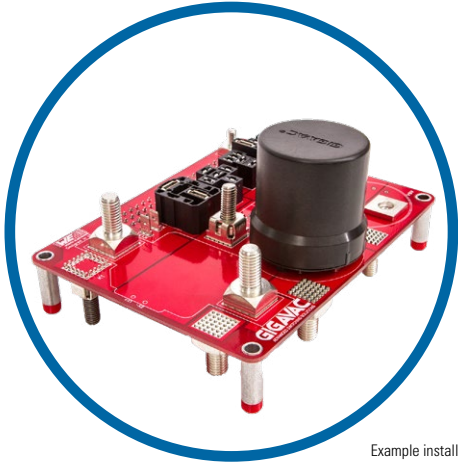




# GV12 SERIES

200+ AMP 100 VDC CONTACTOR



Example installation shown.  
PCB not included.

## Features


- PCB mountable option allows lowest cost OEM solution by eliminating need for cables, wires and connector.
- 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, SAE J1171 - external ignition protection, and ISO8846 for protection against ignition around flammable gasses.
- Meets CE Conformance standards.
- Built-in coil suppression for all DC coils – Saves you engineering time and parts cost to add external coil suppression.
- Stainless steel hardware and brass mounting inserts, for years of corrosion free service.
- Not position sensitive – can be mounted in any position for ease of installation.



## SPECIFICATIONS

Specifications		Units	Data
<b>Rated Voltage</b>		V	100
<b>Contact Arrangement</b>	<b>Main</b>	Form X	SPST-NO
	<b>Auxiliary<sup>1</sup></b>	Form A or B	SPST-NO or SPST-NC
<b>Mechanical Life</b>		Cycles	1,000,000
<b>Contact Resistance</b>	<b>Max</b>	mohms	0.4
	<b>Typical</b>	mohms	0.3
<b>Insulation Resistance<sup>2</sup></b>		Mohms	100
<b>Dielectric at sea level (leakage &lt; 1mA)</b>		VRMS	2,500
<b>Shock, 1/2 Sine, 11ms</b>	<b>Actuated (closed)</b>	G	35
	<b>Non Actuated (open)</b>	G	25
<b>Vibration, Sinusoidal (10-2000 Hz Peak)</b>		G	25
<b>Environmental Seal</b>		Exceeds IP67 & IP69K	
<b>Salt Fog</b>		MIL-STD-810	
<b>Temperature</b>	<b>Operating ambient Temp Range</b>	-55 to +85°C	
	<b>Storage ambient Temp Range</b>	-70 to +150°C	
<b>Weight, typical</b>	<b>Upright Mount</b>	0.44 kg (0.97 lb)	
	<b>Side Mount</b>	0.45 kg (0.99 lb)	
	<b>PCB Mount</b>	0.38 kg (0.84 lb)	
<b>Packaging</b>		24 units per shipping box 21 in x 18 in x 4 in shipping box	

