

TGHX3 Switch Disconnecter

1 Overview



TGHX3-63 2P



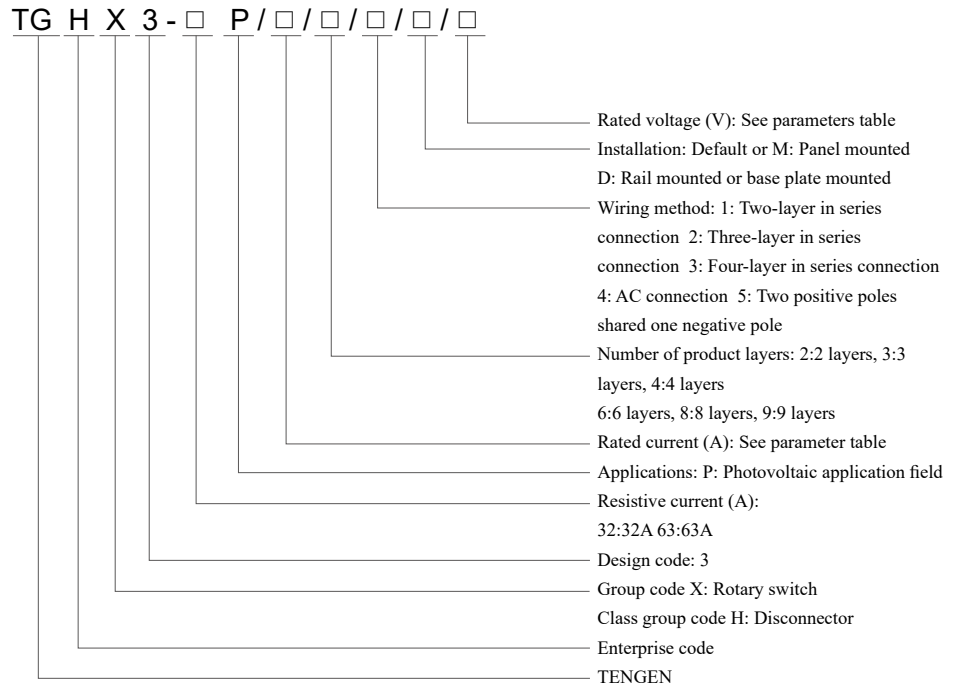
TGHX3-63 4P



TGHX3-63 8P

TGHX3 series switch disconnecter is used in the AC 50/60 Hz power system with the rated voltage DC1500V and below, or rated operating voltage AC690V and below, and with the rated current of 63A and below. The product can be used for infrequent making and breaking operations to isolate and disconnect the line, and provide safety isolation for various low-voltage circuits in the photovoltaic field.

2 Type Designation



3 Normal working and installation conditions

Normal working conditions

- Ambient temperature: The upper limit of the temperature does not exceed +86°C, and the lower limit is not below -40°C; (when out of the standard operating temperature, please contact the manufacturer)
- Altitude: The altitude at the installation site does not exceed 3000m, and the derating is required when more than 3000m, as listed in table below;

Altitude derating coefficient				
Altitude	3000	3500	4000	4500
Operating current correction coefficient	1	0.95	0.93	0.9
Operating voltage correction coefficient	1	0.9	0.83	0.8

- Atmospheric conditions: The atmosphere is clean (there is no medium without explosive hazard, and there are no gases and dust sufficient to cause metal corrosion and insulation damage in the medium); the relative humidity of the atmosphere does not exceed 50% at the ambient air temperature of +40 °C, and higher relative humidity is allowed at lower temperatures (for example, when the temperature is +20 °C, the relative humidity does not exceed 90%); appropriate measures are taken for condensations occurred on the product surface due to temperature changes.

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- Installed in a place where there is medium without explosive hazard and there is no gas and conductive dust sufficient to cause metal corrosion and insulation damage;
- Installed in a place where there is no severe impact and vibration and no rain and snow immersion.

