



## 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 and mounting inserts, for years of corrosion free service.
- Not position sensitive – can be mounted in any position for ease of installation.

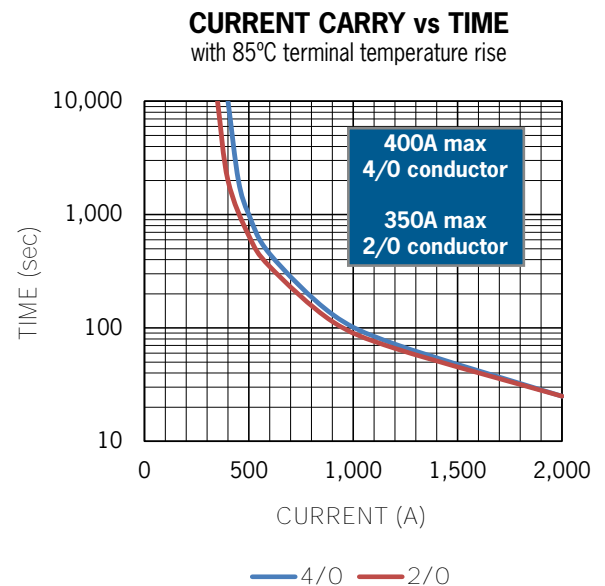
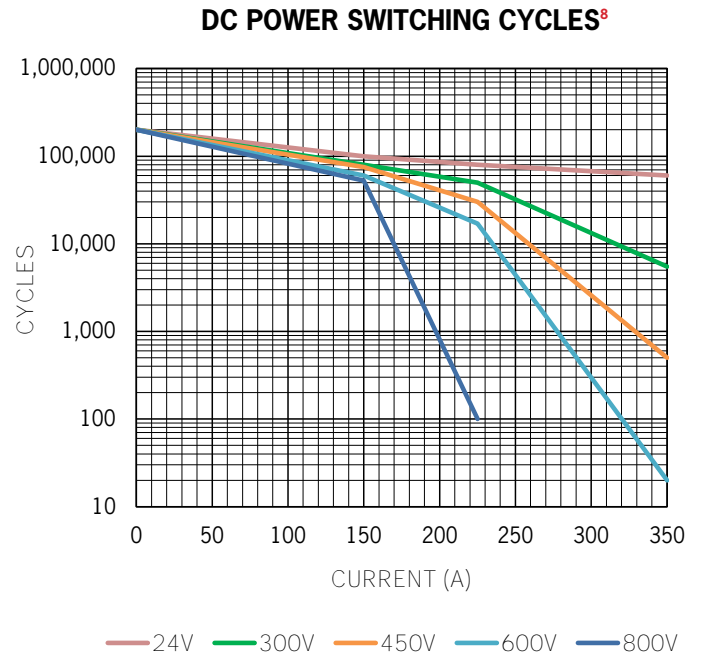
## PRODUCT SPECIFICATIONS

| Specifications                                    | Units       | Data                 |
|---|-------------|----------------------|
| <b>Contact Arrangement</b>                        |             |                      |
| Main  | Form X      | SPST-NO              |
| Auxiliary (2A, 24VDC) <sup>1</sup>                | Form A or B | SPST-NO or SPST-NC   |
| <b>Mechanical Life</b>                            |             |                      |
|   | Cycles      | 1,000,000            |
| <b>Contact Resistance<sup>2</sup></b>             |             |                      |
| Max   | mohms       | 0.4                  |
| Typical   | mohms       | 0.15 to 0.3          |
| <b>Set (Close) Time<sup>3</sup></b>               |             |                      |
| Max   | ms          | 20                   |
| Typical   | ms          | 13                   |
| <b>Reset (Open) Time, Max</b>                     |             |                      |
|   | ms          | 12                   |
| <b>Insulation Resistance<sup>4</sup></b>          |             |                      |
|   | Mohms       | 100                  |
| <b>Dielectric At Sea Level (Leakage &lt; 1mA)</b> |             |                      |
|   | VRMS        | 2,200                |
| <b>Shock, 1/2 Sine, 11ms</b>                      |             |                      |
|   | G peak      | 20                   |
| <b>Vibration, Sinusoidal (500-2000 Hz Peak)</b>   |             |                      |
|   | G           | 15                   |
| <b>Ambient Temp Range</b>                         |             |                      |
| Operating <sup>5</sup>                            | °C          | -55 to +85           |
| Storage   | °C          | -70 to +150          |
| <b>Weight, Typical</b>                            |             |                      |
|   | Kg (Lb)     | 0.5 (1.1)            |
| <b>Environmental Seal</b>                         |             |                      |
|   |             | Exceeds IP67 & IP69K |
| <b>Salt Fog</b>                                   |             |                      |
|   |             | MIL-STD-810          |

