	ES
059A-4	40	59	V1K55A00	145	12.00x8.00x9.00	23	795	V1K55A01	145	12.00x8.00x11.50	23	1,071	ES
072A-4	50	72	V1K80A00	255	12.00x8.00x9.00	23	1,121	V1K80A01	255	12.00x8.00x11.50	29	1,395	ES
078A-4	60	77	V1K80A00	255	12.00x8.00x9.00	23	1,121	V1K80A01	255	12.00x8.00x11.50	29	1,395	ES
097A-4	75	96	V1K110A00	245	12.00x8.00x10.25	40	1,317	V1K110A01	245	16.50x18.00x15.00	68	1,914	ES
125A-4	100	124	V1K130A00	270	8.50x11.00x9.50	55	1,540	V1K130A01	270	16.50x18.00x15.00	83	2,157	ES
157A-4	125	157	V1K160A00	260	8.50x11.00x10.50	60	1,698	V1K160A01	260	16.50x18.00x15.00	83	2,317	ES
180A-4	150	180	V1K200A00	265	8.50x11.00x10.25	60	1,850	V1K200A01	265	16.50x18.00x15.00	93	2,413	ES
246A-4	200	245	V1K250A00	290	8.50x11.00x10.25	65	1,901	V1K250A01	290	16.50x18.00x15.00	93	2,460	ES
316A-4	250	316	V1K305A00	325	8.75x11.00x12.25	80	2,067	V1K305A01	325	16.50x18.00x30.00	117	2,474	ES
368A-4	300	368	V1K362A00	300	8.50x11.75x12.00	80	2,366	V1K362A01	300	16.50x18.00x30.00	117	2,754	ES
414A-4	350	414	V1K420A00	450	10.00x11.75x13.75	95	2,741	V1K420A01	450	16.50x18.00x30.00	132	2,985	ES
486A-4	400	486	V1K480A00	475	10.00x11.75x13.75	100	2,926	V1K480A01	475	16.50x18.00x30.00	138	3,345	ES
526A-4	450	526	V1K600A00	515	12.75x15.00x13.75	130	3,064	V1K600A01	515	16.50x18.00x30.00	168	3,656	ES
602A-4	500	602	V1K600A00	515	12.75x15.00x13.75	130	3,064	V1K600A01	515	16.50x18.00x30.00	168	3,656	ES
645A-4	550	645	V1K750A00	770	12.75x15.00x14.75	135	5,002	V1K750A01	770	16.50x18.00x30.00	180	6,549	ES

Drive Part No. ACB530-U1-	HP ND	Output Current	V1k UL Type 3R Enclosure					Disc. Sym.
			Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
03A3-4	1,5	3,3	V1K3A03	75	11.45x10.00x12.00	25	839	ES
04A1-4	2	4,1	V1K4A03	75	11.45x10.00x12.00	25	844	ES
05A4-4	3	5,4	V1K6A03	80	11.45x10.00x12.00	25	859	ES
06A9-4	3	6,9	V1K6A03	80	11.45x10.00x12.00	25	859	ES
08A8-4	5	8,8	V1K8A03	90	11.45x10.00x12.00	25	878	ES
012A-4	7,5	11,9	V1K12A03	95	11.45x10.00x12.00	25	917	ES
015A-4	10	15,4	V1K18A03	110	11.45x10.00x12.00	25	974	ES
023A-4	15	23	V1K25A03	110	11.45x10.00x12.00	29	1 037	ES
031A-4	20	31	V1K27A03	110	19.18x15.62x19.50	29	1 076	ES
038A-4	25	38	V1K35A03	130	19.18x15.62x19.50	56	1 113	ES
045A-4	30	44	V1K45A03	135	19.18x15.62x19.50	56	1 149	ES
059A-4	40	59	V1K55A03	145	19.18x15.62x19.50	56	1 253	ES
072A-4	50	72	V1K80A03	255	19.18x15.62x19.50	62	1 632	ES
078A-4	60	77	V1K80A03	255	19.18x15.62x19.50	62	1 632	ES
097A-4	75	96	V1K110A03	245	19.18x15.62x19.50	74	2 010	ES
125A-4	100	124	V1K130A03	270	19.18x15.62x19.50	89	2 265	ES
157A-4	125	157	V1K160A03	260	19.18x15.62x19.50	99	2 433	ES
180A-4	150	180	V1K200A03	265	19.18x15.62x19.50	99	2 533	ES
246A-4	200	245	V1K250A03	290	19.18x15.62x19.50	99	2 583	ES
316A-4	250	316	V1K305A03	325	22.15x20.62x28.50	109	2 598	ES
368A-4	300	368	V1K362A03	300	22.15x20.62x28.50	109	2 891	ES
414A-4	350	414	V1K420A03	450	22.15x20.62x28.50	156	3 134	ES
486A-4	400	486	V1K480A03	475	22.15x20.62x28.50	161	3 512	ES
526A-4	450	526	V1K600A03	515	36.00x28.21x36.86	297	3 839	ES
602A-4	500	602	V1K600A03	515	36.00x28.21x36.86	297	3 839	ES
645A-4	550	645	V1K750A03	770	36.00x28.21x36.86	307	6 877	ES

For specific mounting dimension go to <http://www.transcoil.com/home.htm>

## ACB530 Drives dv/dt Output Filters (Cont.)

### Output Filters for Three Phase 550-600V applications

Drive Part No. ACB530-U1-	HP ND	Output Current	V1K UL Open					V1K UL Type 1 Enclosure					Disc. Sym.
			Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
02A7-6	2	2,7	V1K3A00	75	9.00x5.50x7.25	8	457	V1K3A01	75	9.00x5.50x10.00	11	717	ES
03A9-6	3	3,9	V1K4A00	75	9.00x5.50x7.25	8	468	V1K4A01	75	9.00x5.50x10.00	11	721	ES
06A1-6	5	6,1	V1K8A00	90	9.00x5.50x7.25	8	488	V1K8A01	90	9.00x5.50x10.00	11	750	ES
09A0-6	7,5	9	V1K12A00	95	9.00x5.50x7.25	8	507	V1K12A01	95	9.00x5.50x10.00	11	784	ES
011A-6	10	11	V1K12A00	95	9.00x5.50x7.25	8	507	V1K12A01	95	9.00x5.50x10.00	11	784	ES
017A-6	15	17	V1K18A00	110	9.00x5.50x8.25	12	566	V1K18A01	110	9.00x5.50x10.00	15	833	ES
022A-6	20	22	V1K25A00	110	9.00x5.50x8.25	12	684	V1K25A01	110	9.00x5.50x10.00	15	886	ES
027A-6	25	27	V1K27A00	110	9.00x5.50x8.25	14	711	V1K27A01	110	9.00x5.50x10.00	15	919	ES
032A-6	30	32	V1K35A00	130	12.00x8.00x9.00	17	741	V1K35A01	130	12.00x8.00x11.50	23	951	ES
041A-6	40	41	V1K45A00	135	12.00x8.00x9.00	17	770	V1K45A01	135	12.00x8.00x11.50	23	982	ES
052A-6	50	52	V1K55A00	145	12.00x8.00x9.00	23	795	V1K55A01	145	12.00x8.00x11.50	23	1 071	ES
062A-6	60	62	V1K80A00	255	12.00x8.00x9.00	23	1 121	V1K80A01	255	12.00x8.00x11.50	29	1 395	ES
077A-6	75	77	V1K80A00	255	12.00x8.00x9.00	23	1 121	V1K80A01	255	12.00x8.00x11.50	29	1 395	ES
099A-6	100	99	V1K110A00	245	12.00x8.00x10.25	40	1 317	V1K110A01	245	16.50x18.00x15.00	68	1 914	ES
125A-6	125	125	V1K130A00	270	8.50x11.00x9.50	55	1 540	V1K130A01	270	16.50x18.00x15.00	83	2 157	ES
144A-6	150	144	V1K160A00	260	8.50x11.00x10.50	60	1 698	V1K160A01	260	16.50x18.00x15.00	83	2 317	ES

Drive Part No. ACB530-U1-	HP ND	Output Current	V1k UL Type 3R Enclosure					Disc. Sym.
			Part Number	Watts	Dimensions (HxWxD)	Weight	List Price	
02A7-6	2	2,7	V1K3A03	75	11.45x10.00x12.00	25	839	ES
03A9-6	3	3,9	V1K4A03	75	11.45x10.00x12.00	25	844	ES
06A1-6	5	6,1	V1K8A03	90	11.45x10.00x12.00	25	878	ES
09A0-6	7,5	9	V1K12A03	95	11.45x10.00x12.00	25	917	ES
011A-6	10	11	V1K12A03	95	11.45x10.00x12.00	25	917	ES
017A-6	15	17	V1K18A03	110	11.45x10.00x12.00	25	974	ES
022A-6	20	22	V1K25A03	110	11.45x10.00x12.00	29	1 037	ES
027A-6	25	27	V1K27A03	110	19.18x15.62x19.50	29	1 076	ES
032A-6	30	32	V1K35A03	130	19.18x15.62x19.50	56	1 113	ES
041A-6	40	41	V1K45A03	135	19.18x15.62x19.50	56	1 149	ES
052A-6	50	52	V1K55A03	145	19.18x15.62x19.50	56	1 253	ES
062A-6	60	62	V1K80A03	255	19.18x15.62x19.50	62	1 632	ES
077A-6	75	77	V1K80A03	255	19.18x15.62x19.50	62	1 632	ES
099A-6	100	99	V1K110A03	245	19.18x15.62x19.50	74	2 010	ES
125A-6	125	125	V1K130A03	270	19.18x15.62x19.50	89	2 265	ES
144A-6	150	144	V1K160A03	260	19.18x15.62x19.50	99	2 433	ES

For specific mounting dimension go to <http://www.transcoil.com/home.htm>

## Application Information

Baldor Drive Products support diverse applications with a wide variety of products. AC Drives serve processing needs and industrial applications such as fans, pumps, mixers, conveyors, and extruders, plus many more applications. Any drive featured in this publication will provide some form of motor speed regulation and variable speed operation. Within these categories, we offer a broad spectrum of horsepower ranges, drive interconnectivity capabilities, and flexibilities.

Variable Speed Drives provide the following benefits:

- Wide constant horsepower speed range
- Proven performance with matched drive/motor packages
- High speed regulation capabilities
- Worldwide Sales and Technical support

### Which drive is right for you?

Your choice depends on many application-specific factors such as ambient conditions, type of loads, duty cycle, maintenance accessibility, horsepower range, sequencing and more. If you have specific questions, or require application/selection assistance, please contact your nearest Baldor Sales Office.

### AC Drive Characteristics

- AC drives utilize a solid-state adjustable frequency inverter which adjusts frequency and voltage for varying the speed of an otherwise, conventional fixed speed AC motor. This is achieved through Pulse-Width Modulation (PWM) of the voltage output to the motors.
- Available from 1/4 to 550 HP
- Voltage and frequency are maintained at a constant relationship at any motor speed to maintain a constant torque. This is known as the volts per hertz ratio.

### Standard AC Drives are often the best choice when:

- The environment surrounding the AC motor is corrosive, potentially explosive, or very wet, and demands special enclosures such as explosion-proof, washdown, XT-Extra Tough, etc.
- Motors are likely to receive little regular maintenance due to inaccessibility of the motor or poor maintenance practices.
- The motor must be small in size and weigh as little as possible.
- Motor speeds can reach 10,000 RPM.
- Multiple motors are operated at the same speed by a single drive.
- Existing fixed speed (Design B) AC motors can possibly be used.

### Additionally, Vector AC Drives are often the best choice for:

- Fast changing loads.
- Tight speed regulation.
- Applications requiring increased starting torque.
- Precise closed loop speed regulation (to 0.01% and less) is required.
- High dynamic response.
- Web processes, material handling sorter conveyors, metering pumps, extruders, and test stands.

## Application Information

### AC Motor Selection

Various types of AC induction motors are suitable for operation with AC drives. It is essential that the user understand the nature of the application in terms of load characteristics, speed range, and drive requirements, as they relate to the AC drive system, so that the proper combination of motor and drive can be selected for optimum performance.

The following motor performance graphs represent the maximum continuous capability of the respective motors when operated with AC drives. These guidelines are conservative and are based upon full rated conditions (i.e., full horsepower requirements operating continually in a 40° C ambient. Full rated input voltage is assumed.) Since motors are frequently sized larger by the user than the actual horsepower required to provide a performance safety margin, the actual motor performance may be less than 100% full load capability. This should be considered in using the data on the graphs.

Most standard AC motors are designed to operate at a fixed, rated frequency and speed. At this fixed speed, the built-in cooling system will keep the motor from overheating. When operated as an adjustable speed device at slower speeds, the motor cooling action will be reduced. On such applications, the motor may need to be a motor specifically designed for AC drive operation such as the RPM AC Motor. RPM AC Motors offer premium performance on Baldor VS AC Drives.

