| GV21 Series

SPST-NO 900 VDC CONTACTOR

Introduction

Sensata | GIGAVAC GV21 Series contactors are hermetically sealed, gas filled contactors suitable for use in harsh environments. With contact voltage ratings from 12Vdc to 900Vdc and a hot switchable continuous carry current of 100A, the compact GV21 Series is ready to solve your next challenging application problem. Like all Sensata | GIGAVAC advanced switching solutions these contactors can be mounted in any axis or orientation and are sealed to withstand a variety of harsh environments. GV21 Series contactors meet RoHS and CE Conformance requirements and are built in accordance to IATF-16949.

Features

- Hermetically sealed and intrinsically safe. Not mounting position sensitive.
- Operates in explosive/harsh environments without oxidation or contamination of contacts.
- Eligible for use in hazardous/classified operating environments
- High voltage isolation between open contacts, inert gas filled contact chamber
- Designed and built in accordance to IATF-16949
- Flying leads for coil connections

Applications

- Battery electric vehicles
- DC motor controller protection
- DC fast charging
- Photovoltaic controls
- Energy Storage systems

SPECIFICATIONS

Contact Arrangement		Main Contacts SPST-NO (Form X)
Mechanical Life		1 million cycles
Contact Resistance		0.5mΩ (max) @ 100A
Shock, 11ms 1/2 sine (operating)		20G peak
Sine Vibration, 55-2,000 Hz.		20G peak
Weight		6.7 oz (190g)
Voltage Rating: Main Contacts (max)		900VDC
Current Rating: Main Contacts	**Continuous (8.4 mm² / 8 AWG)[1]**	100A
	Continuous (21 mm² / 4 AWG)[1]	150A
	Short Term -- 3 Minutes[2]	200A
Maximum Short Circuit Current (1/2 cycle, 60 Hz) (through closed contacts)		1,250A
Dielectric Withstand Voltage (ASTM D149)	**Between Open Contacts**	>5,000Vrms
	Contacts to Coil	>3,000Vrms
Insulation Resistance, Terminal to Terminal / Terminals to Coil	**When New**	500 MΩ, min. @ 500Vdc
	At End of Life	50 MΩ, min. @ 500Vdc
Operating Temperature Range		-40°C to +85°C
Environmental Seal		Exceeds IP67 and IP69
Salt Fog Spray		MIL-STD-810G

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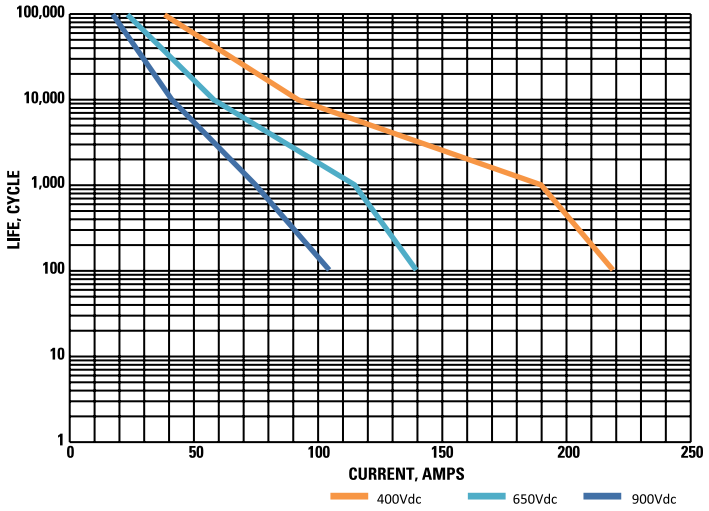
COIL RATINGS at 25°C

