



FEATURES

- Chassis level power terminals – No need for specially routed power cables, special bus bars, or special lugs.
- Rugged **EPIC®** seal rated to 175°C – Reduced risk of fire or meltdown in over current conditions. The same technology used for advanced aerospace programs.
- Hermetically sealed – Designed to meet: UL1604 for Class I & II, Div 2 and Class III for use in hazardous locations, IP67 for temporary water immersion for 30 min, IP69K for pressure washing, SAE J1171 - external ignition protection, and ISO8846 for protection against ignition around flammable gasses.
- Built-in coil suppression for all DC coils – Saves you engineering time and parts cost to add external coil suppression.
- Stainless steel nuts, washers and mounting inserts, for years of corrosion free service.
- Not position sensitive – can be mounted in any position for ease of installation.

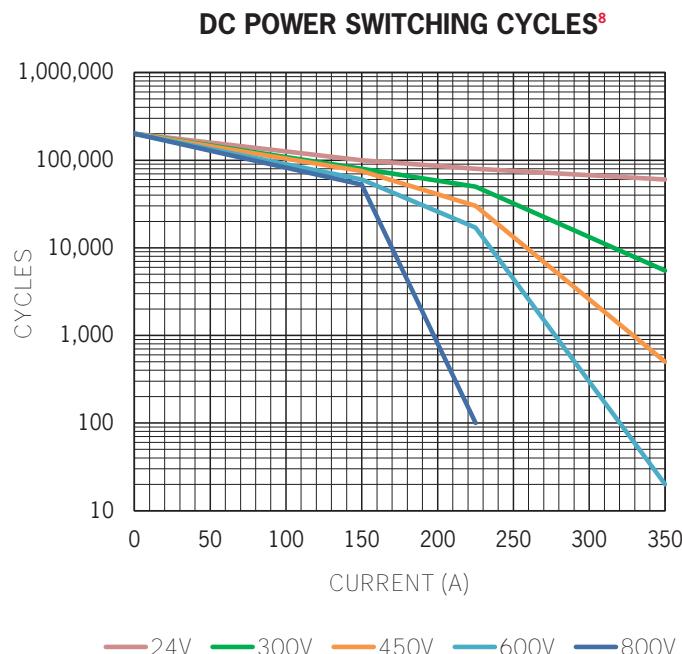
PRODUCT SPECIFICATIONS

Specifications	Units	Data
Contact Arrangement		
Main	Form X	SPST-NO
Auxiliary (2A, 24VDC) ¹	Form A or B	SPST-NO or SPST-NC
Mechanical Life	Cycles	1,000,000
Contact Resistance²		
Max	mohms	0.4
Typical	mohms	0.15 to 0.3
Set (Close) Time³		
Max	ms	20
Typical	ms	13
Reset (Open) Time, Max	ms	12
Insulation Resistance⁴	Mohms	100
Dielectric At Sea Level (Leakage < 1mA)	VRMS	2,200
Shock, 1/2 Sine, 11ms	G peak	20
Vibration, Sinusoidal (500-2000 Hz Peak)	G	15
Ambient Temp Range		
Operating ⁵	°C	-55 to +85
Storage	°C	-70 to +150
Weight, Typical	Kg (Lb)	0.5 (1.1)
Environmental Seal		Exceeds IP67 & IP69K
Salt Fog		MIL-STD-810

