

ABB and Baldor Drives

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AC Drives Selection Chart

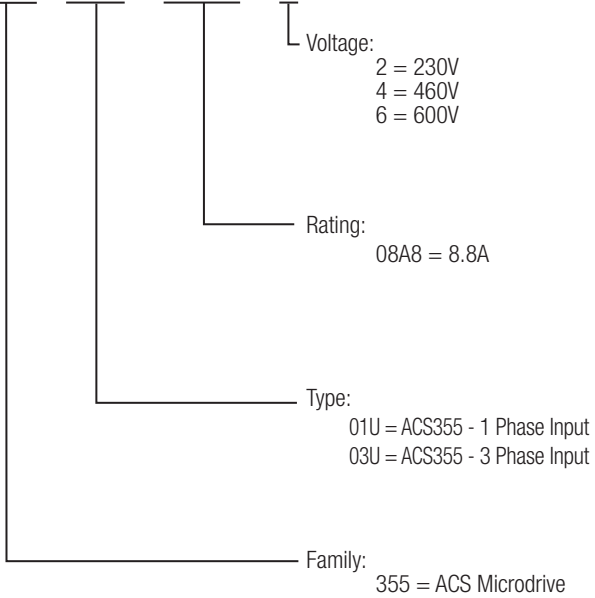
ACS55	ACS150	ACS255	ACS255 NEMA 4X
			
Main Attributes			
Starter-style Microdrive; V/Hz Control, DIN or Panel Mounting, DIP switches and potentiometer configuration, PC configuration tool. EMC model available.	Component-style Microdrive; V/Hz Control, DIN or panel mounting, integral LCD control panel and integrated potentiometer, internal EMC filter.	Starter-style Microdrive; V/Hz & sensorless vector control, integral LED display, Built-In PI Loop; DIN or Panel Mounting.	NEMA 4X Enclosure Micro Drive; V/Hz & sensorless vector control; integral control panel, Built-In start/stop, speed potentiometer and disconnect switches.
HP Range			
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 5 HP
	3~230 V - 0.5 to 3 HP		3~230 V - 0.5 to 5 HP
	3~460 V - 0.5 to 5 HP		3~460 V - 0.5 to 10 HP
		3~600 V - 0.75 - 20 HP	3~600 V - 0.75 - 15 HP
Voltage Range			
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
	3~230 V In / Out		3~230 V In / Out
	3~460 V In / Out		3~460 V In / Out
		3~600 V In / Out	3~600 V In / Out
Enclosure Type			
UL type 0 (IP20)	UL type 0 (IP20)	UL type 0 (IP20)	
	UL Type 1 Kit - Option		NEMA 4X (IP66)
Motor Control Mode			
Scalar (V/Hz)	Scalar (V/Hz)	Scalar (V/Hz)	Scalar (V/Hz)
Motor Type			
Induction Motor	Induction Motor	Induction Motor	Induction Motor
Communications Options			
N.A.	N.A.	Embedded Modbus-RTU	Embedded Modbus-RTU
Operator Interface (Control Panel)			
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
See page 5	See page 8	See page 11	See page 14

AC Drives Selection Chart Continued

ACS355	ACS355 NEMA 4X
 <p>Control panel not included.</p>	
Main Attributes	
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.
HP Range	
1~230 V - 0.5 to 3 HP	
3~230 V - 0.5 to 15 HP	3~230 V - 0.5 to 5 HP
3~460 V - 0.5 to 30 HP	3~460 V - 0.5 to 10 HP
Voltage Range	
1~230 V In / 3~230 V Out	
3~230 V In / Out	3~230 V In / Out
3~460 V In / Out	3~460 V In / Out
Enclosure Type	
UL type 0 (IP20)	
UL Type 1 Kit - Option	UL type 4X (IP66)
Motor Control Mode	
Open Loop vector, (encoder feedback option), Scalar (V/Hz)	Open Loop vector, (encoder feedback option), Scalar (V/Hz)
Motor Type	
Permanent magnet or Induction Motor	Permanent magnet or Induction Motor
Communications Options	
CANopen, DeviceNet, EtherNet/IP, EtherCAT, Modbus-RTU, Modbus/TCP, PROFIBUS, Profinet-IO	CANopen, DeviceNet, EtherNet/IP, EtherCAT, Modbus-RTU, Modbus/TCP, PROFIBUS, Profinet-IO
Operator Interface (Control Panel)	
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.
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ACS Catalog Numbers

ACS 355 - 03U - 08A8 - 2



ACS55 AC Micro Drive



1/4 & 1/2 HP - No EMC Filter
1/4 thru 3 HP - No EMC Filter
1/4 & 1/2 HP - Built-In EMC Filter
1/4 thru 3 HP - Built-In EMC Filter

115 Vac 1 Phase - 50/60 Hz
230 Vac 1 Phase - 50/60 Hz
115 Vac 3 Phase - 50/60 Hz
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.

Performance Features	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
	Digital Inputs Type	12 to 24VDC, (10V Logic 0) with internal 12 VDC power supply (12 VDC, +/-10%, 30mA max.)
Drive Specifications	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
Protective Features	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
Agency Certifications	UL, cUL, CE, RoHS, C-Tick, GOST-R	
Service Conditions	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
1-Phase Supply Voltage 110 to 120V, +10/-15%, 3-Phase Output 200 to 240V								
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
1-Phase Supply Voltage 200 to 240V, +10/-15%, 3-Phase Output 200 to 240V								
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
1-Phase Supply Voltage 110 to 120V, 3-Phase Output 200 to 240V (Built-in EMC filter)								
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
1-Phase Supply Voltage 200 to 240V, 3-Phase Output 200 to 240V (Built-in EMC filter)								
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

Baldor ACB
& ACS Drives

AC Micro
Drives

Analog AC
Drives

Baldor
DC Drives

ACS
Drives

Resistors

Powerohm

Input
Reactors

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ACS55 Option Kits

Catalog Number	Name	List Price	Mult. Sym.
ACS55-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"> • Hardware and cables • PC software • User's manual in English (hard copy and PDF) • Battery charger • USB adapter 	700	ES

ACS55 Dimensions



Frame Size	H1 (in)	H2* (in)	W (in)	D (in)	Weight (lbs)
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

1/2 thru 3 HP 230 Vac 1 Phase - 50/60 Hz
1/2 thru 3 HP 230 Vac 3 Phase - 50/60 Hz
1/2 thru 5 HP 460 Vac 3 Phase - 50/60 Hz



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.

Performance Features	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
Drive Specifications	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
Protective Features	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 ² 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
Agency Certifications	UL, cUL, CE, C-tick, RoHS, GOST-R	
Service Conditions	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				
1-Phase Input Voltage = 200...240V (200, 208, 230, 240V)								
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
3-Phase Input Voltage = 200...240V (200, 208, 230, 240V)								
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

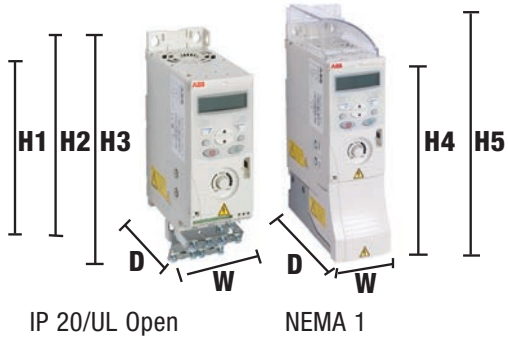
3-phase supply voltage 380, 400, 415, 440 or 480 V. The power ratings are valid at nominal voltage, 480Vac at 50°C (122°F).

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				
3-Phase Input Voltage = 380...480V (380, 400, 415, 440, 460, 480V)								
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.
MFDT-01	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
MUL1-R1	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

¹ U_N = 200...240 V: 1.3 kg / 2.9 lb, U_N = 380...480 V: 1.2 / 2.9 lb.

² U_N = 200...240 V: 1.7 kg / 3.7 lb, U_N = 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

ACS255 IP20 AC Micro Drive

1/2 thru 1/5 HP
1 thru 20 HP

115 Vac 1 Phase - 50/60 Hz
600 Vac 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. 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.

Performance Features	Control Mode	115 VAC: V/Hz and open loop vector 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
	Drive Specifications	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	
Protective Features	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)
Agency Certifications	UL, cUL, CE, C-tick, GOST-R	
Service Conditions	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

ACS255 IP20 - Ratings & Pricing

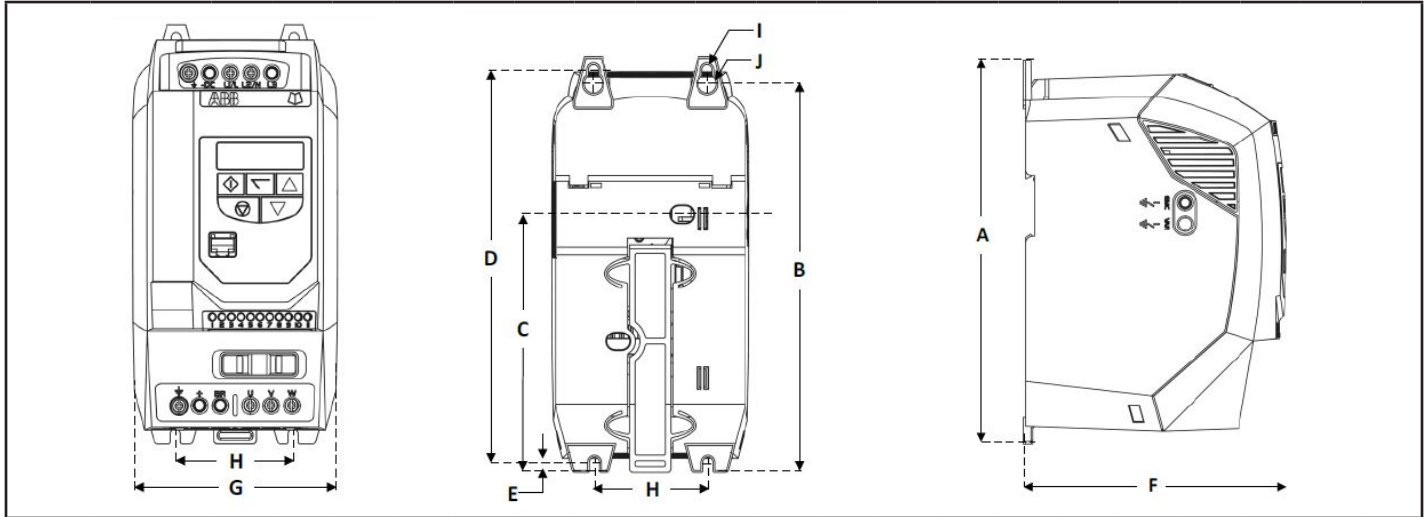
Catalog Number	Braking Chopper (included)	HP	Output Current	Weight (lbs)	Frame Size	List Price	Multiplier Symbol
1-Phase Supply Voltage 110 to 120 V, +/-10%, 3-Phase Output 200 to 240 V							
ACS255-01U-02A3-1	–	0.5	2.3	2.2	E1	408	EP
ACS255-01U-04A3-1	–	1.0	4.3	2.2	E1	450	EP
ACS255-01U-05A8-1	X	1.5	5.8	3.75	E2	552	EP
3-Phase Supply Voltage 500 to 600 V, +/-10%							
ACS255-03U-02A1-6	X	1.0	2.1	4.0	P2	602	EP
ACS255-03U-03A1-6	X	2.0	3.1	4.0	P2	782	EP
ACS255-03U-04A1-6	X	3.0	4.1	4.0	P2	869	EP
ACS255-03U-06A5-6	X	5.0	6.5	4.0	P2	1,043	EP
ACS255-03U-09A0-6	X	7.5	9.0	4.0	P2	1,459	EP
ACS255-03U-12A0-6	X	10.0	12.0	7.7	P3	1,751	EP
ACS255-03U-17A0-6	X	15.0	17.0	7.7	P3	2,291	EP
ACS255-03U-22A0-6	X	20	22	7.7	P3	2,917	EP

ACS255 IP20 Option Kits

ACS255 IP20 options (these options will be shipped separately from drive shipping package)

Variant	Description	Field Kit	Voltage Rating		Multiplier Symbol
			120 V	600 V	
RCCS-01 Copying Tool	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
RCRO-01 Relay Output Card	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
RCRP-02 External LED	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). Note: RCRP-02 required for ACS255 drives. RCRP-01 works only with ACS250.	RCRP-02	106	106	ES
RCRJ-01 RJ45 Y-Cable Splitter	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
RCNT-01 RJ45 Y-Cable Splitter w/Term	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

4.2. Mechanical Dimensions and Mounting – IP20 Open Units

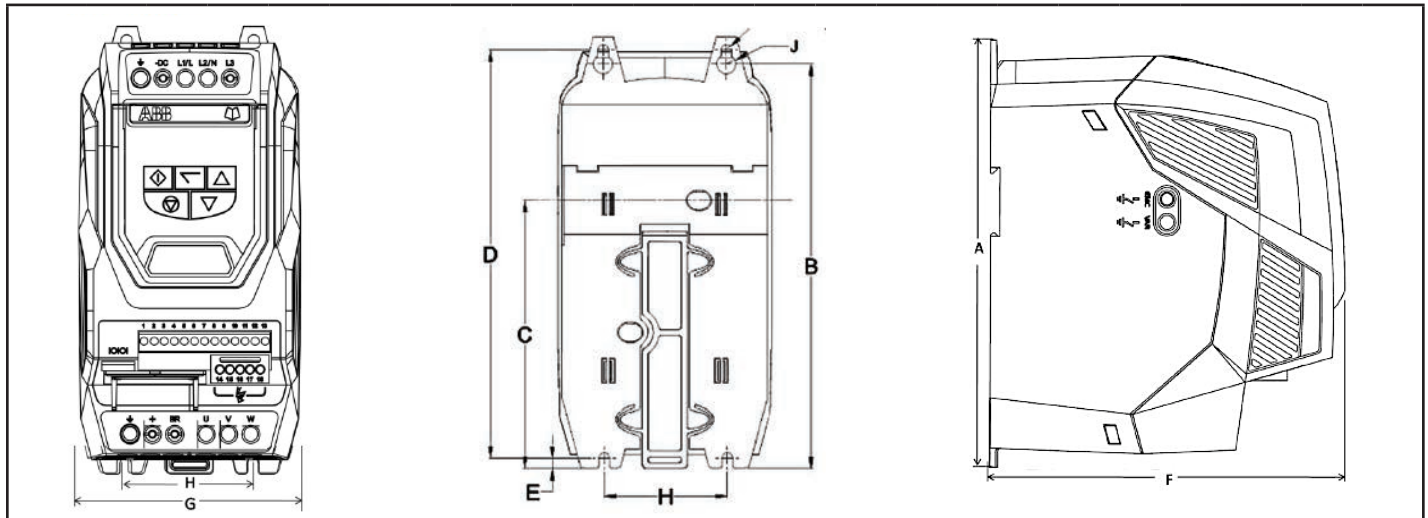


Drive Frame Size	A		B		C		D		E		F		G		H		I		J		Weight	
	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	kg	lbs
1	173	6.81	160	6.30	109	4.29	162	6.38	5	0.20	123	4.84	82	3.23	50	1.97	5.5	0.22	10	0.39	1.0	2.20
2	221	8.70	207	8.15	137	5.39	209	8.23	5.3	0.21	150	5.91	109	4.29	63	2.48	5.5	0.22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

**ACS255 IP66
AC Micro Drive**

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



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. 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.

Performance Features	Control Modes	115-460 VAC: V/Hz and open loop vector 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
Drive Specifications	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	
Protective Features	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)
Agency Certifications	UL, cUL, CE, C-tick, GOST-R	
Service Conditions	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

ACS255 IP66 Ratings & Pricing

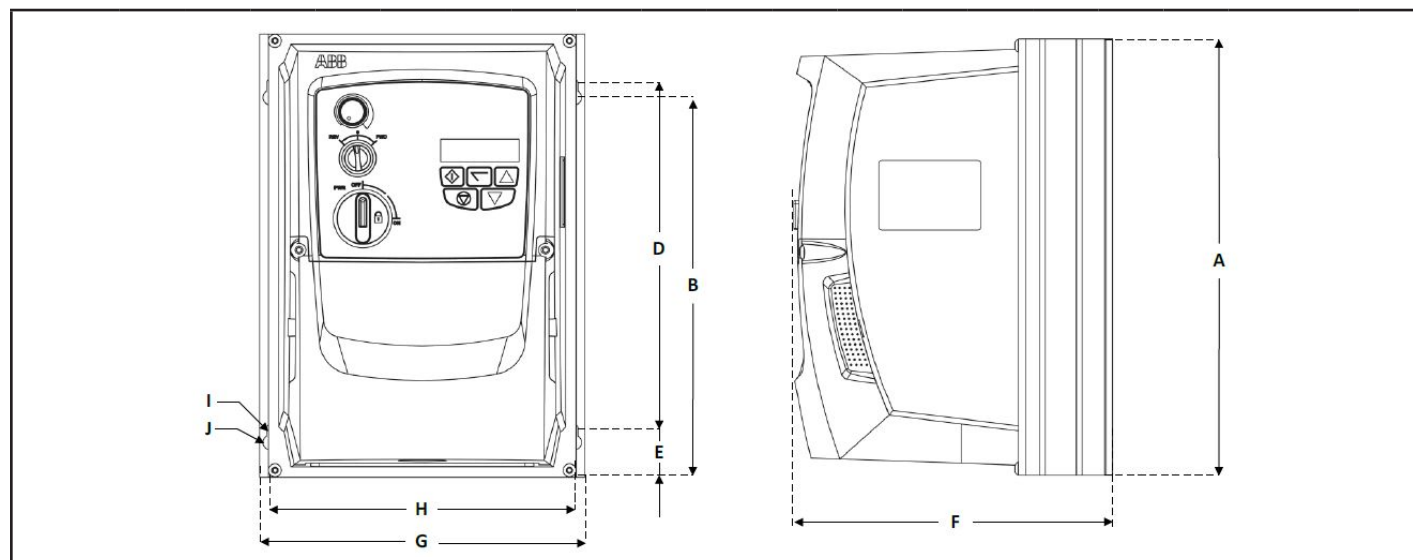
Catalog Number	Braking Chopper (Included)	HP	Output Current	Weight (lbs)	Frame Size	List Price	Optional Switch (+F278)	Multiplier Symbol
1-Phase Supply Voltage 110 to 120V, +/-10%, 3-Phase Output 200 to 240V								
ACS255-01U-02A3-1+B063	–	0.5	2.3	6.5	E1	757	936	EP
ACS255-01U-04A3-1+B063	–	1	4.3	6.5	E1	836	1,010	EP
ACS255-01U-05A8-1+B063	X	1.5	5.8	9.3	E2	1,018	1,151	EP
1-Phase Supply Voltage 200 to 240V, +/-10%, 3-Phase Output 200 to 240V								
ACS255-01U-02A3-2+B063	–	0.5	2.3	6.5	E1	723	832	EP
ACS255-01U-04A3-2+B063	–	1	4.3	6.5	E1	795	893	EP
ACS255-01U-06A1-2+B063	–	1.5	6.1	6.5	E1	826	958	EP
ACS255-01U-07A0-2+B063	–	2	7	6.5	E1	853	1,004	EP
ACS255-01U-10A5-2+B063	X	3	10.5	9.3	E2	982	1,122	EP
ACS255-01U-15A3-2+B063	X	5	15.3	17	E3	1,513	1,658	EP
3-Phase Supply Voltage 200 to 240V, +/-10%								
ACS255-03U-02A3-2+B063	–	0.5	2.3	6.5	E1	660	780	EP
ACS255-03U-04A3-2+B063	–	1	4.3	6.5	E1	717	813	EP
ACS255-03U-06A1-2+B063	–	1.5	6.1	6.5	E1	777	889	EP
ACS255-03U-07A0-2+B063	X	2	7	9.3	E2	824	974	EP
ACS255-03U-10A5-2+B063	X	3	10.5	9.3	E2	950	1,122	EP
ACS255-03U-18A0-2+B063	X	5	18	17	E3	1,353	1,500	EP
3-Phase Supply Voltage 380 to 480V, +/-10%								
ACS255-03U-01A2-4+B063	–	0.5	1.2	6.5	E1	736	856	EP
ACS255-03U-02A2-4+B063	–	1	2.2	6.5	E1	777	896	EP
ACS255-03U-03A3-4+B063	–	1.5	3.3	6.5	E1	843	966	EP
ACS255-03U-04A1-4+B063	–	2	4.1	6.5	E1	911	1,040	EP
ACS255-03U-05A8-4+B063	X	3	5.8	9.3	E2	1,027	1,175	EP
ACS255-03U-09A5-4+B063	X	5	9.5	9.3	E2	1,275	1,411	EP
ACS255-03U-14A0-4+B063	X	7.5	14	17	E3	1,646	1,765	EP
ACS255-03U-18A0-4+B063	X	10	18	17	E3	1,952	2,118	EP
3-Phase Supply Voltage 500 to 600V, +/-10%								
ACS255-03U-02A1-6+B063	X	1	2.1	10.6	P2	1,285	1,462	EP
ACS255-03U-03A1-6+B063	X	2	3.1	10.6	P2	1,484	1,649	EP
ACS255-03U-04A1-6+B063	X	3	4.1	10.6	P2	1,697	1,849	EP
ACS255-03U-06A5-6+B063	X	5	6.5	10.6	P2	1,946	2,082	EP
ACS255-03U-09A0-6+B063	X	7.5	9	10.6	P2	2,455	2,559	EP
ACS255-03U-12A0-6+B063	X	10	12	16.1	P3	2,925	3,096	EP
ACS255-03U-17A0-6+B063	X	15	17	16.1	P3	4,297	4,424	EP