Normal installation conditions

- Installation category: Class III, Class IV;
- Installation environmental Pollution degree: 3;
- Protection grade: IP20;
Protection grade at the handle: IP66;
- Installation method: Panel mounted, rail mounted (installed on TH35-7.5 standard rail).

4 Main Technical Parameters

Switch disconnecter basic parameters table 1

Table 1

Use category	Wiring method	No.	Rated voltage DC (V)	800	1000	1100	1200	1250	1500
				DC-21B DC-PV1 DC-PV2	Two layers in series (2/4/6/8 layers)	1	Rated current (A)	18	15
2	25	20	20			/		/	/
3	32	25	25			/		/	/
4	38	30	30			/		/	/
5	45	35	35			/		/	/
6	50	40	40			/		/	/
DC-21B DC-PV1	Two positive poles shared one negative pole (3/6/9 layers)	7	63		50	50		35	/
DC-21B DC-PV1 DC-PV2	Three layers in series (3/6/9 layers)	8	/	/	/	/		12	10
		9	/	/	/	/		16	13
		10	/	/	/	/		20	16
		11	/	/	/	/		24	20
		12	/	/	/	/		28	23
		13	/	/	/	/		32	26
		DC-21B DC-PV1	14	/	/	/		/	40
Use category	Wiring method	No.	Rated voltage DC (V)	400	690	/	/	/	/
AC-22B	AC connection (2/3/4 layers)	1	Rated current (A)	63	63	/	/	/	/

Note: The product with the voltage specification of DC 1500V shall be customized.

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Table 1, continued

	Use category	Wiring method	No.	Rated voltage DC (V)	800	1000	1100	1200	1250	1500
TGHX3-32P	DC-21B, DC-PV1	Two layers in series (2/4/6/8 layers)	1	Rated current (A)	/	16	12.5	7.5	/	/
			2		30	20	/	16	/	/
			3		32	32	20	20	/	/
		4	/		/	32	/	/	/	
		5	/		/	/	/	/	25	
		6	32		20	13	13	/	/	
	DC-21B, DC-PV2	Two layers in series (2/4/6/8 layers)	7		30	/	/	7.5	/	/
			8		32	20	12.5	10	7.5	/
		Two positive poles shared one negative pole (3/6/9 layers)	9		32	20	12.5	/	7.5	/
		Use category	Wiring method		No.	Rated voltage DC (V)	230	400	690	/
	AC-22B	AC connection (2/3/4 layers)	1	Rated current (A)	32	32	32	/	/	/

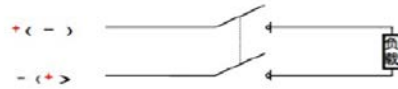
Switch disconnecter basic parameters table 2

Parameter name	Category/Unit	Specific parameter
Frame current	A	32/63
Insulation voltage	V	DC 1500/AC 690
Rated impulse withstand voltage	kV	8
Rated short time withstand current I _{cw}	kA/1s	0.7
Rated short circuit making capability I _{em}	kA	1.4
Mechanical life	Times	10000
Electrical life	Times	300
Operating torque	N.m	1.6~2.2
Machine fixed torque	N.m	2.0~2.5
Wiring torque	N.m	1.5~1.7
Handle fixed torque	N.m	0.6~0.75
Wiring area (recommended)	mm ²	Per Table 9 of GB/T 14048.1
Installation method	Handle cabinet door mounted, rail mounted (installed on the TH35-7.5 standard rail)	
Protection grade	Machine IP20 (except for terminal), handle outside cabinet: IP66	

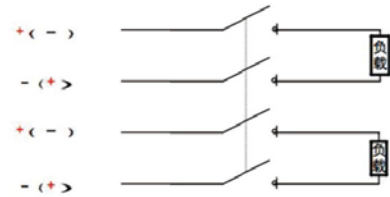
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5 Wiring Method

