

SCR CHASSIS DRIVES

FEATURES

- **ACE Footprint:** Traditional ACE mounting pattern and footprint
- **Field Supply:** Voltage output to energize the field winding of a shunt-wound motor
- **Stopping Modes:** Inhibit (N.O.) for coasting to a stop. Can be used for frequent starting and stopping
- **Diagnostic LEDs:** Current Limit



LGC400-10

RATINGS - 115/230/1/60 VAC INPUT, 0-90, 0-180 VDC OUTPUT

MODEL	W/O HEAT SINK 90 VDC		WITH HEAT SINK 90 VDC		W/O HEAT SINK 180 VDC		WITH HEAT SINK 180VDC		LIST	
	MAX. HP	MAX. AMPS	MAX. HP	MAX. AMPS	MAX. HP	MAX. AMPS	MAX. HP	MAX. AMPS		
LGC400-10	.5	5.0	1.0	10.0	1.0	5.0	2.0	10.0	178	
HEAT SINK NO. 223-0159				MOUNTING DIMENSIONS: 2.5" L X 3.8" W (63 mm L X 97 mm W)						63

REGEN CHASSIS DRIVES

FEATURES

- **Microprocessor Based:** Allows custom programming for OEMs
- **Dual Analog Inputs:** MGC models can accept 2 command signals, making wiring easier for applications requiring two potentiometers
- **7 Modes of Operation** - Speed, torque, linear torque, cycling, positioning
- **Field Supply:** Voltage output to energize the field winding of a shunt-wound motor
- **4Q Reversing:** Regenerative / 4-Quadrant drives have the ability to perform quick and contactorless braking and / or reversing on-the-fly
- **Stopping Modes:** Inhibit for braking to a stop. Enable for coasting to a stop. Can be used for rapid starting and stopping
- **Configurable Enable and Inhibit:** Can be configured to be either normally open or normally closed
- **3-Wire Start/Stop:** Inhibit and Enable can be setup to mimic a 3-Wire Start/Stop
- **Quick Disconnect Terminal** Allows for quicker wiring and setup
- **Diagnostic LEDs:** Current Limit



MGC403-11

RATINGS - 115/230/1/60 VAC INPUT, 0-90, 0-180 VDC OUTPUT

MODEL	W/O HEAT SINK 90 VDC		WITH HEAT SINK 90 VDC		W/O HEAT SINK 180 VDC		WITH HEAT SINK 180VDC		LIST	
	MAX. HP	MAX. AMPS	MAX. HP	MAX. AMPS	MAX. HP	MAX. AMPS	MAX. HP	MAX. AMPS		
MGC403-11	.75	8.0	1.0	11.0	1.5	8.0	2.0	11.0	394	
HEAT SINK NO. 223-0159				MOUNTING DIMENSIONS: 2.5" L X 3.8" W (63 mm L X 97 mm W)						63

FEATURES

- **4Q Reversing:** Regenerative / 4-Quadrant drives have the ability to perform quick and contactorless braking and/or reversing-on-the-fly
- **Field Supply** Voltage output to energize the field winding of a shunt-wound motor
- **Stopping Modes:** Inhibit (N.O.) for braking to a stop. Enable for coasting to a stop. Can be used for rapid starting and stopping
- **Tach Feedback:** Accepts tach generator feedback for tighter speed regulation
- **On-board Fusing** Drives include on-board fusing



RGA400-10

RATINGS - 115/230/1/60 VAC INPUT, 0-90, 0-180 VDC OUTPUT

MODEL	W/O HEAT SINK 90 VDC		WITH HEAT SINK 90 VDC		W/O HEAT SINK 180 VDC		WITH HEAT SINK 180VDC		LIST	
	MAX. HP	MAX. AMPS	MAX. HP	MAX. AMPS	MAX. HP	MAX. AMPS	MAX. HP	MAX. AMPS		
RGA400-10	.5	7.0	1.0	10.0	1.0	7.0	2.0	10.0	738	
HEAT SINK NO. 223-0235				MOUNTING DIMENSIONS: 3.53" L X 8.38" W (90 mm L X 213 mm W)						63