ACS255 IP66 Option Kits

ACS255 IP66 options (these options will be shipped separately from drive shipping package)

Variant	Description	Field Kit	Voltage Rating		Multiplier Symbol
			120 V	600 V	
RCCS-01 Copying Tool	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
RCRO-01 Relay Output Card	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
RCRP-02 External LED	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). Note: RCRP-02 required for ACS255 drives. RCRP-01 works only with ACS250.	RCRP-02	106	106	ES
RCRJ-01 RJ45 Y-Cable Splitter	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
RCNT-01 RJ45 Y-Cable Splitter w/Term	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	lbs
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)

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

Protective Features	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	
Agency Certifications	UL, cUL, CE, C-tick, RoHS, TUV, NORD	
Service Conditions	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 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

FCAN-01 Kit	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
FDNA-01 Kit	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
FENA-01 Kit	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
FENA-21 Kit	Ethernet IP/Modbus TCP Adapter	Similar to the FENA-01-KIT except with dual ports for device level ring (DLR) topology networks.	425	ES
FECA-01 Kit	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
FPBA-01 Kit	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
FRSA-00	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
FMBA-01 Kit	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
SREA-01-KIT	Ethernet Adapter (Gateway)	SREA-01 is an optional device for web browser based remote interface to the 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
MFTD-01	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
SEDG-01	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
SECG-01	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

3AFE64532871	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
3AUA0000041141	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"> • Configure network connections • Parameter editing and monitoring • Upload/download drive parameter files, save, print • Compare files • Trending up to four signals • Drive Control for commissioning and test 	385	ES
OPCA-01	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
MUL1-R1 MUL1-R3 MUL1-R4	NEMA 1 Enclosure Kit	This option provides the necessary hardware to modify the 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
ACS355-DEMOCASE	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

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. (lbs)
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

¹ U_N = 200...240V, 1.3 kg / 2.9 lb, U = 380...780V: 1.2 kg / 2.9 lb
² U_N = 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		

Protective Features	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
Agency Certifications	UL, cUL, CE, C-tick, RoHS, TUV, NORD	
Service Conditions	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.
ACS355-03U-02A4-2+B063	R1	0.5	2.4	750	ER
ACS355-03U-03A5-2+B063	R1	0.75	3.5	849	ER
ACS355-03U-04A7-2+B063	R1	1	4.7	904	ER
ACS355-03U-06A7-2+B063	R1	1.5	6.7	953	ER
ACS355-03U-07A5-2+B063	R1	2	7.5	1,017	ER
ACS355-03U-09A8-2+B063	R3	3	9.8	1,106	ER
ACS355-03U-17A6-2+B063	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.
ACS355-03U-02A4-2+B063+F278	R1	0.5	2.4	990	ER
ACS355-03U-03A5-2+B063+F278	R1	0.75	3.5	1,120	ER
ACS355-03U-04A7-2+B063+F278	R1	1	4.7	1,193	ER
ACS355-03U-06A7-2+B063+F278	R1	1.5	6.7	1,259	ER
ACS355-03U-07A5-2+B063+F278	R1	2	7.5	1,342	ER
ACS355-03U-09A8-2+B063+F278	R3	3	9.8	1,460	ER
ACS355-03U-17A6-2+B063+F278	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. STANDARD With ACS355 IP66, UL Type 4X.	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 ACS & ACS Drives	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
AC Micro Drives	FCAN-01 Kit	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
Analog AC Drives	FDNA-01 Kit	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
Baldor DC Drives	FENA-01 Kit	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
ACS Drives	FENA-21 Kit	Ethernet IP/Modbus TCP Adapter	Similar to the FENA-01-KIT except with dual ports for device level ring (DLR) topology networks.	425	ES
Resistors	FECA-01 Kit	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
Powerohm	FPBA-01 Kit	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
Input Reactors	FRSA-00	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
Output Filters	FMBA-01 Kit	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
Application Information	SREA-01-KIT	Ethernet Adapter (Gateway)	SREA-01 is an optional device for web browser based remote interface to the 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
Cross Reference	MFDT-01	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
Glossary of Terms	SEDG-01	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
Catalog Number Index	SECG-01	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

3AFE64532871	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
3AUA0000041141	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"> • Configure network connections • Parameter editing and monitoring • Upload/download drive parameter files, save, print • Compare files • Trending up to four signals • Drive Control for commissioning and test 	385	ES
OPCA-01	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 (lbs)
	R1	12.01	7.68	11.06	16.98
	R3	17.17	9.69	10.91	28.66

Series 5 Micro Inverters



1/2 thru 2 HP
1/2 thru 2 HP
2 thru 5 HP
1 thru 10 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.⁽¹⁾ 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
- I²t 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 ⁽¹⁾
- 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 ⁽¹⁾

Protective Features

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

Output Ratings	Overload Capacity	150% for 120 seconds	
	Voltage - 3 Phase	0-230 VAC (RMS), 0-460 V AC (RMS)	
Control Spec.	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
	Combined accel/decel for 50 Hz motors		
Protective Functions	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	
Ambient Conditions	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-E0. 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
Open Chassis Mount – Single Phase Input												
0.5/0.37	115/230	2.4	3.6	ID56F50-CO	395	E9	4	4.3	3.9	2.75	3.8	2.5
1/0.75	115/230	4	6	ID5601-CO	478	E9	5	4.3	3.9	5	3.87	3.7
1.5/1.13-2/1.5 ⁽²⁾	115/230	5.5	8.25	ID5602-CO	621	E9	6	4.67	5.58	5.7	3.87	2.5
Open Chassis Mount – Three Phase Input												
2/1.5	230	6.7	10.1	ID5202-CO	753	E9	5	8.55	4.68	4.5	6.5	3.9
3/2.25	230	8.8	13.2	ID5203-CO	793	E9	5	8.55	4.68	4.5	6.5	3.9
1/0.75	460	2.5	3.75	ID5401-CO	820	E9	5	8.55	4.68	4.5	6.5	3.9
2/1.5	460	4	6	ID5402-CO	842	E9	5	8.55	4.68	4.5	6.5	3.9
3/2.25	460	4.5	6.75	ID5403-CO	866	E9	5	8.55	4.68	4.5	6.5	3.9
5/3.7	460	7.6	11.4	ID5405-CO	1,104	E9	5	8.55	4.68	4.5	6.5	3.9
NEMA 1 Enclosed - Single Phase Input												
1/0.75	115/230	4	6	ID5601-EO	576	E9	6	7.13	6.25	2.75	–	–
NEMA 4X Enclosed – Single Phase Input												
1/0.75	115/230	3.6	5.4	ID5601-WO	763	E9	6	9.53	5.51	5.86	8.85	–
1/0.75	115/230	3.6	5.4	ID5601-BO	715	E9	6	9.53	5.51	5.86	8.85	–
1.5/1.13-2/1.5 ⁽²⁾	115/230	5.5/6.7	8.3/10.0	ID5602-WO	1,076	E9	6	9.8	7.55	7.25	9.25	1
1.5/1.13-2/1.5 ⁽²⁾	115/230	5.5/6.7	8.3/10.0	ID5602-BO	1,015	E9	8	9.8	7.55	7.25	9.25	1
NEMA 4X Enclosed – Three Phase Input												
3/2.25	230	9	13.5	ID5203-WO	1,219	E9	6	9.8	7.55	7.25	9.25	1
3/2.25	230	9	13.5	ID5203-BO	1,159	E9	6	9.8	7.55	7.25	9.25	1
5/3.7	230	17	25.5	ID5205-WO	1,731	E9	22	13.58	10.3	9.8	13.2	1.72
5/3.7	230	17	25.5	ID5205-BO	1,645	E9	22	13.8	10.3	9.8	13.2	1.72
3/2.25 ⁽¹⁾	460	4.6	6.9	ID5403-WO	1,291	E9	6	9.8	7.55	7.25	9.25	1
3/2.25 ⁽¹⁾	460	4.6	6.9	ID5403-BO	1,230	E9	6	9.8	7.55	7.25	9.25	1
5/3.7	460	8.3	12.45	ID5405-WO	1,373	E9	6	9.8	7.55	7.25	9.25	1
5/3.7	460	8.3	12.45	ID5405-BO	1,315	E9	6	9.8	7.55	7.25	9.25	1
10/7.5 ⁽³⁾	460	16.0	24.00	ID5410-WO	2,555	E9	22	13.8	10.3	9.8	13.2	1.72
10/7.5 ⁽³⁾	460	16.0	24.00	ID5410-BO	2,427	E9	22	13.8	10.3	9.8	13.2	1.72

(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

(3) Jumper configurable for 7.5 HP or 10 HP

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.
◇ ID5RGA-1	Dynamic braking kit for open chassis 115/230V 1/2 HP and 1 HP rated controls	214	E9	3
◇ ID5SI-1	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
◇ ID5SI-2	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
◇ ID5SI-3	Signal isolator for 24 VDC and 4-20mA input signal for ID5205 & ID5410 only.	255	E9	2
◇ ID5AMS-1	Auto/Manual selection switch for NEMA 4X enclosed units Allows selection of remote or on-board speed commands	59	E9	1
◇ ID5AMS-2	Auto/Manual selection switch for ID5205 & ID5410 only	94	E9	2
◇ ID5FRS-1	Forward/Stop/Reverse selection switch for NEMA 4X enclosed units Allows selection of forward or reverse motor direction commands	33	E9	1
◇ ID5FRS-2	Forward/Stop/Reverse selection switch for NEMA 1 enclosed units. Allows selection of forward or reverse motor direction commands.	33	E9	1
◇ ID5FRS-3	Forward/Stop/Reverse selection switch for ID5205 & ID5410 only.	67	E9	2

◇ Stock Model Numbers

Baldor ACB & ACS Drives

AC Micro Drives

Analog AC Drives

Baldor DC Drives

ACS Drives

Resistors

Powerohm

Input Reactors

Output Filters

Application Information

Cross Reference

Glossary of Terms

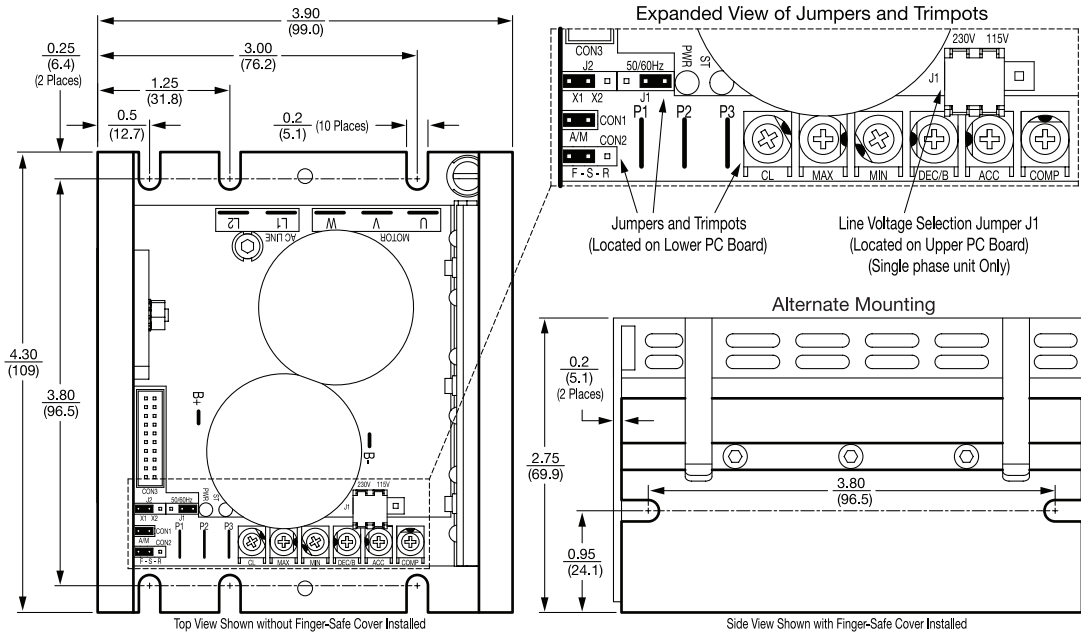
Catalog Number Index

Series 5 Micro Inverters

Dimensions: in (mm)

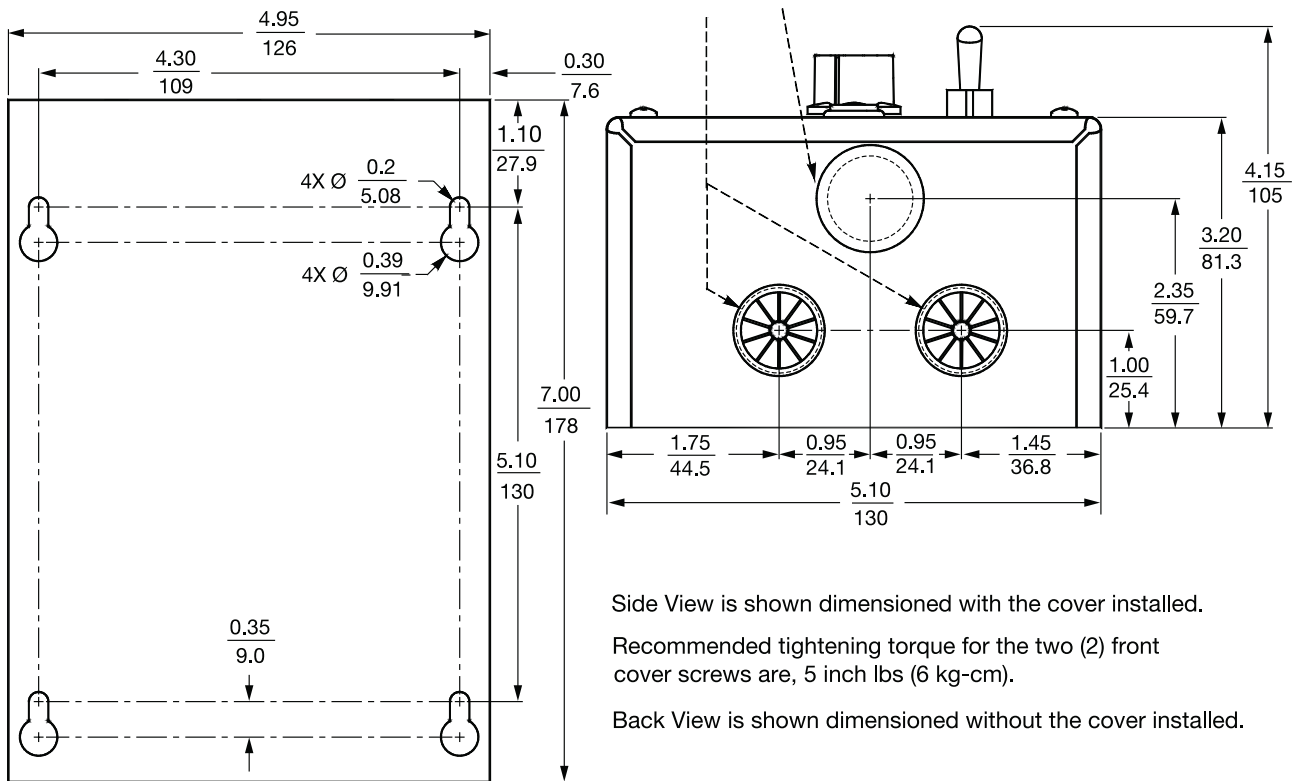
Series 5 Micro Inverter – Open Chassis

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.



Side View is shown dimensioned with the cover installed.

Recommended tightening torque for the two (2) front cover screws are, 5 inch lbs (6 kg-cm).

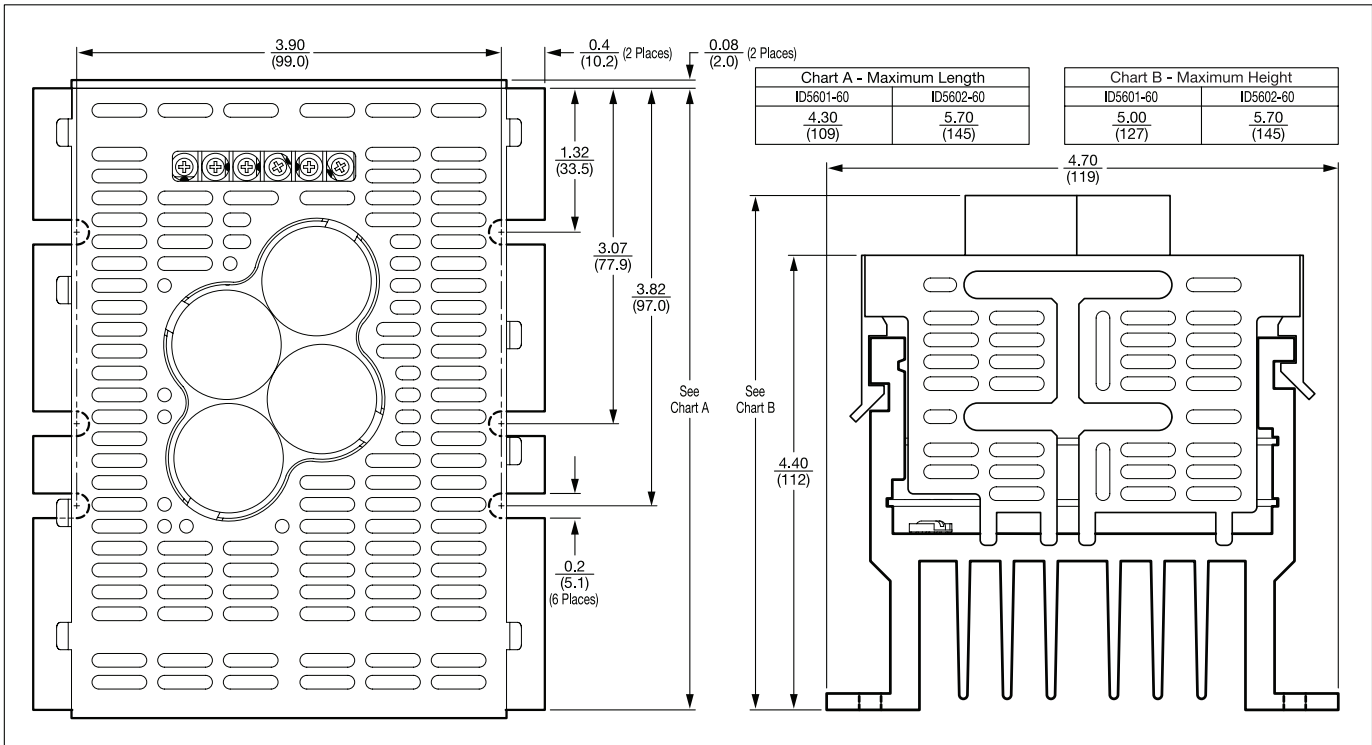
Back View is shown dimensioned without the cover installed.

