



| HX360 Series

800 AMP 1500 VDC CONTACTOR



Features

- Robust High Voltage/High Power load break bi-directional DC contactor
- Designed for high voltage Power conversion equipment OEM's: Photovoltaic/Battery inverters, battery pack designers, DC combiner boxes and other HVDC industrial drive systems
- Excellent isolation performance: 10kv withstand between open contacts for critical safety applications
- Mechanically linked SPDT auxiliary contacts for critical safety applications.
- Reliable indication of the main contacts in the closed position
- Hermetically Sealed - Exceeds IP67-69 specifications. No exposed arcing to open air environments.
- Designed to meet UL1604 for hazardous locations.

Applications

- Energy Storage System
- DC fast charging
- Photovoltaic controls

SPECIFICATIONS

Specifications		Units	Data
Contact Arrangement	Main	Form X	SPST-NO
	Auxiliary	Form C	SPDT
Mechanical Life		cycles	300,000
Auxiliary Contact Load Life (3A @ 24Vdc) ⁴		cycles	300,000
Contact Resistance ¹	Max @ rated carry current	mohms	0.3
	Typical @ rated carry current	mohms	0.15
Operate time, 25°C	Close (includes bounce) Max	ms	85
	Close (includes bounce) Typical	ms	70
Release time (includes arc time at max. break current)		ms	70
Insulation Resistance ²		Mohms	100
Dielectric at sea level (leakage < 1mA)		V	5,375
Impulse Withstand Voltage (per IEC 61000-4-5)		kV	10
Voltage Withstand (open contacts, 1 min. <1mA leakage)		kV	10
Shock, 1/2 Sine, 11ms		G peak	10
Vibration, Sinusoidal (500-2000 Hz peak)		G	10
Temperature	Operating ambient Temp Range	-55 to +85°C	
	Storage ambient Temp Range	-70 to +125°C	
Weight, typical		3.0Kg (6.6Lb)	
Environmental Seal		Exceeds IP67 & IP69K	
Salt Fog		MIL-STD-810	

POWER SWITCHING CYCLES

Make & Break	CYCLES
400A @ 1,500VDC	3,750 ²
500A @ 1,200VDC	3,750 ²
600A @ 1,000VDC	3,750 ²

CONTINUOUS CARRY CURRENT @ 85°C Ambient

Current	Conductor
400A ⁵	400mcm/203mm ²
600A ⁵	600mcm/304mm ²
1,000A ⁵	1,273mcm/633mm ²

FAULT INTERRUPT

Break Only	Iterations
1,500A @ 1,250VDC	7
2,700A @ 1,000VDC	1
5,000A @ 400VDC	2

MAX CLOSING CURRENT

Make Only	Iterations
8,000A @ 24VDC	7
6,000A @ 1,000VDC	1
1,000A @ 24VDC	7,000

SHORT CIRCUIT WITHSTAND

Closed Contacts	Iterations
8,000A / 50ms	10
10,000A / 2ms	3

COIL RATINGS at 25°C

Coil P/N Designation	B	C	F
Coil Voltage, Nominal (VDC)	12	24	48
Coil Type	Dual		
Coil Voltage, Max (V)	14	30	64
Pick-up, Volts, Max (V)	8	16	40
Drop-out, Volts, Max (V)	Coming soon	11	Coming soon
Coil Current ³ (A)	0.75	0.37	0.19
Coil Power ³ (W)	9		
Internal Coil Suppression	TVS 		
Coil Back EMF (V)	55		125
Transients, Max (V) (13 ms)	55	55	130

DIMENSIONS

Mounting Hardware (customer supplied)

M6 or 1/4-20
Torque: 6.8 Nm (60 in-lb)