### Sizing the AC Motor

The following procedure gives a conservative, engineering-based approach for sizing and selecting various AC motors for use with the AC drive.

**WARNING**  
**MACHINERY BUILDERS AND/OR USERS ARE RESPONSIBLE FOR INSURING THAT ALL DRIVE TRAIN MECHANISMS, THE DRIVEN MACHINE, AND PROCESS MATERIAL ARE CAPABLE OF SAFE OPERATION AT THE MAXIMUM SPEED AT WHICH THE MACHINE WILL OPERATE. FAILURE TO OBSERVE THESE PRECAUTIONS COULD RESULT IN BODILY INJURY.**

- Determine the drive motor output horsepower and continuous torque over the total speed range and the starting torque requirements.
- Select the type of motor and drive.
- Using the following graphs for the type of motor selected, confirm that the required load torque from the motor selected falls within the “acceptable region” of the graph.

### Drive Comparison Chart

Use this chart as a quick, basic reference guide to help you determine the drive best suited for your application needs.

	<b>Standard AC</b>
Speed Regulation	1%
Speed Range	10:1
Constant HP Range	1.5:1
Starting Torque	100 to 150%
High-Speed Capability <sup>(1)</sup>	<6000
Dynamic Braking w/o Regulator	No

(1) Speed rating in RPM with standard motors.  
(2) Dependent on encoder or tachometer used.

### Long Motor Leads

The wire leads that connect the motor to the control are critical in terms of sizing, shielding and the cable characteristics. Short cable runs are usually trouble free but fault-monitoring circuitry can produce numerous faults when long cables (over 100 feet) are used. For 100 to 300 ft., a dv/dt filter is recommended if the motor does not have ISR wire. Over 300 ft. For dv/dt filter refer to pages [100-101](#).

The dv/dt filter should be placed in close physical proximity to the control. Unexpected faults may occur due to excessive charging current required for motor cable capacitance.

If you use long motor leads and experience unexpected trips due to current overload conditions and are not sure how to correctly size and connect the optional load reactors, please contact your Baldor representative.

## Application Information

Graphs 1 through 4 show typical constant torque speed range curves with general purpose V/Hz regulation.

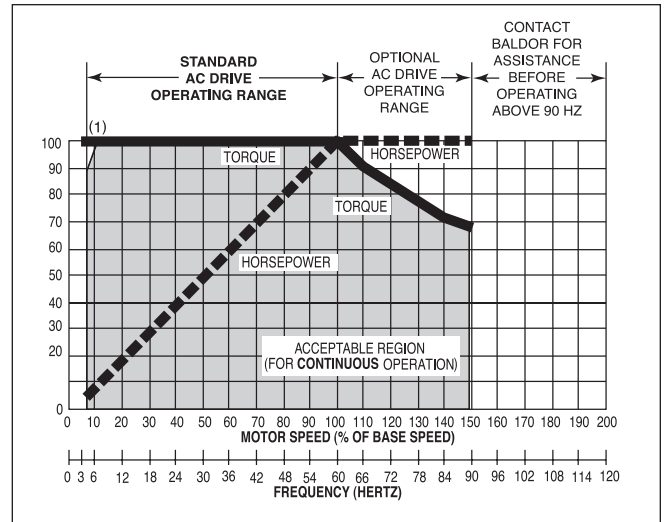
Graphs 1 and 2 are also typical for V/Hz drives.

Continuous motor performance for constant torque to base speed and constant horsepower above base speed. Wider constant torque ranges and/or horsepowers are available but application assistance will be required.

### Graph 1: 10:1 Constant Torque

This graph applies for the following motors used with an AC PWM drive:

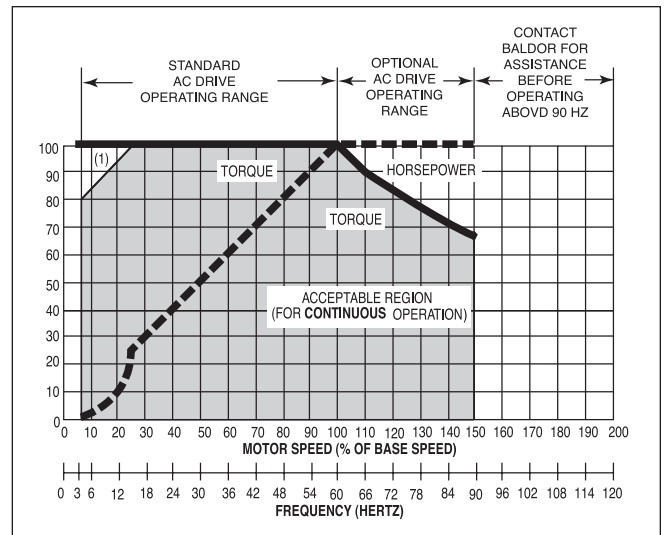
- Super-E® (Modified); contact Product Marketing for further details
- Explosion-proof energy efficient motors  
1/3-150 HP (check motor nameplate to verify CT rating)
- TENV motors



### Graph 2: 4:1 Constant Torque

This graph applies for the following motors used with an AC PWM drive:

- TENV and TEFC energy and premium efficient motors 1-350 HP
- TENV easy-clean washdown duty motors
- Explosion proof energy efficient motors  
1-1/2 - 150 HP (check motor nameplate to verify CT ratio)



(1) Continuous operation in this region is not recommended and may result in reduced motor life.

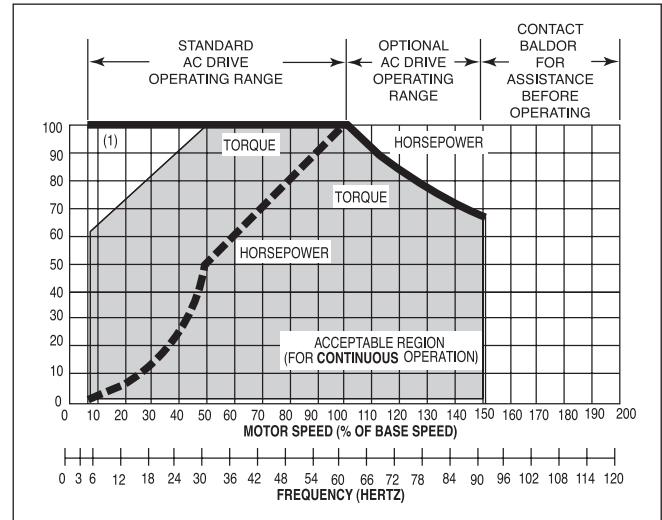


## Application Information

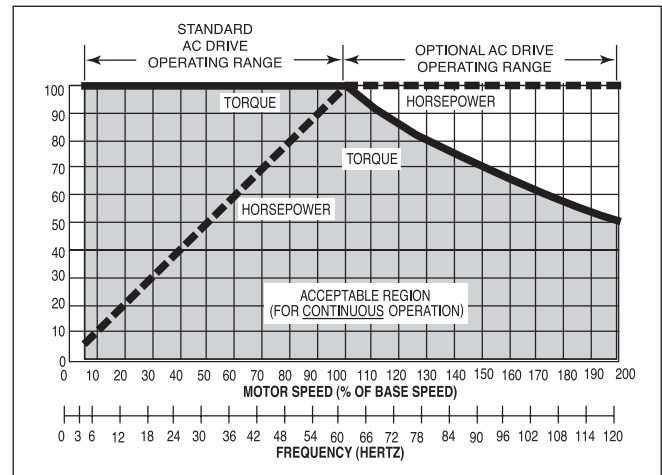
### Graph 3: 2:1 Constant Torque

For use with explosion-proof energy efficient motors 1-1/2 - 150 Hp  
(check motor nameplate to verify CT ratio).

(1) Continuous operation in this region is not recommended and may result in reduced motor life.



### Graph 4: Inverter Duty AC Motors (TENV, TEAO-BC and DPFV enclosures)



## Application Information

### Sizing the AC Drive

The capabilities of the AC drive are determined by its output current rating. The drive chosen must have a continuous current rating equal to or more than the maximum motor load current. Be sure to consider all loads including startup acceleration.

### Single Motor and Drive Applications

NEMA design B motors will generally perform as shown in the engineering data section. Note that all references to HP are for single motor, standard NEMA B, 1.0 service factor, non-explosion proof induction motors only. Contact your Baldor Sales Office for application assistance if other motors are to be used.

### General Sizing Method for use with Multiple Induction Motors

To size the 6 to 60 Hz drive for multiple motor applications or for any applications for 6 to 120 Hz, the following procedure is used.

1. Examine each motor to be driven and determine motor full-load amperes at line voltage. Determine the total full-load current requirements for all motor(s) to be controlled by the drive.
2. To the current determined in step one, add the high currents of any overloads which may exist – acceleration peak load, etc., – and determine maximum short-term load at line voltage.

(Note: Motor acceleration is by linear timed-rate acceleration control. Therefore, locked-rotor amperes normally associated with across-the-line starting of AC motors are not encountered.)

3. Select the AC drive rating from the table with a current capacity that will support the required currents as calculated in the previous steps.
4. If other than NEMA Design B – 1.0 Service Factor induction motors are to be used, or if explosion proof listed motors are required contact your Baldor Sales Office for application assistance.

## Application Information

### Defining loads

Torque and horsepower considerations in calculating horsepower.

### Calculating Horsepower

For rotating objects:

$$HP = \frac{TN}{63,000} \quad \text{where:} \quad \begin{array}{l} T = \text{Torque (lb-in)} \\ N = \text{Speed (RPM)} \end{array}$$

or:

$$HP = \frac{TN}{5250} \quad \text{where:} \quad \begin{array}{l} T = \text{Torque (lb-ft)} \\ N = \text{Speed (RPM)} \end{array}$$

For objects in linear motion:

$$HP = \frac{FV}{396,000} \quad \text{where:} \quad \begin{array}{l} F = \text{Force (lb)} \\ V = \text{Velocity (in/min)} \end{array}$$

or:

$$HP = \frac{FV}{33,000} \quad \text{where:} \quad \begin{array}{l} F = \text{Force (lb)} \\ V = \text{Velocity (FPM)} \end{array}$$

### Centrifugal Applications

Affinity laws for centrifugal applications:

$$\frac{FLOW_1}{FLOW_2} = \frac{RPM_1}{RPM_2}$$

$$\frac{PRES_1}{PRES_2} = \frac{(RPM_1)^2}{(RPM_2)^2}$$

$$\frac{BHP_1}{BHP_2} = \frac{RPM_1^3}{RPM_2^3}$$

For pumps:

$$BHP = \frac{GPM \times ft \times (\text{Specific Gravity})}{3960 \times (\text{Efficiency of Pump})}$$

$$BHP = \frac{GPM \times PSI \times (\text{Specific Gravity})}{1713 \times (\text{Efficiency of Pump})}$$

For fans and blowers:

$$BHP = \frac{CFM \times PSF}{33000 \times (\text{Efficiency of Fan})}$$

$$BHP = \frac{CFM \times PIW}{6344 \times (\text{Efficiency of Fan})}$$

$$BHP = \frac{CFM \times PSI}{229 \times (\text{Efficiency of Fan})}$$

### Where

- BHP = Brake horsepower
- GPM = Gallons per minute
- ft = Feet
- PSI = Pounds per square inch
- Specific Gravity of water = 1.0
- PSF = Pounds per square foot

### Calculating Accelerating Force for Linear Motion

The following formula may be useful to calculate the approximate accelerating force required for linear motion. However, before sizing the drive, add the torque required to accelerate the motor rotor, gears, pulleys, etc., to the linear-motion accelerating force converting to torque.

$$\text{Acceleration Force (F)} = \frac{WV}{1933t}$$

- where:
- W = Weight (lb)
  - V = Change in Velocity (FPM)
  - t = Time (seconds)

### Calculating Accelerating Torque for Rotary Motion

High inertia loads may require higher torque for acceleration than is required to maintain a desired running speed.

The formula to calculate accelerating torque of a rotating member:

$$T = \frac{(WK^2) (N)}{308t}$$

- where:
- T = Accelerating torque (lb-ft)
  - WK<sup>2</sup> = Total inertia (lb-ft<sup>2</sup>) that the motor must accelerate. This value includes motor rotor, gearing, shafting and load.
  - N = Change in speed required (RPM)
  - t = Time from original speed to set speed

The same formula can also be used to determine the minimum accelerating time of a given drive:

$$t = \frac{(WK^2) (N)}{308T}$$

WK<sup>2</sup> is calculated based on the radius of gyration, not diameter. Be cautious in converting from metric units, which are often based on diameter.