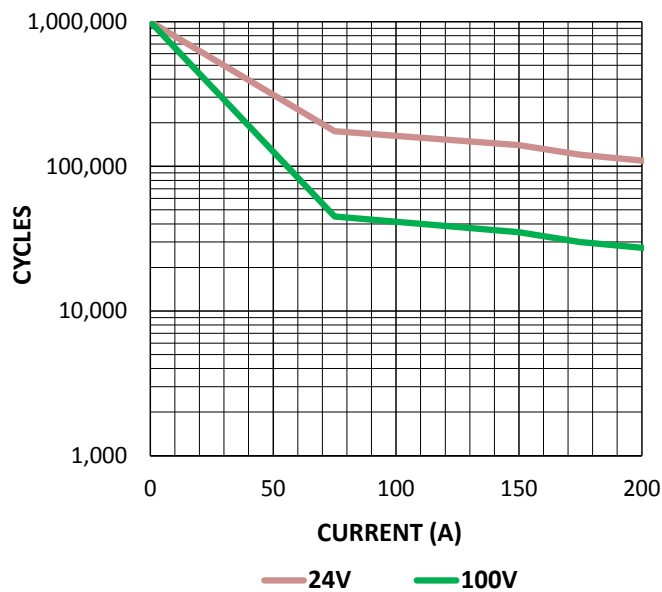
## COIL RATINGS at 25°C

Coil P/N Designation	B	C	F
Coil Voltage, Nominal (VDC)	12	24	48
Coil Voltage, Max (V)	16	32	64
Pick-Up Voltage, Max (V) <sup>6</sup>	8	16	28
Drop-Out Voltage, Max (V) <sup>6</sup>	3	7	10
Drop-Out Voltage, Min (V) <sup>6</sup>	0.5	0.5	1.8
Coil Current (A) <sup>6</sup>	0.68	0.28	0.16
Coil Power (W) <sup>6</sup>	8	6.8	7.6
Operate Time, Max (ms) <sup>3</sup>	20	20	30
Release Time, Max (ms)	12	12	12
Internal Coil Suppression	TVS 		
Coil Back EMF (V)	55	55	80



### POWER SWITCHING

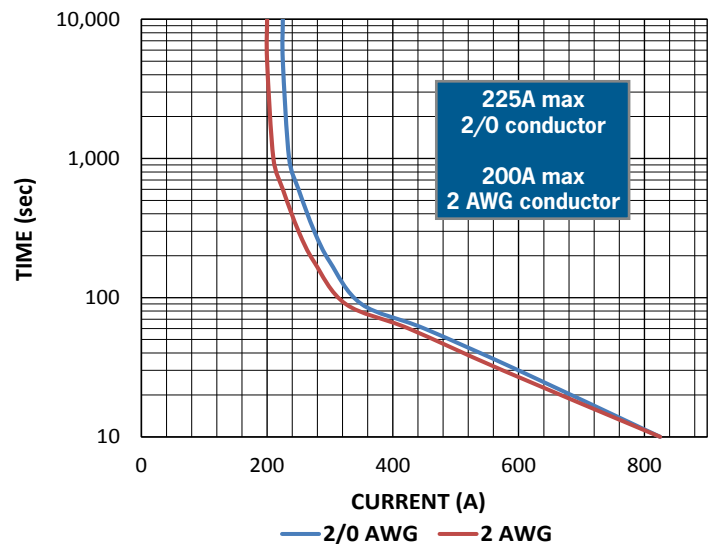
#### DC POWER SWITCHING CYCLES<sup>7</sup>



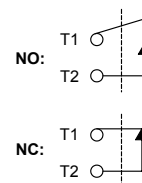
### CURRENT CARRY RATINGS

#### CURRENT CARRY vs TIME

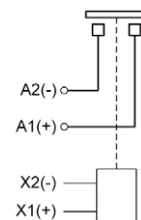
with 85°C terminal temperature rise



#### Auxiliary contacts (optional)



#### Power Contacts





## UPRIGHT MOUNT DIMENSIONS

All dimensions are +/- 0.5mm unless stated otherwise

### Upright Mount

#### Auxiliary Leads

B=SPST-NO  
Blue Lead = T1  
White Lead = T2  
C=SPST-NC  
Orange Lead = T1  
White Lead = T2