Series 5 Micro Inverters

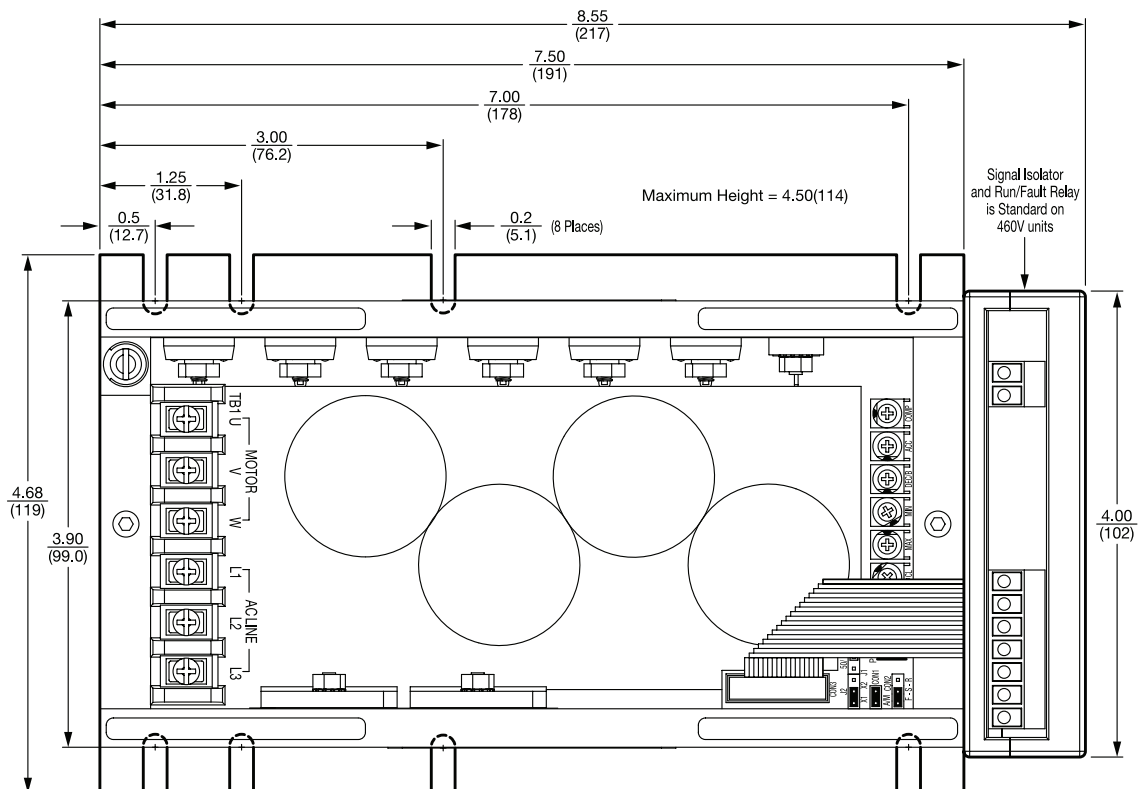
Dimensions: in (mm)

Series 5 Micro Inverter - Open Chassis

Dual Voltage 115/230V Series 5 - 1 & 2 HP



Series 5 - All Three Phase



Baldor ACB & ACS Drives

AC Micro Drives

Analog AC Drives

Baldor DC Drives

ACS Drives

Resistors

Powerohm

Input Reactors

Output Filters

Application Information

Cross Reference

Glossary of Terms

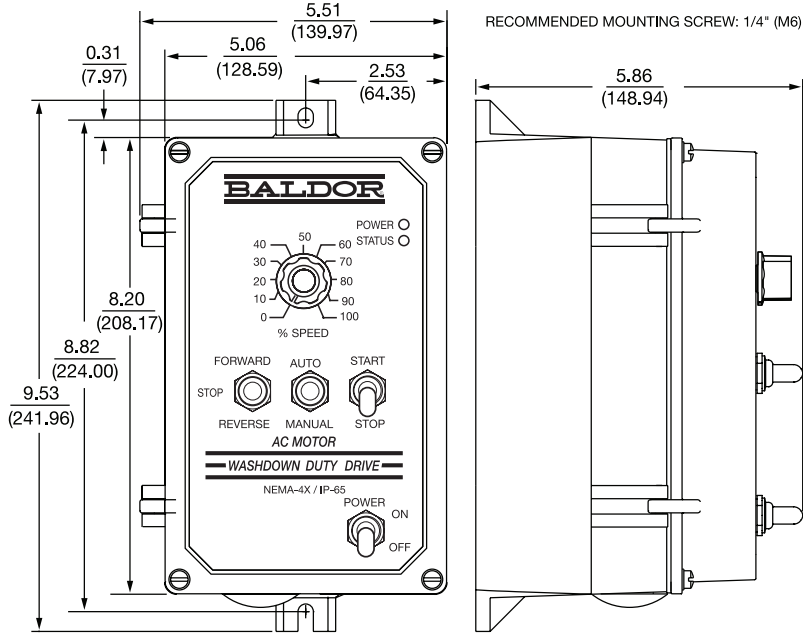
Catalog Number Index

Series 5 Micro Inverters

Dimensions: in (mm)

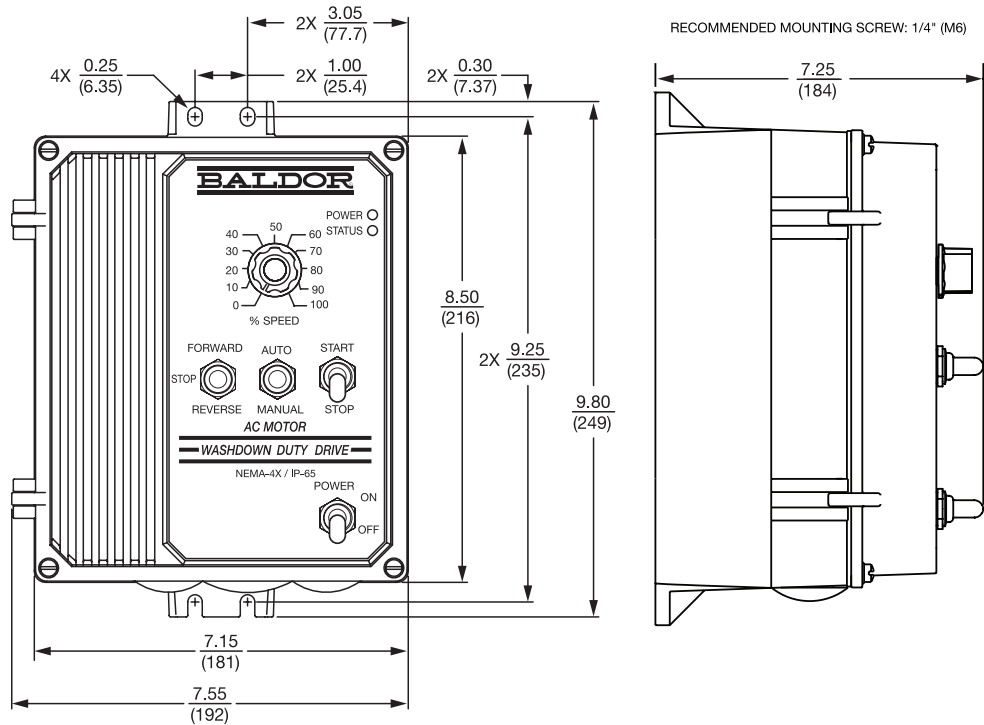
Series 5 Micro Inverter – Washdown

1 HP



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

2 thru 5 HP



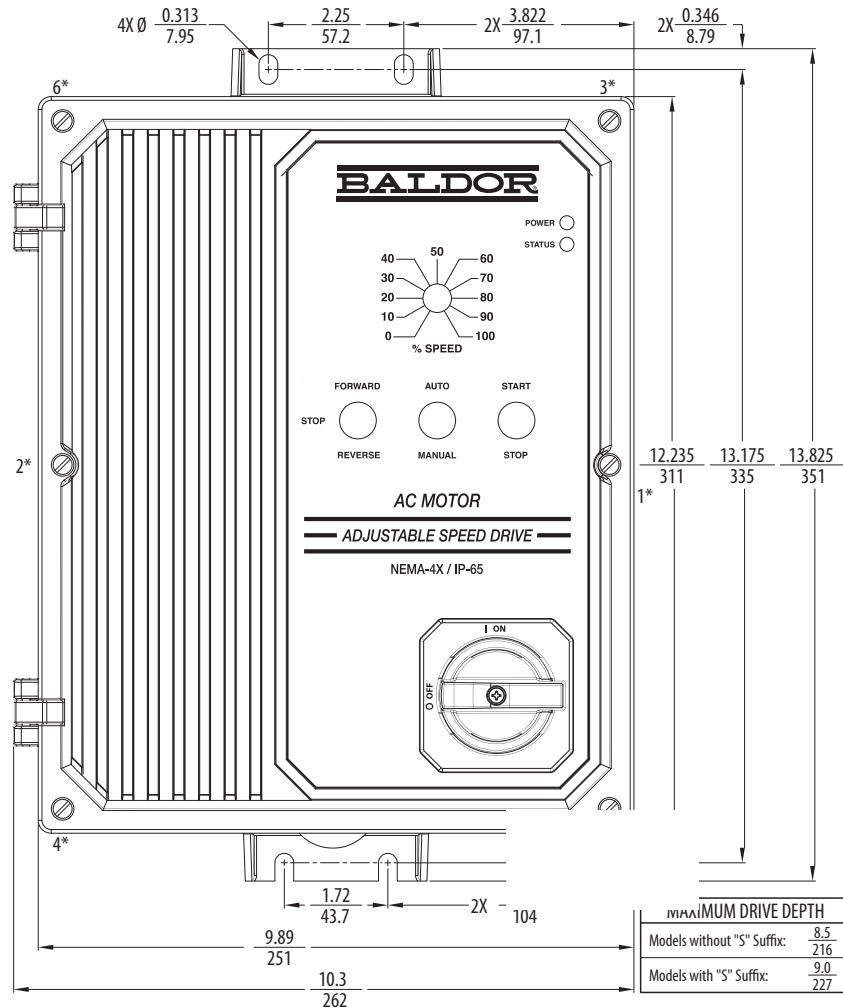
NOTE: Dimensions for reference only. Contact a Baldor District Office or www.baldor.com for the detailed dimension drawing for your specific catalog number.

Series 5 Micro Inverters

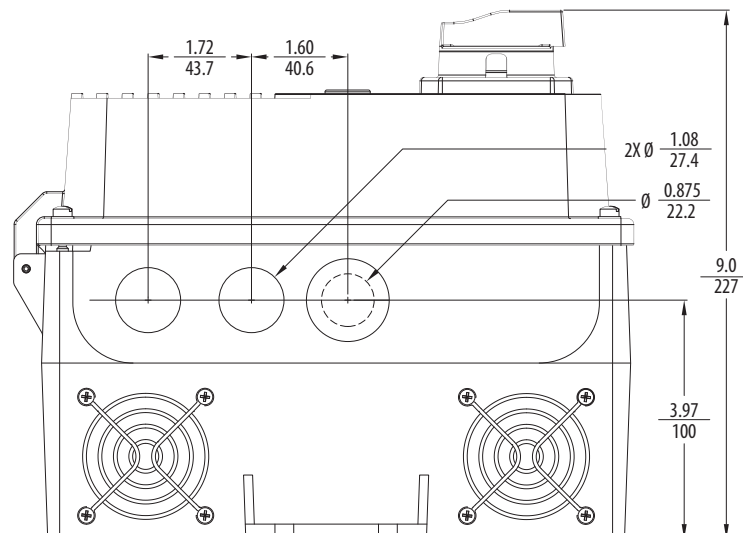
Dimensions: in (mm)

Series 5 Micro Inverter – Washdown

ID5205 & ID5410 Mechanical Specifications (Inches/mm)



*Tighten these screws, in the sequence shown, to 12 in-lbs (14 kg-cm).



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® 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	BC138	◇ NEMA 1 Enclosed, Single Voltage, 1/100 to 1/3HP	218	E9	115	5.0	90	3.5	1
1/50-3/4	BC139	◇ NEMA 1 Enclosed, Dual Voltage, 1/50 to 3/4HP	218	E9	230	5.0	180	3.5	1
1/100-2 (a) (b)	BC140	◇ 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)	BC140-FBR	◇ 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

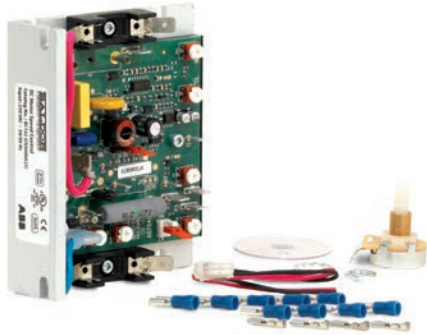
Catalog Number	Description	List Price	Mult. Sym.	Approx. Shpg. Wgt.
BC24-LF	◇ Ac Line Filter for use with CE Applications	75	E9	1
BC143	◇ External Heatsink Kit (BC140, BC140-FBR, BC141, BC142, BC204)	72	E9	2
BC144	◇ Forward-Brake-Reverse Switch Kit for BC140	124	E9	1
BC145	◇ Signal Isolator Board	211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



BC141 / BC142

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-domag feature protects PM motors and helps protect the SCR power bride against direct shorts. The controls have US and Canadian UL component recognition.

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)	BC141	◇ 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	BC141-SIH	BC141 with BC152 Signal Isolator and BC143 Heatsink factory installed	477	E9	115	24.0	90	16.0	2
1/100-3 (a)	BC142	◇ Chassis Mount, Single Voltage, 1/100 to 3HP	202	E9	230	24.0	90	16.0 (b)	2
1/100 - 3	BC142-SIH	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	BC142-5	◇ 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	BC142-6	◇ 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	BC142-6-SIH	BC142-6 with BC152 signal isolator board and BC143 Heatsink factory installed	499	E9	115/230	24.0	90/180	16.0	1
5	BC155	◇ 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	BR1000	◇	0.20	0.5
1/50	1/25	0.51	BR0510	◇	0.30	0.5
1/30	1/15	0.35	BR0350	◇	0.33	0.5
1/20	1/10	0.25	BR0250	◇	0.5	0.75
1/15	1/8	0.25	BR0251	◇	0.8	1.0
1/12	1/6	0.18	BR0180	◇	0.85	1.25
1/8	1/4	0.1	BR0100	◇	1.3	2.0
1/6	1/3	0.1	BR0101	◇	2.0	2.5
1/4	1/2	0.05	BR0050	◇	2.5	4.0
1/3	3/4	0.035	BR0035	◇	3.3	5.0
1/2	1	0.025	BR0025	◇	5.0	8.0
3/4	1 1/2	0.015	BR0015SP	◇	7.5	12.0
1 (a)	2 (a)	0.01	BR0010SP	◇	10	15.0
1 1/2 (a)	3 (a)	0.006	BR0006	◇	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

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.
NEMA 4X SCR									
1/4-2	BC154 ◊	NEMA 4X Enclosed, Dual Voltage, 1/4 to 2 HP	467	E9	115/230	15.0	90/180	10.2	5
	BC154-P ◊	BC154 with POWER SWITCH instead of START/STOP SW.	467	E9	115/230	15.0	90/180	10.2	5
	BC154-R ◊	BC154 with BC156 - FBR Switch factory installed	616	E9	115/230	15.0	90/180	10.2	5
	BC154-SI ◊	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	BC160 ◊	NEMA 4X Enclosed, Dual Voltage, 1.5 HP to 3 HP	537	E9	115/230	22.0	90/180	15.0	3
NEMA 4X Washdown Duty SCR									
1/4-2	BCWD140 ◊	NEMA 4X Enclosed, Dual Voltage, White Epoxy Coating, 1 to 2HP	625	E9	115/230	15.0	90/180	10.2	6
NEMA 4X Washdown Duty Line Regen SCR									
1/8-2	BC254 ◊	NEMA 4X Enclosed, Dual Voltage, 1/8 to 2 HP ^(a)	673	E9	115/230	15.0	90/180	11.0	5
	BC254-FBR ◊	BC254 with BC253 FWD-BRAKE-REV Switch factory installed	706	E9	115/230	15.0	90/180	11.0	5
NEMA 4X Washdown Duty PWM DC ^(b)									
1/4-2	BC354 ◊	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.
BC153 ◊	Electronic Forward-Dynamic Brake-Reverse Kit for BC154, BC354	223	E9	1
BC156 ◊	Mechanical Forward-Dynamic Brake-Reverse Switch for BC154, BC354	145	E9	1
BC157 ◊	Run/Jog switch for BC154 & BC160, BC354	27	E9	1
BC158 ◊	Auto/Manual Installation Kit for BC145 signal isolator for BC154, BC160, BC354	60	E9	1
BC159 ◊	AC Line Switch Kit for BC154, BCWD140, BC254, BC354	32	E9	1
BC145 ◊	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.
Line Regen SCR									
1/8-2 ^(a)	BC204 ◊	Chassis Mount, Dual Voltage, 1/8 to 2 HP	377	E9	115/230	16.0	90/180	11.0 ^(b)	3
	BC204-BPSI ◊	BC204 with BC215 Bi-polar Signal Isolator factory installed	487	E9	115/230	16.0	90/180	11.0 ^(b)	3
1/4-2	BC200 ◊	Chassis Mount, Dual Voltage, 1/4 to 2 HP	704	E9	115/230	16.0	90/180	11.0	4
1/4-3	BC201 ◊	Chassis Mount, Dual Voltage, 1/4 to 3 HP	836	E9	115/230	16.0	90/180	16.0	1
5	BC203 ◊	Chassis Mount, Single Voltage, 5HP	1,052	E9	230	38.0	90/180	25.0	10
NEMA 4X Washdown Duty Line Regen SCR									
1/8-2	BC254 ◊	NEMA 4X Enclosed, Dual Voltage, 1/8 to 2 HP ^(a)	673	E9	115/230	15.0	90/180	11.0	5
	BC254-FBR ◊	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.
Accessories for BC200, BC201 and BC203				
BC212 ^(a) ◊	Bipolar signal isolator board	216	E9	1
Accessories for BC204				
BC143 ◊	External Heatsink Kit	72	E9	2
BC215 ^(a) ◊	Bipolar signal isolator board	100	E9	3
BC216 ◊	Multispeed board for BC204	77	E9	1
BC218 ◊	DIN rail mounting kit	36	E9	1
Accessories for BC254				
BC245 ^(a) ◊	Bipolar signal isolator for BC254	213	E9	1
BC253 ◊	Forward-Stop-Brake-Reverse Switch for BC254	27	E9	1
BC258 ◊	Auto-manual Switch for BC254	60	E9	1
BC259 ◊	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	2 HP	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
Options							
AC Line Switch	Standard	Standard	Standard		Opt - BC159	No	Opt-BC159
Forward/Brake/Reverse Switch	No	No	Opt-BC144		Opt-BC156	No	Standard
			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
			Opt-BC145		Opt-BC145	Opt-BC145	Opt-BC145
Voltage (0-25, 0-120, 0-550 VDC)			Opt-BC145		0-5, 0-10 VDC input standard	0-5, 0-10 VDC input standard	0-5, 0-10 VDC input standard
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