### Other Useful Formulas

Torque = Force x Radius

$$\text{Reflected WK}^2 \text{ through a reducer (gear or belt)} = \frac{\text{WK}^2 \text{ of Load}}{(\text{Reduction Ratio})^2}$$

$$RPM = \frac{FPM}{.262 \times \text{Diameter (Inches)}}$$

For AC induction motors:

$$\text{Synchronous RPM} = \frac{\text{Hertz} \times 120}{\text{Number of Poles}}$$

$$\text{Percent Slip} = \frac{(\text{Synchronous RPM} - \text{Full Load RPM}) \times 100}{\text{Synchronous RPM}}$$

$$\text{Kilowatts (KW)} = \text{Horsepower (HP)} \times .746$$

### Conversions

One inch = 25.4 millimeters

One pound = .453 kilograms

Temp. F = 9/5 (C)+32

Temp. C = 5/9 (F-32)

One lb-ft<sup>2</sup> = 4.21 x 10<sup>-2</sup> kg-m<sup>2</sup>

One Newton Meter = .738 lb-ft

## Application Information

### Definitions of NEMA Enclosures

The following descriptions are a digest from NEMA Standard Publication 250 (1985) and provides definitions of various control enclosures.

#### Type 1 – General Purpose Indoor, Non-Ventilated and Ventilated Enclosures

Type 1 enclosures are intended for use indoors, primarily to prevent accidental contact of personnel with the enclosed equipment, in areas where unusual service conditions do not exist. In addition, they provide protection against falling dirt.

#### Type 2 – Drip-Proof Indoor, Non-Ventilated and Ventilated Enclosures

Type 2 enclosures are intended for use indoors to protect the enclosed equipment against falling noncorrosive liquids and falling dirt. They shall have provision for drainage. If provision is made for the entrance of conduit at the top, it shall consist of a conduit hub or the equivalent. When completely and properly installed, these enclosures shall prevent the entrance of dripping liquid at a higher level than the lowest live part within the enclosure.

#### Type 3 – Dust-Tight and Sleet (Ice) Resistant Outdoor, Non-Ventilated Enclosures

Type 3 enclosures are intended for use outdoors to protect the enclosed equipment against windblown dust and water. They are not sleet (ice) proof. They shall have conduit hubs or equivalent provision for water-tight connection at the conduit entrance, mounting means external to the equipment cavity, and provision for locking.

#### Type 3R – Rainproof and Sleet (Ice) Resistant Outdoor, Non-Ventilated Enclosures

Type 3R enclosures are intended for use outdoors to protect the enclosed equipment against rain and meet the requirements of Underwriters' Laboratories, Inc. applying to "Rain-tight" Enclosures. They are not dust-, snow- nor sleet- (ice) proof. They shall have a conduit hub or equivalent provision for

water-tight connection at the conduit entrance when the conduit enters at a level higher than the lowest live part, provision for locking, and provision for drainage. When completely and properly installed, these enclosures shall prevent the entrance of rain at a level higher than the lowest live part.

#### Type 3S – Dust-Tight, Rain-Tight and Sleet (Ice) Proof, Outdoor, Non-Ventilated Enclosures

Type 3S enclosures are intended for use outdoors to protect the enclosed equipment against windblown dust and water and to provide for its operation when the enclosure is covered by external ice or sleet. These enclosures do not protect the enclosed equipment against malfunction resulting from internal icing; where this is a requirement, the apparatus manufacturer should be consulted. These enclosures shall have conduit hubs or equivalent provision for water-tight connection at the conduit entrance, mounting means external to the equipment cavity, and provision for locking. In addition, they shall have sleet-(ice) proof operating mechanisms, the ability to support the additional weight of the ice, and the ability to withstand removal of the ice by a hand tool to permit access to the enclosure interior.

#### Type 4 – Water-Tight and Dust-Tight, Indoor and Outdoor Non-Ventilated Enclosures

Type 4 enclosures are intended for use indoors to protect the enclosed equipment against splashing water, seepage of water, falling or hose-directed water, and severe external condensation. They shall have conduit hubs or equivalent provision for water-tight connection at the conduit entrance and mounting means external to the equipment cavity.

#### Type 4X – Water-Tight and Dust-Tight and Corrosion-Resistant, Indoor and Outdoor Non-Ventilated Enclosures

Type 4X enclosures have the same provisions as Type 4 enclosures and, in addition, are corrosion-resistant.

#### Type 5 – Superseded by Type 12 for Control Apparatus

#### Type 6 – Submersible, Water-Tight, Dust-Tight and Sleet (Ice) Resistant, Indoor and Outdoor Non-Ventilated Enclosures

Type 6 enclosures are intended for use indoors or outdoors where occasional submersion is encountered. They shall protect the enclosed equipment against a static head of water of 6 ft. for 30 minutes; dust, splashing or external condensation of noncorrosive liquids, falling or hose directed water, lint and seepage. They are not sleet (ice) proof. They shall have conduit hubs or equivalent provision for water-tight connection at the conduit entrance and mounting means external to the equipment cavity.

#### Type 7, 8, 9 and 10 – Enclosures

These enclosures are for use in hazardous locations.

#### Type 11 – Corrosion-Resistant and Drip-Proof, Oil-Immersed, Indoor Non-Ventilated Enclosures

Type 11 enclosures are corrosion-resistant and are intended for use indoors to protect the enclosed equipment against dripping, seepage and external condensation of corrosive liquids. In addition, they protect the enclosed equipment against the corrosive effects of fumes and gases by providing for immersion of the equipment in oil. They shall have conduit hubs or equivalent provision for water-tight connection at the conduit entrance and mounting means external to the equipment cavity.

#### Type 12 – Industrial Use, Dust-Tight and Drip-Tight, Indoor Non-Ventilated Enclosures

Type 12 enclosures are intended for use indoors to protect the enclosed equipment against fibers, flyings, lint, dust, and dirt, and light splashing, seepage, dripping and external condensation of noncorrosive liquids. There shall be no holes through the enclosure and

## Application Information

### Type 12 (continued) –

No conduit knockouts or conduit openings, except that oil-tight or dust-tight mechanisms may be mounted through holes in the enclosure when provided with oil-resistant gaskets. Doors shall be provided with oil-resistant gaskets. In addition, enclosures for combination controllers shall have hinged doors which swing horizontally and require a tool to open.

When intended for wall mounting, Type 12 enclosures shall have mounting means external to the equipment cavity, captive closing hardware, and provision for locking.

When intended for floor mounting, Type 12 enclosures shall have closed bottoms, captive closing hardware, and provision for locking.

### Ventilated Enclosures

Ventilated enclosures have the same provisions as nonventilated enclosures, except that they contain both dust-tight and nondust-tight sections or compartments. Only the nondust-tight sections or compartments are ventilated and are not subject to the dust test.

### Type 13 – Oil-Tight and Dust-Tight, Indoor, Non-Ventilated Enclosures

Type 13 enclosures are intended for use indoors primarily to house pilot devices such as limit switches, foot switches, push buttons, selector switches, pilot lights, etc., and to protect these devices against lint and dust, seepage, external condensation, and spraying of water, oil or coolant. They shall have oil-resistant gaskets and, when intended for wall or machine mounting, shall have mounting means external to the equipment cavity. They shall have no conduit knockouts or unsealed openings providing access into the equipment cavity. All conduit openings shall have provision for oil-tight conduit entry.

### AC Drive Lead Length

Standard AC Drives utilize IGBT Technology for rapid switching of PWM devices to produce accurate sinusoidal drive outputs. Typically operating at carrier frequencies of 8 kHz, low motor acoustic noise is achieved. However, PWM devices can also cause undesirable side effects such as motor stress, high peak voltage and possible reflected waves that exacerbate the peak voltage problems.

Baldor's matching drive/motor packages offer superior design and proven performance. All drive/motor combinations have been tested for dynamic stability. When applied properly, motor stress effects and high peak voltage should be minimal.

See individual product sections in this catalog for information about recommended lead lengths between drives and motors. Additional external filters can be specified to extend lead lengths.

### DB Sizing Procedure

This sizing procedure (with different formulas) is used to determine the required DB Hardware capacity for general industrial machinery or hoisting applications.

### General Machinery

To determine regenerated watts ( $W_r$ ), use the following formulas:

Determine  $T_{DEC}$ :

$$T_{DEC} = \frac{RPM \times WK^2}{308 \times t}$$

Where:

- $T_{DEC}$  = Deceleration torque in lb-ft
- $\Delta RPM$  = Change in speed
- $WK^2$  = Inertia in lb-ft<sup>2</sup>
- $t$  = Time in seconds

Determine  $D_r$ : 
$$\frac{\text{Brake Time Required for Deceleration}}{\text{Total Cycle Time}}$$

$D_r = \text{Duty Cycle} =$

Determine  $W_r$ :

$$W_r = T_{DEC} \times (S_r - S_m) \times D_r \times (0.0712)$$

Where:

$W_r$  = Regenerated watts

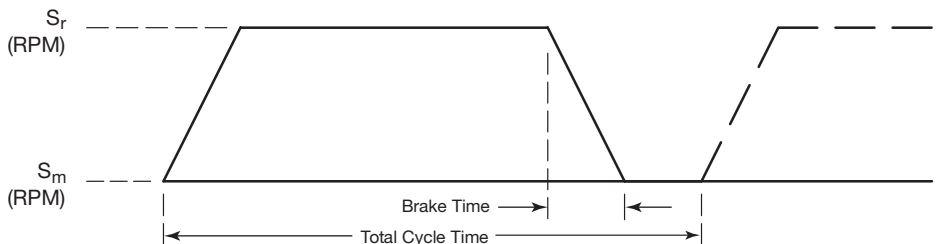
$T_{DEC}$  = Deceleration torque in lb-ft

$S_r$  = Maximum speed regenerating (in RPM)

$S_m$  = Minimum speed regenerating (in RPM)

$D_r$  = Duty cycle

Determine part number of external resistor assembly to order: Refer to Page 72-99.



## Application Information

### Sizing External Braking Hardware

If the results of step 5 indicate the need for external braking hardware, the following additional steps will assist in properly sizing an external brake unit. To determine if the brake unit meets the application's needs, three items must be determined: average power generation, peak power, and peak regeneration current.

6) Average power generation is calculated as follows, assuming the deceleration rate is linear:

$$HP_{\text{regen}} = \frac{(T_R * (N2+N1) / 2 * t1)}{5250 * t2}$$

7) Convert the regeneration HP in watts (Average Power).

$$\text{Watts}_{\text{regen}} = HP_{\text{regen}} * 746$$

8) Peak regeneration watts can be obtained by using the  $HP_{\text{regen}}$  calculated in step 4 and converting to watts. This peak regeneration (watts) energy must be less than the peak watt rating of the braking unit.

### Determining the Duty Cycle

9) The braking duty cycle (percentage of time during an operating cycle when braking occurs), must be determined. A typical operating cycle consists of an acceleration mode, a running at set speed mode, a deceleration mode and finally a rest or zero speed mode. Braking occurs during the deceleration mode.

$$\text{Duty Cycle} = \frac{\text{Braking time}}{\text{Cycle time}}$$

A lower duty cycle percentage will allow more time for resistor cool-down. This will affect resistor sizing and selection. A duty cycle of 50% or less makes snubber brake control a good solution. For duty cycles near or at 100%, line regeneration control is more suitable.