#### Coil Leads

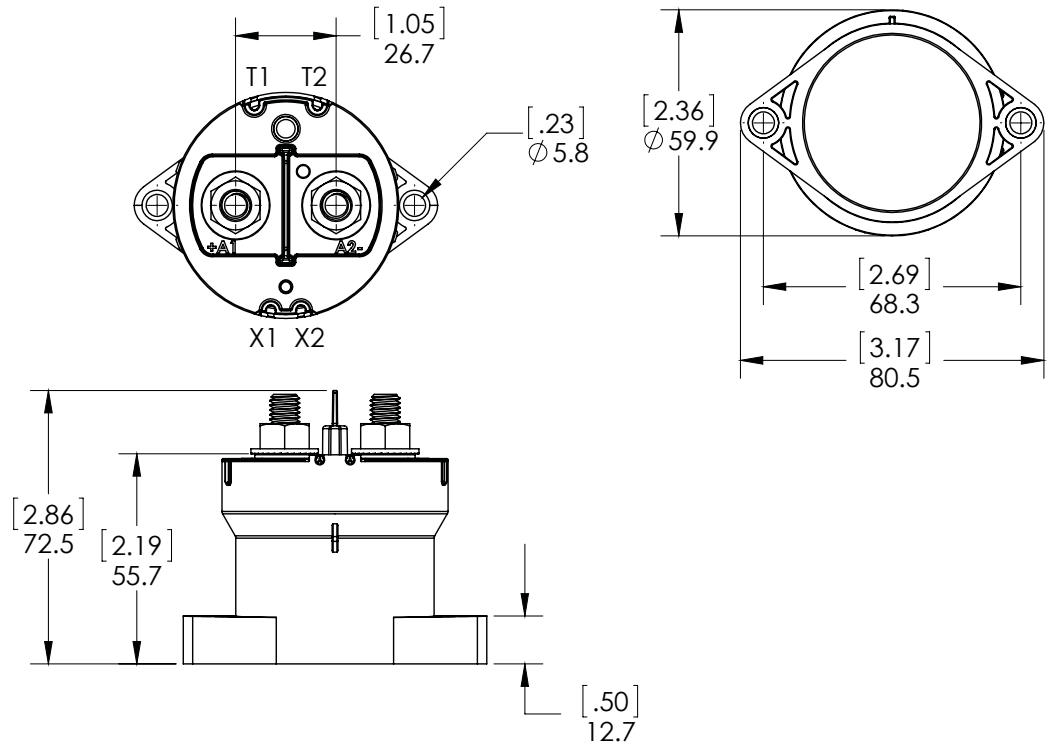
Red Lead = X1(+)  
Black Lead = X2(-)

#### 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 stud  
Stainless M8x1.25 flanged nut  
Torque 10 Nm [90 in-lb] max



## SIDE MOUNT DIMENSIONS

#### Auxiliary Leads

B=SPST-NO  
Blue Lead = T1  
White Lead = T2  
C=SPST-NC  
Orange Lead = T1  
White Lead = T2

#### Coil Leads

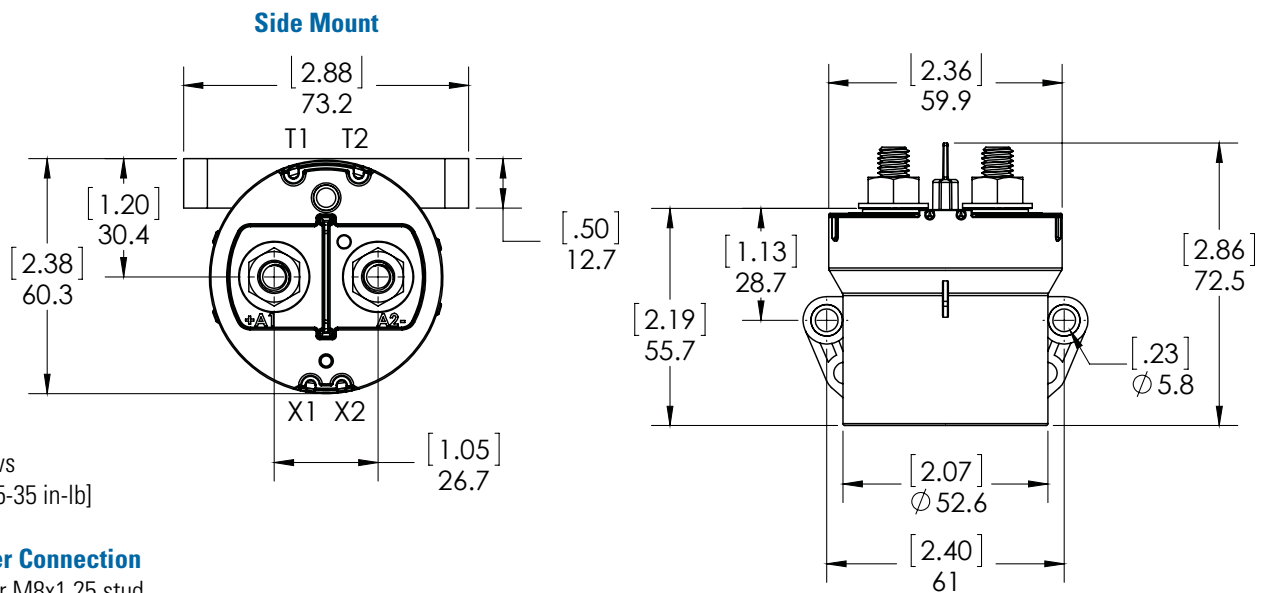
Red Lead = X1(+)  
Black Lead = X2(-)