LOW VOLTAGE PWM CHASSIS DRIVES

FEATURES

- **Microprocessor Based:** Allows custom programming for OEMs
- **Ideal for Battery Powered Equipment:** Maintains both set and/or variable speed even as battery voltage declines. Extends total running time of equipment
- **4Q Reversing:** Regenerative / 4-Quadrant drives have the ability to perform quick and contactorless braking and/or reversing-on-the-fly
- **Coil Output:** Applies a voltage out to a brake coil when the drive is disabled or stopped
- **Stopping Modes:** N.C. enable coasts to a stop. N.O. inhibit brakes to a stop. Can be used for rapid starting and stopping
- **High Efficiency:** Outputs up to 100% of the input voltage
- **Diagnostic LEDs:** Power, Status (Current Limit, Undervoltage, Overvoltage, Overheat Foldback)
- **Precharge Circuit:** Prevents large current in-rushes on power up to extend the life of power contacts (DCR300-60 only)



DCR300-30



DCR300-60

RATINGS - 12/24 VDC INPUT, 0-12, 0-24 VDC OUTPUT

MODEL	12 VDC		24 VDC		PEAK 12 VDC		PEAK 24 VDC		MOUNTING DIMENSIONS	LIST
	MAX. HP	MAX. AMPS	MAX. HP	MAX. AMPS	MAX. HP	MAX. AMPS	MAX. HP	MAX. AMPS		
DCR300-30	.13	15.0	.33	15.0	.375	30.0	.75	30.0	1.75" L X 3.8" W (44 mm L X 97 mm W)	421
DCR300-60	.375	30.0	.75	30.0	.75	60.0	1.5	60.0	1.75" L X 4.82" W (44 mm W X 122 mm W)	578

FEATURES

- Same feature set as DCR300-60
- 36/48 VDC input, 0-36, 0-48 VDC output



DCR600-60

RATINGS - 36/48 VDC INPUT, 0-36, 0-48 VDC OUTPUT

MODEL	36 VDC		48 VDC		PEAK 36 VDC		PEAK 48 VDC		MOUNTING DIMENSIONS	LIST
	MAX. HP	MAX. AMPS	MAX. HP	MAX. AMPS	MAX. HP	MAX. AMPS	MAX. HP	MAX. AMPS		
DCR600-60	.66	30.0	1.33	30.0	1.33	60	2.66	60	1.75" L X 4.82" W (44 mm L X 122 mm W)	635

BRUSHLESS DC CHASSIS DRIVES

FEATURES

- **ACE Footprint:** Traditional ACE mounting pattern and footprint
- **Field Supply:** Voltage output to energize the field winding of a shunt-wound motor
- **Stopping Modes:** Inhibit (N.O.) for coasting to a stop. Can be used for frequent starting and stopping
- **Diagnostic LEDs:** Current Limit

NOTES: The DCL series is a low voltage, brushless motor control that operates in the 12-48 VDC power bandwidth, up to 30 amps peak (1 minute) or 15 amps continuously. The drive is a unique approach to motion control as the base DCL unit is designed for cost conscience OEMs. By removing many of the trim pots and jumpers associated with motor controls, the DCL saves cost on hardware and setup, but can be programmed by American Control Electronics for your specific application and motor.

For users who wish to modify calibration in the field, the DCL uses programmer board CPC300-1 (sold separately) that snaps onto the unit and provides calibration of 10 different parameters, as well as DIP switches for setting different modes of operation. You only need one CPC300-1 as the adder board can be removed after programming and used with multiple DCL units.

Base DCL units are Modbus capable and come with one trim pot for calibrating maximum speed, and two DIP switches for closed / open loop operation, as well as inverting the hall effect feedback.