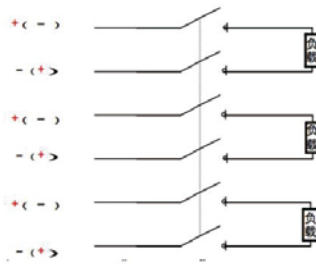
DC product two-layer in series wiring diagram



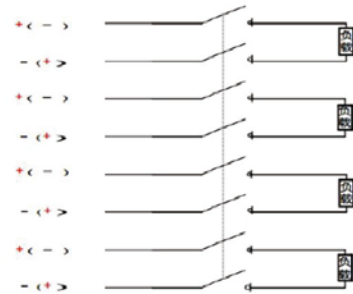
Two-layer in series 2-layer outline



Two-layer in series 4-layer outline

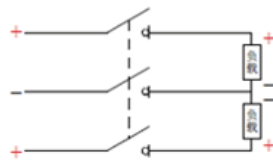


Two-layer in series 6-layer outline

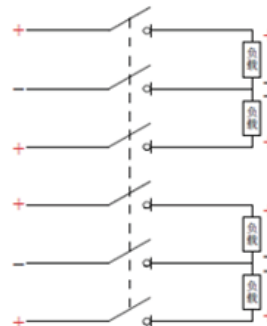


Two-layer in series 8-layer outline

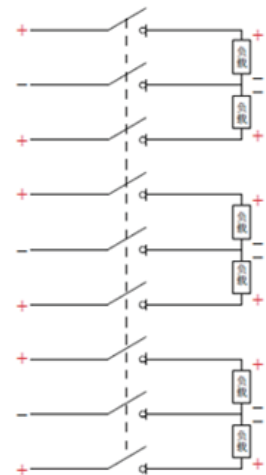
DC product two positive poles shared one negative pole wiring diagram



Two positive poles shared one negative pole 3-layer outline



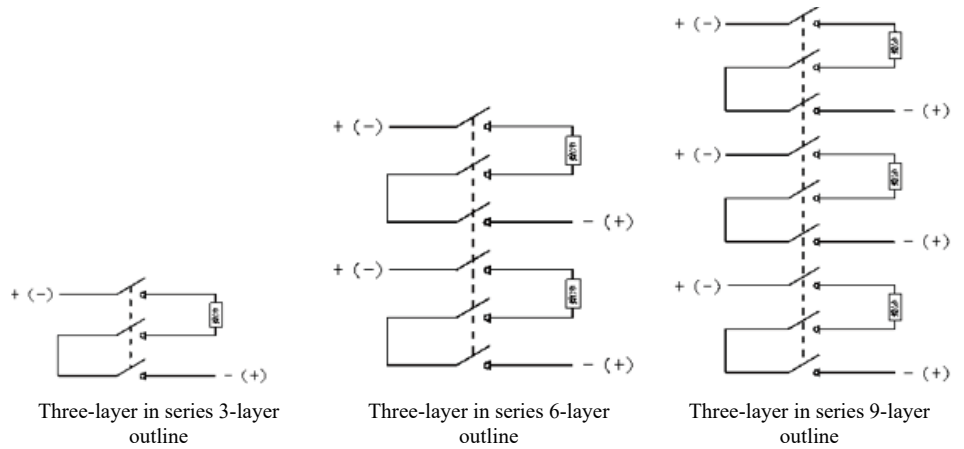
Two positive poles shared one negative pole 6-layer outline