Power Connections

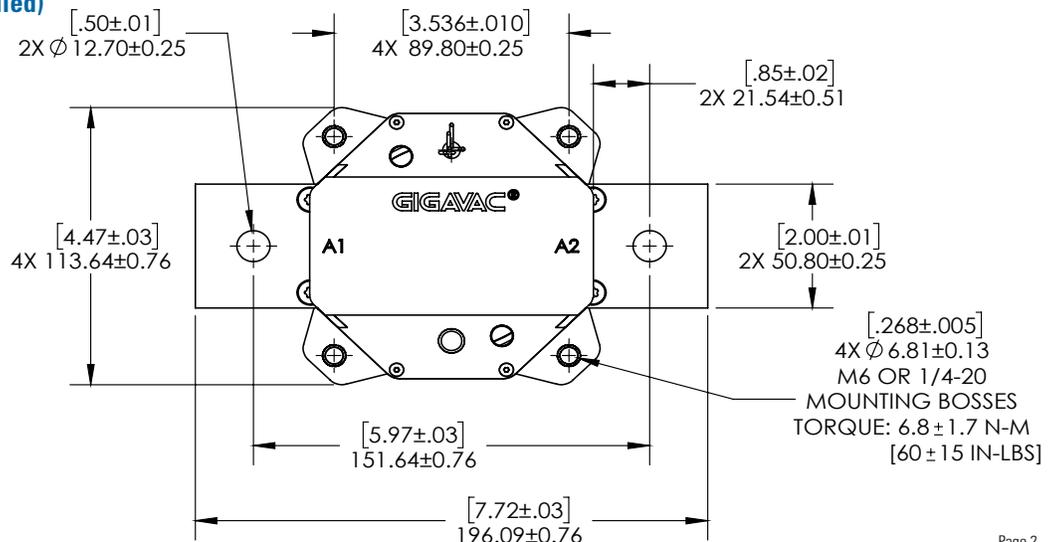
Nickel plated copper busbars

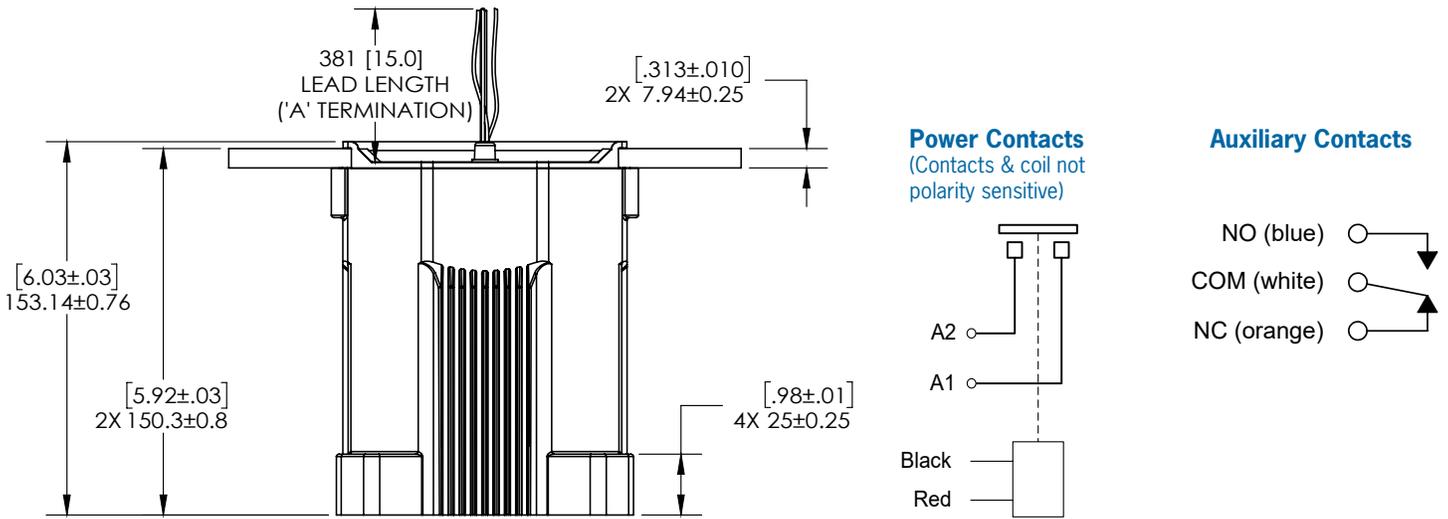
Case Material

DuPont Zytel FR50
(25% glass filled nylon)