Baldor ACB & ACS Drives

AC Micro Drives

Analog AC Drives

Baldor DC Drives

ACS Drives

Resistors

Powerohm

Input Reactors

Output Filters

Application Information

Cross Reference

Glossary of Terms

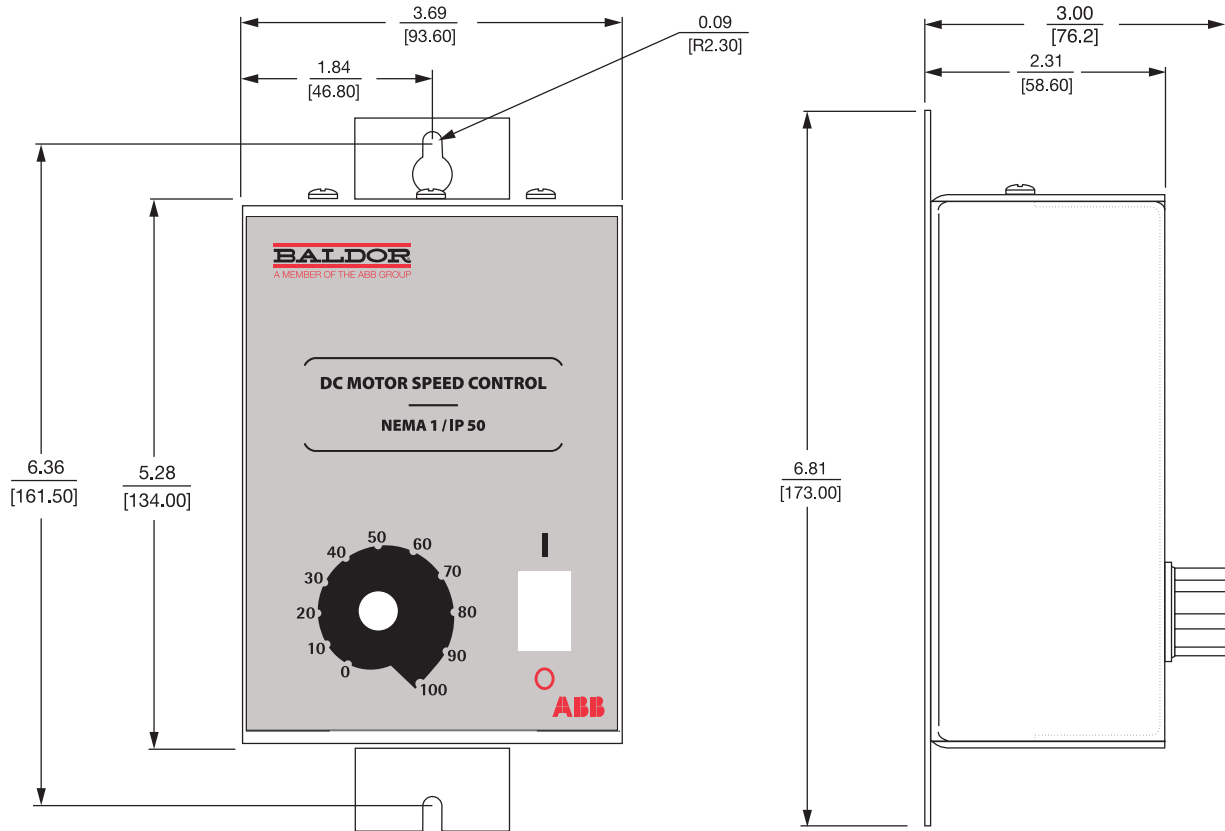
Catalog Number Index

Chassis Mount DC Control Specifications

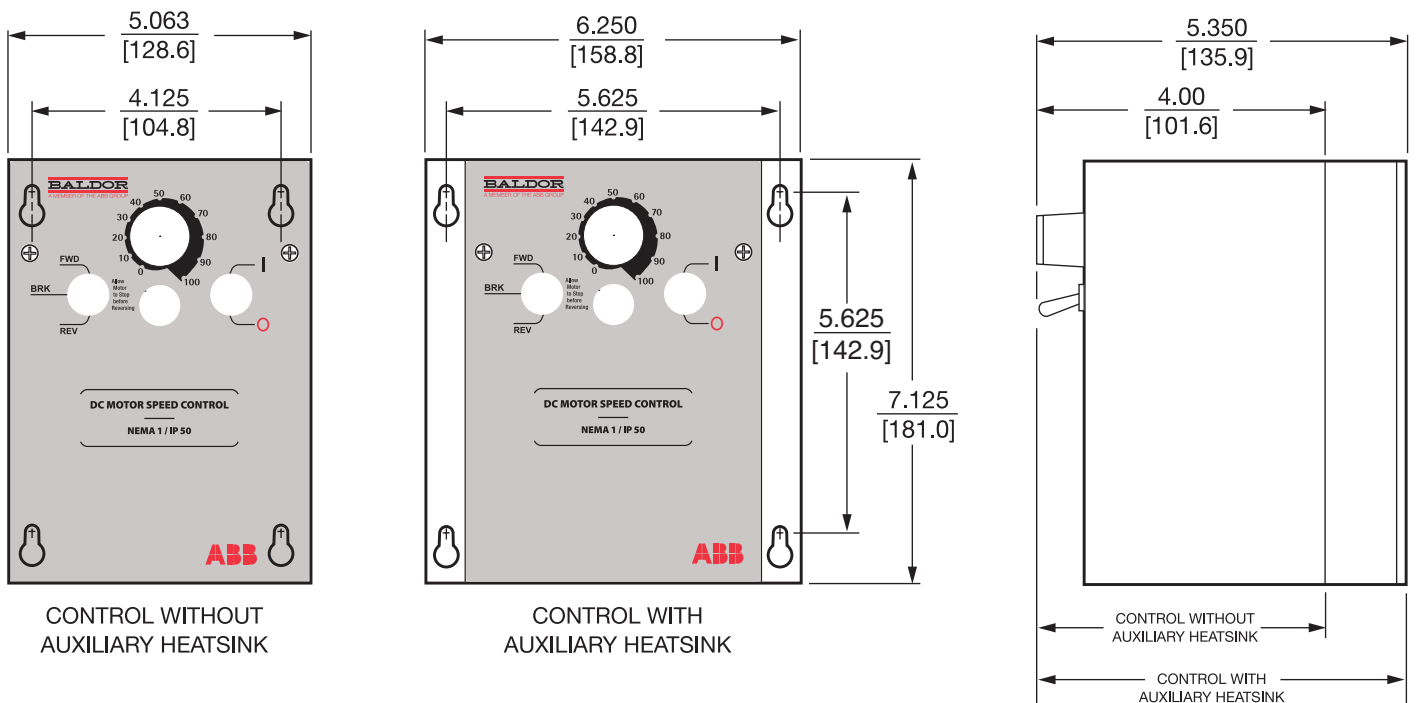
Features	Catalog Number								
	BC141	BC142	BC142-6	BC155	BC204	BC200	BC201	BC203	
Enclosure	Chassis	Chassis	Chassis	Chassis	Chassis	Chassis	Chassis	Chassis	
Control Type	NEMA K	NEMA K	NEMA K	NEMA K	Regenerative	Regenerative	Regenerative	Regenerative	
AC Line Input	115	230	115 230	230	115 230	115 230	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	
Options									
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	No	No	No	No	
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	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	

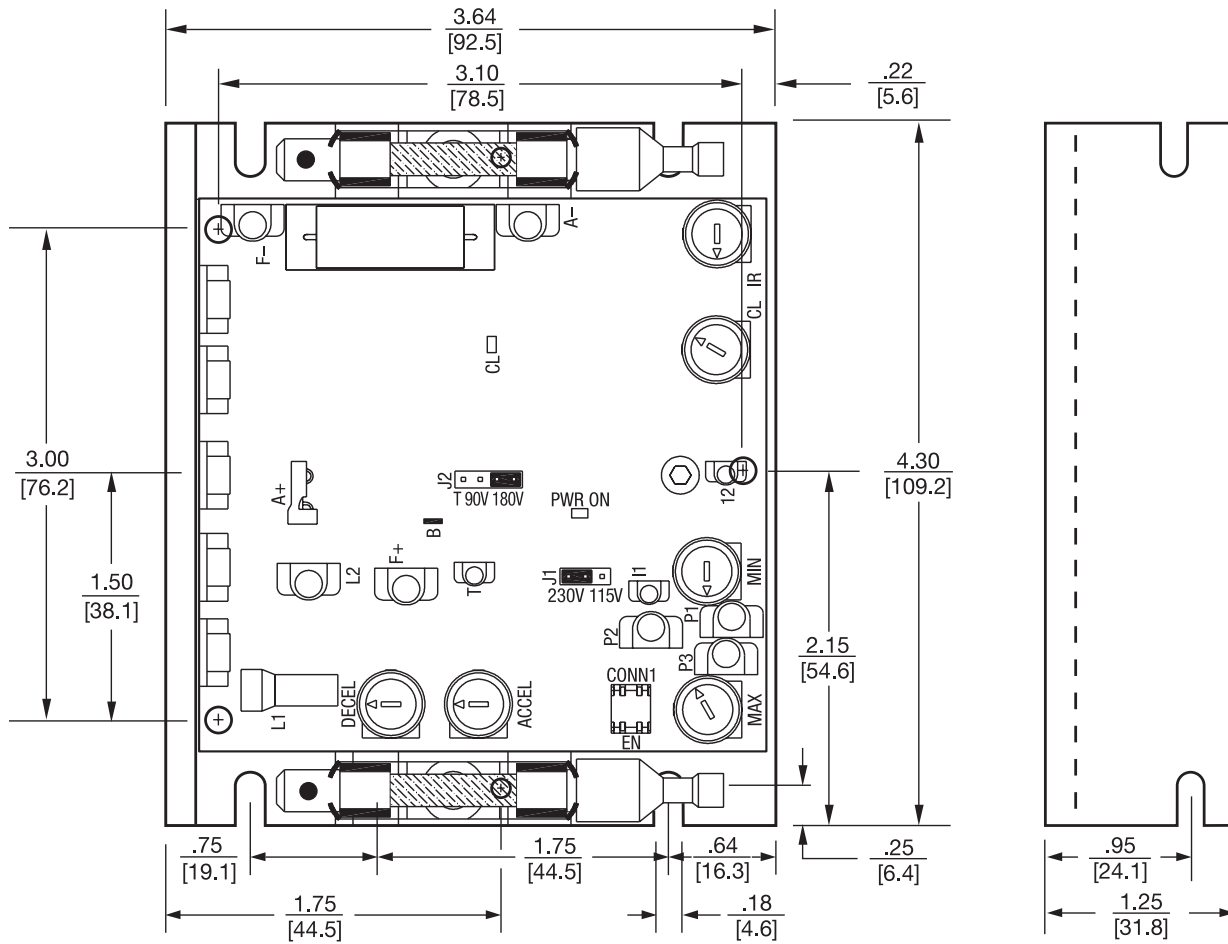
DC Control Dimension Diagrams

BC138, BC139



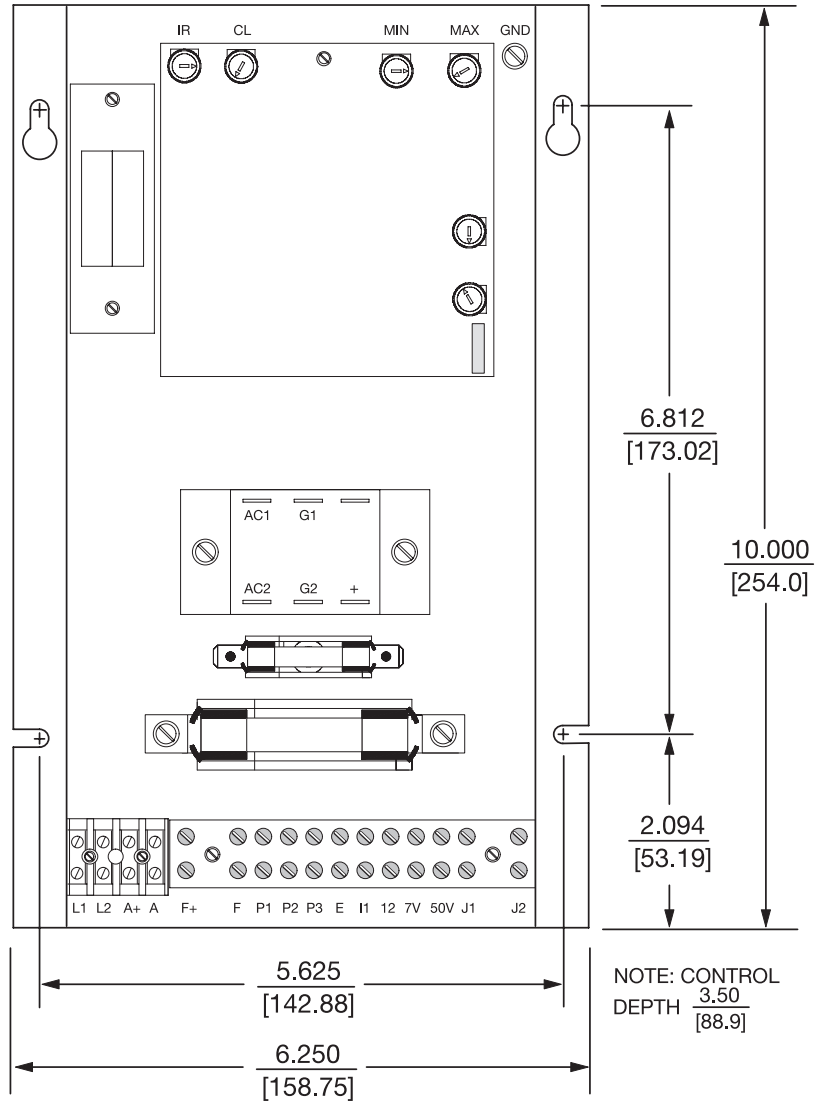
BC140, BC140-FBR



DC Control Dimension Diagrams**BC141, BC142, BC142-6**

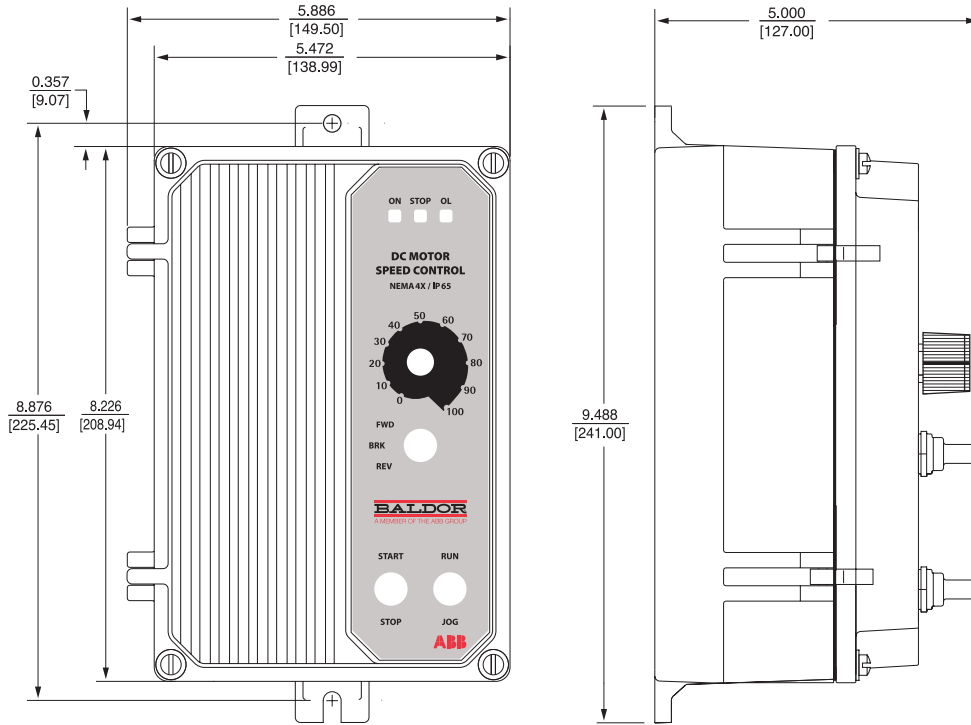
DC Control Dimension Diagrams

BC155

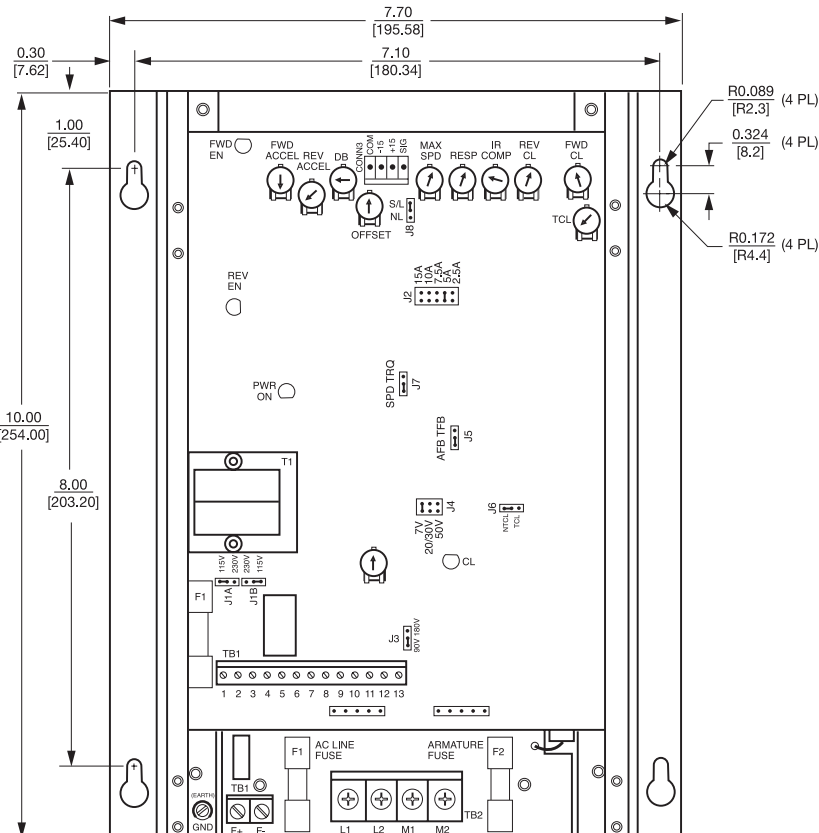


DC Control Dimension Diagrams

BC154, BCWD140, BC160, BC254 and BC354

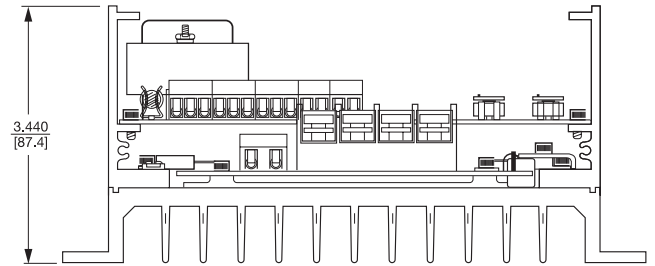
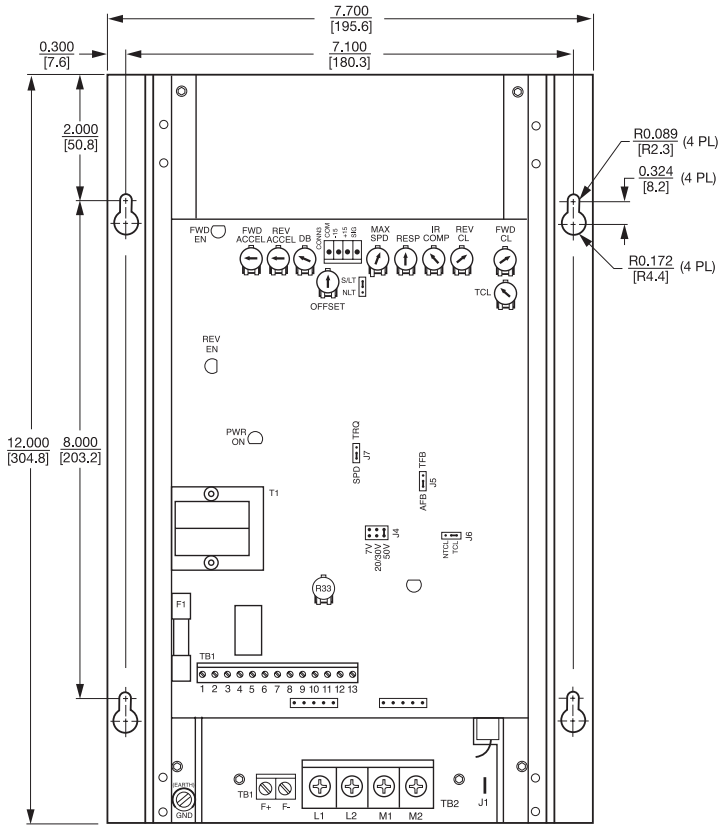