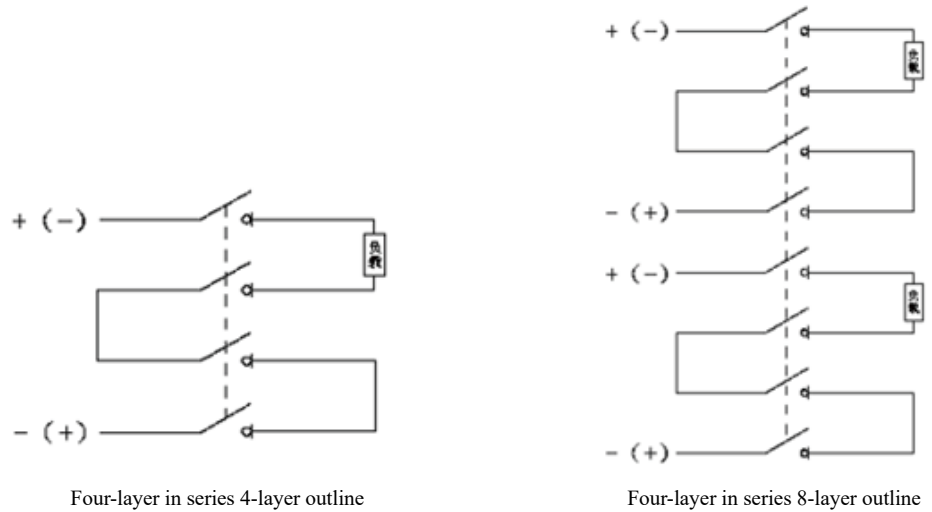
Two positive poles shared one negative pole 9-layer outline

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DC product three-layer in series wiring diagram

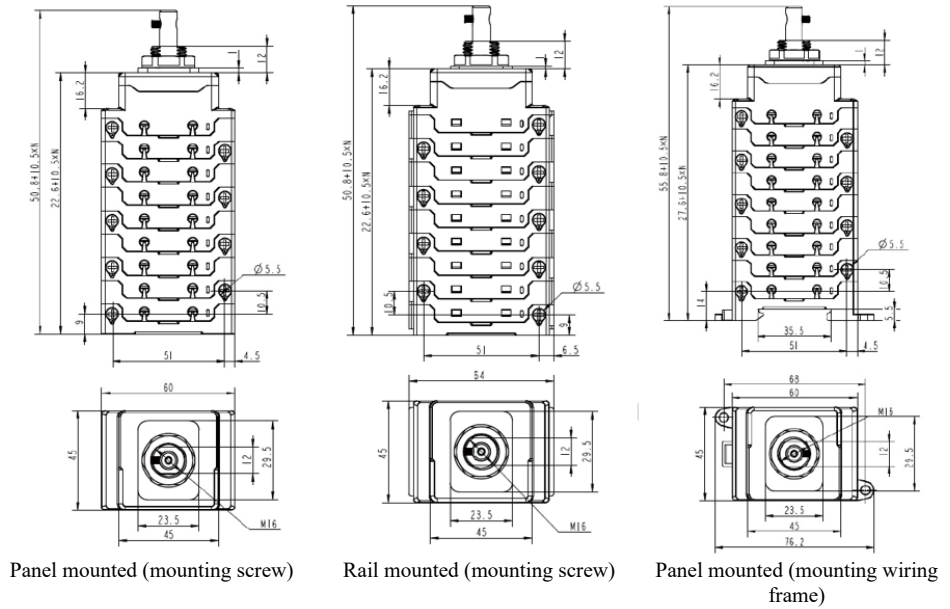


DC product four-layer in series wiring diagram



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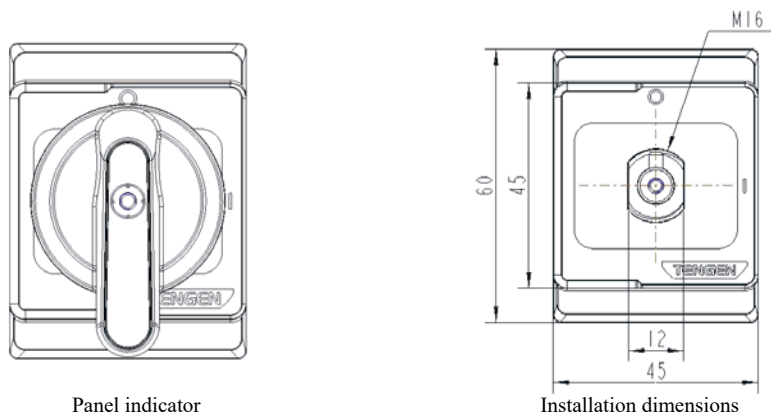
6 Outline and Installation Dimensions