Coil Wire / Aux Wire

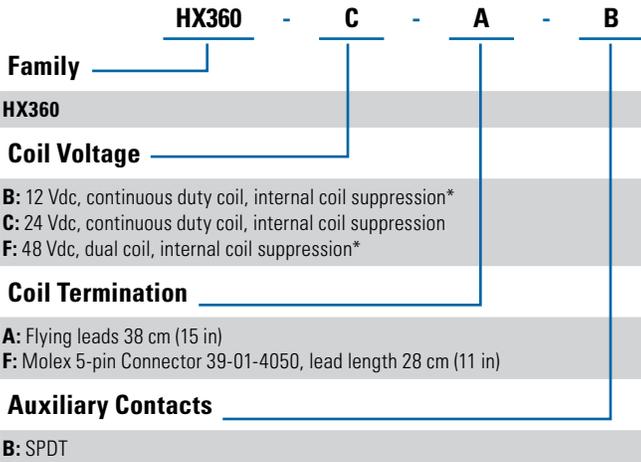
M22579/43-22, 22AWG





ORDERING OPTIONS

Example : HX360CAB



*These configurations will be available after August, 2023

GENERAL NOTES

- Contact resistance measured at currents $\geq 100A$.
- Insulation resistance is 50 Mohms after life.
- Coil ratings are listed for continuous duty operation. External PWM economization can be used following instructions in Applications Note AN-019. Contactor is operated by a coil that changes resistance with temperature. See Applications Notes AN-020 and AN-030 for coil versus temperature graphs.
- Minimum current is 0.1mA, 5V. The auxiliary contact is mechanically linked to the main power contacts.
- Continuous currents assume a 65°C rise on the power terminals. Customer must limit terminal temperature to 150°C continuous.

APPLICATION NOTES

- Contactors feature internal transorb for coil suppression.
- For continuous duty coil operation, 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.
- Applications with capacitors will require a pre-charge circuit.
- Electrical life rating is based on resistive load with 27 μ H 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.
- Main power contacts (A1, A2) are not polarity sensitive.

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.

Sensata Technologies, Inc. ("Sensata") datasheets are solely intended to assist designers ("Buyers") who are developing systems that incorporate Sensata products (also referred to herein as "components"). Buyer understands and agrees that Buyer remains responsible for using its independent analysis, valuation, and judgment in designing Buyer's systems and products. Sensata datasheets have been created using standard laboratory conditions and engineering practices. Sensata has not conducted any testing other than that specifically described in the published documentation for a particular datasheet. Sensata may make corrections, enhancements, improvements, and other changes to its datasheets or components without notice.

Buyers are authorized to use Sensata datasheets with the Sensata component(s) identified in each particular datasheet. HOWEVER, NO OTHER LICENSE, EXPRESS OR IMPLIED, BY ESTOPPEL OTHERWISE TO ANY OTHER SENSATA INTELLECTUAL PROPERTY RIGHT, AND NO LICENSE TO ANY THIRD PARTY TECHNOLOGY OR INTELLECTUAL PROPERTY RIGHT, IS GRANTED HEREIN. SENSATA DATASHEETS ARE PROVIDED "AS IS". SENSATA MAKES NO WARRANTIES OR REPRESENTATIONS WITH REGARD TO THE DATASHEETS OR USE OF THE DATASHEETS, EXPRESS, IMPLIED, OR STATUTORY, INCLUDING ACCURACY OR COMPLETENESS. SENSATA DISCLAIMS ANY WARRANTY OF TITLE AND ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, QUIET ENJOYMENT, QUIET POSSESSION, AND NON-INFRINGEMENT OF ANY THIRD PARTY INTELLECTUAL PROPERTY RIGHTS WITH REGARD TO SENSATA DATASHEETS OR USE THEREOF.

All products are sold subject to Sensata's terms and conditions of sale supplied at www.sensata.com SENSATA ASSUMES NO LIABILITY FOR APPLICATIONS ASSISTANCE OR THE DESIGN OF BUYERS' PRODUCTS. BUYER ACKNOWLEDGES AND AGREES THAT IT IS SOLELY RESPONSIBLE FOR COMPLIANCE WITH ALL LEGAL, REGULATORY, AND SAFETY-RELATED REQUIREMENTS CONCERNING ITS PRODUCTS, AND ANY USE OF SENSATA COMPONENTS IN ITS APPLICATIONS, NOTWITHSTANDING ANY APPLICATIONS-RELATED INFORMATION OR SUPPORT THAT MAY BE PROVIDED BY SENSATA.

Mailing Address: Sensata Technologies, Inc., 529 Pleasant Street, Attleboro, MA 02703, USA

CONTACT US

Americas

+1 (805) 684-8401
info@gigavac.com