

## FEATURES

- Gas filled design offers lower resistance than non-hermetic switches resulting in higher system efficiency and less heat generation.
- Suppression gas allows high fault interrupt capability and prohibits oxidation.
- Smaller, lighter, and more efficient than non-hermetic switches.
- Optional auxiliary contacts for dependable feedback for HVIL circuits.
- Optional joint resistance and voltage sensing pins for easy system diagnosis.

## PRODUCT SPECIFICATIONS

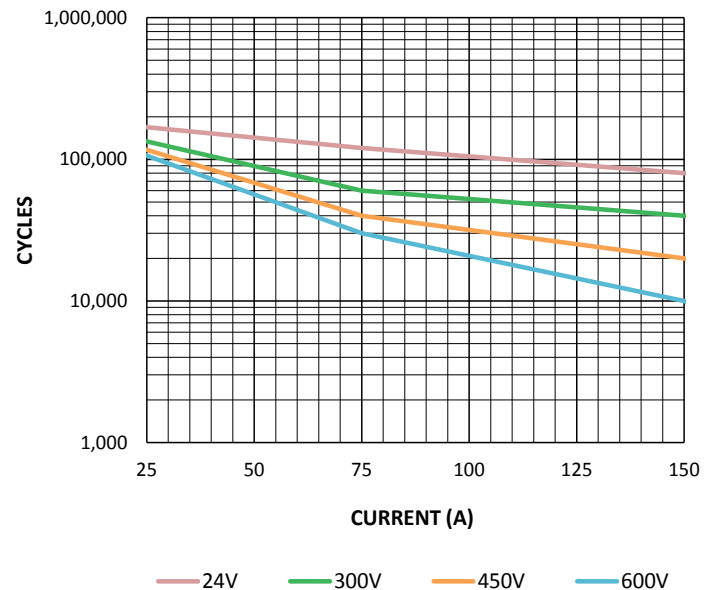
Specifications	Units	Data
Rated Voltage <sup>9</sup>	V	1000
Nominal Current	A	250
Contact Arrangement		
Main	Form X	SPST-NO
Auxiliary <sup>1</sup>	Form A or B	SPST-NO or SPST-NC
Mechanical Life	cycles	1,000,000
Contact Resistance		
Max	mohms	0.25
Typical	mohms	0.2
Insulation Resistance <sup>2</sup>	Mohms	100
Dielectric at sea level (leakage < 1mA)	VRMS	4000
Shock, 1/2 Sine, 11ms		
Actuated (closed)	G	50
Non Actuated (open)	G	25
Vibration, Sinusoidal (10-2000 Hz peak)	G	25
Environmental Seal	Exceeds IP67 & IP69K	
Salt Fog	MIL-STD-810	
Short Circuit Current (20ms)	A	2500
Max Break Current @ 400V (1 cycle)	A	2000
Max Break Current @ 800V (1 cycle)	A	600

## COIL RATINGS at 25°C

Coil P/N Designation	B	C
Coil Voltage, Nominal (VDC)	12	24
Coil Voltage, Max (V)	16	32
Pick-Up Voltage, Max (V) <sup>6</sup>	8	16
Drop-Out Voltage, Max (V) <sup>6</sup>	2	4
Drop-Out Voltage, Min (V) <sup>6</sup>	0.5	0.5
Coil Current (A) <sup>6</sup>	0.68	0.28
Coil Power (W) <sup>6</sup>	8	6.8
Operate Time, Max (ms) <sup>3</sup>	20	
Release Time, Max (ms)	12	
Coil Back EMF (V)	55	

