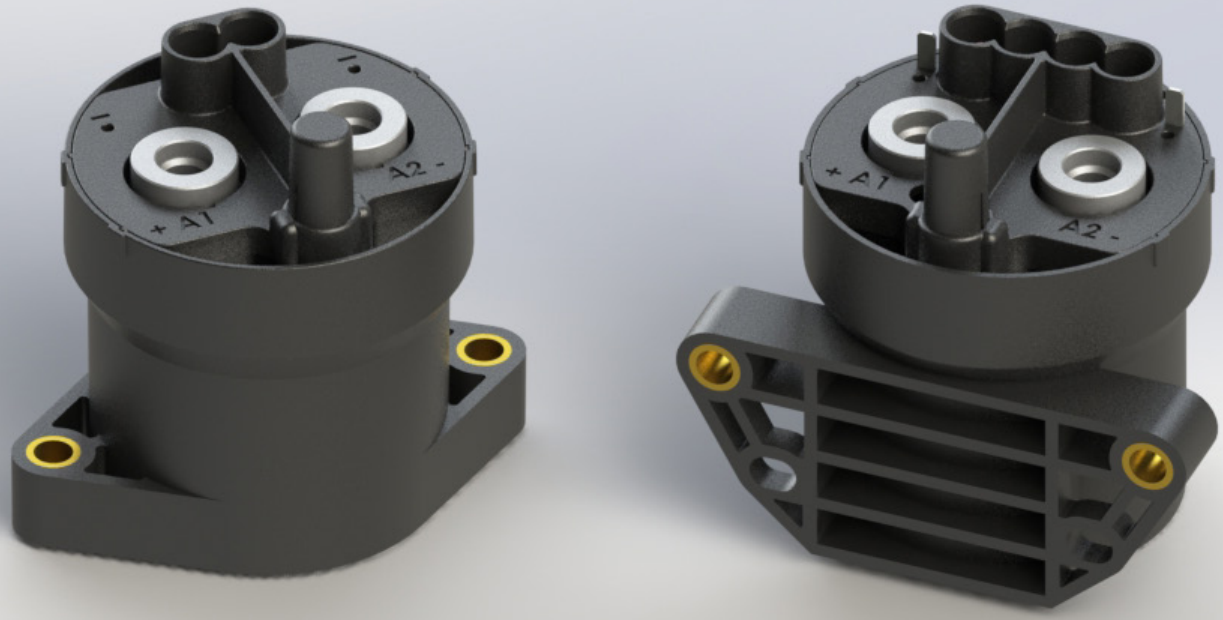
GIGAVAC®

1000V GV350 Series

Automotive Contactor



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.

ADVANCED SWITCHING SOLUTIONS

Rev 7 10/15/18

PRODUCT SPECIFICATIONS

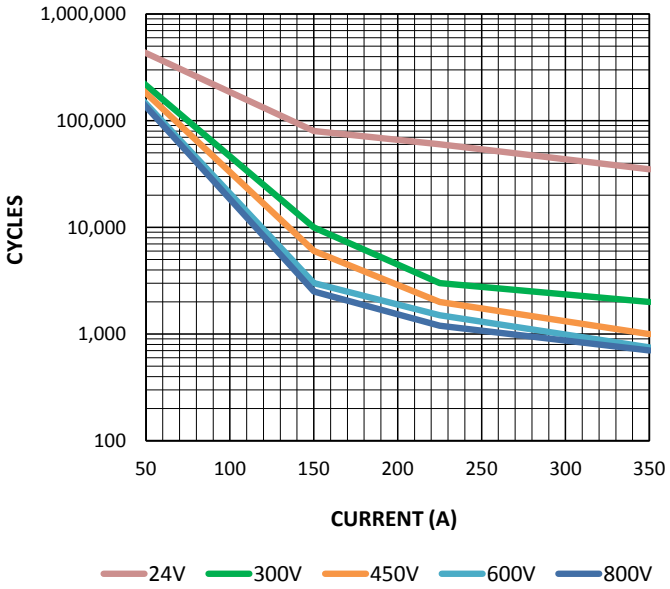
Specifications	Units	Data
Rated Voltage[6]	V	1000
Nominal Current	A	500
Contact Arrangement		
Main	Form X	SPST-NO
Auxiliary[1]	Form A or B	SPST-NO or SPST-NC
Mechanical Life	cycles	1,000,000
Contact Resistance		
Max	mohms	0.2
Typical	mohms	0.15
Insulation Resistance[2]	Mohms	100
Dielectric at sea level (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	4000
Max Break Current @ 400V (1 cycle)	A	3000
Max Break Current @ 800V (1 cycle)	A	900

