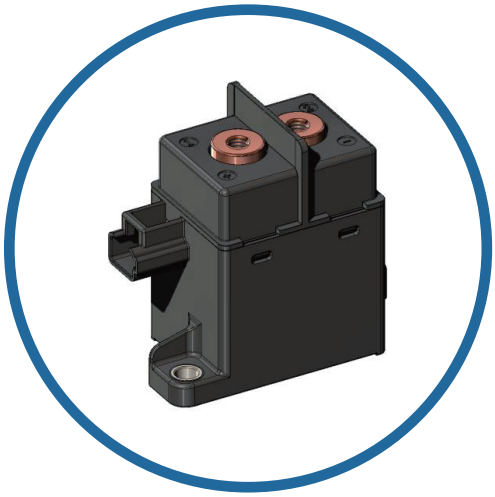
High Voltage DC Contactor

SGX150 150A CERAMIC CONTACTOR



The SGX150 series utilizes ceramic to metal weld technology and offers optimal breaking capability for applications up to 750V and 150A continuous current carry, with an efficient design, effective and reliable switching, longevity, and a square form-factor.

With a strong performance-to-cost ratio, the SGX150 series is ideal for a wide range of applications like residential energy storage systems, DC fast charging stations, and industrial applications such as electric forklifts and Automated Guided Vehicles (AGV).

SPECIFICATIONS

Contact data

Specifications	Data
Contact Arrangement	1 Form A
Contact Resistance	⩽0.2mΩ @ 200A
Rated Load Current	150A(@50mm^2 wire)
Rated Switching Voltage	750Vdc
Max. Breaking Current	1500A(750Vdc),1cycle

Characteristics

Specifications		Data
Dielectric Strength	**Between Open contacts**	3000Vac, 1min
	Between Coil&Contacts	4000Vac, 1min
Insulation Resistance		1000MΩ at 1000Vdc
Operate Time (at nomi. volt.)		⩽30ms
Release Time (at nomi. volt.)		⩽10ms
Vibration Resistance (sine)		10Hz~500Hz, 49m/s^2
Shock Resistance		Functional Open: 196m/s^2
		Functional Close: 490m/s^2
		Destructive: 490m/s^2
Ambient Temperature		-40˚C~85˚C
Humidity		5% RH~85% RH
Termination		M6 female screw
Mounting		M5 screw
Unit Weight		Approx.270g
Outline Dimensions		76.5mm X 39mm X 70mm

Coil

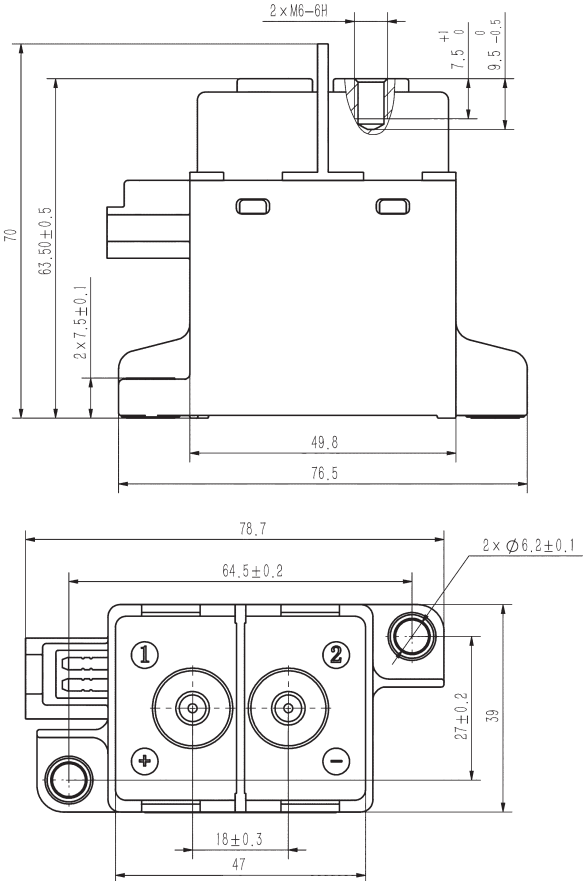
Nominal Voltage Vdc	Pick-up Voltage Vdc	Drop-out Voltage Vdc	Coil Power W
12	⩽9	⩾1	~6.0 @23°C
24	⩽18	⩾2	