COIL RATINGS at 25°C

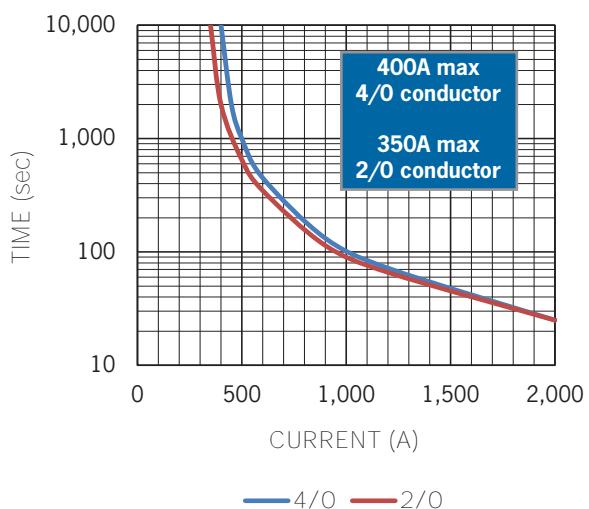
Coil P/N Designation	B	C
Coil Voltage, Nominal	12 VDC	24 VDC
Coil Voltage, Max ⁷	16 V	32 V
Set and Reset Voltage, Max ^{6,7}	7.5 V	15 V
Set and Reset Current, Max ^{6,7}	3.4 A	1.7 A
Coil Back EMF ⁹	0 V	
Transients, Max (13 ms)	±50 V	
Reverse Polarity	50 V	

POWER SWITCHING AND CURRENT CARRY RATINGS



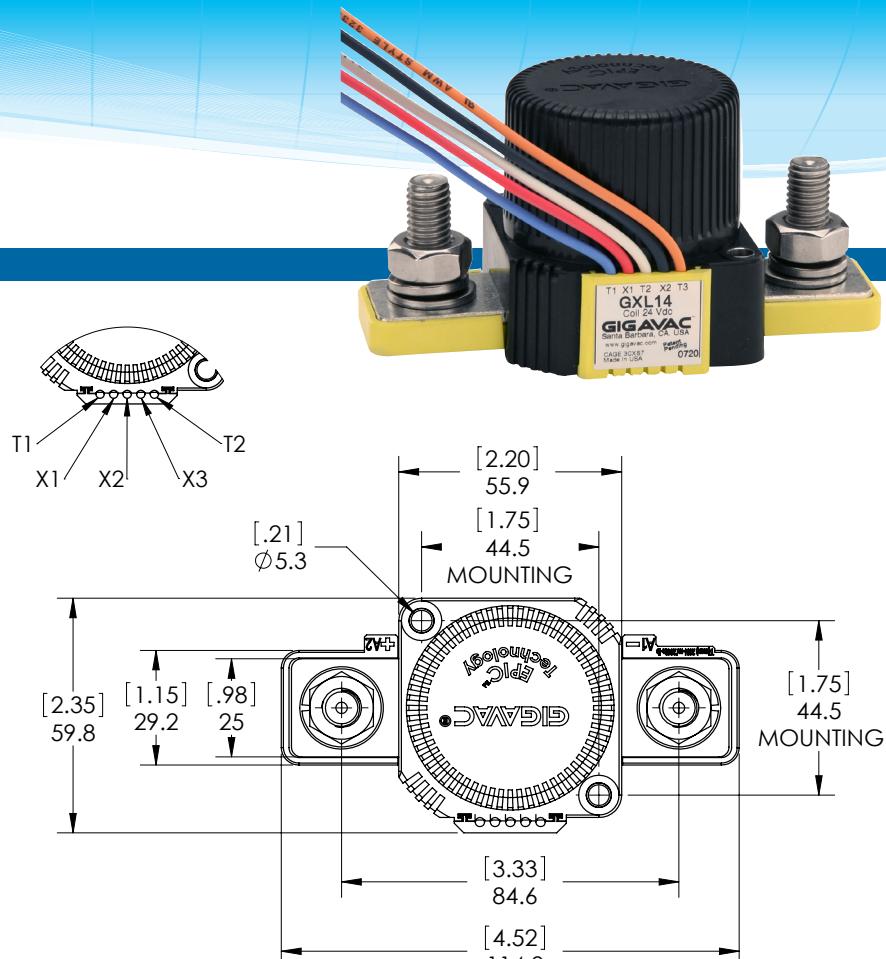
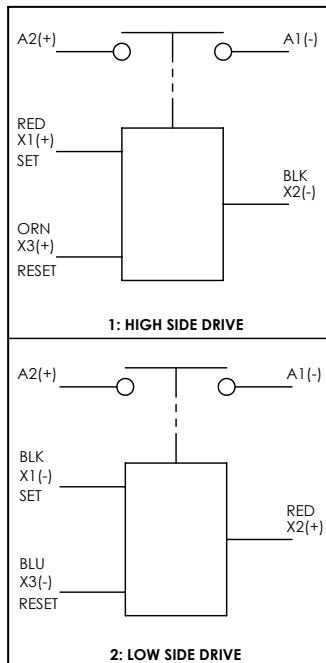
CURRENT CARRY vs TIME

