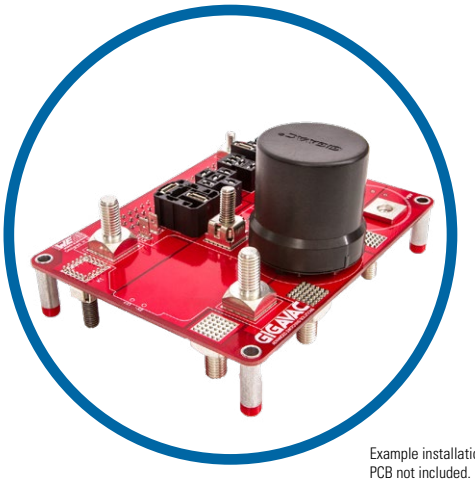
| GV12 SERIES

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

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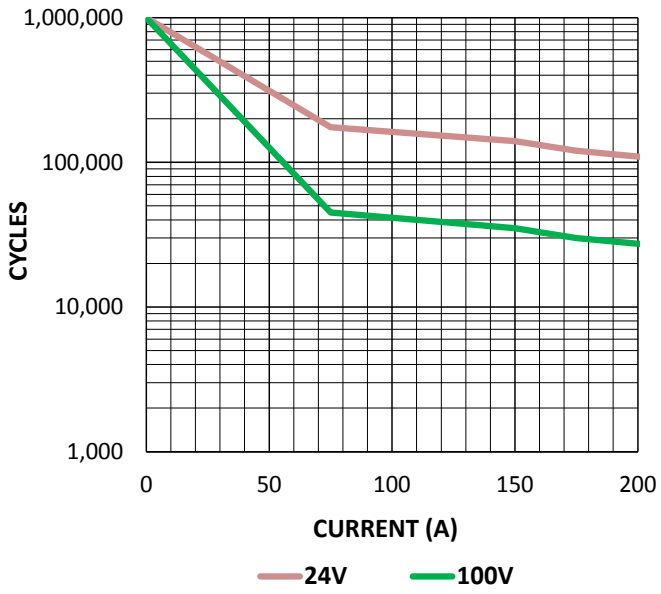
COIL RATINGS at 25°C

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)[6]	8	16	28
Drop-Out Voltage, Max (V)[6]	3	7	10
Drop-Out Voltage, Min (V)[6]	0.5	0.5	1.8
Coil Current (A)[6]	0.68	0.28	0.16
Coil Power (W)[6]	8	6.8	7.6
Operate Time, Max (ms)[3]	20	20	30
Release Time, Max (ms)	12	12	12
Internal Coil Suppression	TVS 		
Coil Back EMF (V)	55	55	80

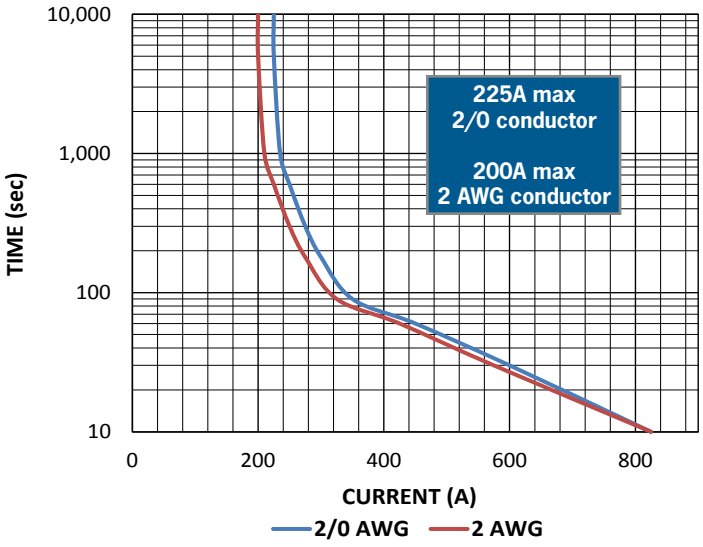
POWER SWITCHING

DC POWER SWITCHING CYCLES[7]

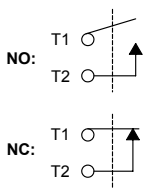


CURRENT CARRY RATINGS

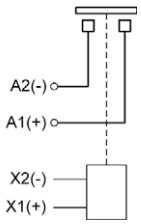
CURRENT CARRY vs TIME
with 85°C terminal temperature rise



Auxiliary contacts
(optional)