#### Side Mounting

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

#### Side Mount Power Connection

Silver Plated Copper M8x1.25 stud  
Stainless M8x1.25 flanged nut  
Torque 10 Nm [90 in-lb] max

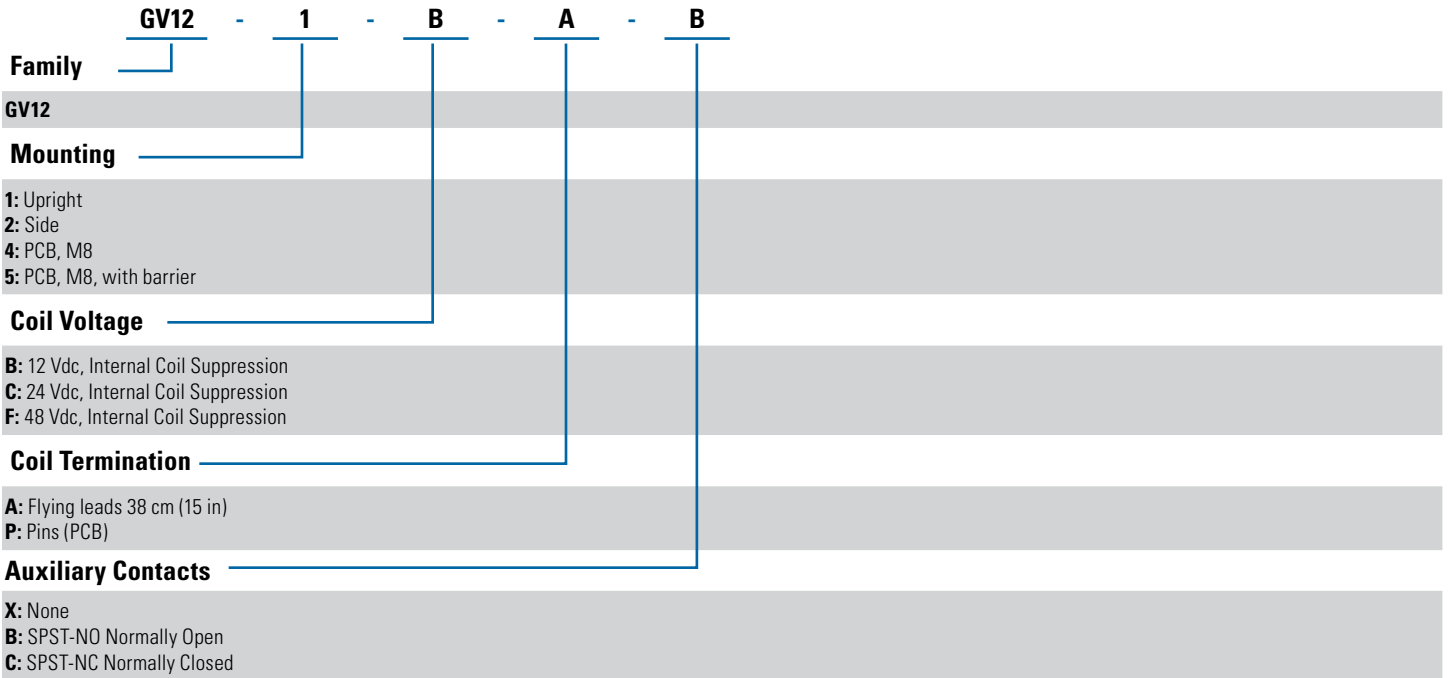






## ORDERING OPTIONS

Example : GV121BAB



## GENERAL NOTES

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. Insulation resistance is 50 Mohms at contactor end-of-life.
3. Operation time is measured at 25°C and includes maximum 7ms bounce.
4. Contactor can operate up to 125°C in special cases - contact Sensata for details.
5. Contactor is operated by a coil that changes resistance with temperature. Since Pick-up Current, Coil Current and Coil Power 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. Similarly, Pick-up and Drop-out Voltages will be higher than indicated at temperatures above 25°C and lower than indicated at temperatures below 25°C.
6. Limit make current to 500A to avoid contact welding. For AC power switching cycles, contact factory.