BC200, BC201



DC Control Dimension Diagrams

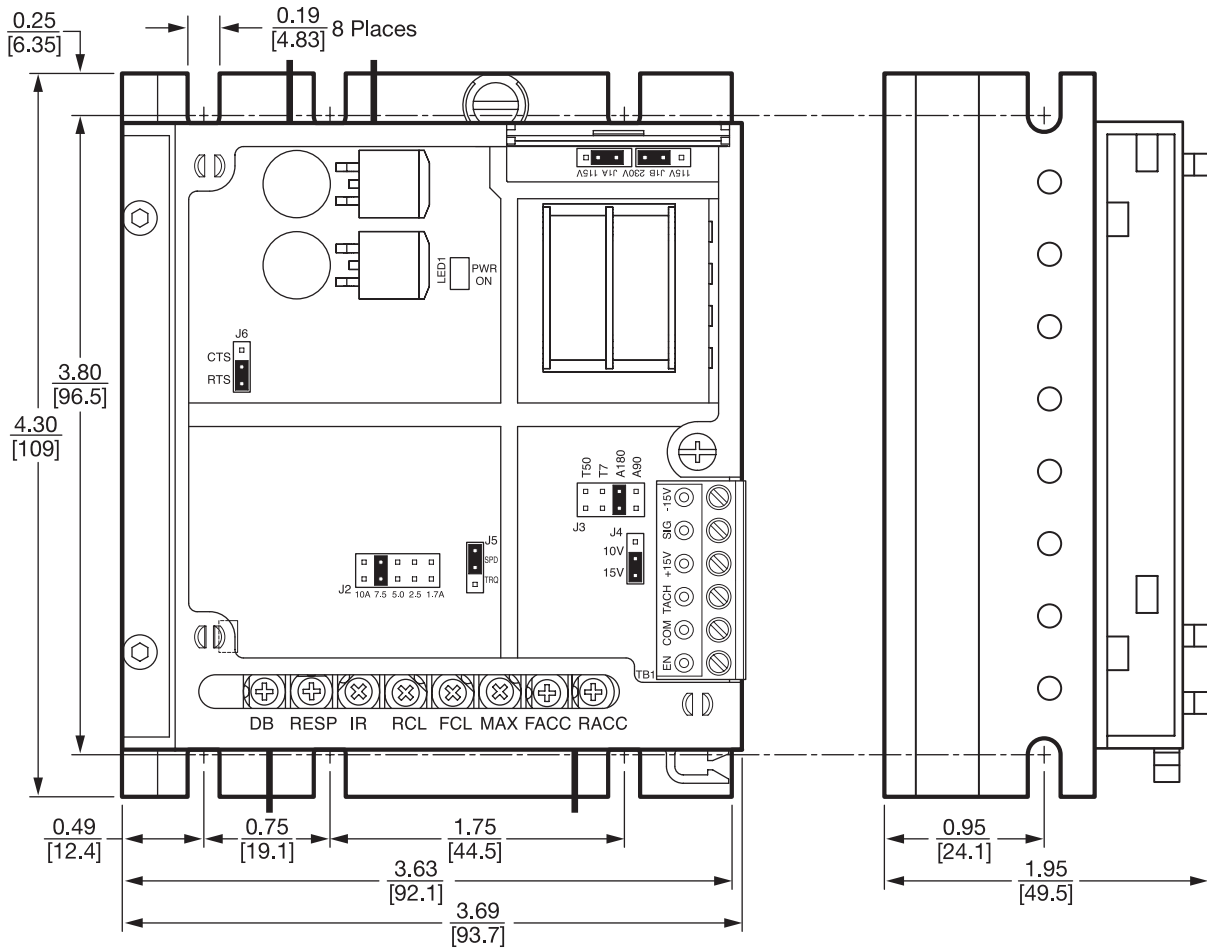
BC203



- Baldor ACB & ACS Drives
- AC Micro Drives
- Analog AC Drives
- Baldor DC Drives
- ACS Drives
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DC Control Dimension Diagrams

BC204



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			Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	Disc. Sym.
		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			Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	Disc. Sym.
		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			Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	Disc. Sym.
		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			Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	Disc. Sym.
		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)

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-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	

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-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

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-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	

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-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.

ACS255 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	
ACS255-01U-05A8-1	1.5	P14494-CR-06	3AUA0000064055	50	100	88	P14494-CR-18	3AUA0000064068	50	200	104	ES
ACS255-01U-05A8-1	1.5	P14494-CR-24	3AUA0000064074	50	300	140	P14494-CR-32	3AUA0000064083	50	400	174	ES
ACS255-01U-05A8-1	1.5	P14494-24	3AUA0000015106	45	300	140	P14494-24	3AUA0000015106	45	300	140	ES
ACS255-01U-05A8-1	1.5	P14494-24	3AUA0000015106	45	300	140	P14494-24	3AUA0000015106	45	300	140	ES
ACS255-03U-02A1-6	1.5	P14494-CR-02	3AUA0000064050	200	100	88	P14494-CR-13	3AUA0000064063	250	200	122	ES
ACS255-03U-03A1-6	2	P14494-CR-08	3AUA0000064058	250	150	104	P14494-CR-19	3AUA0000064069	250	300	140	ES
ACS255-03U-04A1-6	3	P14494-CR-22	3AUA0000064072	100	300	140	P14494-CR-30	3AUA0000064080	100	400	174	ES
ACS255-03U-06A5-6	5	P14494-CR-22	3AUA0000064072	100	300	140	-	-	-	-	-	ES
ACS255-03U-02A1-6	1.5	P14494-CR-19	3AUA0000064069	250	300	140	P14494-CR-27	3AUA0000064077	250	400	174	ES
ACS255-03U-03A1-6	2	P14494-CR-19	3AUA0000064069	250	300	140	P14494-CR-27	3AUA0000064077	250	400	174	ES
ACS255-03U-04A1-6	3	P14494-CR-27	3AUA0000064077	250	400	174	-	-	-	-	-	ES
ACS255-03U-02A1-6	1.5	P14494-11	3AUA0000014395	250	300	223	P14494-11	3AUA0000014395	250	300	223	ES
ACS255-03U-03A1-6	2	P14494-11	3AUA0000014395	250	300	223	P14494-11	3AUA0000014395	250	300	223	ES
ACS255-03U-04A1-6	3	P14494-11	3AUA0000014395	250	300	223	P14494-11	3AUA0000014395	250	300	223	ES
ACS255-03U-06A5-6	5	P14494-13	3AUA0000015096	200	300	223	P14494-14	3AUA0000015097	200	600	338	ES
ACS255-03U-02A1-6	1.5	P14494-11	3AUA0000014395	250	300	223	P14494-11	3AUA0000014395	250	300	223	ES
ACS255-03U-03A1-6	2	P14494-11	3AUA0000014395	250	300	223	P14494-11	3AUA0000014395	250	300	223	ES
ACS255-03U-04A1-6	3	P14494-12	3AUA0000015095	250	600	338	P14494-12	3AUA0000015095	250	600	338	ES
ACS255-03U-04A1-6	3	P14494-12	3AUA0000015095	250	600	338	P14494-12	3AUA0000015095	250	600	338	ES
ACS255-03U-06A5-6	5	P14494-14	3AUA0000015097	200	600	338	P14494-18	3AUA0000015100	150	1200	528	ES
ACS255-03U-09A0-6	7.5	ABB-48431-052	3AUA0000015300	80	800	337	P14494-63	3AUA0000064025	80	1050	433	ES
ACS255-03U-12A0-6	10	P14494-62	3AUA0000064023	63	800	337	ABB-48431-140	3AUA0000015345	63	1200	433	ES
ACS255-03U-17A0-6	15	ABB-41163	3AUA0000015149	35	900	433	P14494-34	3AUA0000015114	35	1600	529	ES
ACS255-03U-22A0-6	20	P14494-33	3AUA0000015113	35	1200	433	ABB-44534	3AUA0000015265	40	2010	626	ES

ACS255 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			Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	Disc. Sym.
		Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price							
ACS255-01U-05A8-1+B063	1.5	P14494-CR-06	3AUA0000064055	50	100	88	P14494-CR-18	3AUA0000064068	50	200	104	ES	
ACS255-01U-05A8-1+B063	1.5	P14494-CR-24	3AUA0000064074	50	300	140	P14494-CR-32	3AUA0000064083	50	400	174	ES	
ACS255-01U-05A8-1+B063	1.5	P14494-24	3AUA0000015106	45	300	140	P14494-24	3AUA0000015106	45	300	140	ES	
ACS255-01U-05A8-1+B063	1.5	P14494-24	3AUA0000015106	45	300	140	P14494-24	3AUA0000015106	45	300	140	ES	
ACS255-01U-10A5-2+B063	3	P14494-CR-12	3AUA0000064062	50	150	104	P14494-CR-24	3AUA0000064074	50	300	140	ES	
ACS255-01U-10A5-2+B063	3	P14494-CR-32	3AUA0000064083	50	400	174	-	-	-	-	-	ES	
ACS255-01U-10A5-2+B063	3	P14494-31	3AUA0000015112	35	300	223	P14494-31	3AUA0000015112	35	300	223	ES	
ACS255-01U-10A5-2+B063	3	P14494-32	3AUA0000013872	35	820	338	P14494-32	3AUA0000013872	35	820	338	ES	
ACS255-03U-07A0-2+B063	2	P14494-CR-06	3AUA0000064055	50	100	88	P14494-CR-18	3AUA0000064068	50	200	122	ES	
ACS255-03U-10A5-2+B063	3	P14494-CR-12	3AUA0000064062	50	150	104	P14494-CR-24	3AUA0000064074	50	300	140	ES	
ACS255-03U-18A0-2+B063	5	P14494-CR-26	3AUA0000064076	40	300	140	P14494-CR-34	3AUA0000064085	40	400	174	ES	
ACS255-03U-07A0-2+B063	2	P14494-CR-24	3AUA0000064074	50	300	140	P14494-CR-32	3AUA0000064083	50	400	174	ES	
ACS255-03U-10A5-2+B063	3	P14494-CR-32	3AUA0000064083	50	400	174	-	-	-	-	-	ES	
ACS255-03U-07A0-2+B063	2	P14494-31	3AUA0000015112	35	300	223	P14494-31	3AUA0000015112	35	300	223	ES	
ACS255-03U-10A5-2+B063	3	P14494-31	3AUA0000015112	35	300	223	P14494-31	3AUA0000015112	35	300	223	ES	
ACS255-03U-18A0-2+B063	5	P14494-31	3AUA0000015112	35	300	223	P14494-32	3AUA0000013872	35	820	338	ES	
ACS255-01U-07A0-2+B063	2	P14494-31	3AUA0000015112	35	300	223	P14494-32	3AUA0000013872	35	820	338	ES	
ACS255-01U-10A5-2+B063	3	P14494-32	3AUA0000013872	35	820	338	P14494-32	3AUA0000013872	35	820	338	ES	
ACS255-03U-18A0-2+B063	5	P14494-32	3AUA0000013872	35	820	338	P14494-32	3AUA0000013872	35	820	338	ES	
ACS255-03U-04A1-4+B063	2	P14494-CR-03	3AUA0000064052	150	100	88	P14494-CR-15	3AUA0000064065	150	200	122	ES	
ACS255-03U-05A8-4+B063	3	P14494-CR-11	3AUA0000064061	100	150	104	P14494-CR-22	3AUA0000064072	100	300	140	ES	
ACS255-03U-09A5-4+B063	5	P14494-CR-22	3AUA0000064072	100	300	140	P14494-CR-30	3AUA0000064080	100	400	174	ES	
ACS255-03U-14A0-4+B063	7.5	P14494-CR-32	3AUA0000064083	50	400	174	-	-	-	-	-	ES	
ACS255-03U-04A1-4+B063	2	P14494-CR-21	3AUA0000064071	150	300	140	P14494-CR-29	3AUA0000064079	150	400	174	ES	
ACS255-03U-05A8-4+B063	3	P14494-CR-30	3AUA0000064080	100	400	174	-	-	-	-	-	ES	
ACS255-03U-04A1-4+B063	2	P14494-15	3AUA0000013679	150	300	223	P14494-15	3AUA0000013679	150	300	223	ES	
ACS255-03U-05A8-4+B063	3	P14494-15	3AUA0000013679	150	300	223	P14494-15	3AUA0000013679	150	300	223	ES	
ACS255-03U-09A5-4+B063	5	P14494-19	3AUA0000015101	75	300	223	P14494-20	3AUA0000015102	75	600	337	ES	
ACS255-03U-14A0-4+B063	7.5	P14494-25	3AUA0000015107	45	800	337	P14494-25	3AUA0000015107	45	800	337	ES	
ACS255-03U-18A0-4+B063	10	P14494-25	3AUA0000015107	45	800	337	P14494-26	3AUA0000013807	45	1260	433	ES	
ACS255-03U-04A1-4+B063	2	P14494-15	3AUA0000013679	150	300	223	P14494-16	3AUA0000013865	150	600	338	ES	
ACS255-03U-05A8-4+B063	3	P14494-16	3AUA0000013865	150	600	338	P14494-16	3AUA0000013865	150	600	338	ES	
ACS255-03U-09A5-4+B063	5	P14494-20	3AUA0000015102	75	600	337	P14494-21	3AUA0000015103	75	1000	432	ES	
ACS255-03U-14A0-4+B063	7.5	P14494-26	3AUA0000013807	45	1260	432	P14494-27	3AUA0000015081	45	1920	626	ES	
ACS255-03U-02A1-6+B063	1.5	P14494-CR-02	3AUA0000064050	200	100	88	P14494-CR-13	3AUA0000064063	250	200	122	ES	
ACS255-03U-03A1-6+B063	2	P14494-CR-08	3AUA0000064058	250	150	104	P14494-CR-19	3AUA0000064069	250	300	140	ES	
ACS255-03U-04A1-6+B063	3	P14494-CR-22	3AUA0000064072	100	300	140	P14494-CR-30	3AUA0000064080	100	400	174	ES	
ACS255-03U-06A5-6+B063	5	P14494-CR-22	3AUA0000064072	100	300	140	-	-	-	-	-	ES	
ACS255-03U-02A1-6+B063	1.5	P14494-CR-19	3AUA0000064069	250	300	140	P14494-CR-27	3AUA0000064077	250	400	174	ES	
ACS255-03U-03A1-6+B063	2	P14494-CR-19	3AUA0000064069	250	300	140	P14494-CR-27	3AUA0000064077	250	400	174	ES	
ACS255-03U-04A1-6+B063	3	P14494-CR-27	3AUA0000064077	250	400	174	-	-	-	-	-	ES	
ACS255-03U-02A1-6+B063	1.5	P14494-11	3AUA0000014395	250	300	223	P14494-11	3AUA0000014395	250	300	223	ES	
ACS255-03U-03A1-6+B063	2	P14494-11	3AUA0000014395	250	300	223	P14494-11	3AUA0000014395	250	300	223	ES	
ACS255-03U-04A1-6+B063	3	P14494-11	3AUA0000014395	250	300	223	P14494-11	3AUA0000014395	250	300	223	ES	
ACS255-03U-06A5-6+B063	5	P14494-13	3AUA0000015096	200	300	223	P14494-14	3AUA0000015097	200	600	338	ES	
ACS255-03U-02A1-6+B063	1.5	P14494-11	3AUA0000014395	250	300	223	P14494-11	3AUA0000014395	250	300	223	ES	
ACS255-03U-03A1-6+B063	2	P14494-11	3AUA0000014395	250	300	223	P14494-11	3AUA0000014395	250	300	223	ES	
ACS255-03U-04A1-6+B063	3	P14494-12	3AUA0000015095	250	600	338	P14494-12	3AUA0000015095	250	600	338	ES	
ACS255-03U-04A1-6+B063	3	P14494-12	3AUA0000015095	250	600	338	P14494-12	3AUA0000015095	250	600	338	ES	
ACS255-03U-06A5-6+B063	5	P14494-14	3AUA0000015097	200	600	338	P14494-18	3AUA0000015100	150	1200	528	ES	
ACS255-03U-09A0-6+B063	7.5	ABB-48431-052	3AUA0000015300	80	800	337	P14494-63	3AUA0000064025	80	1050	433	ES	
ACS255-03U-12A0-6+B063	10	P14494-62	3AUA0000064023	63	800	337	ABB-48431-140	3AUA0000015345	63	1200	433	ES	
ACS255-03U-17A0-6+B063	15	ABB-41163	3AUA0000015149	35	900	433	P14494-34	3AUA0000015114	35	1600	529	ES	