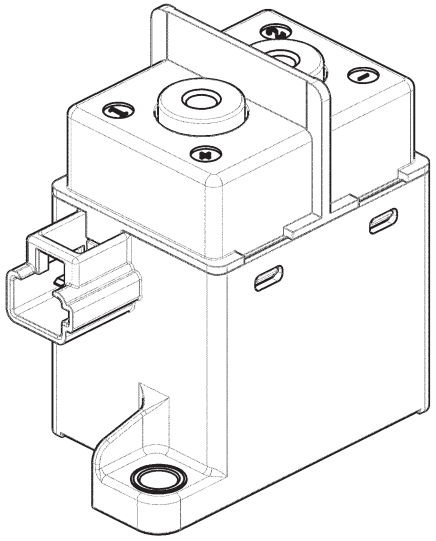
Endurance

Specifications		Data
Electrical Endurance	**Capacitive load**	Switch on: 2 x 10^4 cycles (37.5Vdc,C=1100uF, inrush 400A. steady 150A)
	Resistive load	Switch: 500cycles (750Vdc, 150A)
		Switch:1000cycles (450Vdc, 150A)
		Switch: 6000 cycles (1000Vdc, 50A)
Current Endurance		150A, cont.
		180A, 2h
		225A,15min
		320A, 2min
		400A, 1min
		600A, 20s
		900A, 8s
Mechanical Endurance		2 x10^5 cycles, on-off ratio: 0.5s : 0.5s

Notes:
(1) Until special statement, the temperature of electrical endurance is at 23°C and the on-off ratio is 0.6s: 5.4s.
(2) Coil is not connected to surge suppressor during tests. Attention: If the coil is used in parallel with the diode, the release time of the contactor will be prolonged and the service life will be reduced.

DIMENSIONS

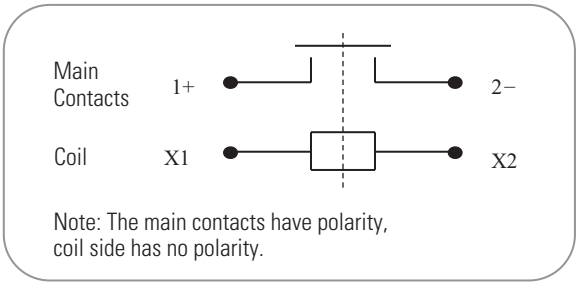




General Tolerance	
Outline Dimension	Tolerance
⩽10mm	±0.3mm
10mm~50mm	±0.6mm
>50mmm	±1.0mm

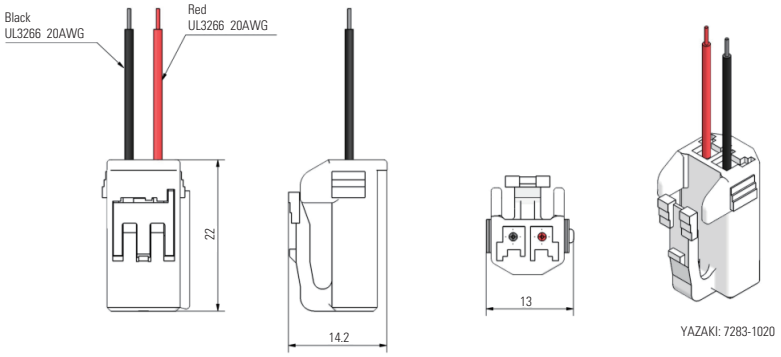
INSTALLATION

① Wiring Diagram



Note: The main contacts have polarity, coil side has no polarity.

② Recommended connector



③ Installation Torque

Load Terminal Installation				
Installation Mode	Screw Installation Depth	Torque	Copper Busbar Diameter	Copper Busbar Thickness
M6 Screw	7.0mm~8.5mm	6N·m~8N·m	6.0mm~6.5mm	2.0mm~3.0mm

Contactor Installation	
Installation Mode	Torque
M5 Screw	3N·m~4N·m

Note:
1. In order to prevent loosening, please use extra washer when installing relay: spring washer + flat washer.
2. Please avoid grease and other foreign matter in the terminal, please use the conrnecting wire with a cross section area ⩾50mm^2 , otherwise they may cause abnormal heating in the terminal part.
3. When installing the contactor at the load using an electric screwdriver, it is recommended to use a three stage step speed mode: the first stage 35rpm, the second stage (100-150) rpm, and the third stage 35rpm.

ORDERING OPTIONS

Example SGX151CXX

SGX15 1 C X X

Family
SGX150

Mounting
1= Upright

Coil Voltage
B= 12Vdc
C= 24Vdc

Coil Termination
X= Connector

Auxiliary Contacts
X= None

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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