Power Contacts



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UPRIGHT MOUNT DIMENSIONS

All dimensions are +/- 0.5mm unless stated otherwise

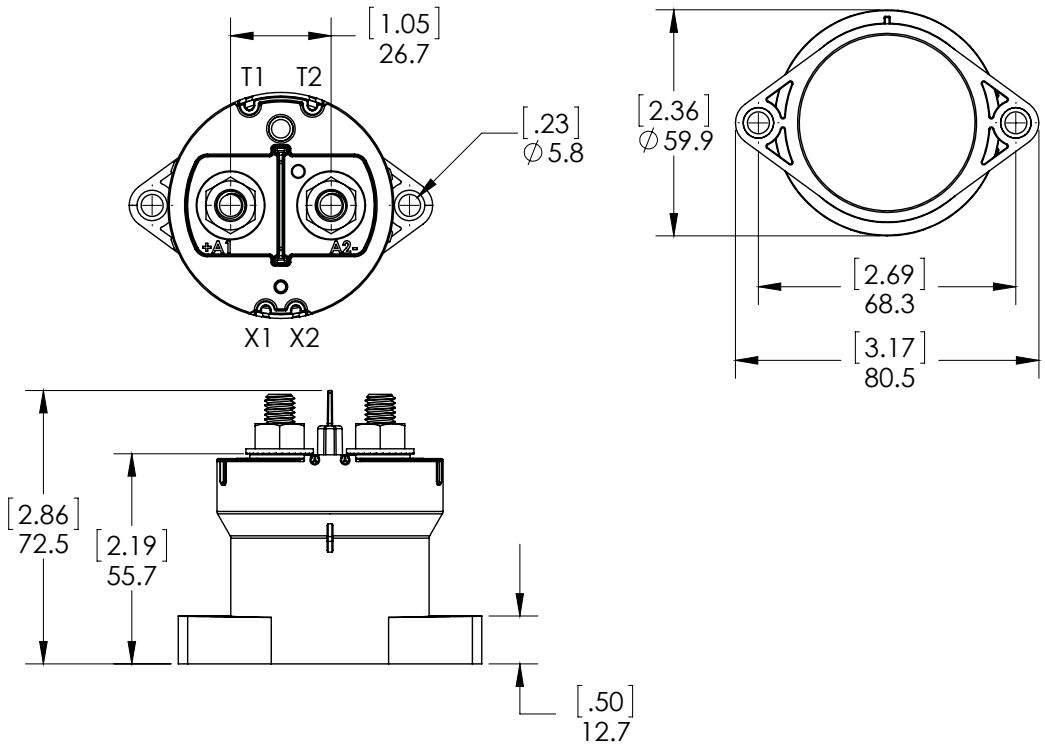
Upright Mount

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

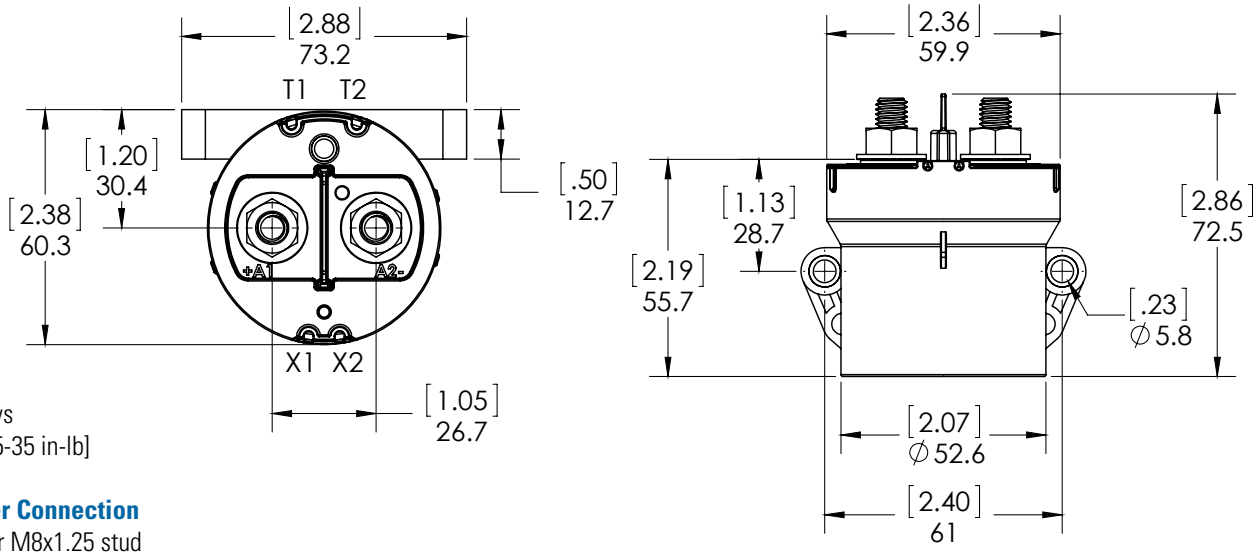
Side Mount

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(-)

