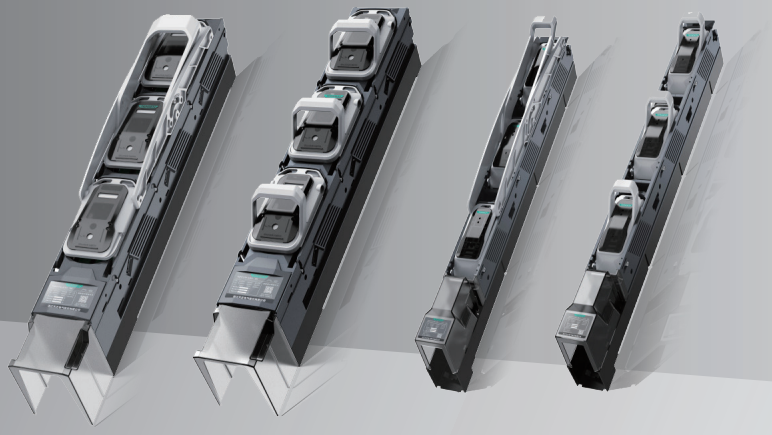


TGHRT17N

Series Fuse Type Switch Disconnector

TGHRT17N Series Fuse Type Switch Disconnector

1 Overview

TGHRT17N series fuse type switch disconnector is used in the AC 50Hz low voltage power distribution equipment with the rated voltage up to 690V and the rated current up to 630A and in the distribution current and motor circuits with high short-circuit current as a power switch, an isolation switch and an emergency switch for circuit protection, but it is generally used for directly turning on / off the electric motor.

This product complies with the GB/T 14048.3 and IEC 60947-3 standards.

2 Type Designation

TG	HRT	17N	-	□	/	□	□	□
①	②	③		④		⑤	⑥	⑦

①	Enterprise code
②	Fuse type switch disconnector
③	Design code

TGHRT17N Series Fuse Type Switch Disconnector

④	Conventional thermal current:	160, 250, 400, 630
⑤	Number of poles:	3:3P
⑥		“L” means three phases are operated simultaneously “S” means three phases are operated separately
⑦	Aux. switch:	“11”: One normally open and one normally closed “22”: Two normally open and two normally closed

3 Technical Parameters

Table 1

Main technical parameters					
Conventional thermal current:		160	250	400	630
Rated operating current Ie (A)		2, 4, 6, 8, 10, 16, 20, 25, 32, 40, 50, 63, 80, 100, 125, 160	80, 100, 125, 160, 200, 250	125, 160, 200, 224, 250, 300, 315, 350, 355, 400	315, 400, 500, 630
Rated insulation voltage Ui (V)		1000			
Rated operating voltage Ue (V) 50/60Hz		415/690			
Rated impulse withstand voltage Uimp (kV)		12			
Use category	AC415V	AC-23B			
	AC690V	AC-21B			
Rated limit short circuit current Iq (kA)	AC415V	100			
	AC690V	50			
Fuse model		RT16-00	RT16-1	RT16-2	RT16-3
Power dissipation (W)		12	23	34	48
Mechanical life		1500	1500	1000	800
Electrical life		200	200	200	200
Busbar system spacing (mm)		185			
Installation method		Vertical			

4 Normal Working Environment

4.1 Altitude

The altitude generally does not exceed 2000 m; if exceeding 2000 m, the altitude correction factors are listed in table below.

Table 2

Altitude derating factor table					
No.	Altitude (km)	Operating current correction factor	Insulation voltage (V)	Power frequency withstand voltage (V)	Remarks
1	2	1.0	1000	3000	
2	3	0.94	800	2500	
3	4	0.88	700	2000	
4	5	0.85	600	1800	

4.2 Ambient Air Temperature

-5 ℃ - +40 ℃ ; the mean temperature within 24h does not exceed +35 ℃ , and the temperature correction factors are listed in table below.

Table 3

No.	Frame current (A)	Table of product derating factor corresponding to the temperature (℃) (Reference temperature is 40 ℃)							
1	160、250、400、630	Temp.	40	45	50	55	60	65	70
		Derating factor	1.00	0.95	0.93	0.85	0.82	0.80	0.78

4.3 Atmospheric Conditions

The relative humidity of the air does not exceed 50% at a maximum temperature of 40 °C. A higher relative humidity is allowed at low temperatures, for example, the relative humidity is 90% at +20 °C.

4.4 Pollution Degree

Level 3.