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AC Micro Drives
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ACS255 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			Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	Disc. Sym.
		Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	Resistor Type Code						
ACS255-01U-05A8-1+B063+F278	1.5	P14494-CR-06	3AUA0000064055	50	100	88	P14494-CR-18	3AUA0000064068	50	200	104	ES	
ACS255-01U-05A8-1+B063+F278	1.5	P14494-CR-24	3AUA0000064074	50	300	140	P14494-CR-32	3AUA0000064083	50	400	174	ES	
ACS255-01U-05A8-1+B063+F278	1.5	P14494-24	3AUA0000015106	45	300	140	P14494-24	3AUA0000015106	45	300	140	ES	
ACS255-01U-05A8-1+B063+F278	1.5	P14494-24	3AUA0000015106	45	300	140	P14494-24	3AUA0000015106	45	300	140	ES	
ACS255-01U-10A5-2+B063+F278	3	P14494-CR-12	3AUA0000064062	50	150	104	P14494-CR-24	3AUA0000064074	50	300	140	ES	
ACS255-01U-10A5-2+B063+F278	3	P14494-CR-32	3AUA0000064083	50	400	174	-	-	-	-	-	ES	
ACS255-01U-10A5-2+B063+F278	3	P14494-31	3AUA0000015112	35	300	223	P14494-31	3AUA0000015112	35	300	223	ES	
ACS255-01U-10A5-2+B063+F278	3	P14494-32	3AUA0000013872	35	820	338	P14494-32	3AUA0000013872	35	820	338	ES	
ACS255-03U-07A0-2+B063+F278	2	P14494-CR-06	3AUA0000064055	50	100	88	P14494-CR-18	3AUA0000064068	50	200	122	ES	
ACS255-03U-10A5-2+B063+F278	3	P14494-CR-12	3AUA0000064062	50	150	104	P14494-CR-24	3AUA0000064074	50	300	140	ES	
ACS255-03U-18A0-2+B063+F278	5	P14494-CR-26	3AUA0000064076	40	300	140	P14494-CR-34	3AUA0000064085	40	400	174	ES	
ACS255-03U-07A0-2+B063+F278	2	P14494-CR-24	3AUA0000064074	50	300	140	P14494-CR-32	3AUA0000064083	50	400	174	ES	
ACS255-03U-10A5-2+B063+F278	3	P14494-CR-32	3AUA0000064083	50	400	174	-	-	-	-	-	ES	
ACS255-03U-07A0-2+B063+F278	2	P14494-31	3AUA0000015112	35	300	223	P14494-31	3AUA0000015112	35	300	223	ES	
ACS255-03U-10A5-2+B063+F278	3	P14494-31	3AUA0000015112	35	300	223	P14494-31	3AUA0000015112	35	300	223	ES	
ACS255-03U-18A0-2+B063+F278	5	P14494-31	3AUA0000015112	35	300	223	P14494-32	3AUA0000013872	35	820	338	ES	
ACS255-01U-07A0-2+B063+F278	2	P14494-31	3AUA0000015112	35	300	223	P14494-32	3AUA0000013872	35	820	338	ES	
ACS255-01U-10A5-2+B063+F278	3	P14494-32	3AUA0000013872	35	820	338	P14494-32	3AUA0000013872	35	820	338	ES	
ACS255-03U-18A0-2+B063+F278	5	P14494-32	3AUA0000013872	35	820	338	P14494-32	3AUA0000013872	35	820	338	ES	
ACS255-03U-04A1-4+B063+F278	2	P14494-CR-03	3AUA0000064052	150	100	88	P14494-CR-15	3AUA0000064065	150	200	122	ES	
ACS255-03U-05A8-4+B063+F278	3	P14494-CR-11	3AUA0000064061	100	150	104	P14494-CR-22	3AUA0000064072	100	300	140	ES	
ACS255-03U-09A5-4+B063+F278	5	P14494-CR-22	3AUA0000064072	100	300	140	P14494-CR-30	3AUA0000064080	100	400	174	ES	
ACS255-03U-14A0-4+B063+F278	7.5	P14494-CR-32	3AUA0000064083	50	400	174	-	-	-	-	-	ES	
ACS255-03U-04A1-4+B063+F278	2	P14494-CR-21	3AUA0000064071	150	300	140	P14494-CR-29	3AUA0000064079	150	400	174	ES	
ACS255-03U-05A8-4+B063+F278	3	P14494-CR-30	3AUA0000064080	100	400	174	-	-	-	-	-	ES	
ACS255-03U-04A1-4+B063+F278	2	P14494-15	3AUA0000013679	150	300	223	P14494-15	3AUA0000013679	150	300	223	ES	
ACS255-03U-05A8-4+B063+F278	3	P14494-15	3AUA0000013679	150	300	223	P14494-15	3AUA0000013679	150	300	223	ES	
ACS255-03U-09A5-4+B063+F278	5	P14494-19	3AUA0000015101	75	300	223	P14494-20	3AUA0000015102	75	600	337	ES	
ACS255-03U-14A0-4+B063+F278	7.5	P14494-25	3AUA0000015107	45	800	337	P14494-25	3AUA0000015107	45	800	337	ES	
ACS255-03U-18A0-4+B063+F278	10	P14494-25	3AUA0000015107	45	800	337	P14494-26	3AUA0000013807	45	1260	433	ES	
ACS255-03U-04A1-4+B063+F278	2	P14494-15	3AUA0000013679	150	300	223	P14494-16	3AUA0000013865	150	600	338	ES	
ACS255-03U-05A8-4+B063+F278	3	P14494-16	3AUA0000013865	150	600	338	P14494-16	3AUA0000013865	150	600	338	ES	
ACS255-03U-09A5-4+B063+F278	5	P14494-20	3AUA0000015102	75	600	337	P14494-21	3AUA0000015103	75	1000	432	ES	
ACS255-03U-14A0-4+B063+F278	7.5	P14494-26	3AUA0000013807	45	1260	432	P14494-27	3AUA0000015081	45	1920	626	ES	
ACS255-03U-02A1-6+B063+F278	1.5	P14494-CR-02	3AUA0000064050	200	100	88	P14494-CR-13	3AUA0000064063	250	200	122	ES	
ACS255-03U-03A1-6+B063+F278	2	P14494-CR-08	3AUA0000064058	250	150	104	P14494-CR-19	3AUA0000064069	250	300	140	ES	
ACS255-03U-04A1-6+B063+F278	3	P14494-CR-22	3AUA0000064072	100	300	140	P14494-CR-30	3AUA0000064080	100	400	174	ES	
ACS255-03U-06A5-6+B063+F278	5	P14494-CR-22	3AUA0000064072	100	300	140	-	-	-	-	-	ES	
ACS255-03U-02A1-6+B063+F278	1.5	P14494-CR-19	3AUA0000064069	250	300	140	P14494-CR-27	3AUA0000064077	250	400	174	ES	
ACS255-03U-03A1-6+B063+F278	2	P14494-CR-19	3AUA0000064069	250	300	140	P14494-CR-27	3AUA0000064077	250	400	174	ES	
ACS255-03U-04A1-6+B063+F278	3	P14494-CR-27	3AUA0000064077	250	400	174	-	-	-	-	-	ES	
ACS255-03U-02A1-6+B063+F278	1.5	P14494-11	3AUA0000014395	250	300	223	P14494-11	3AUA0000014395	250	300	223	ES	
ACS255-03U-03A1-6+B063+F278	2	P14494-11	3AUA0000014395	250	300	223	P14494-11	3AUA0000014395	250	300	223	ES	
ACS255-03U-04A1-6+B063+F278	3	P14494-11	3AUA0000014395	250	300	223	P14494-11	3AUA0000014395	250	300	223	ES	
ACS255-03U-06A5-6+B063+F278	5	P14494-13	3AUA0000015096	200	300	223	P14494-14	3AUA0000015097	200	600	338	ES	
ACS255-03U-02A1-6+B063+F278	1.5	P14494-11	3AUA0000014395	250	300	223	P14494-11	3AUA0000014395	250	300	223	ES	
ACS255-03U-03A1-6+B063+F278	2	P14494-11	3AUA0000014395	250	300	223	P14494-11	3AUA0000014395	250	300	223	ES	
ACS255-03U-04A1-6+B063+F278	3	P14494-12	3AUA0000015095	250	600	338	P14494-12	3AUA0000015095	250	600	338	ES	
ACS255-03U-04A1-6+B063+F278	3	P14494-12	3AUA0000015095	250	600	338	P14494-12	3AUA0000015095	250	600	338	ES	
ACS255-03U-06A5-6+B063+F278	5	P14494-14	3AUA0000015097	200	600	338	P14494-18	3AUA0000015100	150	1200	528	ES	
ACS255-03U-09A0-6+B063+F278	7.5	ABB-48431-052	3AUA0000015300	80	800	337	P14494-63	3AUA0000064025	80	1050	433	ES	
ACS255-03U-12A0-6+B063+F278	10	P14494-62	3AUA0000064023	63	800	337	ABB-48431-140	3AUA0000015345	63	1200	433	ES	
ACS255-03U-17A0-6+B063+F278	15	ABB-41163	3AUA0000015149	35	900	433	P14494-34	3AUA0000015114	35	1600	529	ES	

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			Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	Disc. Sym.
		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			Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	Disc. Sym.
		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			Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	Disc. Sym.
		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			Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	Disc. Sym.
		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			Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	Disc. Sym.
		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			Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	Disc. Sym.
		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			Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	Disc. Sym.
		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			Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	Disc. Sym.
		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			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+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			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+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			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+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			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+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			Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	Disc. Sym.
		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			Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	Disc. Sym.
		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						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-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			Resistor Type Code	Resistor Catalog Number	Ohms	Watts	List Price	Disc. Sym.
		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.

Type CR Case Resistor

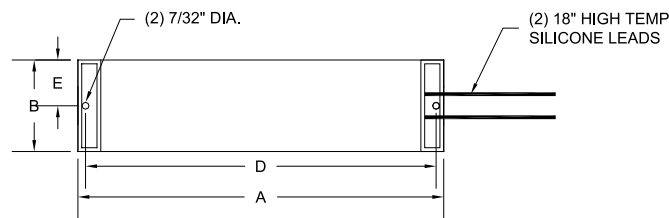
Information and Dimensions

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.

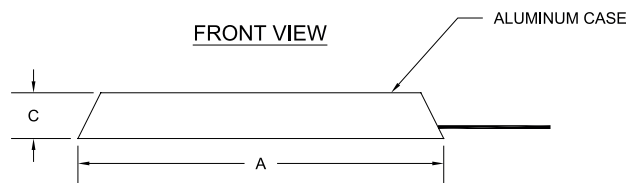
Electrical Ratings & Dimensions of Standard Size Case Resistors

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

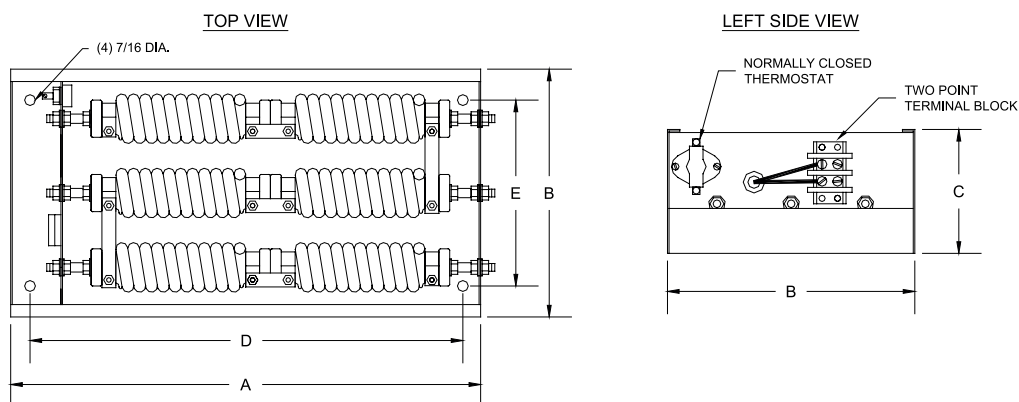
Information and Dimensions

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 catalog 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

Catalog 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.

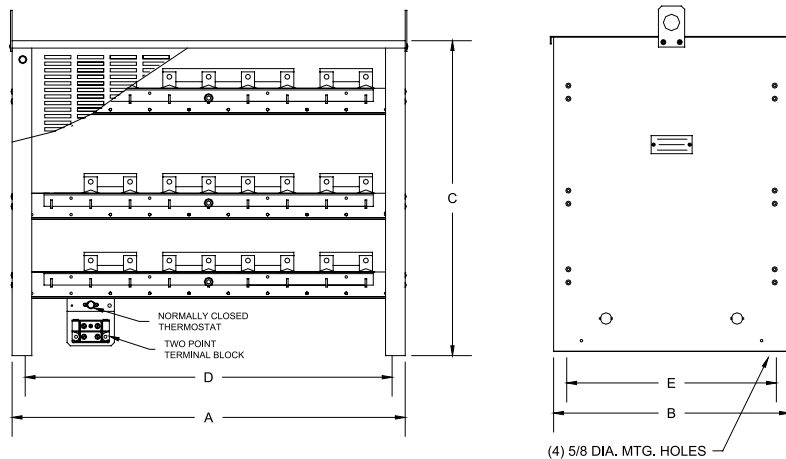
These rigid enclosures include a screened top and removable front and back screened covers. The enclosure sides are solid and the bottom is open and furnished with two lifting eyes. Mounting holes are located inside the enclosure and can be easily accessed by removing the front or rear cover. Resistor 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 catalog number. Please do not hesitate to call the factory if you need assistance.

ED Enclosure Dimensions and Coil Options

Catalog 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

FRONT VIEW

SIDE VIEW



Resistor Technical Data (cont.) By Catalog Number

Catalog 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

Baldor ACB
& ACS Drives

AC Micro
Drives

Analog AC
Drives

Baldor
DC Drives

ACS
Drives

Resistors

Powerohm

Input
Reactors

Output
Filters

Application
Information

Cross
Reference

Glossary
of Terms

Catalog
Number Index

Resistor Technical Data By Catalog Number

Catalog Number	Ohms	Watts	Encl.	Dimensions WDH (inches)	Weight (lbs)	List Price	Disc. Sym.
ABB-41136	3,00	1500	GCE4	12W x 13D x 5H	16	529	EG
ABB-41137	3,00	1800	GCE6	19W x 10D x 5H	16	624	EG
ABB-41138	3,00	2100	GCE6	19W x 10D x 5H	16	624	EG
ABB-41150	4,00	5600	GCE9	26.5W x 10D x 5H	26	1,050	EG
ABB-41163	35,00	900	GCE3	12W x 10D x 5H	13	433	EG
ABB-41169	11,00	3700	GCE6	19W x 10D x 5H	19	789	EG
ABB-42685	1,72	21000	ED2	30W x 18D x 16H	89	3,664	EG
ABB-42776	4,40	9000	GCE15	26.5W x 16D x 5H	41	1,568	EG
ABB-42778	2,74	13500	GCE18	28W x 10D x 10H	65	2,168	EH
ABB-43160	8,52	25992	ED2	30W x 18D x 16H	100	3,351	EG
ABB-43164	4,00	30976	ED3	30W x 18D x 24H	133	4,902	EG
ABB-43167	40,00	2890	GCE8	19W x 13D x 5H	24	817	EG
ABB-43494	2,74	49208	ED4	30W x 18D x 32H	188	6,995	EH
ABB-43505	1,39	99878	ED7	30W x 18D x 56H	442	13,875	EH
ABB-44471	22,00	1455	GCE4	12W x 13D x 5H	16	529	EG
ABB-44479	4,26	9872	GCE15	26.5W x 16D x 5H	41	1,568	EG
ABB-44480	4,26	11696	GCE18	28W x 10D x 10H	53	1,845	EG
ABB-44494	13,00	3333	GCE6	19W x 10D x 5H	19	789	EG
ABB-44499	6,10	9444	GCE18	28W x 10D x 10H	47	1,845	EG
ABB-44501	4,20	15279	GCE24	28W x 13D x 10H	69	2,104	EG
ABB-44502	4,20	18553	GCE30	28W x 16D x 10H	93	3,052	EG
ABB-44504	4,02	19403	GCE30	28W x 16D x 10H	93	3,052	EH
ABB-44509	1,38	52037	ED4	30W x 18D x 32H	255	7,482	EH
ABB-44518	13,30	6955	GCE12	26.5W x 13D x 5H	27	1,224	EG
ABB-44525	2,71	33760	ED3	30W x 18D x 24H	129	5,371	EH
ABB-44534	40,00	2010	GCE5	12W x 16D x 5H	18	626	EG
ABB-44536	22,00	3703	GCE9	26.5W x 10D x 5H	23	972	EG
ABB-44537	22,32	4823	GCE9	26.5W x 10D x 5H	23	972	EG
ABB-44540	8,32	10834	GCE18	28W x 10D x 10H	45	1,563	EG
ABB-44541	8,42	12590	GCE18	28W x 10D x 10H	45	1,563	EG
ABB-44542	8,52	15547	GCE24	28W x 13D x 10H	59	2,307	EG
ABB-44543	6,39	18031	GCE30	28W x 16D x 10H	76	2,566	EG
ABB-44551	2,02	70350	ED5	30W x 18D x 40H	282	8,553	EH
ABB-48431-002	22,00	819	GCE2	12W x 7D x 5H	10	337	EG
ABB-48431-003	22,00	1140	GCE3	12W x 10D x 5H	13	433	EG
ABB-48431-005	22,00	1862	GCE5	12W x 16D x 5H	18	626	EG
ABB-48431-006	22,00	2200	GCE6	19W x 10D x 5H	20	722	EG
ABB-48431-007	22,00	2426	GCE6	19W x 10D x 5H	20	722	EG
ABB-48431-008	22,00	3168	GCE8	19W x 13D x 5H	25	876	EG
ABB-48431-009	22,00	5632	GCE9	26.5W x 10D x 5H	23	972	EG
ABB-48431-020	44,00	324	GCE1	12W x 5D x 5H	7	223	EG
ABB-48431-021	44,00	800	GCE2	12W x 7D x 5H	10	337	EG
ABB-48431-022	44,00	1263	GCE3	12W x 10D x 5H	13	433	EG
ABB-48431-036	13,00	6292	GCE12	26.5W x 13D x 5H	27	1,224	EG
ABB-48431-050	80,00	400	GCE1	12W x 5D x 5H	7	223	EG
ABB-48431-051	80,00	400	GCE1	12W x 5D x 5H	7	223	EG
ABB-48431-052	80,00	800	GCE2	12W x 7D x 5H	10	337	EG
ABB-48431-053	80,00	1600	GCE4	12W x 13D x 5H	16	529	EG
ABB-48431-061	11,00	704	GCE2	12W x 7D x 5H	10	337	EG
ABB-48431-064	11,00	1584	GCE4	12W x 13D x 5H	16	529	EG
ABB-48431-065	11,00	1859	GCE5	12W x 16D x 5H	18	626	EG
ABB-48431-068	11,00	4400	GCE9	26.5W x 10D x 5H	24	909	EG
ABB-48431-070	11,00	8019	GCE12	26.5W x 13D x 5H	28	1,224	EG
ABB-48431-072	11,00	15884	GCE24	28W x 13D x 10H	56	2,307	EG
ABB-48431-080	30,00	800	GCE2	12W x 7D x 5H	10	337	EG
ABB-48431-081	30,00	1600	GCE4	12W x 13D x 5H	16	529	EG
ABB-48431-092	8,50	937	GCE3	12W x 10D x 5H	13	433	EG
ABB-48431-098	8,50	6197	GCE12	26.5W x 13D x 5H	29	1,141	EG
ABB-48431-102	8,50	21250	ED2	30W x 18D x 16H	100	3,351	EG
ABB-48431-110	120,00	600	GCE2	12W x 7D x 5H	10	337	EG
ABB-48431-125	8,00	20000	ED2	30W x 18D x 16H	100	3,351	EG