DCL300-30



CPC300-1

RATINGS - 12/24 VDC INPUT, 0-12, 0-24 VDC OUTPUT

MODEL	12 VDC		24 VDC		1 MIN. PEAK 12 VDC		1 MIN. PEAK 24 VDC		MOUNTING DIMENSIONS	LIST
	MAX. HP	MAX. AMPS	MAX. HP	MAX. AMPS	MAX. HP	MAX. AMPS	MAX. HP	MAX. AMPS		
DCL300-30	.16	15.0	.33	15.0	.375	30.0	.75	30.0	1.75" L X 4.05" W (44 mm L X 103 mm W)	291

SCR NEMA 1 DRIVES

FEATURES

- **Low Cost:** Designed for cost savings in large quantities for OEMs
- **NEMA 1 Enclosure:** Prevents accidental contact with the circuit board
- **Stopping Modes:** Inhibit (N.O.) for coasting to stop, can be used for frequent starting and stopping
- Maximum / Minimum Speed Pots
- Acceleration / Deceleration
- Current Limit/IR Compensation



RATINGS - 115/1/60 VAC INPUT, 0-90 VDC OUTPUT

MODEL				LIST
	MAX. HP	MAX. AMPS		
ELC110-5	.5	5.0		290
	HEAT SINK NO. - N/A		OUTSIDE DIMENSIONS: 4.5" H X 3.5" W (114 mm H X 88.9 mm W)	

FEATURES NEMA 1 DRIVES - Unidirectional & Reversing

- **NEMA 1 Enclosure:** Prevents accidental contact with the circuit board
- **Field Supply:** Voltage output to energize the field winding of a shunt-wound motor
- **Diagnostic LEDs:** Current Limit
- **Case LEDs:** Power
- **Pre-Wired Switches:** ON/OFF
- **Stopping Modes:** Inhibit (N.O.) for coasting to a stop. Can be used for frequent starting and stopping



LGC410-10

LGC430-10

RATINGS - 115/230/1/60 VAC INPUT, 0-90, 0-180 VDC OUTPUT

MODEL	W/O HEAT SINK 90 VDC		WITH HEAT SINK 90 VDC		W/O HEAT SINK 180 VDC		WITH HEAT SINK 180VDC		LIST
	MAX. HP	MAX. AMPS	MAX. HP	MAX. AMPS	MAX. HP	MAX. AMPS	MAX. HP	MAX. AMPS	
Unidirectional LGC410-10	.5	5.0	1.0	10.0	1.0	5.0	2.0	10.0	358
	HEAT SINK NO. 223-0174			OUTSIDE DIMENSIONS: 8.0" H X 6.0" W (203 mm H x 125 mm W)					85
REVERSING LGC430-10	.5	5.0	1.0	10.0	1.0	5.0	2.0	10.0	504
	HEAT SINK NO. 223-0174								

FEATURES SCR NEMA 4X DRIVES

- **LGC440-10 NEMA 4X METAL Enclosure:** Water resistant and dust proof enclosure
- **PAT440-10 NEMA 4X PLASTIC Enclosure:** Plastic corrosion resistant weatherproof enclosure that protects against dirt and splashing
- **Field Supply:** Voltage output to energize the field winding of a shunt-wound motor
- **Stopping Modes:** Inhibit (N.O.) for coasting to a stop. Can be used for frequent starting and stopping



PAT440-10
(Plastic Enclosure)

LGC440-10
(Metal Enclosure)

RATINGS - 115/230/1/60 VAC INPUT, 0-90, 0-180 VDC OUTPUT

MODEL	W/O HEAT SINK 90 VDC		WITH HEAT SINK 90 VDC		W/O HEAT SINK 180 VDC		WITH HEAT SINK 180VDC		LIST
	MAX. HP	MAX. AMPS	MAX. HP	MAX. AMPS	MAX. HP	MAX. AMPS	MAX. HP	MAX. AMPS	
PAT440-10	Heat sink included		1.0	10.0	Heatsink included		2.0	10.0	535
LGC440-10			1.0	10.0			2.0	10.0	658
	MOUNTING DIMENSIONS: 5.5" L X 5.16" W (140mm L X 131mm W)								