## COIL RATINGS at 25°C

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

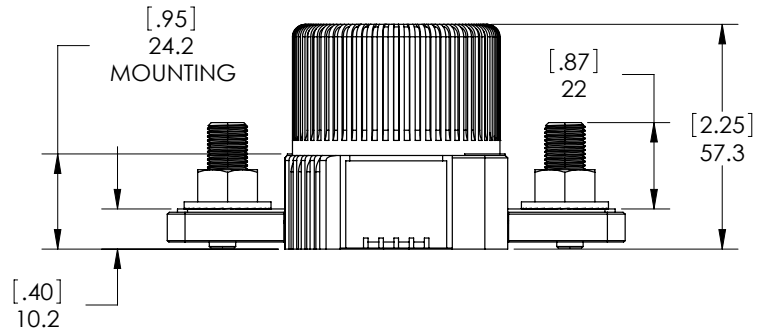
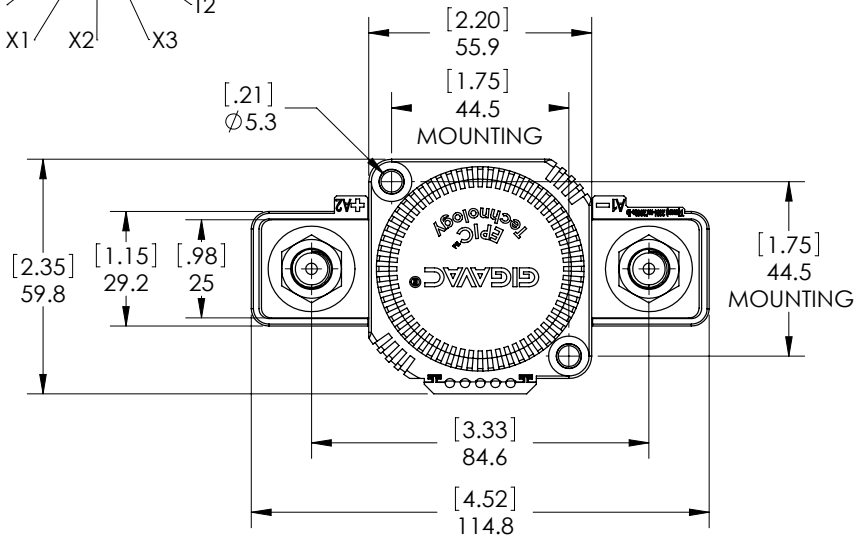
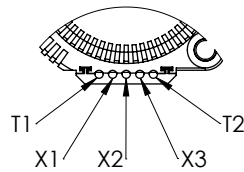
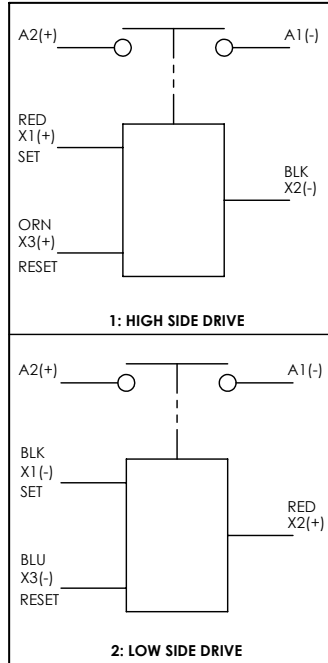
## POWER SWITCHING AND CURRENT CARRY RATINGS





**DIMENSIONS**

**Power Contacts**



**Mounting**

M5 Bolts

**Case Material**

DuPont Zytel FR50  
 (25% Glass Filled Nylon)

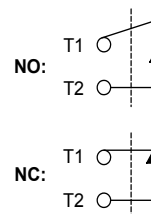
**Power Connection**

Stainless M10x1.5 Bolt  
 Stainless M10x1.5 Flanged Nut  
 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,<br>Internal Coil<br>Suppression |               |                                    |                              |
|                   | C = 24 Vdc,<br>Internal Coil<br>Suppression |               |                                    |                              |
| Drive             |   | 1 = High Side |                                    |                              |
|                   |   | 2 = Low Side  |                                    |                              |
| Coil Termination  |   |               | A = Flying leads<br>38 cm (15 in)  |                              |
|                   |   |               | B = Flying leads<br>61 cm (24 in)  |                              |
|                   |   |               | C = Flying leads<br>122 cm (48 in) |                              |
| Auxiliary Contact |   |               |                                    | Blank = None                 |
|                   |   |               |                                    | B = SPST,<br>Normally Open   |
|                   |   |               |                                    | C = SPST,<br>Normally Closed |

### Notes & Definitions:

- 1 Auxillary 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

- Power switching lifecycles are based on [current flow](#) from A2(+) to A1(-). For best breaking performance, the contactor should be installed so that current flows from A2(+) to A1(-). There are cases where the contactor will interrupt power in the opposite direction but please contact GIGAVAC to confirm suitability. Direction of current flow is not relevant during make or when flowing on closed contacts. For bi-directional contactors, please contact GIGAVAC.
- 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.
- 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.



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