### Calculating the Regenerative Current

10) The regenerative current must be compared to the current rating of the braking unit. The regenerative current must not exceed the rated amps of the braking unit. Using the braking HP from step 4, the following rule-of-thumb formulas can be used to calculate the regenerative current:

$$\begin{aligned} 460 \text{ V Drives } I_{\text{regen}} &= 1.2 * HP_{\text{regen}} \\ 230 \text{ V Drives } I_{\text{regen}} &= 2.4 * HP_{\text{regen}} \end{aligned}$$

## Cross Reference - IP20 Enclosure Micro Drives <sup>1</sup>

110-120V, 50/60Hz, 1-Phase Input / 230V, 3-Phase Output								
Hp	Baldor Legacy Catalog Number	Braking	ABB Type Code	Braking	List Price			
0,5	VS1ST10P5-0	No	ACS250-01U-02A3-1	No	408			
1	VS1ST11-0	No	ACS250-01U-04A3-1	No	450			
1,5	VS1ST11P5-0T	Yes	ACS250-01U-05A8-1	Yes	552			
200-240V, 50/60Hz, 1-Phase Input / 230V, 3-Phase Output								
Hp	Baldor Legacy Catalog Number	Braking	ABB Type Code	Braking	List Price	ABB Type Code	Braking	List Price <sup>2</sup>
0,5	VS1ST80P5-0	No	ACS150-01U-02A4-2	Yes	216	ACS355-01U-02A4-2	Yes	319
1	VS1ST81-0	No	ACS150-01U-04A7-2	Yes	270	ACS355-01U-04A7-2	Yes	362
1,5			ACS150-01U-06A7-2	Yes	311	ACS355-01U-06A7-2	Yes	405
2	VS1ST82-0	No	ACS150-01U-07A5-2	Yes	352	ACS355-01U-07A5-2	Yes	448
2	VS1ST82-0T	Yes	ACS150-01U-07A5-2	Yes	352	ACS355-01U-07A5-2	Yes	448
3	VS1ST83-0T	Yes	ACS150-01U-09A8-2	Yes	417	ACS355-01U-09A8-2	Yes	540
200-240V, 50/60Hz, 3-Phase Input / 230V, 3-Phase Output								
0,5	VS1ST20P5-0	No	ACS150-03U-02A4-2	Yes	216	ACS355-03U-02A4-2	Yes	319
0,75			ACS150-03U-03A5-2	Yes	243	ACS355-03U-03A5-2	Yes	341
1	VS1ST21-0	No	ACS150-03U-04A7-2	Yes	270	ACS355-03U-04A7-2	Yes	362
1,5			ACS150-03U-06A7-2	Yes	311	ACS355-03U-06A7-2	Yes	405
2	VS1ST22-0	No	ACS150-03U-07A5-2	Yes	352	ACS355-03U-07A5-2	Yes	448
2	VS1ST22-0T	Yes	ACS150-03U-07A5-2	Yes	352	ACS355-03U-07A5-2	Yes	448
3	VS1ST23-0T	Yes	ACS150-03U-09A8-2	Yes	417	ACS355-03U-09A8-2	Yes	540
5	VS1ST25-0T	Yes				ACS355-03U-17A6-2	Yes	669
7,5						ACS355-03U-24A4-2	Yes	873
10						ACS355-03U-31A0-2	Yes	1152
15						ACS355-03U-46A2-2	Yes	1523
380-480V, 50/60Hz, 3-Phase Input / 460V, 3-Phase Output								
0,5			ACS150-03U-01A2-4	Yes	305	ACS355-03U-01A2-4	Yes	380
0,75			ACS150-03U-01A9-4	Yes	316	ACS355-03U-01A9-4	Yes	419
1	VS1ST41-0	No	ACS150-03U-02A4-4	Yes	328	ACS355-03U-02A4-4	Yes	458
1,5			ACS150-03U-03A3-4	Yes	362	ACS355-03U-03A3-4	Yes	494
2	VS1ST42-0	No	ACS150-03U-04A1-4	Yes	396	ACS355-03U-04A1-4	Yes	529
2	VS1ST42-0T	Yes	ACS150-03U-04A1-4	Yes	396	ACS355-03U-04A1-4	Yes	529
3	VS1ST43-0T	Yes	ACS150-03U-05A6-4	Yes	441	ACS355-03U-05A6-4	Yes	641
5	VS1ST45-0T	Yes	ACS150-03U-08A8-4	Yes	564	ACS355-03U-08A8-4	Yes	761
7,5	VS1ST47-0T	Yes	None in 7.5HP			ACS355-03U-12A5-4	Yes	935
10	VS1ST410-0T	Yes	None in 10HP			ACS355-03U-15A6-4	Yes	1154
15	VS1ST415-0T	Yes	None in 15HP			ACS355-03U-23A1-4	Yes	1475
15						ACS355-03U-23A1-4	Yes	1475
20						ACS355-03U-31A0-4	Yes	1800
25						ACS355-03U-38A0-4	Yes	2142
30						ACS355-03U-44A0-4	Yes	2602
500-600V ± 10%, 50/60Hz, 3-Ph Input & Output								
0,5			ACS150-03U-01A2-4	Yes	305	ACS355-03U-01A2-4	Yes	380
0,75			ACS150-03U-01A9-4	Yes	316	ACS355-03U-01A9-4	Yes	419
1	VS1ST41-0	No	ACS150-03U-02A4-4	Yes	328	ACS355-03U-02A4-4	Yes	458
1,5			ACS150-03U-03A3-4	Yes	362	ACS355-03U-03A3-4	Yes	494
2	VS1ST42-0	No	ACS150-03U-04A1-4	Yes	396	ACS355-03U-04A1-4	Yes	529
2	VS1ST42-0T	Yes	ACS150-03U-04A1-4	Yes	396	ACS355-03U-04A1-4	Yes	529
3	VS1ST43-0T	Yes	ACS150-03U-05A6-4	Yes	441	ACS355-03U-05A6-4	Yes	641
5	VS1ST45-0T	Yes	ACS150-03U-08A8-4	Yes	564	ACS355-03U-08A8-4	Yes	761
7,5	VS1ST47-0T	Yes	None in 7.5HP			ACS355-03U-12A5-4	Yes	935
10	VS1ST410-0T	Yes	None in 10HP			ACS355-03U-15A6-4	Yes	1154
15	VS1ST415-0T	Yes	None in 15HP			ACS355-03U-23A1-4	Yes	1475
15						ACS355-03U-23A1-4	Yes	1475
20						ACS355-03U-31A0-4	Yes	1800
25						ACS355-03U-38A0-4	Yes	2142
30						ACS355-03U-44A0-4	Yes	2602
500-600V ± 10%, 50/60Hz, 3-Ph Input & Output								
1	VS1STS51-0T	Yes	ACS250-03U-02A1-6	Yes	602			
2	VS1STS52-0T	Yes	ACS250-03U-03A1-6	Yes	782	ACB530-U1-02A7-6	Yes	1,362
3	VS1STS53-0T	Yes	ACS250-03U-04A1-6	Yes	869	ACB530-U1-03A9-6	Yes	1,651
5	VS1STS55-0T	Yes	ACS250-03U-06A5-6	Yes	1,043	ACB530-U1-06A1-6	Yes	1,801
7,5	VS1STS57-0T	Yes	ACS250-03U-09A0-6	Yes	1,459	ACB530-U1-09A0-6	Yes	1,952
10	VS1STS510-0T	Yes	ACS250-03U-12A0-6	Yes	1,751	ACB530-U1-011A-6	Yes	2,473
15	VS1STS515-0T	Yes	ACS250-03U-17A0-6	Yes	2,291	ACB530-U1-017A-6	Yes	2,713
20	VS1STS520-0T	Yes	ACS250-03U-22A0-6	Yes	2,917	ACB530-U1-022A-6	Yes	3,471
25						ACB530-U1-027A-6	Yes	4,123
30	VS1STS530-0T	Yes				ACB530-U1-032A-6	Yes	5,098
40	VS1STS540-0T	Yes				ACB530-U1-041A-6	Yes	6,182
50						ACB530-U1-052A-6	Yes	7,592
60	VS1STS560-0T	Yes				ACB530-U1-062A-6	Yes	9,111
75						ACB530-U1-077A-6	Yes	10,195
100						ACB530-U1-099A-6	Yes	11,822
125						ACB530-U1-125A-6	Yes	15,185
150						ACB530-U1-144A-6	Yes	16,269

1 = This simplified cross reference is provided as a guideline comparing only the HP rating and braking capabilities. A thorough review of the application and parameters required is suggested before selecting a drive.  
 2 = Control panel not included in price, ordered as a separate item  
 3 = ACB530 drives have NEMA 1 enclosures

## Cross Reference - IP66 Enclosure Micro Drives<sup>1</sup>

115V, 50/60 Hz, 1-Phase Input / 230V, 3-Phase Output												
NEMA 4X/12**				ACS250 - NEMA 4X/12**								
Hp	Catalog Number	Disc*	Braking	Catalog Number	Disc*	Braking	List Price					
0,5	VS1MX10P5-4	No	No	ACS250-01U-02A3-1+B063	No	No	757					
0,5	VS1MX10P5-4D	Yes	No	ACS250-01U-02A3-1+B063+F278	Yes	No	936					
1	VS1MX11-4	No	No	ACS250-01U-04A3-1+B063	No	No	836					
1	VS1MX11-4D	Yes	No	ACS250-01U-04A3-1+B063+F278	Yes	No	1,010					
1,5	VS1MX11P5-4T	No	Yes	ACS250-01U-05A8-1+B063	No	Yes	1,018					
230V, 50/60 Hz, 1-Phase Input / 230V, 3-Phase Output												
NEMA 4X/12**				ACS250 - IP66 / NEMA 4X**				ACS355 (Derated 3-Ph) - IP66 / UL Type 4X**				
Hp	Catalog Number	Disc*	Braking	Catalog Number	Disc*	Braking	List Price	Catalog Number	Disc*	Braking	List Price <sup>2</sup>	
0,5	VS1MX80P5-4	No	No	ACS250-01U-02A3-2+B063	No	No	723	ACS355-03U-06A7-2+B063	No	Yes	953	
0,5	VS1MX80P5-4D	Yes	No	ACS250-01U-02A3-2+B063+F278	Yes	No	832	ACS355-03U-06A7-2+B063+F278	Yes	Yes	1,259	
0,75								ACS355-03U-09A8-2+B063	No	Yes	1,106	
0,75								ACS355-03U-09A8-2+B063	No	Yes	1,106	
1	VS1MX81-4	No	No	ACS250-01U-04A3-2+B063	No	No	795	ACS355-03U-17A6-2+B063	No	Yes	1,460	
1	VS1MX81-4D	Yes	No	ACS250-01U-04A3-2+B063+F278	Yes	No	893	ACS355-03U-17A6-2+B063+F278	Yes	Yes	1,927	
2	VS1MX82-4	No	No	ACS250-01U-07A0-2+B063	No	No	853	ACS355-03U-17A6-2+B063	No	Yes	1,460	
2	VS1MX82-4D	Yes	No	ACS250-01U-07A0-2+B063+F278	Yes	No	1,004	ACS355-03U-17A6-2+B063+F278	Yes	Yes	1,927	
2	VS1MX82-4T	No	Yes					ACS355-03U-17A6-2+B063	No	Yes	1,460	
2	VS1MX82-4TD	Yes	Yes					ACS355-03U-17A6-2+B063+F278	Yes	Yes	1,927	
3	VS1MX83-4T	No	Yes	ACS250-01U-10A5-2+B063	No	Yes	982					
3	VS1MX83-4TD	Yes	Yes	ACS250-01U-10A5-2+B063+F278	Yes	Yes	1,122					
230V, 50/60 Hz, 3-Phase Input / 230V, 3-Phase Output												
NEMA 4X/12**				ACS250 - IP66 / NEMA 4X**				ACS355 - IP66 / UL Type 4X**				
Hp	Catalog Number	Disc*	Braking	Catalog Number	Disc*	Braking	List Price	Catalog Number	Disc*	Braking	List Price <sup>2</sup>	
0,5	VS1MX20P5-4	No	No	ACS250-03U-02A3-2+B063	No	No	660	ACS355-03U-02A4-2+B063	No	Yes	750	
0,5	VS1MX20P5-4D	Yes	No	ACS250-03U-02A3-2+B063+F278	Yes	No	780	ACS355-03U-02A4-2+B063+F278	Yes	Yes	990	
0,75								ACS355-03U-03A5-2+B063	No	Yes	849	
0,75								ACS355-03U-03A5-2+B063+F278	Yes	Yes	1,120	
1	VS1MX21-4	No	No	ACS250-03U-04A3-2+B063	No	No	717	ACS355-03U-04A7-2+B063	No	Yes	904	
1	VS1MX21-4D	Yes	No	ACS250-03U-04A3-2+B063+F278	Yes	No	813	ACS355-03U-04A7-2+B063+F278	Yes	Yes	1,193	
1,5								ACS355-03U-05A7-2+B063	No	Yes	953	
1,5								ACS355-03U-05A7-2+B063+F278	Yes	Yes	1,259	
2	VS1MX22-4	No	No					ACS355-03U-07A5-2+B063	No	Yes	1,017	
2	VS1MX22-4D	Yes	No					ACS355-03U-07A5-2+B063+F278	Yes	Yes	1,342	
2	VS1MX22-4T	No	Yes	ACS250-03U-07A0-2+B063	No	Yes	824	ACS355-03U-07A5-2+B063	No	Yes	1,017	
2	VS1MX22-4TD	Yes	Yes	ACS250-03U-07A0-2+B063+F278	Yes	Yes	974	ACS355-03U-07A5-2+B063+F278	Yes	Yes	1,342	
3	VS1MX23-4T	No	Yes	ACS250-03U-10A5-2+B063	No	Yes	950	ACS355-03U-09A8-2+B063	No	Yes	1,106	
3	VS1MX23-4TD	Yes	Yes	ACS250-03U-10A5-2+B063+F278	Yes	Yes	1,122	ACS355-03U-09A8-2+B063+F278	Yes	Yes	1,460	
5	VS1MX25-4T	No	Yes	ACS250-03U-18A0-2+B063	No	Yes	1,353	ACS355-03U-17A6-2+B063	No	Yes	1,460	
5	VS1MX25-4TD	Yes	Yes	ACS250-03U-18A0-2+B063+F278	Yes	Yes	1,500	ACS355-03U-17A6-2+B063+F278	Yes	Yes	1,927	
460V, 50/60 Hz, 3-Phase Input / 460V, 3-Phase Output												
NEMA 4X/12**				ACS250 - IP66 / NEMA 4X**				ACS355 - IP66 / UL Type 4X**				
Hp	Catalog Number	Disc*	Braking	Catalog Number	Disc*	Braking	List Price	Catalog Number	Disc*	Braking	List Price <sup>2</sup>	
0,5								ACS355-03U-01A2-4+B063	No	Yes	718	
0,5								ACS355-03U-01A2-4+B063+F278	Yes	Yes	898	
0,75								ACS355-03U-01A9-4+B063	No	Yes	733	
0,75								ACS355-03U-01A9-4+B063+F278	Yes	Yes	916	
1	VS1MX41-4	No	No	ACS250-03U-02A2-4+B063	No	No	777	ACS355-03U-02A4-4+B063	No	Yes	786	
1	VS1MX41-4D	Yes	No	ACS250-03U-02A2-4+B063+F278	Yes	No	896	ACS355-03U-02A4-4+B063+F278	Yes	Yes	982	
2	VS1MX42-4	No	No	ACS250-03U-04A1-4+B063	No	No	911	ACS355-03U-04A1-4+B063	No	Yes	900	
2	VS1MX42-4D	Yes	No	ACS250-03U-04A1-4+B063+F278	Yes	No	1,040	ACS355-03U-04A1-4+B063+F278	Yes	Yes	1,125	
2	VS1MX42-4T	No	Yes					ACS355-03U-04A1-4+B063	No	Yes	900	
2	VS1MX42-4TD	Yes	Yes					ACS355-03U-04A1-4+B063+F278	Yes	Yes	1,125	
3	VS1MX43-4T	No	Yes	ACS250-03U-05A8-4+B063	No	Yes	1,027	ACS355-03U-05A6-4+B063	No	Yes	975	
3	VS1MX43-4TD	Yes	Yes	ACS250-03U-05A8-4+B063+F278	Yes	Yes	1,175	ACS355-03U-05A6-4+B063+F278	Yes	Yes	1,219	
5	VS1MX45-4T	No	Yes	ACS250-03U-09A5-4+B063	No	Yes	1,275	ACS355-03U-08A8-4+B063	No	Yes	1,180	
5	VS1MX45-4TD	Yes	Yes	ACS250-03U-09A5-4+B063+F278	Yes	Yes	1,411	ACS355-03U-08A8-4+B063+F278	Yes	Yes	1,475	
7,5	VS1MX47-4T	No	Yes	ACS250-03U-14A0-4+B063	No	Yes	1,646	ACS355-03U-12A5-4+B063	No	Yes	1,479	
7,5	VS1MX47-4TD	Yes	Yes	ACS250-03U-14A0-4+B063+F278	Yes	Yes	1,765	ACS355-03U-12A5-4+B063+F278	Yes	Yes	1,849	
10	VS1MX410-4T	No	Yes	ACS250-03U-18A0-4+B063	No	Yes	1,952	ACS355-03U-15A6-4+B063	No	Yes	1,802	
10	VS1MX410-4TD	Yes	Yes	ACS250-03U-18A0-4+B063+F278	Yes	Yes	2,118	ACS355-03U-15A6-4+B063+F278	Yes	Yes	2,253	