with 85°C terminal temperature rise



DIMENSIONS

Power Contacts

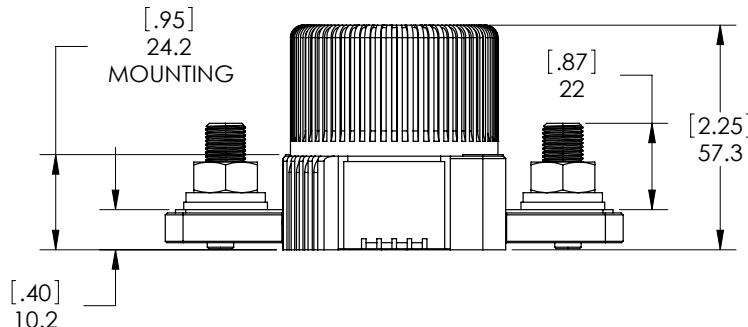


Mounting

M5 Bolts

Case Material

DuPont Zytel FR50
(25% Glass Filled Nylon)



Power Connection

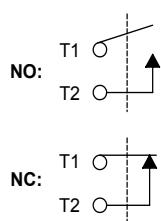
Stainless M10x1.5 Bolt
Stainless M10x1.5 Nut
Stainless Lock Washer
Stainless Flat Washer

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

Coil Wire

Silicone, 20 AWG, UL: VW-1

Auxiliary contacts (optional)



PART NUMBER SYSTEM

GXL14	B	1	A	B
Coil Voltage	B = 12 Vdc, Internal Coil Suppression			
	C = 24 Vdc, Internal Coil Suppression			
Drive		1 = High Side 2 = Low Side		
Coil Termination			A = Flying leads 38 cm (15 in) B = Flying leads 61 cm (24 in) C = Flying leads 122 cm (48 in)	
Auxiliary Contact			Blank = None B = SPST, Normally Open C = SPST, Normally Closed	

Notes & Definitions:

- 1 Auxiliary contact rating is 2A, 24Vdc Resistive load, 100,000 cycles. Minimum current is 0.1mA, 5V. The auxiliary contact is mechanically linked to the main power contacts.
- 2 Contact resistance measured at currents higher than 100A.
- 3 Operation time is measured at 25°C and includes maximum 7ms bounce.
- 4 Insulation resistance is 50 Mohms after life.
- 5 Contactor can operate up to 125°C in special cases - contact GIGAVAC for details.
- 6 Set voltage is voltage required to ensure contacts close. Minimum pulse of 100ms required. Coil pulse limited to <100ms by internal electronics.
- 7 Contactor is operated by a coil that changes resistance with temperature. Since coil voltage, set and reset voltage, and set and reset current are specified at nominal voltage, they will be lower than indicated at temperatures above 25°C and higher than indicated at temperatures below 25°C.
- 8 Limit make current to 600A to avoid contact welding. For AC power switching cycles, contact factory.
- 9 Coils are switched internally with a FET, so no fly-back/suppression voltage is seen at the coil inputs.

APPLICATION NOTES

- Contactors feature internal transorb for coil suppression. No external diodes should be added across the coil. The use of additional external coil suppression can slow the release time and invalidate the life cycle ratings, or can cause the contactor not to be able to interrupt the maximum current specified. If lower coil back EMF is required, please contact GIGAVAC for assistance.
- Contactors should be installed so that current flows from A2(+) to A1(-). Contactors should not be switched bi-directionally.
- Applications with capacitors will require a pre-charge circuit.
- Electrical life rating is based on resistive load with 27µH maximum inductance in circuit. Because your application may be different, we suggest you test the contactor in your circuit to verify life is as required.
- End of life is defined as when the dielectric, insulation resistance or contact resistance fails the specifications listed.