Catalog Number	Ohms	Watts	Encl.	Dimensions WDH (inches)	Weight (lbs)	List Price	Disc. Sym.
ABB-48431-140	63,00	1200	GCE3	12W x 10D x 5H	13	433	EG
ABB-48431-141	63,00	3000	GCE8	19W x 13D x 5H	25	876	EG
ABB-48431-153	5,30	1193	GCE3	12W x 10D x 5H	13	433	EG
ABB-48431-154	5,30	1717	GCE5	12W x 16D x 5H	18	626	EG
ABB-48431-155	5,30	2565	GCE6	19W x 10D x 5H	18	753	EG
ABB-48431-156	5,30	3313	GCE6	19W x 10D x 5H	19	789	EG
ABB-48431-158	5,30	3864	GCE6	19W x 10D x 5H	19	789	EG
ABB-48431-159	5,30	4770	GCE9	26.5W x 10D x 5H	25	972	EG
ABB-48431-160	5,30	5772	GCE12	26.5W x 13D x 5H	32	1,141	EG
ABB-48431-161	5,30	7653	GCE12	26.5W x 13D x 5H	32	1,328	EG
ABB-48431-162	5,30	13250	GCE24	28W x 13D x 10H	67	2,307	EG
ABB-48431-165	5,30	29813	ED2	30W x 18D x 16H	122	3,907	EG
ABB-48431-184	4,30	10750	GCE18	28W x 10D x 10H	53	1,845	EG
ABB-48431-212	4,00	25600	ED3	30W x 18D x 24H	101	4,103	EG
ABB-48431-270	2,90	5614	GCE9	26.5W x 10D x 5H	29	1,050	EG
ABB-48431-275	2,90	41760	ED4	30W x 18D x 32H	193	5,743	EG
ABB-48431-301	2,50	2723	GCE6	19W x 10D x 5H	19	753	EG
ABB-48431-303	2,50	3610	GCE6	19W x 10D x 5H	21	836	EG
ABB-48431-304	2,50	6250	GCE12	26.5W x 13D x 5H	37	1,238	EG
ABB-48431-305	2,50	16000	GCE30	28W x 16D x 10H	71	2,770	EG
ABB-48431-307	2,50	36000	ED3	30W x 18D x 24H	160	4,902	EH
ABB-48431-330	2,20	14080	GCE30	28W x 16D x 10H	71	2,544	EH
ABB-48431-331	2,20	17820	GCE24	28W x 13D x 10H	82	2,739	EG
ABB-48431-332	2,20	26620	ED3	30W x 18D x 24H	113	4,432	EH
ABB-48431-333	2,20	31680	ED3	30W x 18D x 24H	151	4,589	EH
ABB-48431-362	1,80	32805	ED3	30W x 18D x 24H	169	5,354	EH
ABB-48431-363	1,80	40500	ED4	30W x 18D x 32H	191	6,369	EH
ABB-48431-364	1,80	49005	ED4	30W x 18D x 32H	256	8,247	EH
ABB-48431-390	1,70	8330	GCE12	26.5W x 13D x 5H	45	1,544	EG
ABB-48431-392	1,70	17000	GCE24	28W x 13D x 10H	89	2,739	EH
ABB-48431-396	1,70	58183	ED4	30W x 18D x 32H	227	6,995	EH
ABB-48431-423	1,50	40838	ED4	30W x 18D x 32H	236	7,482	EH
ABB-48431-425	1,50	60000	ED5	30W x 18D x 40H	294	8,396	EH
ABB-48431-450	1,35	24604	ED2	30W x 18D x 16H	122	3,907	EH
ABB-48431-455	1,35	68344	ED4	30W x 18D x 32H	256	8,247	EH
ABB-48431-456	1,35	91260	ED7	30W x 18D x 56H	442	13,875	EH
ABB-48431-457	1,35	121500	ED8	30W x 18D x 64H	547	15,762	EH
ABB-49173-005	3,50	8500	GCE15	26.5W x 16D x 5H	45	1,568	EG
ABB-49173-007	2,00	8600	GCE15	26.5W x 16D x 5H	52	1,734	EG
ABB-49173-009	1,40	13000	GCE18	28W x 10D x 10H	70	2,168	EG
ABB-49173-010	1,40	21000	GCE30	28W x 16D x 10H	90	2,770	EH
P14494-10	350,00	200	GCE1	12W x 5D x 5H	8	223	EF
P14494-11	250,00	300	GCE1	12W x 5D x 5H	7	223	EF
P14494-12	250,00	600	GCE2	12W x 7D x 5H	10	337	EG
P14494-13	200,00	300	GCE1	12W x 5D x 5H	7	223	EF
P14494-14	200,00	600	GCE2	12W x 7D x 5H	10	337	EG
P14494-15	150,00	300	GCE1	12W x 5D x 5H	7	223	EF
P14494-16	150,00	600	GCE2	12W x 7D x 5H	10	337	EF
P14494-18	150,00	1200	GCE4	12W x 13D x 5H	16	529	EG
P14494-19	75,00	300	GCE1	12W x 5D x 5H	7	223	EF
P14494-20	75,00	600	GCE2	12W x 7D x 5H	10	337	EF
P14494-21	75,00	1000	GCE3	12W x 10D x 5H	13	433	EF
P14494-23	80,00	2400	GCE6	19W x 10D x 5H	20	722	EG
P14494-24	45,00	300	GCE1	12W x 5D x 5H	7	223	EF
P14494-25	45,00	800	GCE2	12W x 7D x 5H	10	337	EF
P14494-26	45,00	1260	GCE3	12W x 10D x 5H	13	433	EF
P14494-27	45,00	1920	GCE5	12W x 16D x 5H	18	626	EF
P14494-31	35,00	300	GCE1	12W x 5D x 5H	7	223	EF
P14494-32	35,00	820	GCE2	12W x 7D x 5H	10	337	EF
P14494-33	35,00	1200	GCE3	12W x 10D x 5H	13	433	EF
P14494-34	35,00	1600	GCE4	12W x 13D x 5H	16	529	EG

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 Catalog 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 Catalog 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 Catalog 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.

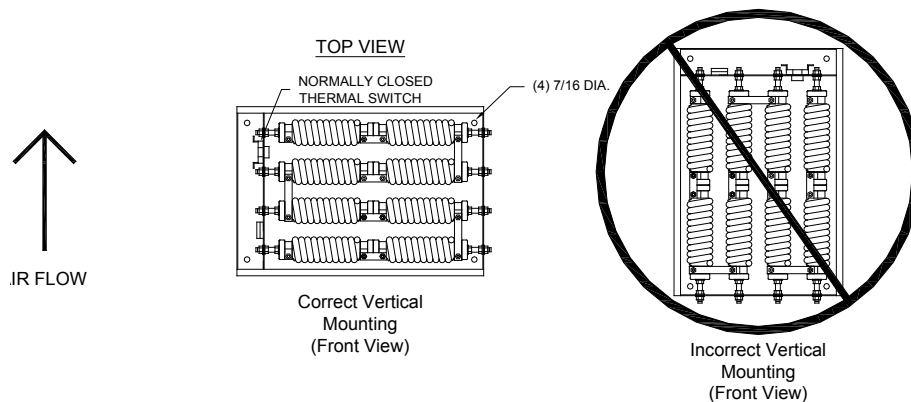
INSPECTION: Upon receipt of your Powerohm Braking Resistor, be sure to inspect the unit carefully for any shipping damage. After unpacking, check the unit for loose, broken, bent or otherwise damaged parts due to shipping. Report any shipping damage immediately to the freight carrier. Be sure to verify that the catalog 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

Catalog Number	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

Baldor ACS & ACS Drives

AC Micro Drives

Analog AC Drives

Baldor DC Drives

ACS Drives

Resistors

Powerohm

Input Reactors

Output Filters

Application Information

Cross Reference

Glossary of Terms

Catalog Number Index

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.
			Catalog Number	List Price	Catalog Number	List Price	Catalog 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.
			Catalog Number	Watts	Dimensions (HxWxD)	Weight	List Price	Catalog 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.
			Catalog Number	List Price	Catalog Number	List Price	Catalog 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.
			Catalog Number	Watts	Dimensions (HxWxD)	Weight	List Price	Catalog 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.
			Catalog Number	List Price	Catalog Number	List Price	Catalog 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.
			Catalog Number	Watts	Dimensions (HxWxD)	Weight	List Price	Catalog 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 ACS255 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. ACS255-01U-	HP ND	Output Current	KDR UR 5%, Open, Not UL		KDR UR 5%, NEMA 1, Not UL		KDR 5%, UL Listed, Open					Disc. Sym.
			Catalog Number	List Price	Catalog Number	List Price	Catalog 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. ACS255-01U-	HP ND	Output Current	KDR 5%, UL Type 1 Enclosure					KDR 5%, UL Type 3R Enclosure					Disc. Sym.
			Catalog Number	Watts	Dimensions (HxWxD)	Weight	List Price	Catalog 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 ACS255 Drives / High Impedance (Cont.)

Input Reactors for Three Phase 200-240V applications

Drive Part No. ACS255-03U-	HP ND	Output Current	KDR UR 5%, Open, Not UL		KDR UR 5%, NEMA 1, Not UL		KDR 5%, UL Listed, Open					Disc. Sym.
			Catalog Number	List Price	Catalog Number	List Price	Catalog 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. ACS255-03U-	HP ND	Output Current	KDR 5%, UL Type 1 Enclosure					KDR 5%, UL Type 3R Enclosure					Disc. Sym.
			Catalog Number	Watts	Dimensions (HxWxD)	Weight	List Price	Catalog 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. ACS255-03U-	HP ND	Output Current	KDR UR 5%, Open, Not UL		KDR UR 5%, NEMA 1, Not UL		KDR 5%, UL Listed, Open					Disc. Sym.
			Catalog Number	List Price	Catalog Number	List Price	Catalog 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. ACS255-03U-	HP ND	Output Current	KDR 5%, UL Type 1 Enclosure					KDR 5%, UL Type 3R Enclosure					Disc. Sym.
			Catalog Number	Watts	Dimensions (HxWxD)	Weight	List Price	Catalog 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 ACS255 Drives / High Impedance (Cont.)

Input Reactors for Three Phase 550-600V applications

Drive Part No. ACS255-03U-	HP ND	Output Current	KDR UR 5%, Open, Not UL		KDR UR 5%, NEMA 1, Not UL		KDR 5%, UL Listed, Open					Disc. Sym.
			Catalog Number	List Price	Catalog Number	List Price	Catalog 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. ACS255-03U-	HP ND	Output Current	KDR 5%, UL Type 1 Enclosure					KDR 5%, UL Type 3R Enclosure					Disc. Sym.
			Catalog Number	Watts	Dimensions (HxWxD)	Weight	List Price	Catalog 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 Current Ratings with and without AC Line Reactor

Type ACS150- ACS355-	ACS150	ACS355	Input without Reactor	Input with 5% Reactor	Type ACS255-	Input without Reactor	Input with 3% Reactor
			Input A	Input A		Input A	Input A
Single Phase Drive - 200-240 V Applications							
01x-02A4-2	x	x	6,1	4,5	01x-02A3-2	6,4	5,0
01x-04A7-2	x	x	11	8,1	01x-04A3-2	8,5	7,5
01x-06A7-2	x	x	16	11	01x-07A0-2	15,2	13,5
01x-07A5-2	x	x	17	12	01x-10A5-2	19,5	17,3
01x-09A8-2	x	x	21	15	–	–	–
Three Phase Drive - 200-240 V Applications							
03x-02A4-2	x	x	4,3	2,2	03x-02A3-2	3,8	3,1
03x-03A5-2	x	x	6,1	3,5	03x-04A3-2	4,5	3,5
03x-04A7-2	x	x	7,6	4,2	03x-07A0-2	7,0	5,5
03x-06A7-2	x	x	12	6,1	03x-10A5-2	10,5	8,6
03x-07A5-2	x	x	12	6,9	03x-18A0-2	18,0	15,0
03x-09A8-2	x	x	14	9,2	–	–	–
03x-13A3-2	–	x	22	13	–	–	–
03x-17A6-2	–	x	24,8	14	–	–	–
03x-24A4-2	–	x	41	21	–	–	–
03x-31A0-2	–	x	50	26	–	–	–
03x-46A2-2	–	x	69	41	–	–	–
Three Phase Drive - 380-480 V Applications							
03x-01A2-4	x	x	1,8	0,9	03x-02A2-4	2,9	2,2
03x-01A9-4	x	x	3,0	1,5	03x-04A1-4	5,1	4,1
03x-02A4-4	x	x	3,4	1,9	03x-05A8-4	7,5	5,5
03x-03A3-4	x	x	5,0	2,6	03x-09A5-4	11,2	9,0
03x-04A1-4	x	x	5,8	2,9	03x-14A0-4	19,0	16,0
03x-05A6-4	x	x	8,0	4,0	03x-18A0-4	21,0	17,0
03x-07A3-4	x	x	9,7	5,1	–	–	–
03x-08A8-4	x	x	11	6,4	–	–	–
03x-12A5-4	–	x	16	9,5	–	–	–
03x-15A6-4	–	x	18	10	–	–	–
03x-23A1-4	–	x	26	15	–	–	–
03x-31A0-4	–	x	43	20	–	–	–
03x-38A0-4	–	x	51	26	–	–	–
03x-44A0-4	–	x	56	32	–	–	–
Three Phase Drive - 550-600 V Applications							
–	–	–	–	–	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

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& ACS Drives

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Baldor
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Input Reactors for ACS150 and ACS355 Drives / Low Impedance



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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.
			Catalog Number	List Price	Catalog Number	List Price	Catalog 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.
			Catalog Number	Watts	Dimensions (HxWxD)	Weight	List Price	Catalog 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.
			Catalog Number	List Price	Catalog Number	List Price	Catalog 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.
			Catalog Number	Watts	Dimensions (HxWxD)	Weight	List Price	Catalog 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>

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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.
			Catalog Number	List Price	Catalog Number	List Price	Catalog 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.
			Catalog Number	Watts	Dimensions (HxWxD)	Weight	List Price	Catalog 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 ACS255 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. ACS255-01U-	HP ND	Output Current	KDR UR 3%, Open, Not UL		KDR UR 3%, NEMA 1, Not UL		KDR 3%, UL Listed, Open					Disc. Sym.
			Catalog Number	List Price	Catalog Number	List Price	Catalog 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. ACS255-01U-	HP ND	Output Current	KDR 3%, UL Type 1 Enclosure					KDR 3%, UL Type 3R Enclosure					Disc. Sym.
			Catalog Number	Watts	Dimensions (HxWxD)	Weight	List Price	Catalog 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 ACS255 Drives / Low Impedance (Cont.)

Input Reactors for Three Phase 200-240V applications

Drive Part No. ACS255-03U	HP ND	Output Current	KDR UR 3%, Open, Not UL		KDR UR 3%, NEMA 1, Not UL		KDR 3%, UL Listed, Open					Disc. Sym.
			Catalog Number	List Price	Catalog Number	List Price	Catalog 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.
			Catalog Number	Watts	Dimensions (HxWxD)	Weight	List Price	Catalog 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. ACS255-03U	HP ND	Output Current	KDR UR 3%, Open, Not UL		KDR UR 3%, NEMA 1, Not UL		KDR 3%, UL Listed, Open					Disc. Sym.
			Catalog Number	List Price	Catalog Number	List Price	Catalog 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. ACS255-03U-	HP ND	Output Current	KDR 3%, UL Type 1 Enclosure					KDR 3%, UL Type 3R Enclosure					Disc. Sym.
			Catalog Number	Watts	Dimensions (HxWxD)	Weight	List Price	Catalog 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 ACS255 Drives / Low Impedance (Cont.)

Input Reactors for Three Phase 550-600V applications

Drive Part No. ACS255-03U-	HP ND	Output Current	KDR UR 3%, Open, Not UL		KDR UR 3%, NEMA 1, Not UL		KDR 3%, UL Listed, Open					Disc. Sym.
			Catalog Number	List Price	Catalog Number	List Price	Catalog 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. ACS255-03U-	HP ND	Output Current	KDR 3%, UL Type 1 Enclosure					KDR 3%, UL Type 3R Enclosure					Disc. Sym.
			Catalog Number	Watts	Dimensions (HxWxD)	Weight	List Price	Catalog 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 Current Ratings with and without AC Line Reactors

Type ACS150- ACS355-	ACS150	ACS355	Input without Reactor	Input with 5% Reactor	Type ACS255-	Input without Reactor	Input with 3% Reactor
			Input A	Input A		Input A	Input A
Single Phase Drive - 200-240 V Applications							
01x-02A4-2	x	x	6,1	4,5	01x-02A3-2	6,4	5,0
01x-04A7-2	x	x	11	8,1	01x-04A3-2	8,5	7,5
01x-06A7-2	x	x	16	11	01x-07A0-2	15,2	13,5
01x-07A5-2	x	x	17	12	01x-10A5-2	19,5	17,3
01x-09A8-2	x	x	21	15	-	-	-
Three Phase Drive - 200-240 V Applications							
03x-02A4-2	x	x	4,3	2,2	03x-02A3-2	3,8	3,1
03x-03A5-2	x	x	6,1	3,5	03x-04A3-2	4,5	3,5
03x-04A7-2	x	x	7,6	4,2	03x-07A0-2	7,0	5,5
03x-06A7-2	x	x	12	6,1	03x-10A5-2	10,5	8,6
03x-07A5-2	x	x	12	6,9	03x-18A0-2	18,0	15,0
03x-09A8-2	x	x	14	9,2	-	-	-
03x-13A3-2	-	x	22	13	-	-	-
03x-17A6-2	-	x	24,8	14	-	-	-
03x-24A4-2	-	x	41	21	-	-	-
03x-31A0-2	-	x	50	26	-	-	-
03x-46A2-2	-	x	69	41	-	-	-
Three Phase Drive - 380-480 V Applications							
03x-01A2-4	x	x	1,8	0,9	03x-02A2-4	2,9	2,2
03x-01A9-4	x	x	3,0	1,5	03x-04A1-4	5,1	4,1
03x-02A4-4	x	x	3,4	1,9	03x-05A8-4	7,5	5,5
03x-03A3-4	x	x	5,0	2,6	03x-09A5-4	11,2	9,0
03x-04A1-4	x	x	5,8	2,9	03x-14A0-4	19,0	16,0
03x-05A6-4	x	x	8,0	4,0	03x-18A0-4	21,0	17,0
03x-07A3-4	x	x	9,7	5,1	-	-	-
03x-08A8-4	x	x	11	6,4	-	-	-
03x-12A5-4	-	x	16	9,5	-	-	-
03x-15A6-4	-	x	18	10	-	-	-
03x-23A1-4	-	x	26	15	-	-	-
03x-31A0-4	-	x	43	20	-	-	-
03x-38A0-4	-	x	51	26	-	-	-
03x-44A0-4	-	x	56	32	-	-	-
Three Phase Drive - 550-600 V Applications							
-	-	-	-	-	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.
			Catalog Number	Watts	Dimensions (HxWxD)	Weight	List Price	Catalog 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.
			Catalog 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.
			Catalog Number	Watts	Dimensions (HxWxD)	Weight	List Price	Catalog 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.
			Catalog 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.
			Catalog Number	Watts	Dimensions (HxWxD)	Weight	List Price	Catalog 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.
			Catalog 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>

ACS255 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. ACS255-01U-	HP ND	Output Current	V1k UL Open					V1k UL Type 1 Enclosure					Disc. Sym.
			Catalog Number	Watts	Dimensions (HxWxD)	Weight	List Price	Catalog 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. ACS255-01U-	HP ND	Output Current	V1k UL Type 3R Enclosure					Disc. Sym.
			Catalog 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. ACS255-03U-	HP ND	Output Current	V1k UL Open					V1k UL Type 1 Enclosure					Disc. Sym.
			Catalog Number	Watts	Dimensions (HxWxD)	Weight	List Price	Catalog 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. ACS255-01U-	HP ND	Output Current	V1k UL Type 3R Enclosure					Disc. Sym.
			Catalog 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>

ACS255 Drives dv/dt Output Filters (Cont.)