\* Disconnect models include speed potentiometer and F-O-R switch

\*\* Indoor applications

1 = This simplified cross reference is provided as a guideline comparing only the HP rating and braking capabilities. A thorough review of the application and parameters required is suggested before selecting a drive.

2 = Control panel not included in price, ordered as a separate item



## Cross Reference - NEMA12 Enclosure Micro Drives<sup>1</sup>

115V, 50/60 Hz, 1-Phase Input / 230V, 3-Phase Output												
NEMA 12				ACS250 - NEMA 4X/12**								
Hp	Catalog Number	Disc*	Braking	Catalog Number	Disc*	Braking	List Price					
0,5	VS1MX10P5-2	No	No	ACS250-01U-02A3-1+B063	No	No	757					
0,5	VS1MX10P5-2D	Yes	No	ACS250-01U-02A3-1+B063+F278	Yes	No	936					
1	VS1MX11-2	No	No	ACS250-01U-04A3-1+B063	No	No	836					
1	VS1MX11-2D	Yes	No	ACS250-01U-04A3-1+B063+F278	Yes	No	1,010					
1,5	VS1MX11P5-2T	No	Yes	ACS250-01U-05A8-1+B063	No	Yes	1,018					
1,5	VS1MX11P5-2TD	Yes	Yes	ACS250-01U-05A8-1+B063+F278	Yes	Yes	1,151					
230V, 50/60 Hz, 1-Phase Input / 230V, 3-Phase Output												
NEMA 12				ACB530 (Derated 3-Ph) - NEMA 12					ACS355 (Derated 3-Ph) - IP66 / UL Type 4X**			
Hp	Catalog Number	Disc*	Braking	Catalog Number	Disc*	Braking	List Price	Catalog Number	Disc*	Braking	List Price <sup>2</sup>	
0,5	VS1MX80P5-2	No	No	ACB530-U1-07A5-2+B055	No	Yes	1,075	ACS355-03U-06A7-2+B063	No	Yes	953	
0,5	VS1MX80P5-2D	Yes	No					ACS355-03U-06A7-2+B063+F278	Yes	Yes	1,259	
0,75				ACB530-U1-07A5-2+B055	No	Yes	1,075	ACS355-03U-09A8-2+B063	No	Yes	1,106	
0,75								ACS355-03U-09A8-2+B063	No	Yes	1,106	
1	VS1MX81-2	No	No	ACB530-U1-012A-2+B055	No	Yes	1,100	ACS355-03U-17A6-2+B063	No	Yes	1,460	
1	VS1MX81-2D	Yes	No					ACS355-03U-17A6-2+B063+F278	Yes	Yes	1,927	
2	VS1MX82-2	No	No	ACB530-U1-017A-2+B055	No	Yes	1,300	ACS355-03U-17A6-2+B063	No	Yes	1,460	
2	VS1MX82-2D	Yes	No					ACS355-03U-17A6-2+B063+F278	Yes	Yes	1,927	
2	VS1MX82-2T	No	Yes	ACB530-U1-017A-2+B055	No	Yes	1,300	ACS355-03U-17A6-2+B063	No	Yes	1,460	
2	VS1MX82-2TD	Yes	Yes					ACS355-03U-17A6-2+B063+F278	Yes	Yes	1,927	
3	VS1MX83-2T	No	Yes	ACB530-U1-024A-2+B055	No	Yes	2,412					
3	VS1MX83-2TD	Yes	Yes									
230V, 50/60 Hz, 3-Phase Input / 230V, 3-Phase Output												
NEMA 12				ACB530 - NEMA 12					ACS355 - IP66 / UL Type 4X**			
Hp	Catalog Number	Disc*	Braking	Catalog Number	Disc*	Braking	List Price	Catalog Number	Disc*	Braking	List Price <sup>2</sup>	
0,5	VS1MX20P5-2	No	Yes					ACS355-03U-02A4-2+B063	No	Yes	750	
0,5	VS1MX20P5-2D	Yes	Yes					ACS355-03U-03A5-2+B063+F278	Yes	Yes	1,120	
0,75								ACS355-03U-03A5-2+B063	No	Yes	849	
0,75								ACS355-03U-03A5-2+B063+F278	Yes	Yes	1,120	
1	VS1MX21-2	No	No	ACB530-U1-07A5-2+B055	No	Yes	1,075	ACS355-03U-04A7-2+B063	No	Yes	904	
1	VS1MX21-2D	Yes	No					ACS355-03U-04A7-2+B063+F278	Yes	Yes	1,193	
2	VS1MX22-2	No	Yes	ACB530-U1-07A5-2+B055	No	Yes	1,075	ACS355-03U-07A5-2+B063	No	Yes	1,017	
2	VS1MX22-2D	Yes	Yes					ACS355-03U-07A5-2+B063+F278	Yes	Yes	1,342	
2	VS1MX22-2T	No	Yes	ACB530-U1-07A5-2+B055	No	Yes	1,075	ACS355-03U-07A5-2+B063	No	Yes	1,017	
2	VS1MX22-2TD	Yes	Yes					ACS355-03U-07A5-2+B063+F278	Yes	Yes	1,342	
3	VS1MX23-2T	No	Yes	ACB530-U1-012A-2+B055	No	Yes	1,100	ACS355-03U-09A8-2+B063	No	Yes	1,106	
3	VS1MX23-2TD	Yes	Yes					ACS355-03U-09A8-2+B063	Yes	Yes	1,460	
460V, 50/60 Hz, 3-Phase Input / 460V, 3-Phase Output												
NEMA 12				ACB530 - NEMA 12					ACS355 - IP66 / UL Type 4X**			
Hp	Catalog Number	Disc*	Braking	Catalog Number	Disc*	Braking	List Price	Catalog Number	Disc*	Braking	List Price <sup>2</sup>	
1	VS1MX41-2	No	No	ACB530-U1-04A1-4+B055	No	Yes	1,216	ACS355-03U-02A4-4+B063	No	Yes	786	
1	VS1MX41-2D	Yes	No					ACS355-03U-02A4-4+B063+F278	Yes	Yes	982	
2	VS1MX42-2	No	No	ACB530-U1-04A1-4+B055	No	Yes	1,216	ACS355-03U-04A1-4+B063	No	Yes	900	
2	VS1MX42-2D	Yes	No					ACS355-03U-04A1-4+B063+F278	Yes	Yes	1,125	
2	VS1MX42-2T	No	Yes	ACB530-U1-04A1-4+B055	No	Yes	1,216	ACS355-03U-04A1-4+B063	No	Yes	900	
2	VS1MX42-2TD	Yes	Yes					ACS355-03U-04A1-4+B063+F278	Yes	Yes	1,125	
3	VS1MX43-2T	No	Yes	ACB530-U1-06A9-4+B055	No	Yes	1,351	ACS355-03U-05A6-4+B063	No	Yes	975	
3	VS1MX43-2TD	Yes	Yes					ACS355-03U-05A6-4+B063+F278	Yes	Yes	1,219	
5	VS1MX45-2T	No	Yes	ACB530-U1-08A8-4+B055	No	Yes	1,637	ACS355-03U-08A8-4+B063	No	Yes	1,180	
5	VS1MX45-2TD	Yes	Yes					ACS355-03U-08A8-4+B063+F278	Yes	Yes	1,475	
600V, 50/60Hz, 3-Phase Input & Output												
NEMA 12				ACB530 - NEMA 12					NEMA 4X/12**			
Hp	Catalog Number	Disc*	Braking	Catalog Number	Disc*	Braking	List Price	Catalog Number	Disc*	Braking	List Price <sup>2</sup>	
1	VSTMXS51-2T	No	Yes					ACS250-03U-02A1-6+B063	No	Yes	1,285	
1	VSTMXS51-2TD	Yes	Yes					ACS250-03U-02A1-6+B063+F278	Yes	Yes	1,462	
2	VSTMXS52-2T	No	Yes	ACB530-U1-02A7-6+B055	No	Yes	1,362	ACS250-03U-03A1-6+B063	No	Yes	1,484	
2	VSTMXS52-2TD	Yes	Yes					ACS250-03U-03A1-6+B063+F278	Yes	Yes	1,649	
3	VSTMXS53-2T	No	Yes	ACB530-U1-03A9-6+B055	No	Yes	1,651	ACS250-03U-04A1-6+B063	No	Yes	1,697	
3	VSTMXS53-2TD	Yes	Yes					ACS250-03U-04A1-6+B063+F278	Yes	Yes	1,849	
5	VSTMXS55-2T	No	Yes	ACB530-U1-06A1-6+B055	No	Yes	1,801	ACS250-03U-06A5-6+B063	No	Yes	1,946	
5	VSTMXS55-2TD	Yes	Yes					ACS250-03U-06A5-6+B063+F278	Yes	Yes	2,082	
7,5	VSTMXS57-2T	No	Yes	ACB530-U1-09A0-6+B055	No	Yes	1,952	ACS250-03U-09A0-6+B063	No	Yes	2,455	
7,5	VSTMXS57-2TD	Yes	Yes					ACS250-03U-09A0-6+B063+F278	Yes	Yes	2,559	
10	None							ACS250-03U-12A0-6+B063	No	Yes	2,925	
10	None							ACS250-03U-12A0-6+B063+F278	Yes	Yes	3,096	
15	None							ACS250-03U-17A0-6+B063	No	Yes	4,297	
15	None							ACS250-03U-17A0-6+B063+F278	Yes	Yes	4,424	

\* Disconnect models include speed potentiometer and F-O-R switch

\*\* Indoor applications

1 = This simplified cross reference is provided as a guideline comparing only the HP rating and braking capabilities. A thorough review of the application and parameters required is suggested before selecting a drive.

