

GV12 SERIES

200+ AMP 100 VDC CONTACTOR



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 IS08846 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		Units	Data
Rated Voltage		V	100
Contact Arrangement	Main	Form X	SPST-N0
	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	



COIL RATINGS at 25°C

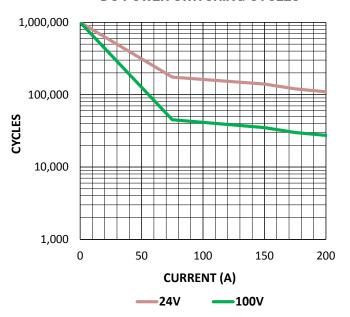
Coil P/N Designation	В	C	F
Coil Voltage, Nominal (VDC)	12	24	48
Coil Voltage, Max (V)	16	32	64
Pick-Up Voltage, Max (V) ⁶	8	16	28
Drop-Out Voltage, Max (V) ⁶	3	7	10
Drop-Out Voltage, Min (V) ⁶	0.5	0.5	1.8
Coil Current (A) ⁶	0.68	0.28	0.16
Coil Power (W) ⁶	8	6.8	7.6
Operate Time, Max (ms) ³	20	20	30
Release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



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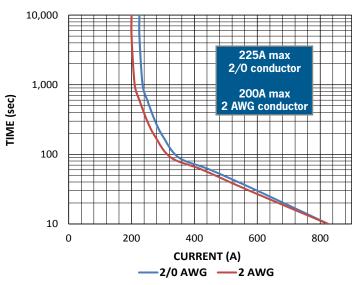
CURRENT CARRY RATINGS

DC POWER SWITCHING CYCLES7



CURRENT CARRY vs TIME

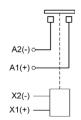
with 85°C terminal temperature rise



Auxiliary contacts (optional)



Power Contacts



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UPRIGHT MOUNT DIMENSIONS

All dimensions are +/- 0.5mm unless stated otherwise

Auxiliary Leads

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

Coil Leads

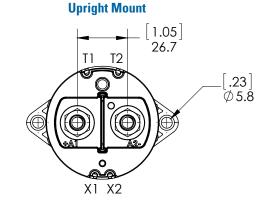
Red Lead = X1(+)Black Lead = X2(-)

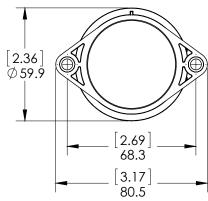
Upright Mounting

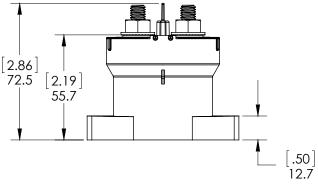
M5 or No. 10 Screws Torque 1.7-4 Nm [15-35 in-lb]

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

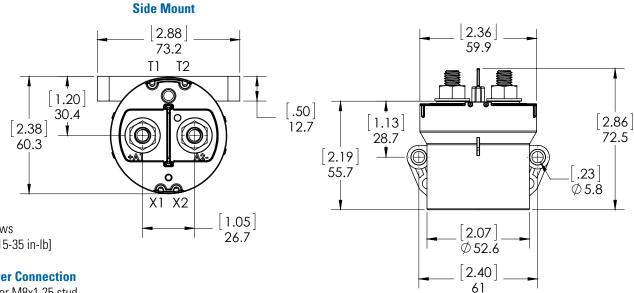
Red Lead = X1(+)Black Lead = X2(-)

Side Mounting

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

Side Mount Power Connection

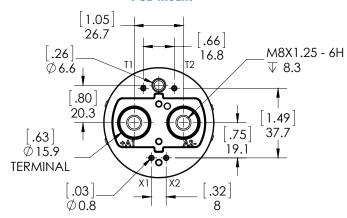
Silver Plated Copper M8x1.25 stud Stainless M8x1.25 flanged nut Torque 10 Nm [90 in-lb] max

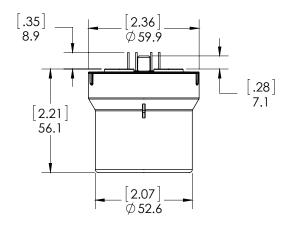


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PCB MOUNT DIMENSIONS

PCB Mount





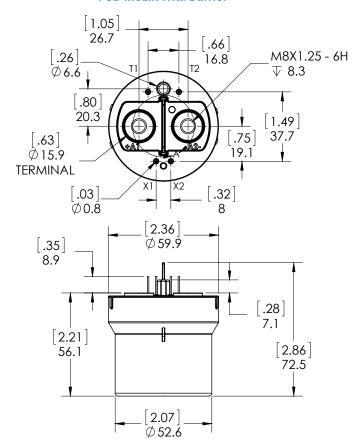
PCB Mounting / Power Connection

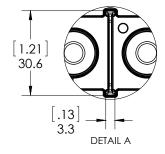
M8x1.25 bolt Torque 10 Nm [90 in-lb] max

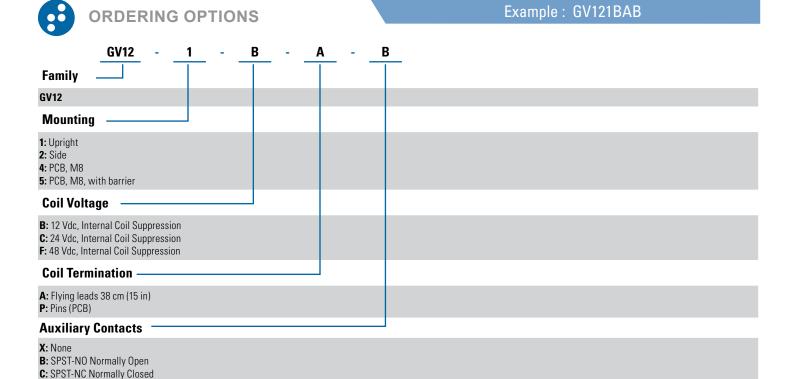
PCB Coil and Auxiliary Pin Material

510 Phosphor Bronze, Tin Plated

PCB Mount with Barrier









- 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.