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



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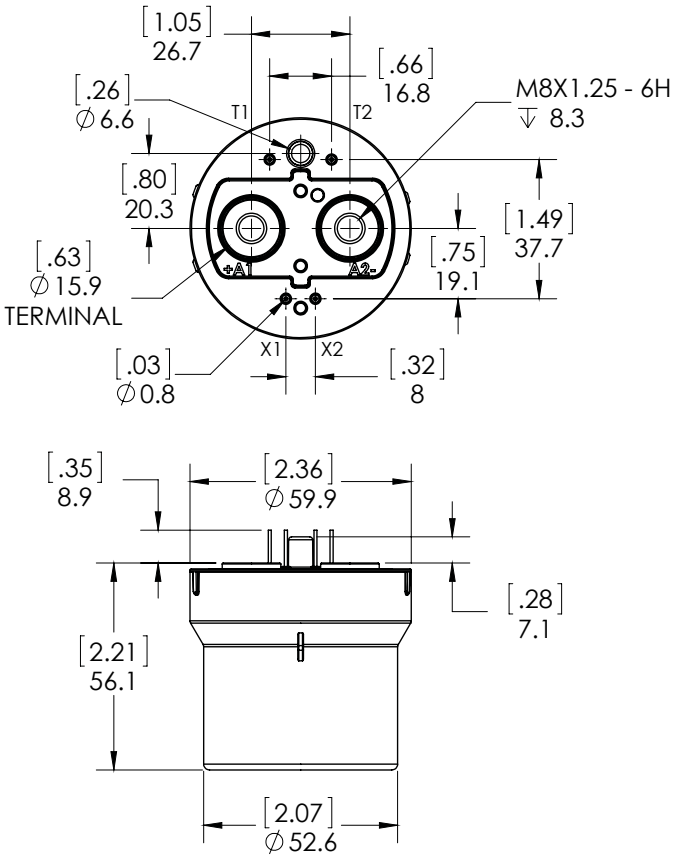
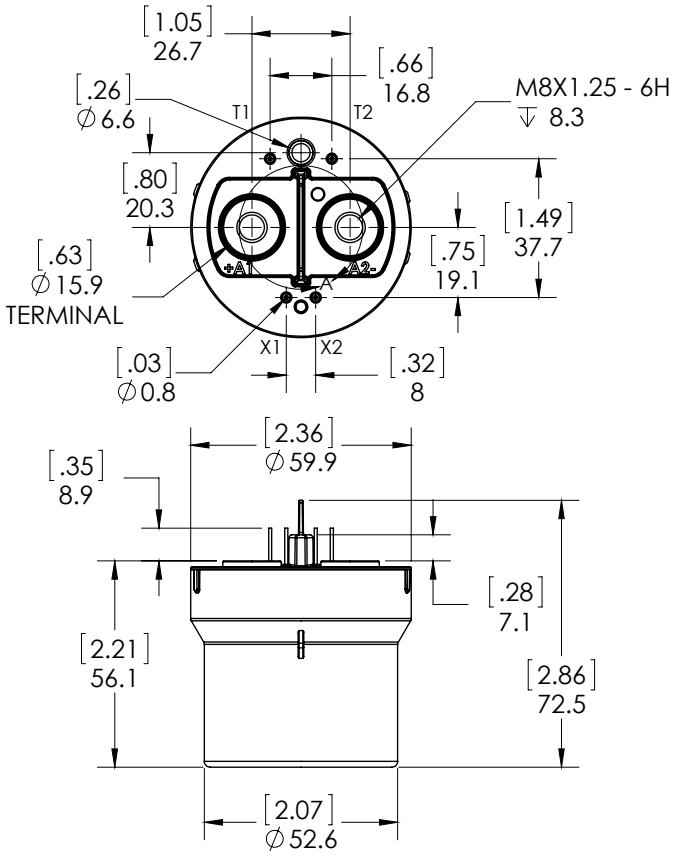
PCB MOUNT DIMENSIONS

PCB Mount



PCB Mount with Barrier

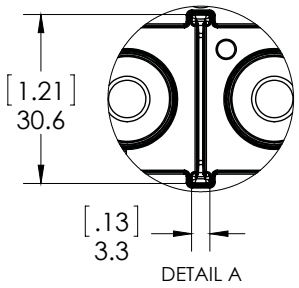


PCB Mounting / Power Connection

M8x1.25 bolt
Torque 10 Nm [90 in-lb] max

PCB Coil and Auxiliary Pin Material

510 Phosphor Bronze, Tin Plated



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ORDERING OPTIONS

Example : GV121BAB

GV12 - 1 - B - A - B

Family

GV12

Mounting

1: Upright
2: Side
4: PCB, M8
5: PCB, M8, with barrier

Coil Voltage

B: 12 Vdc, Internal Coil Suppression
C: 24 Vdc, Internal Coil Suppression
F: 48 Vdc, Internal Coil Suppression

Coil Termination

A: Flying leads 38 cm (15 in)
P: Pins (PCB)

Auxiliary Contacts

X: None
B: SPST-NO Normally Open
C: SPST-NC Normally Closed

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.

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