2 = Control panel not included in price, ordered as a separate item

## Drives Cross Reference

VS1 Part Number	Crossover Part Number	List Price	RE Part Number	Crossover Part Number	List Price
<b>VS1SM</b>	<b>ACS355</b>		<b>VS1PFS</b>	<b>ACB530</b>	
VS1SM80P5-F	ACS355-01U-02A4-2 (1)	319	<b>VS1PF 230V</b>	<b>ACB530 230V</b>	
VS1SM81-F	ACS355-01U-04A7-2 (1)	362	VS1PFS250-9	ACB530-U1-143A-2	7,296
VS1SM82-F	ACS355-01U-07A5-2 (1)	448	VS1PFS260-9	ACB530-U1-178A-2	9,268
VS1SM83-F	ACS355-01U-09A8-2 (1)	540	VS1PFS275-9	ACB530-U1-221A-2	11,774
VS1SM80P5	ACS355-01U-02A4-2	319	<b>VS1SP</b>	<b>ACB530</b>	
VS1SM81	ACS355-01U-04A7-2	362	<b>VS1SP 230V</b>	<b>ACB530 230V</b>	
VS1SM82	ACS355-01U-07A5-2	448	VS1SP21-1B	ACB530-U1-07A5-2	1,075
VS1SM83	ACS355-01U-09A8-2	540	VS1SP22-1B	ACB530-U1-012A-2	1,100
<b>RE Part Number</b>	<b>Crossover Part Number</b>	<b>List Price</b>	<b>VS1SP23-1B</b>	ACB530-U1-017A-2	1,300
<b>VS1MD</b>	<b>ACS355</b>		VS1SP25-1B	ACB530-U1-024A-2	1,675
<b>VS1MD 230V</b>	<b>ACS355 230V</b>		VS1SP27-1B	ACB530-U1-031A-2	2,100
VS1MD20P5	ACS355-03U-02A4-2	319	VS1SP210-1B	ACB530-U1-046A-2	2,580
VS1MD21	ACS355-03U-04A7-2	362	VS1SP215-1B	ACB530-U1-059A-2	3,287
VS1MD22	ACS355-03U-07A5-2	448	VS1SP220-1B	ACB530-U1-075A-2	4,136
VS1MD23	ACS355-03U-09A8-2	540	VS1SP225-1B	ACB530-U1-088A-2	5,000
VS1MD25	ACS355-03U-17A6-2	669	VS1SP230-1B	ACB530-U1-114A-2	6,114
VS1MD27	ACS355-03U-24A4-2	873	VS1SP240-1B	ACB530-U1-143A-2	7,296
VS1MD210	ACS355-03U-31A0-2	1,152	VS1SP250-1B	ACB530-U1-178A-2	9,268
VS1MD215	ACS355-03U-46A2-2	1,523	VS1SP260-1B	ACB530-U1-221A-2	11,774
<b>VS1MD 460V</b>	<b>ACS355 460V</b>		<b>VS1SP 460V</b>	<b>ACB530 460V</b>	
VS1MD40P5	ACS355-03U-01A2-4	380	VS1SP41-1B	ACB530-U1-04A1-4	1,216
VS1MD41	ACS355-03U-02A4-4	458	VS1SP42-1B	ACB530-U1-06A9-4	1,351
VS1MD42	ACS355-03U-04A1-4	529	VS1SP43-1B	ACB530-U1-08A8-4	1,637
VS1MD43	ACS355-03U-05A6-4	641	VS1SP45-1B	ACB530-U1-012A-4	1,776
VS1MD45	ACS355-03U-08A8-4	761	VS1SP47-1B	ACB530-U1-015A-4	2,249
VS1MD47	ACS355-03U-12A5-4	935	VS1SP410-1B	ACB530-U1-023A-4	2,466
VS1MD410	ACS355-03U-15A6-4	1,154	VS1SP415-1B	ACB530-U1-031A-4	2,761
VS1MD415	ACS355-03U-23A1-4	1,475	VS1SP420-1B	ACB530-U1-038A-4	3,353
VS1MD420	ACS355-03U-31A0-4	1,800	VS1SP425-1B	ACB530-U1-045A-4	4,142
VS1MD425	ACS355-03U-38A0-4	2,142	VS1SP430-1B	ACB530-U1-059A-4	4,930
VS1MD430	ACS355-03U-44A0-4	2,602	VS1SP440-1B	ACB530-U1-072A-4	5,719
<b>VS1PF</b>	<b>ACB530</b>		VS1SP450-1B	ACB530-U1-078A-4	7,100
<b>VS1PF 230V</b>	<b>ACB530 230V</b>		VS1SP460-1B	ACB530-U1-097A-4	9,266
VS1PF215-1	ACB530-U1-046A-2	2,580	VS1SP475-1B	ACB530-U1-125A-4	10,748
VS1PF220-9	ACB530-U1-059A-2	3,287	VS1SP4100-1B	ACB530-U1-157A-4	12,424
VS1PF225-9	ACB530-U1-075A-2	4,136	VS1SP4125-1B	ACB530-U1-180A-4	13,311
VS1PF230-9	ACB530-U1-088A-2	5,000	VS1SP4150-1	ACB530-U1-246A-4	17,164
VS1PF240-9	ACB530-U1-114A-2	6,114	VS1SP4200-1	ACB530-PC-316A-4	23,686
<b>VS1PF 460V</b>	<b>ACB530 460V</b>		VS1SP4250-1	ACB530-PC-368A-4	36,417
VS1PF47-1	ACB530-U1-012A-4	1,776	VS1SP4300-1	ACB530-PC-414A-4	41,085
VS1PF410-1	ACB530-U1-015A-4	2,249	VS1SP4350-1	ACB530-PC-486A-4	48,313
VS1PF415-1	ACB530-U1-023A-4	2,466	<b>VSSP 575V</b>	<b>ACB530 575V</b>	
VS1PF420-9	ACB530-U1-031A-4	2,761	VS1SP51-1B	ACB530-U1-02A7-6	1,362
VS1PF420-9L	ACB530-U1-031A-4	2,761	VS1SP52-1B	ACB530-U1-03A9-6	1,651
VS1PF425-9	ACB530-U1-038A-4	3,353	VS1SP53-1B	ACB530-U1-06A1-6	1,801
VS1PF425-9L	ACB530-U1-038A-4	3,353	VS1SP55-1B	ACB530-U1-09A0-6	1,952
VS1PF430-9	ACB530-U1-045A-4	4,142	VS1SP57-1B	ACB530-U1-011A-6	2,473
VS1PF430-9L	ACB530-U1-045A-4	4,142	VS1SP510-1B	ACB530-U1-017A-6	2,713
VS1PF440-9	ACB530-U1-059A-4	4,930	VS1SP515-1B	ACB530-U1-022A-6	3,471
VS1PF440-9L	ACB530-U1-059A-4	4,930	VS1SP520-1B	ACB530-U1-027A-6	4,123
VS1PF450-9	ACB530-U1-072A-4	5,719	VS1SP525-1B	ACB530-U1-032A-6	5,098
VS1PF450-9L	ACB530-U1-072A-4	5,719	VS1SP530-1B	ACB530-U1-041A-6	6,182
VS1PF460-9	ACB530-U1-078A-4	7,100	VS1SP540-1B	ACB530-U1-052A-6	7,592
VS1PF460-9L	ACB530-U1-078A-4	7,100	VS1SP550-1B	ACB530-U1-062A-6	9,111
VS1PF475-9	ACB530-U1-097A-4	9,266	VS1SP560-1B	ACB530-U1-077A-6	10,195
VS1PF475-9L	ACB530-U1-097A-4	9,266	VS1SP575-1B	ACB530-U1-099A-6	11,822
VS1PF4100-9	ACB530-U1-125A-4	10,748	VS1SP5100-1B	ACB530-U1-125A-6	15,185
VS1PF4100-9L	ACB530-U1-125A-4	10,748	VS1SP5125-1B	ACB530-U1-144A-6	16,269
VS1PF4125-9	ACB530-U1-157A-4	12,424	VS1SP57-1B	ACB530-U1-011A-6	2,473
VS1PF4125-9L	ACB530-U1-157A-4	12,424	VS1SP510-1B	ACB530-U1-017A-6	2,713
VS1PF4150-9L	ACB530-U1-180A-4	13,311			
VS1PF4200-9L	ACB530-U1-246A-4	17,164			
VS1PF4250-9L	ACB530-PC-316A-4	23,686			
VS1PF4300-9L	ACB530-PC-368A-4	36,417			
VS1PF4350-9L	ACB530-PC-414A-4	41,085			
VS1PF4400-9L	ACB530-PC-486A-4	48,313			
<b>VS1PF 575V</b>	<b>ACB530 575V</b>				
VS1PF57-1	ACB530-U1-09A0-6	1,952			
VS1PF510-1	ACB530-U1-011A-6	2,473			
VS1PF515-1	ACB530-U1-017A-6	2,713			

## Drives Cross Reference Cont.

RE Part Number	Crossover Part Number	List Price	RE Part Number	Crossover Part Number	List Price
VS1PF420-9	ACB530-U1-022A-6	3,471	VS1SP515-1B	ACB530-U1-022A-6	3,471
VS1PF425-9	ACB530-U1-027A-6	4,123	VS1SP520-1B	ACB530-U1-027A-6	4,123
VS1PF530-9	ACB530-U1-032A-6	5,098	VS1SP525-1B	ACB530-U1-032A-6	5,098
VS1PF540-9	ACB530-U1-041A-6	6,182	VS1SP530-1B	ACB530-U1-041A-6	6,182
VS1PF550-9	ACB530-U1-052A-6	7,592	VS1SP540-1B	ACB530-U1-052A-6	7,592
VS1PF560-9	ACB530-U1-062A-6	9,111	VS1SP550-1B	ACB530-U1-062A-6	9,111
VS1PF575-9	ACB530-U1-077A-6	10,195	VS1SP560-1B	ACB530-U1-077A-6	10,195
VS1PF5100-9	ACB530-U1-099A-6	11,822	VS1SP575-1B	ACB530-U1-099A-6	11,822
VS1PF5125-9	ACB530-U1-125A-6	15,185	VS1SP5100-1B	ACB530-U1-125A-6	15,185
VS1PF5150-9L	ACB530-U1-144A-6	16,269	VS1SP5125-1B	ACB530-U1-144A-6	16,269

### Inverter Drives 230 Volts - Three Phase NEMA 1 Enclosure

Voltage	Heavy Duty HP	Series 15H Catalog Number	ACB530 Catalog Number	ACB List Price
230	1	ID15H201-E	ACB530-U1-07A5-2	1,075
230	2	ID15H202-E	ACB530-U1-012A-2	1,100
230	3	ID15H203-E	ACB530-U1-017A-2	1,300
230	5	ID15H205-E	ACB530-U1-024A-2	1,675
230	7,5	ID15H207-E	ACB530-U1-031A-2	2,100
230	10	ID15H210-E	ACB530-U1-046A-2	2,580
230	15	ID15H215-E	ACB530-U1-059A-2	3,287
230	20	ID15H220-EO	ACB530-U1-075A-2	4,136
230	25	ID15H225-EO	ACB530-U1-088A-2	5,000
230	30	ID15H230-EO	ACB530-U1-114A-2	6,114
230	40	ID15H240-MO	ACB530-U1-143A-2	7,296
230	50	ID15H250-MO	ACB530-U1-178A-2	9,268
230	60		ACB530-U1-221A-2	11,774

### Inverter Drives 460 Volts - Three Phase NEMA 1 Enclosure

460	1	ID15H401-E	ACB530-U1-04A1-4	1,216
460	2	ID15H402-E	ACB530-U1-06A9-4	1,351
460	3	ID15H403-E	ACB530-U1-08A8-4	1,637
460	5	ID15H405-E	ACB530-U1-012A-4	1,776
460	7,5	ID15H407-E	ACB530-U1-015A-4	2,249
460	10	ID15H410-E	ACB530-U1-023A-4	2,466
460	15	ID15H415-E	ACB530-U1-031A-4	2,761
460	20	ID15H420-EO	ACB530-U1-038A-4	3,353
460	25	ID15H425-EO	ACB530-U1-045A-4	4,142
460	30	ID15H430-EO	ACB530-U1-059A-4	4,930
460	40	ID15H440-EO	ACB530-U1-072A-4	5,719
460	50	ID15H450-EO	ACB530-U1-078A-4	7,100
460	60	ID15H460-EO	ACB530-U1-097A-4	9,266
460	75	ID15H475-EO	ACB530-U1-125A-4	10,748
460	100	ID15H4100-EO	ACB530-U1-157A-4	12,424
460	125	ID15H4125-EO	ACB530-U1-180A-4	13,311
460	150	ID15H4150-EO	ACB530-U1-246A-4	17,164
460	200	ID15H4200-EO	ACB530-PC-316A-4	23,686
460	250	ID15H4250-EO	ACB530-PC-368A-4	36,417
460	300	ID15H4300-EO	ACB530-PC-414A-4	41,085
460	350	ID15H4350-EO	ACB530-PC-486A-4	48,313

