



### FEATURES

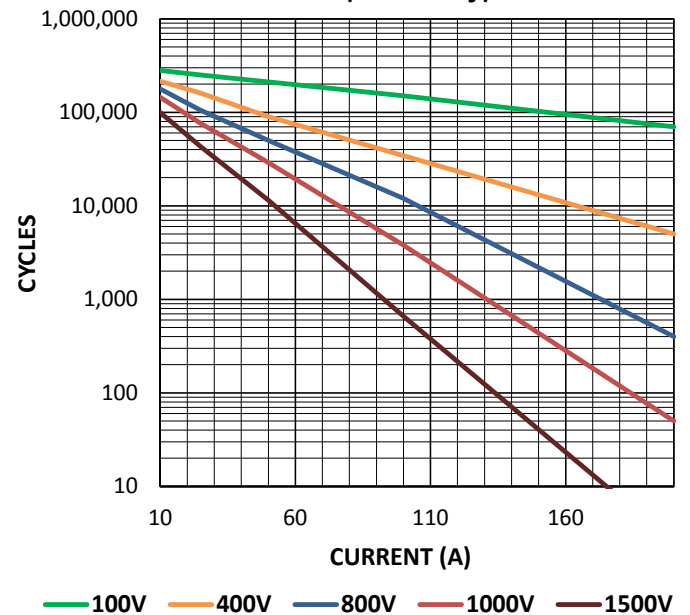
- Compact normally closed contractor for capacitor discharge and other dump switch applications requiring normally closed contacts.
- Meets CE Conformance standards.
- Built-in coil suppression for all DC coils – Saves you engineering time and parts cost to add external coil suppression.
- High Efficiency Dual DC Coils – Very low 12, 24, or 48Vdc continuous power coils with no EMI emissions or cross-talk on your system control power – Ideal for battery powered systems or where low coil power consumption is needed
- Not position sensitive – can be mounted in any position for ease of installation.
- Designed and Manufactured in Carpinteria, CA USA

### PRODUCT SPECIFICATIONS

Specifications	Units	Data
<b>Rated Voltage</b>	Vdc	1,500
<b>Contact Arrangement</b>		
Main	Form Y	SPST-NC
Auxiliary (2A, 24VDC) <sup>6</sup>	Form A or B	SPST-NO or SPST-NC
<b>Mechanical Life</b>	Cycles	1,000,000
<b>Contact Resistance<sup>1</sup></b>		
Max	mohms	0.4
Typical	mohms	0.15 to 0.3
<b>Operate Time<sup>2</sup></b>		
Max	ms	20
Typical	ms	13
<b>Release Time, Max</b>	ms	20
<b>Insulation Resistance<sup>3</sup></b>	Mohms	100
<b>Dielectric At Sea Level (Leakage &lt; 1mA)</b>	Vrms	4,300
<b>Shock, 1/2 Sine, 11ms</b>	G peak	20
<b>Vibration, Sinusoidal (10-2000 Hz Peak)</b>	G	15
<b>Ambient Temp Range</b>		
Operating <sup>4</sup>	°C	-55 to +85
Storage	°C	-70 to +150
<b>Weight, Typical</b>	Kg (Lb)	0.38 (0.84)
<b>Short Circuit Current (20ms)</b>	A	2,500
<b>Impulse withstand voltage: IEC61000-4-4 (500 ohm)</b>	kV	8

### POWER SWITCHING AND CURRENT CARRY RATINGS

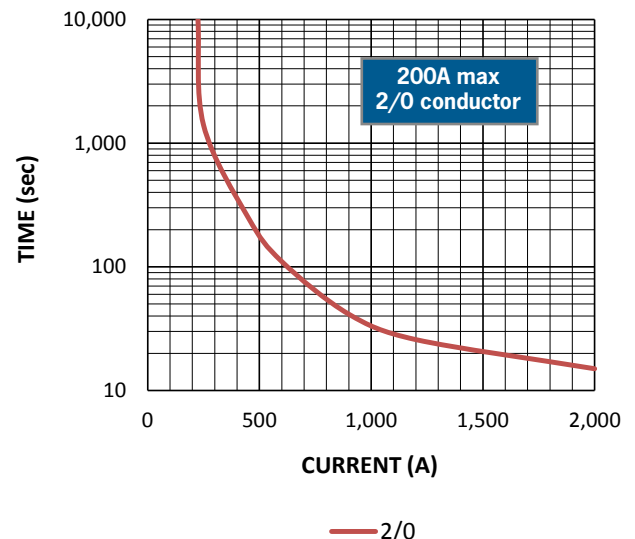
DC RESISTIVE CLOSING ESTIMATES  
(make only)

