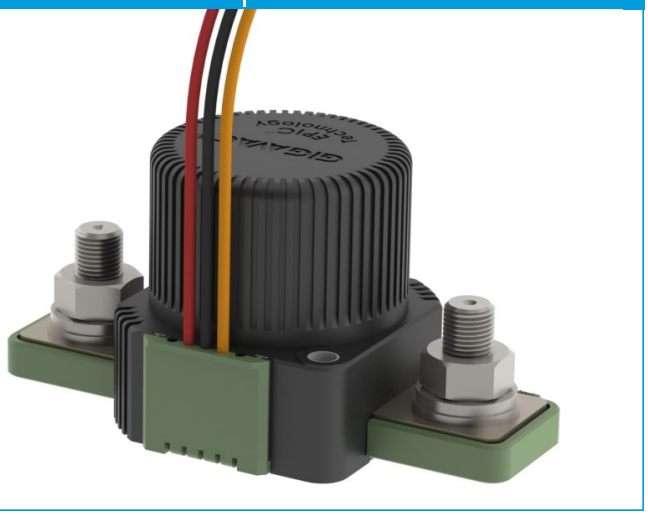
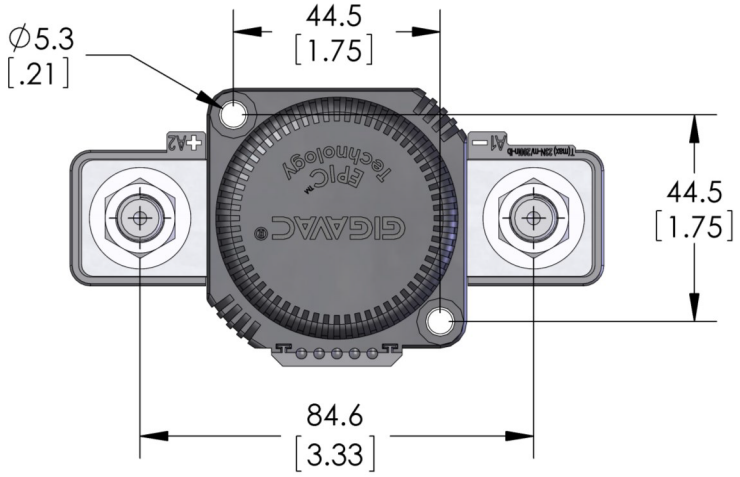
GIGAVAC®
ADVANCED SWITCHING SOLUTIONS

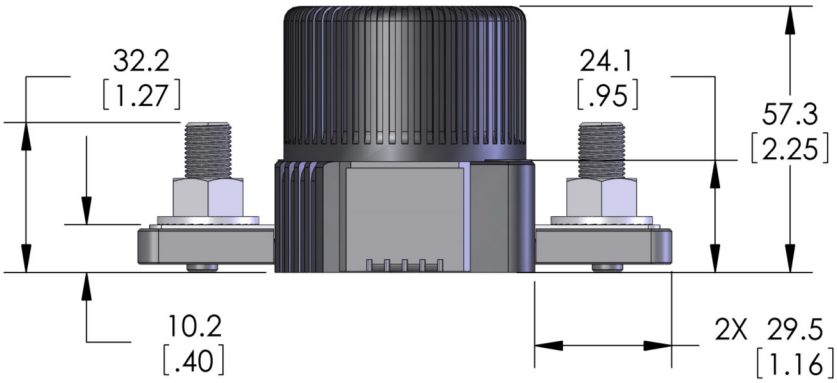
12V - 48V MXL14

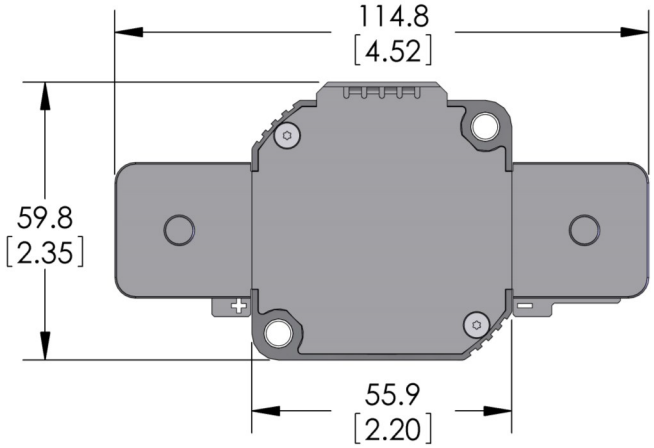
Chassis Mount

Latching 400A Bi-stable contactor





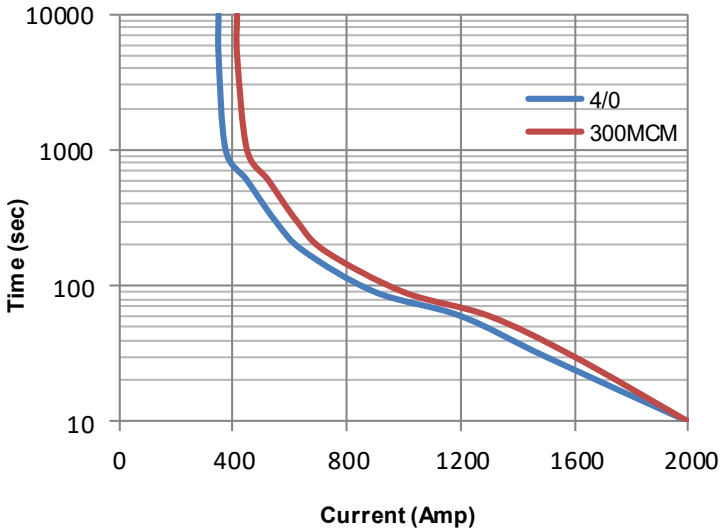




Key Features

EPIC® Seal	Ceramic to metal braze. Gas filled hermetic chamber protects key components. Exceeds IP69K standard
Temperature	Tested to temperatures up to 200°C
Contacts / Form	Silver / Bi-stable
Coil	Contacts held magnetically. No coil holding power required.
High Shock and Vibration	For rugged environments, off-road and tracked vehicles
Installation	Not direction sensitive
Reference	MIL-R-6106, RoHS