COIL RATINGS at 25˚C

Coil P/N Designation	P	R
Coil Voltage, Nominal (VDC)	12/24	12/24
Coil Type	External PWM[4]	
Coil Resistance (ohms)	1.45	5
Operate Time, Max (ms)[5]	20	
Release Time, Max (ms)	12	

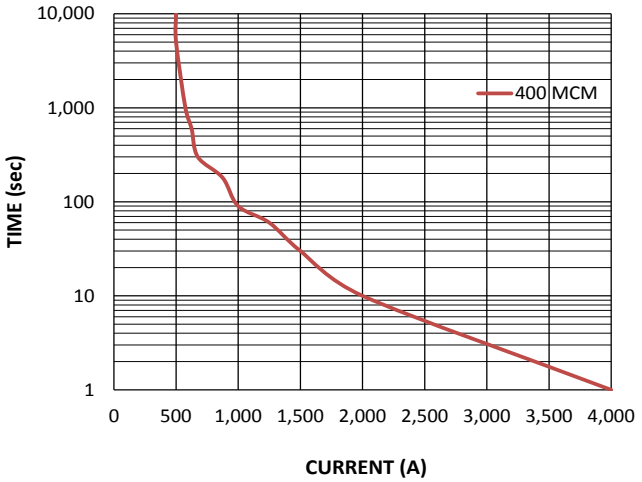
POWER SWITCHING AND CURRENT CARRY RATINGS

DC POWER SWITCHING CYCLES



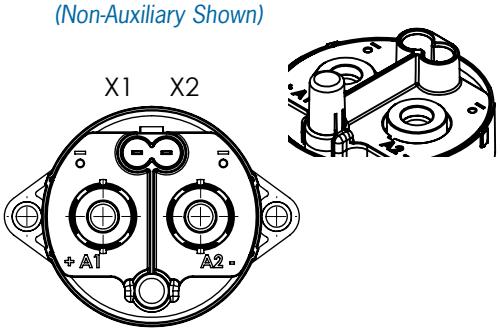
CURRENT CARRY vs TIME

with 85°C terminal temperature rise

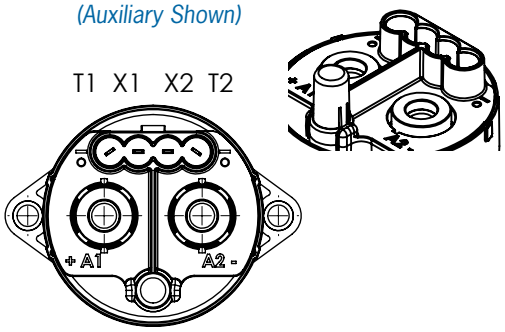


UPRIGHT MOUNT DIMENSIONS

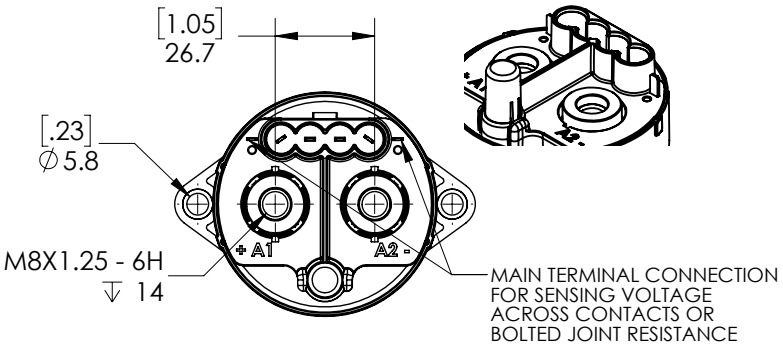
Upright Mount
(Non-Auxiliary Shown)