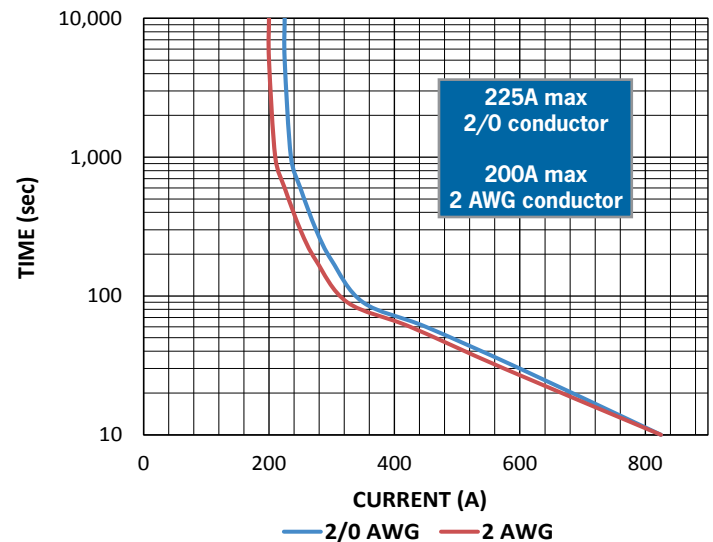
## POWER SWITCHING

### DC POWER SWITCHING CYCLES



### CURRENT CARRY vs TIME

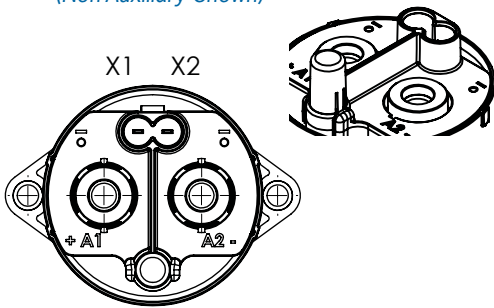
with 85°C terminal temperature rise



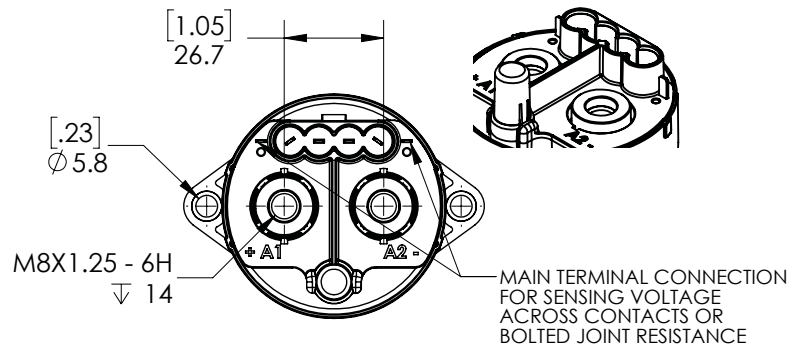


## UPRIGHT MOUNT DIMENSIONS

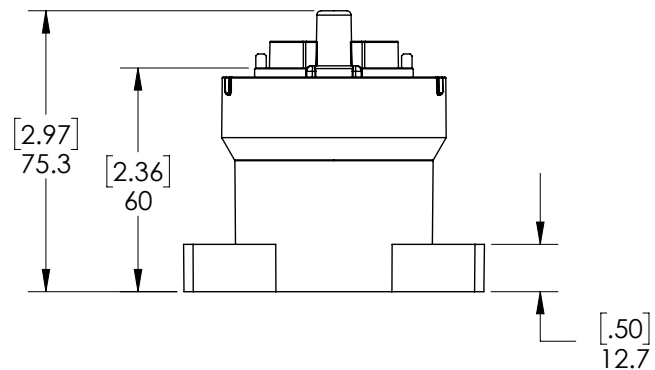
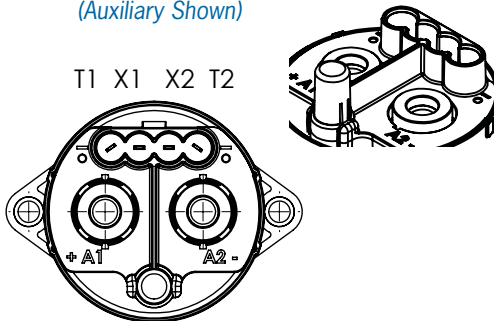
### Upright Mount (Non-Auxiliary Shown)



### Upright Mount (Auxiliary with Main Terminal Connection for Sensing Voltage Across Contacts or Bolted Joint Resistance Shown)



### Upright Mount (Auxiliary Shown)



### Coil/Auxiliary Connector

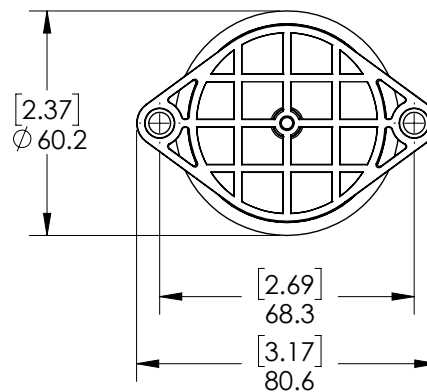
Coil: Tin Plated Brass  
Auxiliary: Tin Plated Beryllium Copper

### Upright Mounting

M5 or No. 10 Screws  
Torque 1.7-4 Nm [15-35 in-lb]

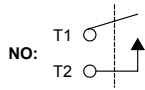
### Upright Mount Power Connection

Silver Plated Copper M8x1.25 Terminals  
Torque 10 Nm [90 in-lb] max

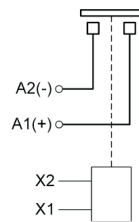


## SPECIFICATIONS AND CURRENT CARRY RATINGS

### Auxiliary Contacts (Optional)



### Power Contacts



### Temperature and Weight

Operating ambient Temp Range = -55 to +85°C<sup>3</sup>  
Storage ambient Temp Range = -70 to +150°C  
Weight, typical = TBD kg (TBD lb)

### Packaging

24 units per shipping box  
21 in x 18 in x 4 in shipping box

## PART NUMBER SYSTEM

GV25	1	B	P	B
Mounting	1 = Upright			
	2 = Side (Coming Soon)			
Coil Voltage		B = 12 Vdc		
		C = 24 Vdc		
Coil Termination			P = Pins	
Auxiliary Contacts				X = None
				B = SPST-NO Normally Open

## APPLICATION NOTES

- Contactors feature internal transient voltage suppressor for coil suppression. **No external diodes** should be added across the coil.
- Power switching lifecycles are based on **current flow** from A1(+) to A2(-). For best breaking performance, the contactor should be installed so that current flows from A1(+) to A2(-). 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 exceeds the specifications listed.

## 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 Insulation resistance is 50 Mohms after life.
- 3 Contactor can operate up to 125°C in special cases - contact GIGAVAC for details.
- 4 Delete
- 5 Because the contactor is operated by a coil that changes resistance with temperature:

Maximum coil voltage will be lower than indicated at temperatures above 25°C, and higher than indicated at temperatures below 25°C.

And because Nominal Coil Voltage has been assumed for the Pick-up Current, Coil Current and Coil Power specifications, Current/Wattage will be lower than indicated at temperatures above 25°C and higher than indicated at temperatures below 25°C.

Pick-up Voltage and Drop Out Voltage will be lower than indicated at temperatures below 25°C and higher than indicated at temperatures above 25°C.

- 6 These DC coils have built-in coil suppression. 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.
- 7 All contact ratings and coil versions may not be UL recognized. Contact GIGAVAC for a copy of the applicable sections of the test report.
- 8 Operation time is measured at 25°C and includes maximum 7ms bounce.
- 9 Rated voltage refers to max voltage for which make/break load cycles are provided. Contactor can be used in higher voltage systems. Contact GIGAVAC for more info.