### Inverter Drives 575 Volts - Three Phase NEMA 1 Enclosure

575	1	ID15H501-E	ACB530-U1-02A7-6	1,362
575	2	ID15H502-E	ACB530-U1-03A9-6	1,651
575	3	ID15H503-E	ACB530-U1-06A1-6	1,801
575	5	ID15H505-E	ACB530-U1-09A0-6	1,952
575	7,5	ID15H507-E	ACB530-U1-011A-6	2,473
575	10	ID15H510-E	ACB530-U1-017A-6	2,713
575	15	ID15H515-E	ACB530-U1-022A-6	3,471
575	20	ID15H520-EO	ACB530-U1-027A-6	4,123
575	25	ID15H525-EO	ACB530-U1-032A-6	5,098
575	30	ID15H530-EO	ACB530-U1-041A-6	6,182
575	40	ID15H540-EO	ACB530-U1-052A-6	7,592
575	50	ID15H550-EO	ACB530-U1-062A-6	9,111
575	60	ID15H560-EO	ACB530-U1-077A-6	10,195
575	75	ID15H575-EO	ACB530-U1-099A-6	11,822
575	100	ID15H5100-EO	ACB530-U1-125A-6	15,185
575	125		ACB530-U1-144A-6	16,269

## Drives Cross Reference Cont.

<b>Inverter Drives 230 Volts - Three Phase NEMA 1 Enclosure</b>				
<b>Voltage</b>	<b>Heavy Duty HP</b>	<b>Series H2 Inverter Catalog Number</b>	<b>ACB530 Catalog Number</b>	<b>ACB List Price</b>
230	1	IHH201-E	ACB530-U1-07A5-2	1,075
230	2	IHH202-E	ACB530-U1-012A-2	1,100
230	3	IHH203-E	ACB530-U1-017A-2	1,300
230	5	IHH205-E	ACB530-U1-024A-2	1,675
230	7.5	IHH207-E	ACB530-U1-031A-2	2,100
230	10	IHH210-E	ACB530-U1-046A-2	2,580
230	15	IHH215-E	ACB530-U1-059A-2	3,287
230	20	IHH220-E	ACB530-U1-075A-2	4,136
230	25	IHH225-E	ACB530-U1-088A-2	5,000
230	30	IHH230-E	ACB530-U1-114A-2	6,114
230	40	IHH240-E	ACB530-U1-143A-2	7,296
230	50	IHH250-E	ACB530-U1-178A-2	9,268
230	60	IHH260-E	ACB530-U1-221A-2	11,774
<b>Inverter Drives 460 Volts - Three Phase NEMA 1 Enclosure</b>				
460	1	IHH401-E	ACB530-U1-04A1-4	1,216
460	2	IHH402-E	ACB530-U1-06A9-4	1,351
460	3	IHH403-E	ACB530-U1-08A8-4	1,637
460	5	IHH405-E	ACB530-U1-012A-4	1,776
460	7.5	IHH407-E	ACB530-U1-015A-4	2,249
460	10	IHH410-E	ACB530-U1-023A-4	2,466
460	15	IHH415-E	ACB530-U1-031A-4	2,761
460	20	IHH420-E	ACB530-U1-038A-4	3,353
460	25	IHH425-E	ACB530-U1-045A-4	4,142
460	30	IHH430-E	ACB530-U1-059A-4	4,930
460	40	IHH440-E	ACB530-U1-072A-4	5,719
460	50	IHH450-E	ACB530-U1-078A-4	7,100
460	60	IHH460-E	ACB530-U1-097A-4	9,266
460	75	IHH475-E	ACB530-U1-125A-4	10,748
460	100	IHH4100-E	ACB530-U1-157A-4	12,424
460	125	IHH4125-E	ACB530-U1-180A-4	13,311
<b>Inverter Drives 575 Volts - Three Phase NEMA 1 Enclosure</b>				
575	1	IHH501-E	ACB530-U1-02A7-6	1,362
575	2	IHH502-E	ACB530-U1-03A9-6	1,651
575	3	IHH503-E	ACB530-U1-06A1-6	1,801
575	5	IHH505-E	ACB530-U1-09A0-6	1,952
575	7.5	IHH507-E	ACB530-U1-011A-6	2,473
575	10	IHH510-E	ACB530-U1-017A-6	2,713
575	15	IHH515-E	ACB530-U1-022A-6	3,471
575	20	IHH520-E	ACB530-U1-027A-6	4,123
575	25	IHH525-E	ACB530-U1-032A-6	5,098
575	30	IHH530-E	ACB530-U1-041A-6	6,182
575	40	IHH540-E	ACB530-U1-052A-6	7,592
575	50	IHH550-E	ACB530-U1-062A-6	9,111
575	60	IHH560-E	ACB530-U1-077A-6	10,195
575	75	IHH575-E	ACB530-U1-099A-6	11,822
575	100	IHH5100-E	ACB530-U1-125A-6	15,185
575	125	IHH5125-E	ACB530-U1-144A-6	16,269

## Glossary of Terms

**AC (Alternating Current)** – The commonly available electric power supplied by an AC generator and is distributed in single- or three-phase forms. AC current changes its flow (current).

**AC Motor** – A motor operating on AC current that flows in either direction. There are multiple types: Induction, synchronous, permanent magnet and synchronous reluctance.

**Accelerating Torque** – An increase in torque (force) generated by a motor in order to achieve running speed.

**Adjustable Speed** – The concept of varying the speed of a motor, either manually or automatically.

**Adjustable Speed Drive (Electrical)** – The adjustable speed drive is comprised of the motor, drive controller, and operator's controls (either manual or automatic). See also Inverter.

**Altitude** – The atmospheric altitude (height above sea level) at which the motor or drive will be operating.

**Ambient Temperature** – The temperature of the surrounding cooling medium, such as gas or liquid, which comes into contact with the heated parts of the motor or drive.

**Ampere** – The rate of flow of charge in a conductor of one coulomb per second.

**Armature** – The moving part of a magnetic circuit, such as the rotating part of a motor or generator.

**Base Frequency** – The motor nameplate frequency rating.

**Base Speed** – The manufacturer's nameplate rating at which point the motor will develop rated horsepower at rated load and voltage. With DC drives, it is commonly the point where full armature voltage is applied with full-rated field excitation. With AC drives, it is commonly the point where 60 Hz is applied to the induction motor.

**BAUD** – A unit of signaling speed, equal to the number of discrete conditions or signal events per second. Where one bit is encoded on each signaling event, the number of baud is the same as the number of bits.

**Braking** – A method of stopping or reducing the time required to stop an AC or DC motor, accomplished in several ways:

**DC-injection braking (AC drives)** – A method which produces electromagnetic braking forces in the motor by removing two AC motors (stator) phases and injecting DC current. The result is a linear braking characteristic (ramp) that does not diminish with motor speed. Application is normally limited to 10 - 20% of rated motor speed due to increased heating in the rotor.

**Dynamic Braking (AC drives) - DB** – A method which produces electromagnetic braking forces in the motor by dissipating generated power into the DC bus through a resistive load. Braking force remains constant and is only limited by the thermal capacity of the resistors. The result is a linear braking characteristic (ramp) that does not diminish with motor speed.

**Dynamic Braking (DC drives) - DB** – A method which produces electromagnetic braking forces in the motor by dissipating generated power from armature / shunt field reaction into a resistive load. Braking force is determined by the field strength, armature voltage, and thermal capacity of the resistors. The result is a logarithmic braking characteristic (curve) that diminishes with motor speed.

**Regenerative Braking** – The technique of slowing or stopping a drive by regeneration.

**Braking Torque** – The torque required to bring a motor down to a standstill. The term is also used to describe the torque developed by a motor during dynamic braking conditions.

**Breakaway Torque** – The torque required to start a machine from standstill. It is always greater than the torque needed to maintain motion.

**Cascade Drive System** – Two or more drives connected to a master speed setting potentiometer.

**Capacitor** – A device which, when connected in an alternating-current circuit, causes the current to lead the voltage in time phase. The peak of the current wave is reached ahead of the peak of the voltage wave.

**CE** – This designation shows that a product such as a drive or motor meets European Standards for safety and environmental protection. A CE mark is required for products used in most European countries.

**Chassis** – A hardware assembly that houses devices such as I/O modules, adapter modules, processor modules, and power supplies.

**Configurable** – Input parameter whose values can only be modified while the drive is stopped (not running or jogging).

**ControlNet** – An open producer/consumer communication network with features such as redundant media and deterministic I/O timing, designed for high-performance or time-critical requirements.

**Current** – The time rate of flow of electrical charge. Current is measured in amps (amperes).

**Current Feedback** – A current signal used by the regulator to control the operating current of the drive.

**DC (Direct Current)** – A current that flows only in one direction in an electric circuit. It may be continuous or discontinuous and it may be constant or varying.

**DC Bus** – A drive's power structure that transmits rectified AC line power from the bridge rectifier to the output transistors.

**DC Motor** – A motor using either generated or rectified DC power. A DC motor is usually used when variable speed operation is required.

**Decelerating Torque** – The torque (force) generated by the decrease in motor and load kinetic energy which the motor and load requires to reach its final (slower) speed condition.

**Default Value** – Parameter values that are stored in the drive's read-only memory (ROM).

**Device** – A module or product.

**DeviceNet** – A producer/consumer Control Area Network (CAN) that connects controllers and devices such as drives.

**Diode** – A solid-state, unidirectional conductor.

**Drive Controller** – An electronic device that can control the speed, torque horsepower, and direction of an AC or DC motor. Also called Variable Speed Drive.

**Dynamic Braking** – See Braking.

**Efficiency** – The ratio of mechanical output to electrical input. It represents the effectiveness with which the motor converts electrical energy to mechanical energy.

**EIA** – Electronics Industries Association. An American agency that sets electrical / electronic standards.

**Electrostatic Discharge (ESD)** – A static-electricity discharge that may damage drive components. Follow appropriate precautions to guard against damage to drive components.

**EMF** – Electromotive Force, another term for voltage or potential difference. In DC adjustable speed drives, voltage applied to the motor armature from a power supply is the emf and the voltage generated by the motor is the counter-emf or cemf.

**EMI** – Electromagnetic Interference. Any electromagnetic disturbance that interrupts, obstructs, or otherwise impairs the performance of electronic equipment.

**Enclosure** – The housing or frame of the drive.

**Ethernet/IP** – An open producer-consumer communication network based on the Ethernet standard (IEEE 802.3), TCP/IP, UDP/IP, and CIP.

**Fault** – Any malfunction that interferes with normal system operation.

**Field** – A term commonly used to describe the stationary (stator) member of a DC motor. The field provides the magnetic field with which the mechanically rotating (armature or rotor) member interacts.

**Firmware** – Logic stored in read-only memory.

**Flash Update** – The process of updating firmware in a device.

**Flux** – The magnetic field which is established around an energized conductor or permanent magnet. The field is represented by flux lines creating a flux pattern between opposite poles. The density of the flux lines is a measure of the strength of the magnetic field.

**Force** – The tendency to change the motion of an object with an exertion of energy from a separate source. Force is measured in pound-feet, ounce-inches, Newton-meters, or gram-centimeters.

**Frame** – The supporting structure of the drive. The frame also determines mounting dimensions.

**Frequency** – The rate at which alternating current makes a complete cycle of reversals. It is expressed in cycles per second. In the U.S., 60 cycles (Hz) is the standard while in other countries 50 Hz (cycles) is common. The frequency of the AC current will affect the speed of a motor.

**Frequency Setpoint** – The frequency value stored in memory (either by local or remote means) within a given frequency range of the drive's output voltage. This sets the speed of the motor.

**Gain** – The ratio of the magnitude of the output signal with respect to that of the input signal.

**GND Sense** – A current transducer that detects an unequal or imbalanced current in the three-phase AC line or DC bus of the drive. The imbalance indicates an output ground fault condition.

**Hertz (Hz)** – One cycle per second (as in 60 Hz which is 60 cycles per second).

**Horsepower** – The measure of the rate of work. One horsepower is equivalent to lifting 33,000 pounds to a height of one foot in one minute. The horsepower (HP) of a motor is expressed as a function of torque (T, measured in lb-ft) and RPM (revolutions per minute). For motors, you can approximate horsepower using this formula:  
$$HP = T \times (RPM/5250)$$

**Host** –

1. A central controlling computer in a network system.
2. Any device on a network system that provides a controlling function to another device on the network.
3. Any intelligent device for which another device is providing a communication interface to a network.