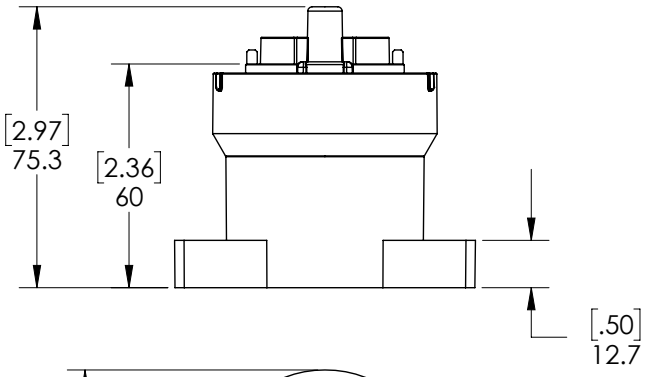


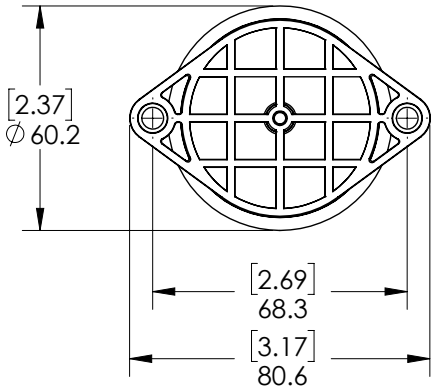
Upright Mount
(Auxiliary Shown)



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







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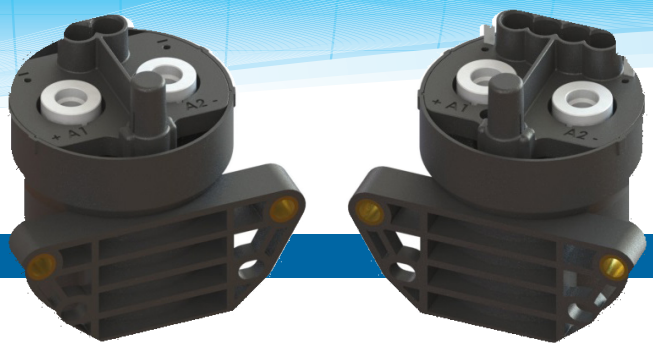
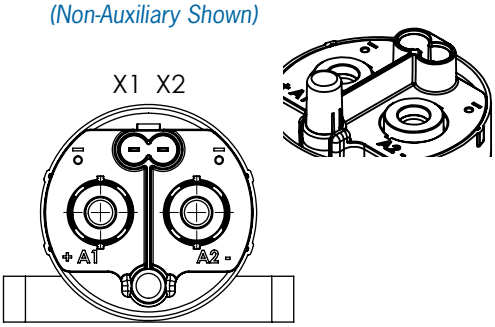
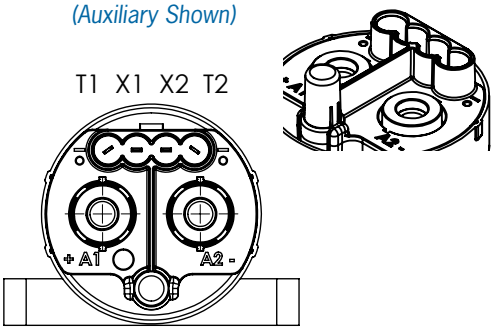