Output Filters for Three Phase 380-480V applications

Drive Part No. ACS255-03U-	HP ND	Output Current	V1K UL Open					V1K UL Type 1 Enclosure					Disc. Sym.
			Catalog Number	Watts	Dimensions (HxWxD)	Weight	List Price	Catalog 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. ACS255-03U-	HP ND	Output Current	V1k UL Type 3R Enclosure					Disc. Sym.
			Catalog 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. ACS255-03U-	HP ND	Output Current	V1K UL Open					V1K UL Type 1 Enclosure					Disc. Sym.
			Catalog Number	Watts	Dimensions (HxWxD)	Weight	List Price	Catalog 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. ACS255-03U-	HP ND	Output Current	V1k UL Type 3R Enclosure					Disc. Sym.
			Catalog 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>

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.

	Standard AC
Speed Regulation	1%
Speed Range	10:1
Constant HP Range	1.5:1
Starting Torque	100 to 150%
High-Speed Capability ⁽¹⁾	<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.

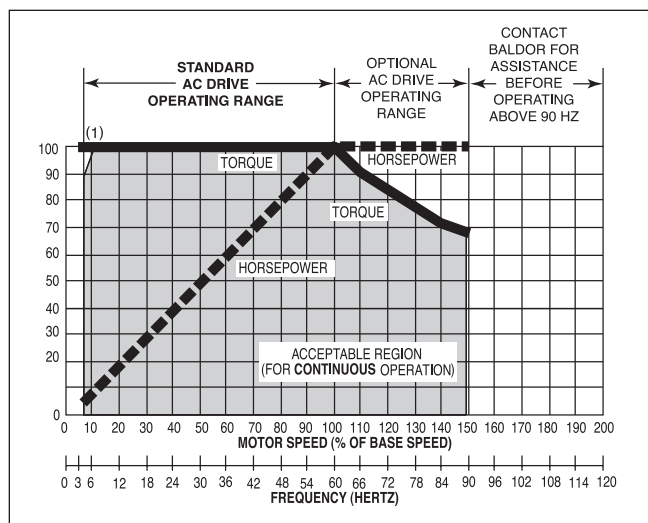
Graphs 1 and 2 are also typical for V/Hz drives.

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:

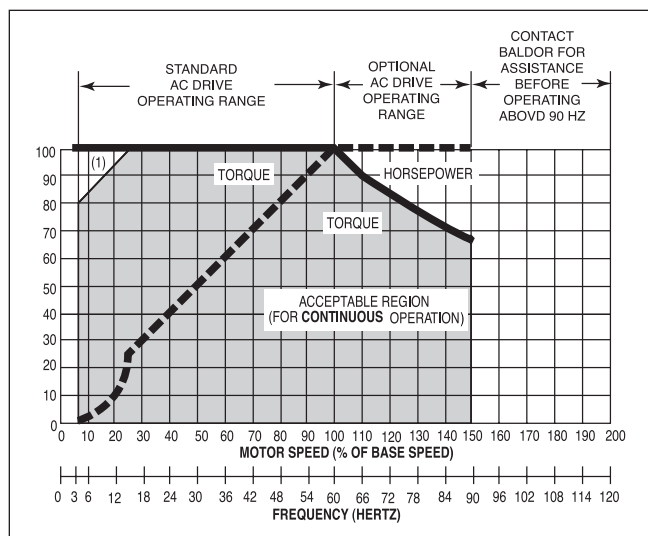
- Super-E® (Modified); contact Product Marketing for further details
- Explosion-proof energy efficient motors
1/3-150 HP (check motor nameplate to verify CT rating)
- TENV motors



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)



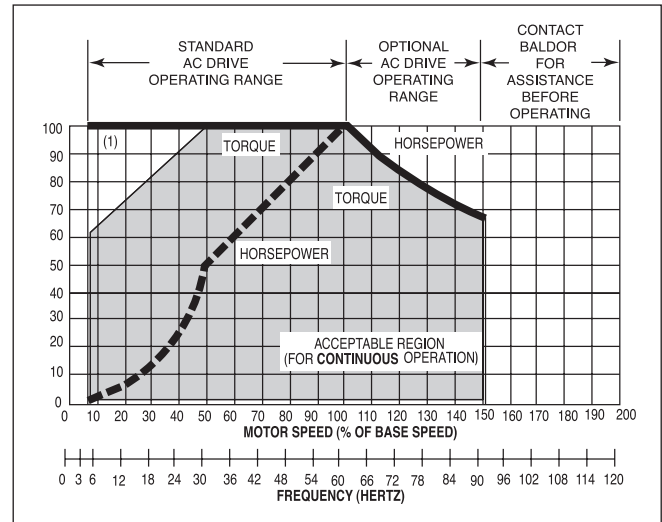
(1) Continuous operation in this region is not recommended and may result in reduced motor life.

Application Information

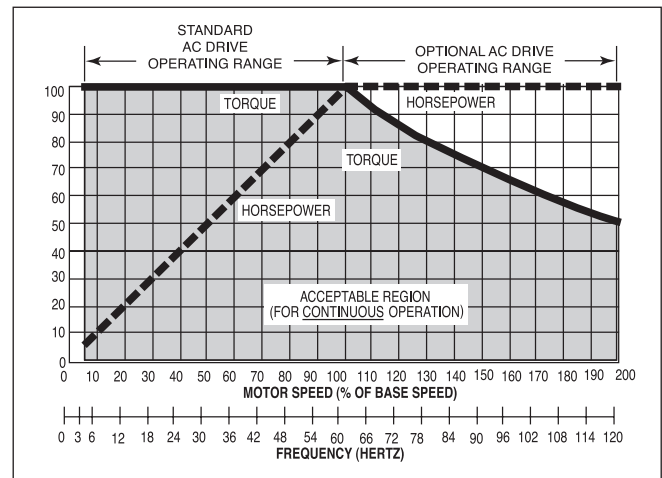
Graph 3: 2:1 Constant Torque

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)
 - WK² = Total inertia (lb-ft²) 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:

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

WK² 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-ft² = 4.21 x 10⁻² kg-m²

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

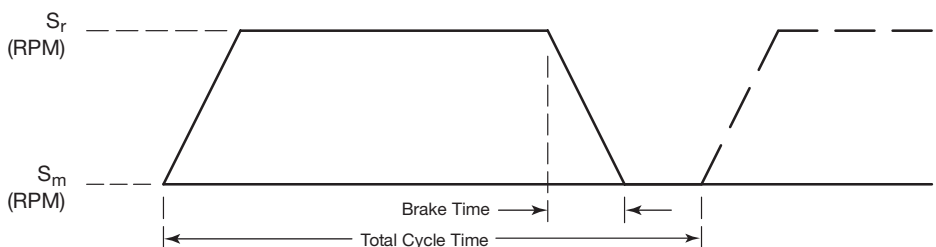
To determine regenerated watts (W_r), use the following formulas:

Determine T_{DEC} :

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

Where:

- T_{DEC} = Deceleration torque in lb-ft
- ΔRPM = Change in speed
- WK^2 = Inertia in lb-ft²
- 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 catalog 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_{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 ¹

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	ACS255-01U-02A3-1	No	408			
1	VS1ST11-0	No	ACS255-01U-04A3-1	No	450			
1,5	VS1ST11P5-0T	Yes	ACS255-01U-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 ²
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	VS1STS1-0T	Yes	ACS255-03U-02A1-6	Yes	602			
2	VS1STS52-0T	Yes	ACS255-03U-03A1-6	Yes	782			
3	VS1STS53-0T	Yes	ACS255-03U-04A1-6	Yes	869			
5	VS1STS55-0T	Yes	ACS255-03U-06A5-6	Yes	1,043			
7,5	VS1STS57-0T	Yes	ACS255-03U-09A0-6	Yes	1,459			
10	VS1STS510-0T	Yes	ACS255-03U-12A0-6	Yes	1,751			
15	VS1STS515-0T	Yes	ACS255-03U-17A0-6	Yes	2,291			
20	VS1STS520-0T	Yes	ACS255-03U-22A0-6	Yes	2,917			
25								
30	VS1STS530-0T	Yes						
40	VS1STS540-0T	Yes						
50								
60	VS1STS560-0T	Yes						
75								
100								
125								
150								

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

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Cross Reference - IP66 Enclosure Micro Drives¹

115V, 50/60 Hz, 1-Phase Input / 230V, 3-Phase Output												
NEMA 4X/12**				ACS255 - NEMA 4X/12**								
HP	Catalog Number	Disc*	Braking	Catalog Number	Disc*	Braking	List Price					
0,5	VS1MX10P5-4	No	No	ACS255-01U-02A3-1+B063	No	No	757					
0,5	VS1MX10P5-4D	Yes	No	ACS255-01U-02A3-1+B063+F278	Yes	No	936					
1	VS1MX11-4	No	No	ACS255-01U-04A3-1+B063	No	No	836					
1	VS1MX11-4D	Yes	No	ACS255-01U-04A3-1+B063+F278	Yes	No	1,010					
1,5	VS1MX11P5-4T	No	Yes	ACS255-01U-05A8-1+B063	No	Yes	1,018					
230V, 50/60 Hz, 1-Phase Input / 230V, 3-Phase Output												
NEMA 4X/12**				ACS255 - 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 ²	
0,5	VS1MX80P5-4	No	No	ACS255-01U-02A3-2+B063	No	No	723	ACS355-03U-06A7-2+B063	No	Yes	953	
0,5	VS1MX80P5-4D	Yes	No	ACS255-01U-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	ACS255-01U-04A3-2+B063	No	No	795	ACS355-03U-17A6-2+B063	No	Yes	1,460	
1	VS1MX81-4D	Yes	No	ACS255-01U-04A3-2+B063+F278	Yes	No	893	ACS355-03U-17A6-2+B063+F278	Yes	Yes	1,927	
2	VS1MX82-4	No	No	ACS255-01U-07A0-2+B063	No	No	853	ACS355-03U-17A6-2+B063	No	Yes	1,460	
2	VS1MX82-4D	Yes	No	ACS255-01U-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	ACS255-01U-10A5-2+B063	No	Yes	982					
3	VS1MX83-4TD	Yes	Yes	ACS255-01U-10A5-2+B063+F278	Yes	Yes	1,122					
230V, 50/60 Hz, 3-Phase Input / 230V, 3-Phase Output												
NEMA 4X/12**				ACS255 - 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 ²	
0,5	VS1MX20P5-4	No	No	ACS255-03U-02A3-2+B063	No	No	660	ACS355-03U-02A4-2+B063	No	Yes	750	
0,5	VS1MX20P5-4D	Yes	No	ACS255-03U-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	ACS255-03U-04A3-2+B063	No	No	717	ACS355-03U-04A7-2+B063	No	Yes	904	
1	VS1MX21-4D	Yes	No	ACS255-03U-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	ACS255-03U-07A0-2+B063	No	Yes	824	ACS355-03U-07A5-2+B063	No	Yes	1,017	
2	VS1MX22-4TD	Yes	Yes	ACS255-03U-07A0-2+B063+F278	Yes	Yes	974	ACS355-03U-07A5-2+B063+F278	Yes	Yes	1,342	
3	VS1MX23-4T	No	Yes	ACS255-03U-10A5-2+B063	No	Yes	950	ACS355-03U-09A8-2+B063	No	Yes	1,106	
3	VS1MX23-4TD	Yes	Yes	ACS255-03U-10A5-2+B063+F278	Yes	Yes	1,122	ACS355-03U-09A8-2+B063+F278	Yes	Yes	1,460	
5	VS1MX25-4T	No	Yes	ACS255-03U-18A0-2+B063	No	Yes	1,353	ACS355-03U-17A6-2+B063	No	Yes	1,460	
5	VS1MX25-4TD	Yes	Yes	ACS255-03U-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**				ACS255 - 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 ²	
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	ACS255-03U-02A2-4+B063	No	No	777	ACS355-03U-02A4-4+B063	No	Yes	786	
1	VS1MX41-4D	Yes	No	ACS255-03U-02A2-4+B063+F278	Yes	No	896	ACS355-03U-02A4-4+B063+F278	Yes	Yes	982	
2	VS1MX42-4	No	No	ACS255-03U-04A1-4+B063	No	No	911	ACS355-03U-04A1-4+B063	No	Yes	900	
2	VS1MX42-4D	Yes	No	ACS255-03U-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	ACS255-03U-05A8-4+B063	No	Yes	1,027	ACS355-03U-05A6-4+B063	No	Yes	975	
3	VS1MX43-4TD	Yes	Yes	ACS255-03U-05A8-4+B063+F278	Yes	Yes	1,175	ACS355-03U-05A6-4+B063+F278	Yes	Yes	1,219	
5	VS1MX45-4T	No	Yes	ACS255-03U-09A5-4+B063	No	Yes	1,275	ACS355-03U-08A8-4+B063	No	Yes	1,180	
5	VS1MX45-4TD	Yes	Yes	ACS255-03U-09A5-4+B063+F278	Yes	Yes	1,411	ACS355-03U-08A8-4+B063+F278	Yes	Yes	1,475	
7,5	VS1MX47-4T	No	Yes	ACS255-03U-14A0-4+B063	No	Yes	1,646	ACS355-03U-12A5-4+B063	No	Yes	1,479	
7,5	VS1MX47-4TD	Yes	Yes	ACS255-03U-14A0-4+B063+F278	Yes	Yes	1,765	ACS355-03U-12A5-4+B063+F278	Yes	Yes	1,849	
10	VS1MX410-4T	No	Yes	ACS255-03U-18A0-4+B063	No	Yes	1,952	ACS355-03U-15A6-4+B063	No	Yes	1,802	
10	VS1MX410-4TD	Yes	Yes	ACS255-03U-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 Drives¹

115V, 50/60 Hz, 1-Phase Input / 230V, 3-Phase Output							
NEMA 12				ACS255 - NEMA 4X/12**			
HP	Catalog Number	Disc*	Braking	Catalog Number	Disc*	Braking	List Price
0,5	VS1MX10P5-2	No	No	ACS255-01U-02A3-1+B063	No	No	757
0,5	VS1MX10P5-2D	Yes	No	ACS255-01U-02A3-1+B063+F278	Yes	No	936
1	VS1MX11-2	No	No	ACS255-01U-04A3-1+B063	No	No	836
1	VS1MX11-2D	Yes	No	ACS255-01U-04A3-1+B063+F278	Yes	No	1,010
1,5	VS1MX11P5-2T	No	Yes	ACS255-01U-05A8-1+B063	No	Yes	1,018
1,5	VS1MX11P5-2TD	Yes	Yes	ACS255-01U-05A8-1+B063+F278	Yes	Yes	1,151
230V, 50/60 Hz, 1-Phase Input / 230V, 3-Phase Output							
NEMA 12				ACS355 (Derated 3-Ph)- IP66 / UL Type 4X**			
HP	Catalog Number	Disc*	Braking	Catalog Number	Disc*	Braking	List Price ²
0,5	VS1MX80P5-2	No	No	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				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	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	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	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				
3	VS1MX83-2TD	Yes	Yes				
230V, 50/60 Hz, 3-Phase Input / 230V, 3-Phase Output							
NEMA 12				ACS355 - IP66 / UL Type 4X**			
HP	Catalog Number	Disc*	Braking	Catalog Number	Disc*	Braking	List Price ²
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	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	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	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	ACS355-03U-09A8-2+B063	No	Yes	1,106
3	VS1MX23-2TD	Yes	Yes		Yes	Yes	1,460
460V, 50/60 Hz, 3-Phase Input / 460V, 3-Phase Output							
NEMA 12				ACS355 - IP66 / UL Type 4X**			
HP	Catalog Number	Disc*	Braking	Catalog Number	Disc*	Braking	List Price ²
1	VS1MX41-2	No	No	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	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	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	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	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				NEMA 4X/12**			
HP	Catalog Number	Disc*	Braking	Catalog Number	Disc*	Braking	List Price ²
1	VSTMXS51-2T	No	Yes	ACS255-03U-02A1-6+B063	No	Yes	1,285
1	VSTMXS51-2TD	Yes	Yes	ACS255-03U-02A1-6+B063+F278	Yes	Yes	1,462
2	VSTMXS52-2T	No	Yes	ACS255-03U-03A1-6+B063	No	Yes	1,484
2	VSTMXS52-2TD	Yes	Yes	ACS255-03U-03A1-6+B063+F278	Yes	Yes	1,649
3	VSTMXS53-2T	No	Yes	ACS255-03U-04A1-6+B063	No	Yes	1,697
3	VSTMXS53-2TD	Yes	Yes	ACS255-03U-04A1-6+B063+F278	Yes	Yes	1,849
5	VSTMXS55-2T	No	Yes	ACS255-03U-06A5-6+B063	No	Yes	1,946
5	VSTMXS55-2TD	Yes	Yes	ACS255-03U-06A5-6+B063+F278	Yes	Yes	2,082
7,5	VSTMXS57-2T	No	Yes	ACS255-03U-09A0-6+B063	No	Yes	2,455
7,5	VSTMXS57-2TD	Yes	Yes	ACS255-03U-09A0-6+B063+F278	Yes	Yes	2,559
10	None			ACS255-03U-12A0-6+B063	No	Yes	2,925
10	None			ACS255-03U-12A0-6+B063+F278	Yes	Yes	3,096
15	None			ACS255-03U-17A0-6+B063	No	Yes	4,297
15	None			ACS255-03U-17A0-6+B063+F278	Yes	Yes	4,424

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

** Indoor applications

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

Drives Cross Reference

VS1 Catalog Number	Crossover Catalog Number	List Price
VS1SM	ACS355	
VS1SM80P5-F	ACS355-01U-02A4-2 (1)	319
VS1SM81-F	ACS355-01U-04A7-2 (1)	362
VS1SM82-F	ACS355-01U-07A5-2 (1)	448
VS1SM83-F	ACS355-01U-09A8-2 (1)	540
VS1SM80P5	ACS355-01U-02A4-2	319
VS1SM81	ACS355-01U-04A7-2	362
VS1SM82	ACS355-01U-07A5-2	448
VS1SM83	ACS355-01U-09A8-2	540
RE Catalog Number	Crossover Catalog Number	List Price
VS1MD	ACS355	
VS1MD 230V	ACS355 230V	
VS1MD20P5	ACS355-03U-02A4-2	319
VS1MD21	ACS355-03U-04A7-2	362
VS1MD22	ACS355-03U-07A5-2	448
VS1MD23	ACS355-03U-09A8-2	540
VS1MD25	ACS355-03U-17A6-2	669
VS1MD27	ACS355-03U-24A4-2	873
VS1MD210	ACS355-03U-31A0-2	1,152
VS1MD215	ACS355-03U-46A2-2	1,523
VS1MD 460V	ACS355 460V	
VS1MD40P5	ACS355-03U-01A2-4	380
VS1MD41	ACS355-03U-02A4-4	458
VS1MD42	ACS355-03U-04A1-4	529
VS1MD43	ACS355-03U-05A6-4	641
VS1MD45	ACS355-03U-08A8-4	761
VS1MD47	ACS355-03U-12A5-4	935
VS1MD410	ACS355-03U-15A6-4	1,154
VS1MD415	ACS355-03U-23A1-4	1,475
VS1MD420	ACS355-03U-31A0-4	1,800
VS1MD425	ACS355-03U-38A0-4	2,142
VS1MD430	ACS355-03U-44A0-4	2,602

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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.

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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Baldor Electric Company • P.O. Box 2400 • Fort Smith, AR 72902-2400 U.S.A.
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