Note: N is the number of the poles of product

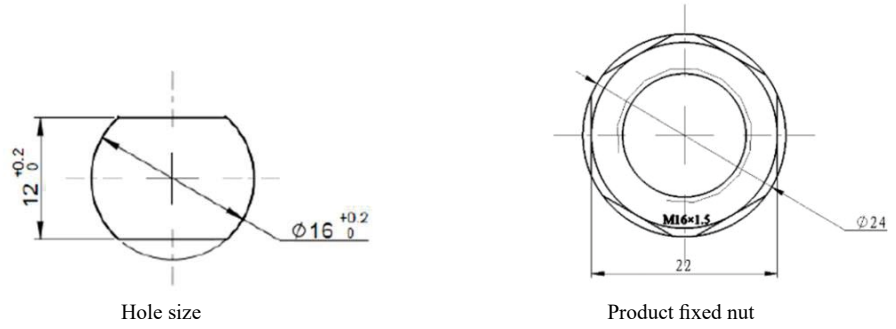
7 Installation method

Panel mounted

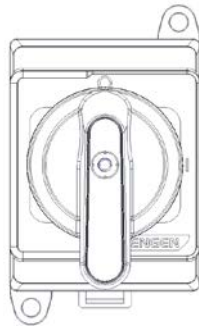


State position: The product has two position states namely closing position "I/ON" and opening position "O/OFF", as shown in the above figure.

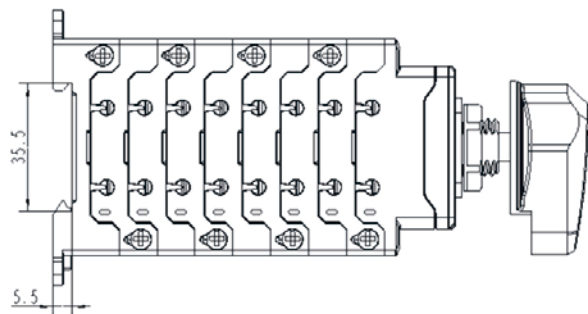
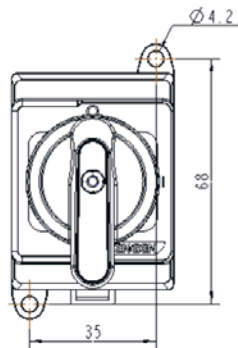
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Rail mounted



Panel indicator



Installation dimensions

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8 Installation, Operation and Maintenance

The manufacture will provide the after-sales service for any damage or failure to work normally due to poor manufacturing under the conditions of normal installation, operation and inspection of the product.

9 Precautions

- User is solely responsible for quality problem caused by the product unpacking without permission;
- Do not touch the exposed part of the non-insulating part of the switch disconnecter in the energized state with your hands.
- Wiring must be connected reliably to prevent burns to the terminal block of the switch disconnecter due to excess heating.

10 Ordering Notice

Please specify the following items when ordering:

- Product name, such as TGHX3-63P/18/4/1/M/800 switch disconnecter;
- Frame current, such as 63:63A;
- Rated current: such as 18:18A;
- Number of layers, such as 4:4 layers;
- Wiring method: 1: two-layer in series;
- Installation methods, such as M: panel mounted;
- Rated voltage: 800:800V;
- Qty., such as 100 units

Order example: TGHX3-63P/18/4/1/M/800, 100 units.