PWM CHASSIS DRIVES

FEATURES

- **UL 61800-5-1 Listed:** Tested to the new UL standard implemented in 2020.
- **Microprocessor based:** Allows custom programming for OEM's.
- **4Q Reversing:** Regenerative (4-Quadrant) drives have the ability to perform quick and contactorless reversing on-the-fly.
- **Doubler mode:** Can double a 115 VAC line to run a 180 VDC motor.
- **Isolated inputs:** Accepts floating or grounded signals 0 ± 5 VDC, 0 ± 10 VDC or 4-20 mA.
- **Diagnostic LED:** LEDs for power and status (undervoltage, overvoltage, short circuit/current trip, overheating warning/trip).
- **Thermally protects:** Drive recognizes when overheated as a result of overload. It first flashes a warning code on the status LED and will eventually trip if the condition persists.
- **Stopping modes:** User can regeneratively brake, decelerate, or coast the motor to a stop.
- **Dump circuitry:** Internal circuitry for the hookup of an external dump resistor.
- **Quadrature encoder option:** For OEM applications, the drive can be programmed to follow quadrature encoder feedback without any circuitry changes.



PMB703-7

RATINGS - 115/230/1/60 VAC INPUT, 0-90, 0-130, 0-180 VDC OUTPUT

MODEL	90 VDC		130 VDC		180 VDC		NOTE	LIST
	MAX. HP	MAX. AMPS	MAX. HP	MAX. AMPS	MAX. HP	MAX. AMPS		
PMB703-7	.66	5.5/7.0*	1.0	5.5/7.0*	1.33	5.5/7.0*	*When mounted to allow upwards air-flow through the heat sink fins. De-rate to 5.5 amps when mounted in any other configuration	907
HEAT SINK NO. - N/A MOUNTING DIMENSIONS: 5.5" L X 5.16" W (140 mm L X 131 mm W)								

PWM NEMA 4X DRIVES

FEATURES

- **NEMA 4X Enclosure:** Water proof and dust proof enclosure
- **Field Supply:** Voltage output to energize the field winding of a shunt-wound motor
- **Stopping Modes:** Inhibit (N.O.) for coasting to a stop. Can be used for rapid starting and stopping
- **Diagnostic LEDs:** Power, Current Limit
- **On-board Fusing:** Drives include on-board fusing
- **Pre-Wired Switches:** ON/OFF
- **Jog Mode:** Dedicated circuitry for a jog setup



PWL440-10

RATINGS - 115/230/1/60 VAC INPUT, 0-90, 0-130, 0-180 VDC OUTPUT

MODEL	90 VDC		130 VDC		180 VDC		LIST
	MAX. HP	MAX. AMPS	MAX. HP	MAX. AMPS	MAX. HP	MAX. AMPS	
PWL440-10	1.0	10.0	1.5	10.0	3.0	5.5/7.0*	723
HEAT SINK NO. - N/A MOUNTING DIMENSIONS: 7.0" L X 6.3" W (178 mm L X 160 mm W)							

AMERICAN CONTROL ELECTRONICS AC MOTOR CONTROLS



PMF743-4

AG-I can also provide ACE AC Controls with the following options

- Chassis, NEMA 4X Steel or Plastic Enclosures
- DC injection braking
- -5 to 5 VDC, -10 to 10 VDC, 4-20 mA Input Isolation
- Reversing
- 115, 230 or 115/230 Volt AC inputs, 1 & 3 phase outputs



PMF703-5

All ACE products are designed and built in their United States facility, which is both ISO 9001:2008 registered and UL508A certified. In addition, ACE controls are listed with the following approval organizations.