Current Carry vs Time
with 85°C terminal temperature rise



Power Terminals
Stainless M10 X 1.5 Bolt
Stainless M10 X 1.5 Flanged Nut

Torque 14-20 Nm [125-175 in-lb]

Coil Wire
Silicone, 20 AWG, UL: VW-1

Mounting Hardware
M5 [No. 10] Bolts (not incl.)

Torque 2-4 Nm [18-35 in-lb]

Case Material
25% GF Nylon 6/6, UL 94 V-O

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Technical Specification

Continuous Current	400A w/ 300MCM (see graph on reverse)
Max Current—1 sec	3000A
Max Current—10 sec	2000A
Max Current—90 sec	1000A
Contact Voltage Drop (max)	150mV at 400A
Insulation Resistance (min)	100MΩ (50MΩ after life)
Dielectric Withstanding	1500VRMS (1050 VRMS after life)
Operate Time (max)	20 msec (include bounce)
Release Time (max)	12 msec
Weight	1.1 lb with hardware (500 grams)

Resistive Load Switching

400A at 24 VDC	100,000 cycles
Mechanical Life	300,000 cycles
Fault Interrupt @ 28VDC	3000A

Environmental Specifications

Seal	Hermetic, 10 E-9 atm cc/sec
Temperature Range	-55°C to +100°C
Shock	Sawtooth @ 20G, 11ms, ½ Sine @ 25G, 11ms
Vibration	10-2000 Hz, 20G
Water / Steam	2750 psi waterjet, 105 psi steam, boiling water
Salt Spray Corrosion	MIL-STD-810G
Resistant to corrosion, chemicals, and fungal growth	

Auxiliary contacts (optional) - Form A, SPST Normally Open

Switching Current (max)	1A at 28VDC
Switching Current (min)	0.1mA at 5V

Coil Ratings at 25°C
*Contact factory for additional coil voltages

Coil P/N Designation	B	C
Coil Voltage, Nominal	12 VDC	24 VDC
Coil Voltage, Max	16 VDC	32 VDC
Set and Reset Voltage, Max[2,3]	7.5 VDC	15 VDC
Set and Reset Current, Max[2] (75ms)	3.4 A	1.7 A
Coil Back EMF[1]	0 V	
Transients, Max (13ms)	±50 V	
Reverse Polarity	50 V	

1 Coils are switched internally with a FET, so no fly-back/suppression voltage is seen at the coil inputs.
2 Powering the SET and RESET pins at the same time can damage the coil circuit. Care should be taken to prevent this type of dual input.
3 Set voltage is voltage required to ensure contacts close. Minimum pulse of 100ms required. Coil pulse limited to <100ms by internal electronics.

Ordering Key

MXL14 _ _ _ _

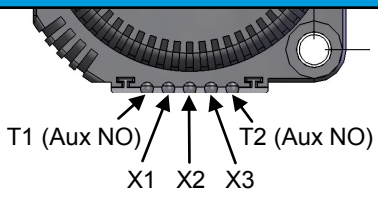
Coil Voltage:
B = 12V
C = 24V

Drive:
1 = High Side
2 = Low Side

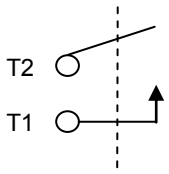
Aux. Contacts:
Blank = none
B = SPST, NO

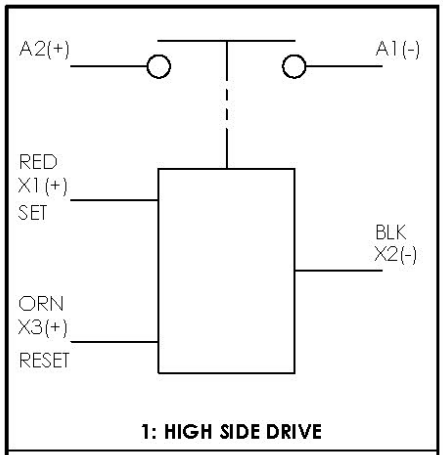
Coil Wire:
A = 38 cm (15 in)
B = 61 cm (24 in)
C = 122 cm (48 in)

Power Circuit and Installation

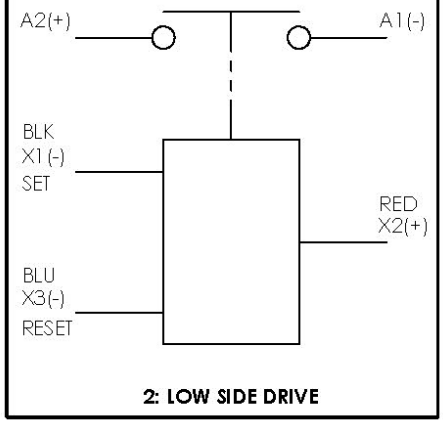


(Optional) Auxiliary Contacts Normally Open





1: HIGH SIDE DRIVE



2: LOW SIDE DRIVE

Options and Accessories

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