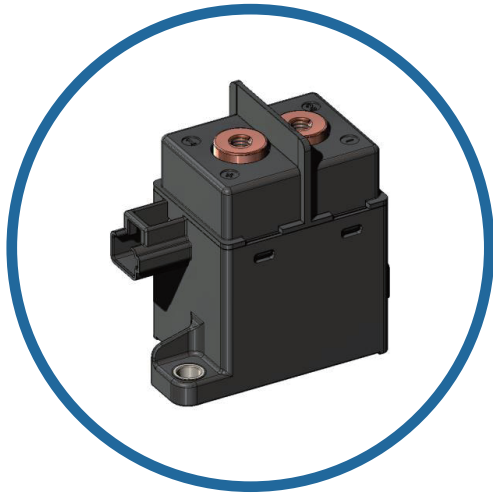


High Voltage DC Contactor

SGX150 150A CERAMIC CONTACTOR



Feature

- Hermetically seal rated to 175°C – Reduced risk of fire or meltdown in over current conditions.
- Backfilled with gas (primarily hydrogen) to effectively inhibit oxidation, resulting in low and stable contact resistance.
- The insulation resistance stands at 1000M Ω (1000Vdc), while the dielectric strength between the coil and contacts reaches 4.0kV.
- Continuous current carry 150A at 85°C,
- Comply with IEC 60664-1 and RoHS standards.

Applications

- Material Handling
- Residential ESS
- DC Fast Charging

SPECIFICATIONS

Contact data

Specifications	Data
Contact Arrangement	1 Form A
Contact Resistance	$\leq 0.2\text{m}\Omega$ @ 200A
Rated Load Current	150A(@50mm ² wire)
Rated Switching Voltage	1000Vdc
Rated Switching Power	112.5kW
Min. Applicable Load	6Vdc, 1A
Max. Switching Voltage	1000Vdc
Max. Switching Power	112.5kW(750Vdc)
Max. Breaking Current	1500A(750Vdc), 1cycle

Characteristics

Specifications		Data
Dielectric Strength	Between Open contacts	3000Vac, 1min
	Between Coil&Contacts	4000Vac, 1min
Insulation Resistance		1000M Ω at 1000Vdc
Operate Time (at nomi. volt.)		$\leq 30\text{ms}$
Release Time (at nomi. volt.)		$\leq 10\text{ms}$
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	

Notes: The values above are conservative values within the temperature range (-40°C to 85°C).

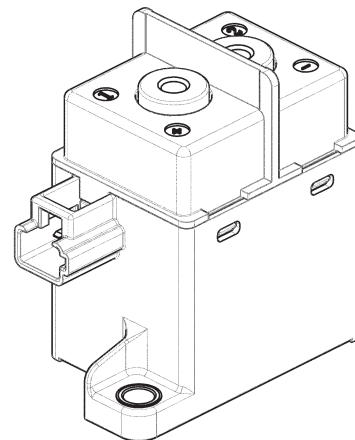
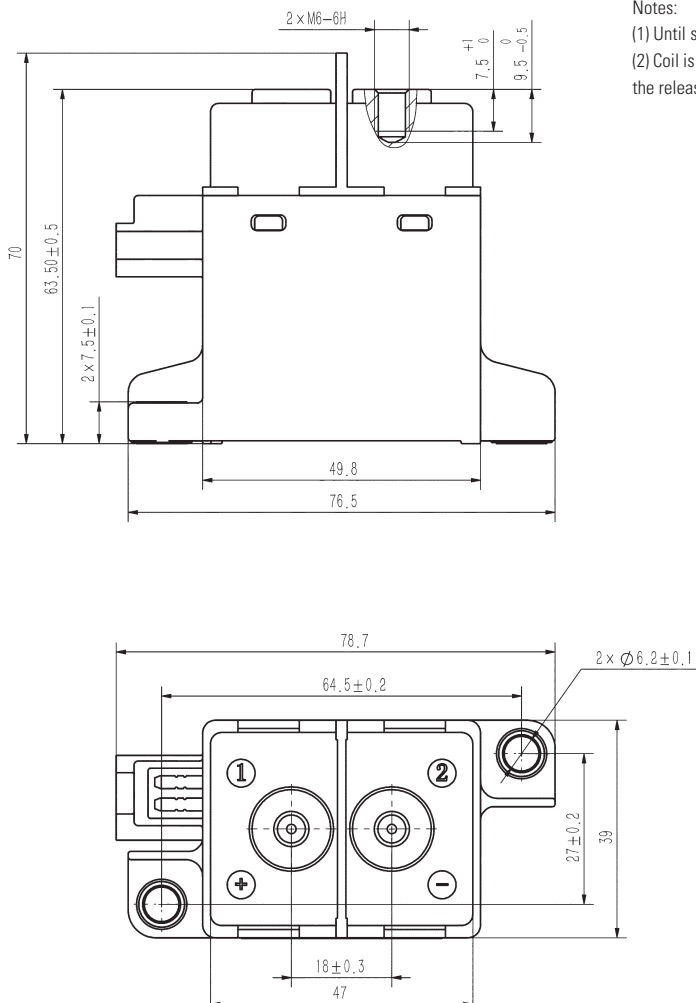
Endurance

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

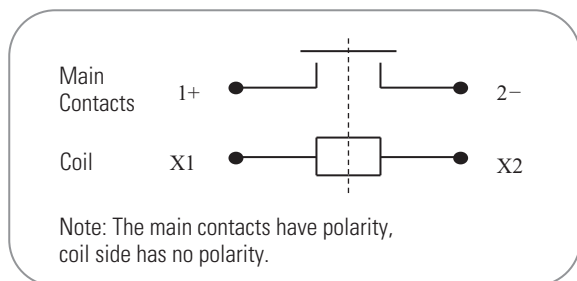
DIMENSIONS



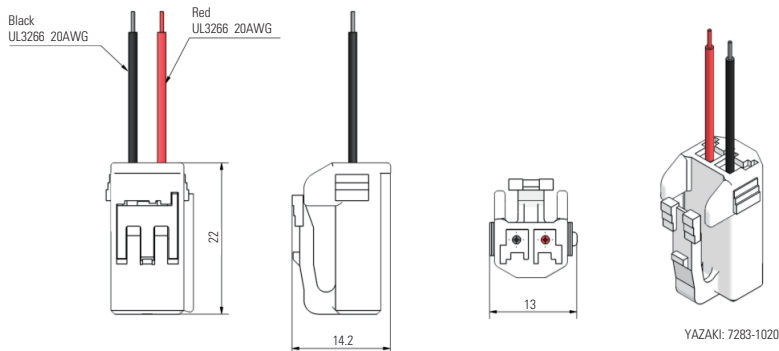
General Tolerance	
Outline Dimension	Tolerance
≤10mm	+0.3mm
10mm-50mm	+0.6mm
>50mm	+1.0mm

● INSTALLATION

① Wiring Diagram



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 connecting wire with a cross section area $\geq 50\text{mm}^2$, 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	SGX15				
Mounting		1= Upright			
Coil Voltage			B= 12Vdc C= 24Vdc		
Coil Termination				A= Flying leads, 30 cm (12 in) B= Flying leads, 61 cm (24 in) C= Flying leads, 122 cm (48 in) X= Connector	
Auxiliary Contacts					X= None B= SPST-NO Normally Open *

Note*:
in development



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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