**Host Interface** – The communication interface to the host computer.

**Inductance** – The characteristic of an electric circuit by which varying current in it produces a varying magnetic field which causes voltages in the same circuit or in a nearby circuit.

**Inertia** – A measure of a body's resistance to changes in velocity, whether the body is at rest or moving at a constant velocity. The velocity can be either linear or rotational.

**Inertial Load** – A load (such as a flywheel or fan) that tends to cause the motor shaft to continue to rotate after power has been removed (stored kinetic energy). If this continued rotation cannot be tolerated, some mechanical or electrical braking means must be applied. This application might require a special motor due to the energy required to accelerate the inertia.

**Ingress Protection (IP) Rating** – The IP designation is a numeric rating used to specify the degree of environmental protection provided by an enclosure based on specific tests. The IP rating consists of two numbers, although a third number describing the degree of protection from mechanical impact can also be included but is commonly omitted. For example, IP 56. A higher number represents better protection.

**First Number** – The first number describes the degree of protection from solid objects and with respect to human access to hazardous parts.

- 0 - No protection.
- 1 - Protection against solid objects 50 mm in diameter or greater
- 2 - Protection against solid objects 12.5 mm in diameter or greater
- 3 - Protection against solid objects 2.5 mm in diameter or greater
- 4 - Protection against solid objects 1.0 mm in diameter or greater
- 5 - Dust protected (quantities of dust will not accumulate)
  - Dust tight

**Second Number** – The second number describes the degree of protection from liquids.

- 0 - No protection.
- 1 - Protection against vertically falling drops of water
- 2 - Protection against vertically falling drops of water when enclosure is tilted up to 15 degrees
- 3 - Protection against spraying water when the enclosure is tilted up to 60 degrees on the vertical
- 4 - Protection against splashing water from all directions
- 5 - Protection against water jets from all directions
- 6 - Protection against powerful water jets or heavy seas
- 7 - Protection against the effects of temporary immersion in water
- 8 - Protection against the effects of continuous submersion in water

**Instantaneous Electronic Trip (IET)** – A fault condition that occurs while the drive is running resulting in a motor coast-to-rest stop. The drive senses a condition that could result in equipment damage.

**Input Parameter** – A parameter whose value can be changed through the OIM.

**Input Power Factor** – The ratio of the input inverter AC effective power to the input AC apparent power.

- Inverter** –
1. An AC adjustable-frequency drive
  2. A particular section of an AC drive. This section uses the DC voltage from a previous circuit stage (intermediate DC circuit) to produce a pulse-width modulated or stepped AC current or voltage waveform that has characteristics similar to the desired sine-wave frequency.
  3. A circuit whose output signal is the inverse of its input.

**I/O** – Input(s) and/or Output(s)

**I/O Block** – An assembly containing a chassis, a power supply, an adapter, and I/O in a single integral package.

**I/O Channel** – A channel of a data transmission link between a processor scanner module and an I/O adapter module.

**I/O Chassis** – A chassis for I/O modules and either a processor to control the I/O modules, or an adapter to interface a scanner to the I/O modules.

**IR Compensation** – A way to compensate for the voltage drop across resistance of the AC or DC motor circuit and the resultant reduction in speed. This compensation also provides a way to improve the speed regulation characteristics of the motor, especially at low speeds. Drives that use a tachometer generator for speed feedback generally do not require an IR compensation circuit because the tachometer will inherently compensate for the loss in speed.

- Jogging** –
1. In a numerical control system, an operator manually generating motion (continuous or incrementally) by closing a switch.
  2. An operator generating motion incrementally by closing a switch.

- Joule** –
1. The work done by the force of 1 Newton acting through a distance of 1 meter.
  2. The energy required to transport 1 coulomb between two points having a potential difference of 1 volt.

**k** – An abbreviation used as a multiple for bits, bytes, or words denoting size of a block of data or memory. 1 k = 1024.

**Kilowatt (kW)** – Equals 1,000 watts and is used where larger units of power measurement are desired because the watt is a relatively small unit of power.

**Kinetic Energy** – The energy of motion of a moving body.

**Ladder Diagram** – An industry standard for representing relay control logic.

**LED** – Light Emitting Diode.

**LEM** – A hall-effect current transducer that senses drive output current and generates a signal for the control logic.

**Line Dip** – A short duration, low input voltage condition.

**Liquid Crystal Display (LCD)** – A reflective, visual readout device often used in digital watches and laptop computers.

**Load** – The burden imposed on a motor by the driven machine. It is often stated as the torque required to overcome the resistance of the machine it drives. “Load” is sometimes synonymous with “required power.”

**Load Torque** – The motor torque required to keep the load rotating at nearly constant speed.

**Local I/O** – I/O connected to a processor across a backplane or a parallel link, thus limiting its distance from the processor.

**Logic Diagram** – A diagram that represents logic elements and their interconnections.

**Master** – A device used to control secondary devices.

**Modulated LED Control** – A photoelectric control that operates on light pulses, rather than on constant light intensity.

**Module** – A device that provides an interface between a product and a network. It is often referred to as a peripheral.

**Module Addressing** – The method of identifying the I/O modules installed in chassis.

**Motor** – A device that converts electrical energy to mechanical energy to turn a shaft.

**Motor Identification:**

- Frame designation (actual frame size in which the motor is built)
- Horsepower, speed, design and enclosure Voltage, frequency and number of phases of power supply
- Class of insulation and time rating
- Application

**Motor Nameplate** – The plate on the outside of a motor that describes the motor, horsepower, voltage, revolutions per minute, efficiency, design, enclosure, etc.

**NEMA (National Electrical Manufacturer’s Association)** – A non-profit organization organized and supported by manufacturers of electric equipment and supplies. NEMA has set standards for: horsepower ratings, speeds, frame sizes and dimensions, standard voltages and frequencies with allowable variations, service factors, torque, starting current, and enclosures.

**Network** – A series of stations (nodes) connected by some type of communication medium. A network may be made up of a single link or multiple links.

**Node** – The connection point at which media access is provided.

**Non-Retentive** – Changes to the parameter value are not saved when power is removed.

**Non-Volatile Storage (NVS)** – NVS is the permanent memory of a device. Devices such as the converter store parameters and other information in NVS so that they are not lost when the device loses power. NVS is sometimes called EEPROM.

**Output Parameter** – Provides output information. Value cannot be changed through the OIM.

**Overcurrent** – A current greater than a specified maximum current value.

**Overload Capacity** – The ability of the drive to withstand currents beyond the system’s continuous rating. It is normally specified as a percentage of full load current for a specified time period.

**Peripheral Equipment** – In a programmable controller system, units that communicate with the programmable controller, but are not part of the programmable controller. For example, a programmable device or printer.

**Phase** – Indicates changing values of the recurring cycles of AC voltages and currents. The most common power supplies are either single- or three-phase (with 120 electrical degrees between three-phases).

**Potentiometer** – A resistor with one or more adjustable sliding contacts that function as an adjustable voltage divider.

**Power** – Work done per unit time. Measured in horsepower or watts: 1 Hp = 33,000 ft-lb/min = 746 watts.

**Power Factor** – A measurement of the time phase difference between the voltage and current in an AC circuit. Power factor is the ratio of real power (kW) to total KVA or the ratio of actual power (W) to apparent power (volt-amperes).

**Preset Speed** – Describes one or more fixed speeds at which a drive operates.

**Program** – A set of instructions used to control a machine or process.

**Programmable Controller** – A solid-state control system that has a user-programmable memory for storage of instructions to implement specific functions such as I/O control, logic, timing, counting, report generation, communication, arithmetic, and data file manipulation. A controller consists of a central processor, input/output interface, and memory.



**Programmable Controller Communications Command (PCCC)**

– The protocol used by some controllers to communicate with devices on a network. Some software products also use PCCC to communicate.

**Pulse** – A momentary, sharp change in voltage, current, or light from its quiescent condition.

**Pulse-Width-Modulation (PWM)** – A technique used to eliminate or reduce unwanted harmonic frequencies when inverting DC voltage to sine wave AC.

**Queue** – A logical structure that keeps track of items waiting for processing whenever the system is unable to process each item immediately. It controls the order in which the waiting items are ultimately processed.

**Rated Input Voltage** – The specified AC line voltage connected to the drive.

**Rated Output Current** – The total maximum current delivered from a drive or to a motor under full load conditions.

**Rated Output Voltage** – The total maximum output voltage while delivering rated current under full load conditions.

**Rectifier** – A device that conducts current in only one direction, thereby transforming alternating current to direct current.

**Regeneration** – 1. For DC drives, the characteristic of a motor to act as a generator when the counter emf is larger than the drive’s applied voltage.  
2. For AC drives, the point at which rotor synchronous frequency is greater than the applied frequency.

**Regenerative Braking** – See Braking.

**Regenerative Control** – A regenerative drive contains the inherent capability and/or power semiconductors to control the flow of power to and from the motor.

**Remote I/O** – I/O connected to a processor across a serial link. With a serial link, remote I/O can be located long distance from the processor.

**Revolutions Per Minute (RPM)** – The number of times per minute the shaft of the motor (machine) rotates.

**Service Factor (SF)** – When used on a motor nameplate, a number that indicates how much above the nameplate rating a motor can be loaded without causing serious degradation. For example, a 1.15 SF can produce 15% greater torque than a 1.0 SF rating of the same motor.

**Slave** – In a communication link, a station that cannot initiate communication. Only a master can initiate communication.

**Speed Range** – The speed minimum and maximum at which a motor must operate under constant or variable torque load conditions.

**Stall** – A motor state in which the motor remains motionless although the motor is generating torque.

**Stator** – The part of an AC induction motor’s magnetic structure which does not rotate.

**Status** – The condition at a particular time of any of numerous entities within a system.

**Status Indicators** – LEDs that are used to report the status of a device.

**Surge Suppressor** – Circuit protection that suppresses the peak value of any unusual input voltage to the drive. It is sometimes used to lighten the leading edge of voltage.

**Tachometer** – Normally used as a rotation sensing device. Tachometers are typically attached to the output shaft of a motor requiring close speed regulation. The tachometer feeds its signal to a control loop, which adjusts its input to the motor accordingly.

**Throughput** – The rate at which equipment processes or transmits data.

**Top Speed** – The highest speed a drive can achieve. Top speed equals base speed when there is no field weakening.

**Torque** – Turning force delivered by a motor or gearmotor shaft, usually expressed in pounds-feet or newton-meters:

$$\text{lb-ft} = \text{HP} \times (5250/\text{RPM}) = \text{Full Load Torque};$$

$$\text{Nm} = \text{P(kW)} \times (9550/\text{RPM}) = \text{Full Load Torque};$$

**Torque Compensation** – The increase of the volts/frequency ratio of the drive in the low frequency area to compensate for the reduced torque of the motor at low speeds. Reduced torque at low speeds is due to the resistance of the motor stator windings.

**Transducer** – A device that converts one energy form to another. When a transducer is actuated by signals from one system or medium, it can supply a related signal to the other system or medium.

**Tunable** – Input parameter whose value can be modified at any time (when the drive is stopped, running, or jogging).

**U.L. (Underwriter’s Laboratory)** – An independent testing organization, which examines and tests devices, systems and materials with particular reference to life, fire and casualty hazards.

Baldor ACB & ACS Drives  
AC Micro Drives  
AC Inverter Drives  
AC Vector Drives  
Analog AC Drives  
Baldor DC Drives  
ACS Drives  
ACB Drives  
Resistors  
Powerohm  
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**Variable Torque** – A multi-speed motor used on loads with torque requirements, which vary with speed as with some centrifugal pumps and blowers. The horsepower varies as the square of the speed.

**Voltage** – The force that causes a current to flow in an electrical circuit. Analogous to pressure in hydraulics, voltage is often referred to as electrical pressure. The voltage of a motor is usually determined by the supply to which it is attached. NEMA requires that the motor be able to carry its rated horsepower at nameplate voltage plus or minus 10% although not necessarily at the rated temperature rise.

**Voltage Feedback** – A voltage signal which the regulator uses to control the operation of the drive.

**Volts per Hertz (V/Hz)** – The ratio of output voltage (in volts) to output frequency (in hertz) in the output frequency range of the drive to achieve constant torque in the motor.

**VS Utilities Software** – A Windows-based software tool for monitoring and configuring Baldor products and modules.

**Watt (W)** – The amount of power required to maintain a current of one ampere at a pressure of one volt. One horsepower is equal to 756 watts.

**Word** – A grouping or a number of bits in a sequence that is treated as a unit.

**Work** – A force moving an object over a distance.  $Work = Force \times Distance$ .

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