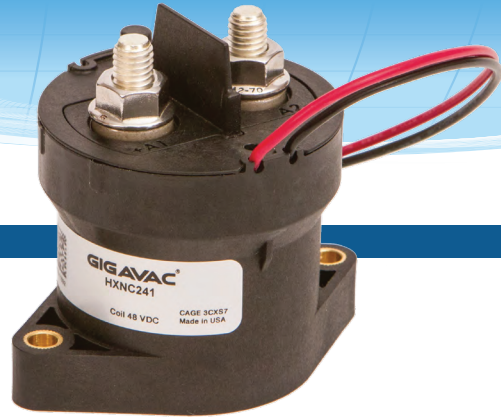


### COIL RATINGS at 25°C

Coil P/N Designation	B	C	F
<b>Coil Voltage, Nominal</b>	12 VDC	24 VDC	48 VDC
<b>Coil Voltage, Max</b>	16 V	32 V	64 V
<b>Pick-Up Voltage, Max<sup>4,5</sup></b>	8 V	16 V	40 V
<b>Drop-Out Voltage</b>	0.5 V	2 V	4 V
<b>Pick-Up Current, Max (75 ms)<sup>4,5</sup></b>	3.9 A	1.6 A	0.97 A
<b>Coil Current<sup>5</sup></b>	0.23 A	0.097 A	0.042 A
<b>Coil Power<sup>5</sup></b>	2.8 W	2.3 W	2 W
<b>Internal Coil Suppression</b>			
<b>Coil Back EMF</b>	55 V	55 V	125 V
<b>Transients, Max (13 ms)</b>	±50 V	±50 V	±75 V
<b>Reverse Polarity</b>	16 V	32 V	64 V

CURRENT CARRY vs TIME  
with 85°C terminal temperature rise





**DIMENSIONS**

**Recommended Mounting Hardware**

M5 Bolts

**Case Material**

DuPont Zytel FR50  
(25% Glass Filled Nylon)

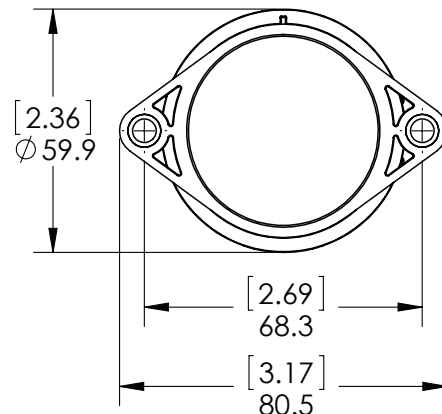
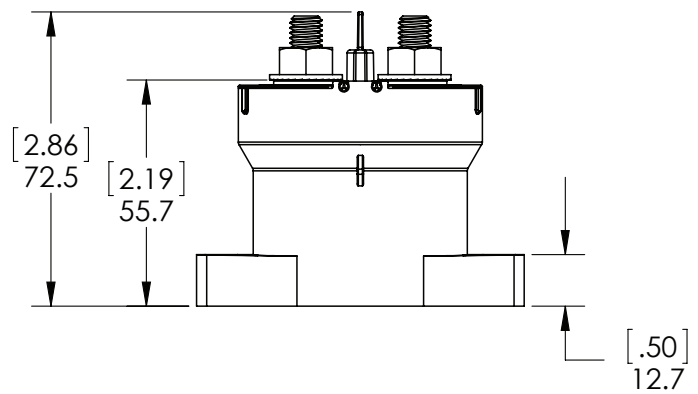
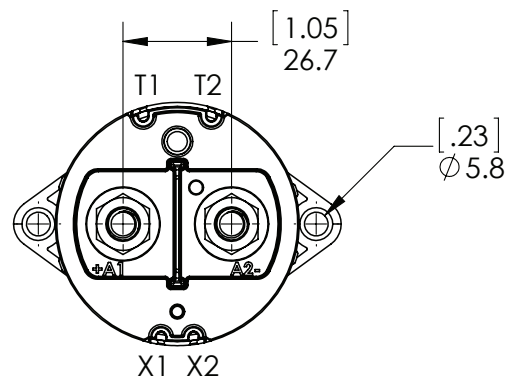
**Power Connection**

Silver Plated Copper M8x1.25 Stud  
Stainless M8x1.25 Flanged Nut

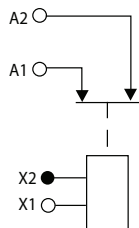
Torque 10Nm [90in-lb] max

**Flying Leads, Coil/Aux**

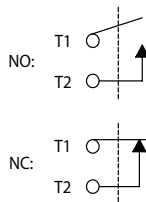
Silicone, 20 AWG, UL: VW-1



**Power Contacts**



**Auxiliary contacts<sup>6</sup>**  
*(optional)*



## PART NUMBER SYSTEM

HXNC241	B	A	B
<b>Coil Voltage</b>	B = 12 Vdc, Internal Coil Suppression		
	C = 24 Vdc, Internal Coil Suppression		
	F = 48 Vdc, Internal Coil Suppression		
<b>Coil Termination</b>		A = Flying leads 38 cm (15 in)	
<b>Auxiliary Contact</b>			X = None
			B = SPST, Normally Open
			C = SPST, Normally Closed

### Notes & Definitions:

- 1 Contact resistance measured at currents higher than 100A.
- 2 Operation time is measured at 25°C and includes maximum 7ms bounce.
- 3 Insulation resistance is 50 Mohms after life.
- 4 **Contactor has two coils.** Both are used for pick-up, and then in approximately 75 milliseconds, one coil is electronically removed from the coil drive circuit. The remaining coil supplies low continuous hold power sufficient for the contactor to meet all of its specified performance specifications. This provides low coil power without PWM electronics that can cause EMI emissions and/or cross-talk on control power.
- 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 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.

## APPLICATION NOTES

- Contactors feature internal transistor for coil suppression. **No external diodes** should be added across the coil. The use of additional external coil suppression can slow the release time and invalidate the life cycle ratings, or can cause the contactor not to be able to interrupt the maximum current specified. If lower coil back EMF is required, please contact GIGAVAC for assistance.
- 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 or discharge 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 fails the specifications listed.
- Contact GIGAVAC regarding DC Power Switching Cycle Life for part numbers that include auxiliary contacts.

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