SIDE MOUNT DIMENSIONS

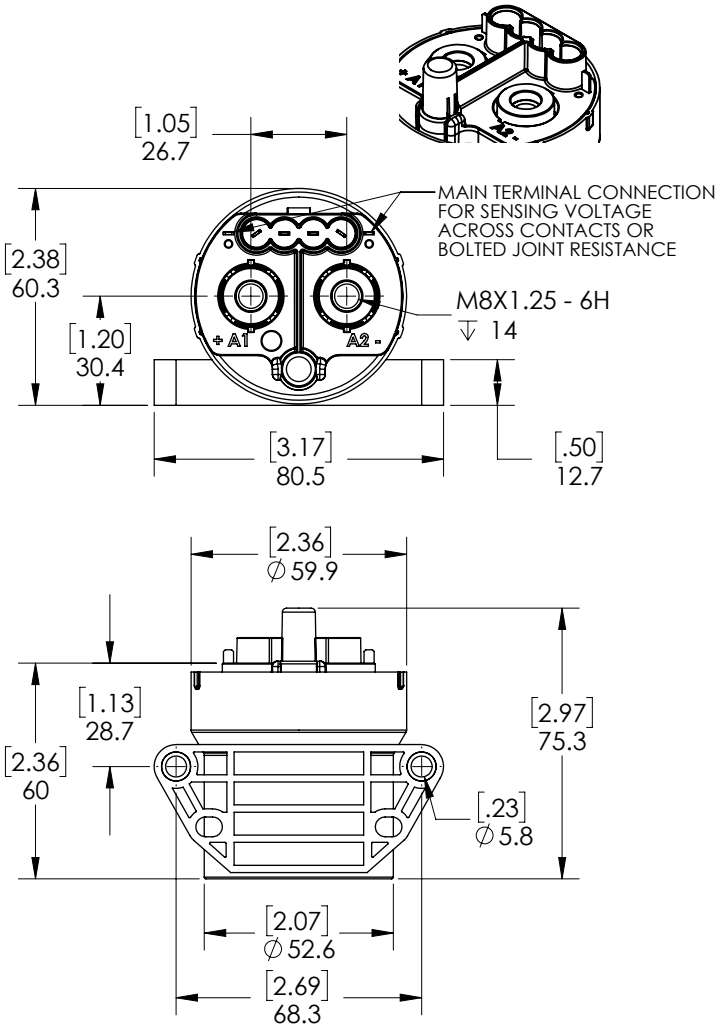
Side Mount
(Non-Auxiliary Shown)



Side Mount
(Auxiliary Shown)



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



SPECIFICATIONS

Coil/Auxiliary Connector

Coil: Tin Plated Brass
Auxiliary: Tin Plated Beryllium Copper

Mounting

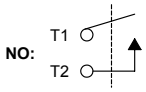
M5 or No. 10 Screws
Torque 1.7-4 Nm [15-35 in-lb]

Power Connection

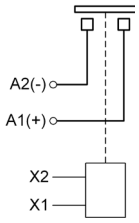
Silver Plated Copper M8x1.25 Terminals
Torque 10 Nm [90 in-lb] max

Auxiliary Contacts

(Optional)



Power Contacts



Temperature and Weight

Operating ambient Temp Range = -55 to +85˚C[3]
Storage ambient Temp Range = -70 to +150˚C
Weight, typical = 0.39 kg (0.86 lb)

Packaging

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

PART NUMBER SYSTEM

GV35	1	P	P	B
Mounting	**1** = Upright			
	2 = Side Mount			
Coil Voltage		**P** = 12/24 Vdc[4]		
		R = 12/24 Vdc[4]		
Coil Termination			**P** = Pins	
Auxiliary Contacts				**X** = None
				B = SPST-NO Normally Open

APPLICATION NOTES

- **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 See Application Note AN-022 for PWM instructions.

5 Operation time is measured at 25°C and includes maximum 7ms bounce.

6 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.