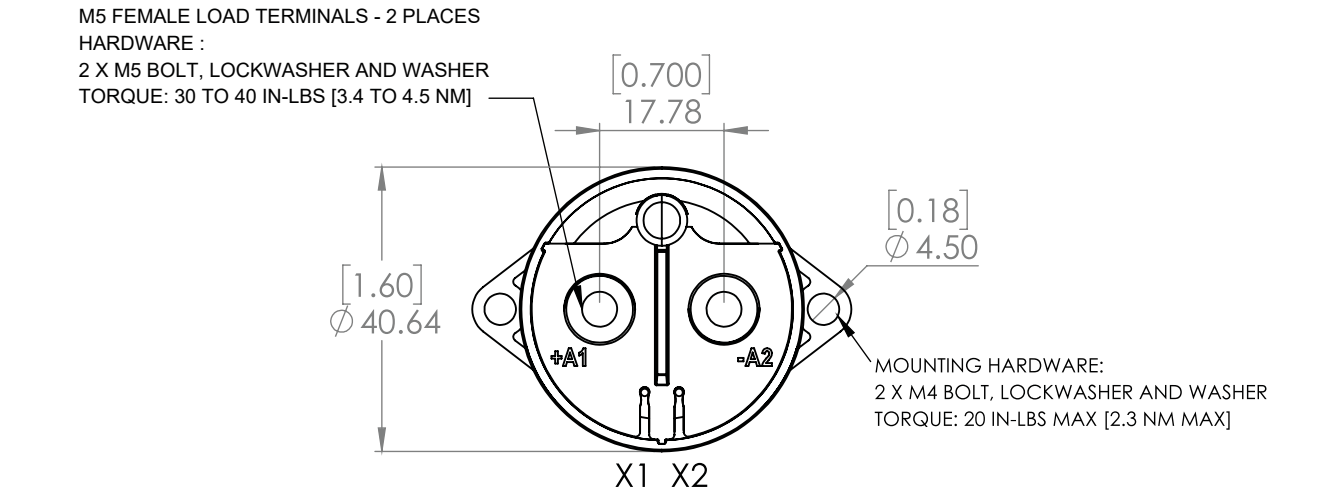
Nominal Voltage	12Vdc	24Vdc	48Vdc
Maximum Voltage	16Vdc	28Vdc	52Vdc
Pick Up Voltage	Up to 9.6Vdc	16Vdc	33Vdc
Drop Out Voltage	1.2Vdc	2.4Vdc	4.8Vdc
Coil Current	461mA	250mA	122mA
Coil Power	5.5W	6.0W	6.0W
Coil Resistance ± 5% (ohms)	26	96	392
Operate Time	25ms		
Release Time	10ms		

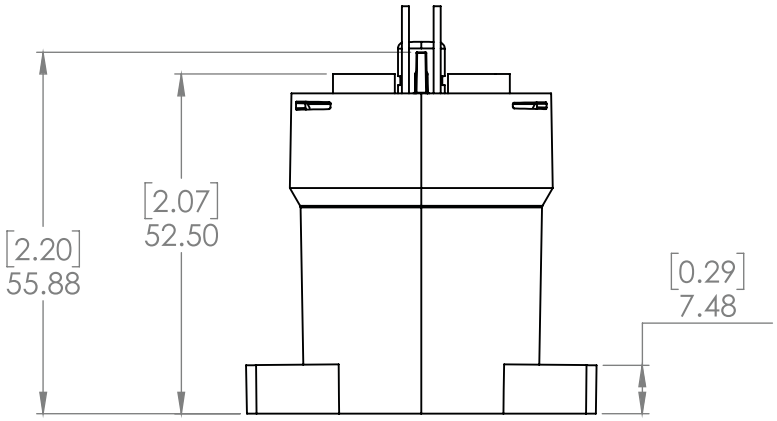
DC Power Switching Cycles

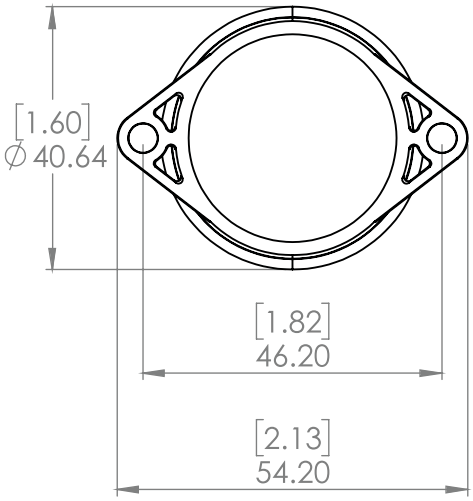


DIMENSIONS

Dimensions are in millimeters [inches]
Coil terminal polarity is X1 (+) and X2 (-)







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ORDERING OPTIONS

Example : GV211BAX

GV21	1	B	A	X

Family

GV21

Mounting

1: Upright

Coil Voltage

B: 12 Vdc
C: 24 Vdc
F: 48 Vdc

Coil Termination

A: Flying leads 38 cm (15 in)

Auxiliary Contacts

X: None

GENERAL NOTES

1. Current rating depends upon conductor size. Keep power terminals below 150°C (max).
2. 3 minutes at +40°C ambient with 8.4 mm2 (#8 AWG) conductor.

WARNINGS

RISK OF MATERIAL DAMAGE AND HOT ENCLOSURE
- The product's side panels may be hot, allow the product to cool before touching
- Follow proper mounting instructions including torque values
- Do not allow liquids or foreign objects to enter this product

Failure to follow these instructions can result in serious injury, or equipment damage.

HAZARD OF ELECTRIC SHOCK, EXPLOSION OR ARC FLASH
- Disconnect all power before installing or working with this equipment
- Verify all connections and replace all covers before turning on power

Failure to follow these instructions will result in death or serious injury.

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