4.5 Normal Installation Conditions

The installation category is Class III, and the vertical installation will be available. The product is installed in a place where there is no significant shaking, shock vibration, and rain and snow attacks, and there is no explosive hazard medium and no gas and conductive dust sufficient to cause metal corrosion and damage to the insulation.

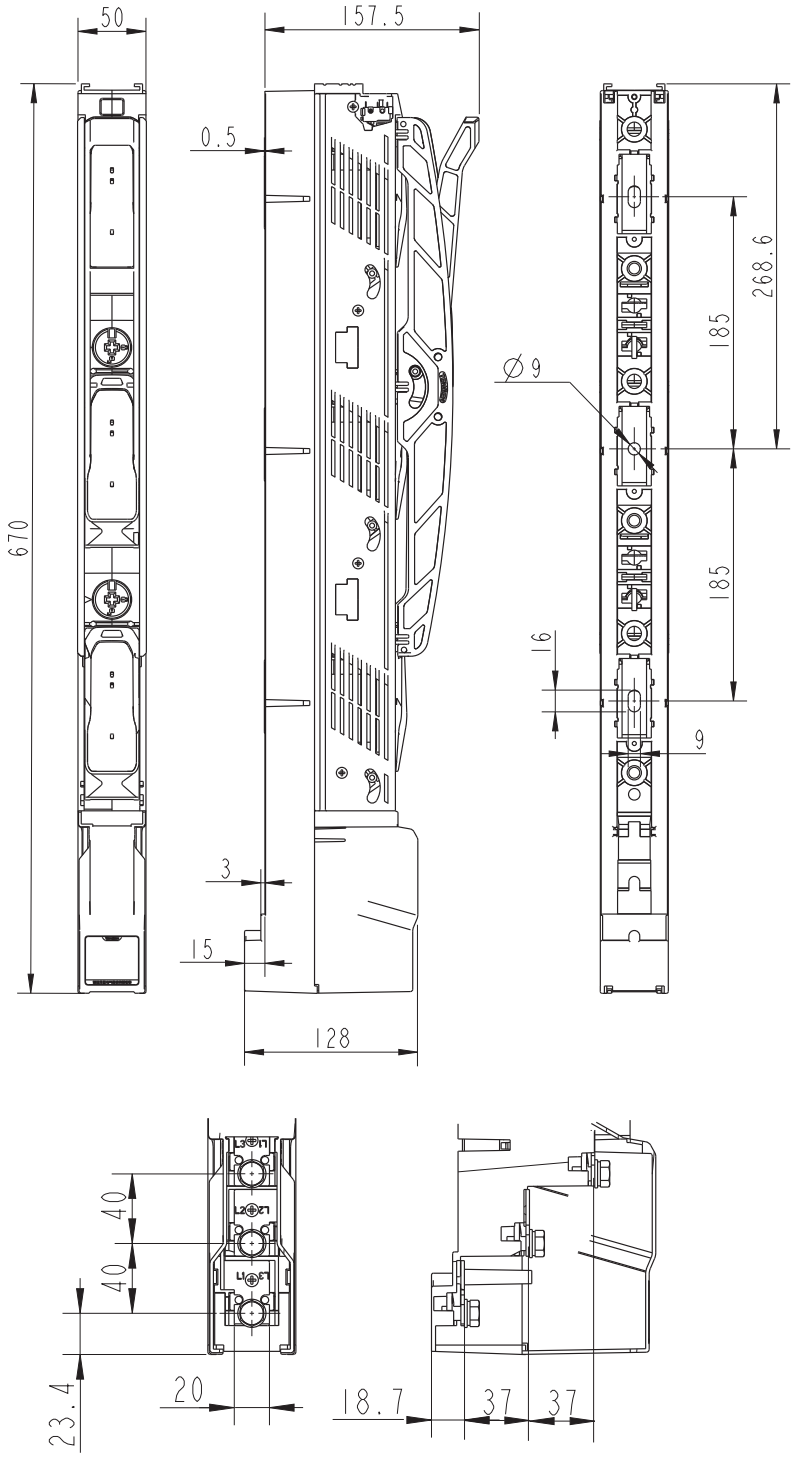
TGHRT17N Series Fuse Type Switch Disconnector

5 Product Outline and Installation Dimensions (the tolerances refer to GB / T 1804–m unless otherwise specified)

5.1 TGHRT17N-160 product outline and installation dimensional drawings

5.1.1 TGHRT17N-160/3L product outline and installation dimensions

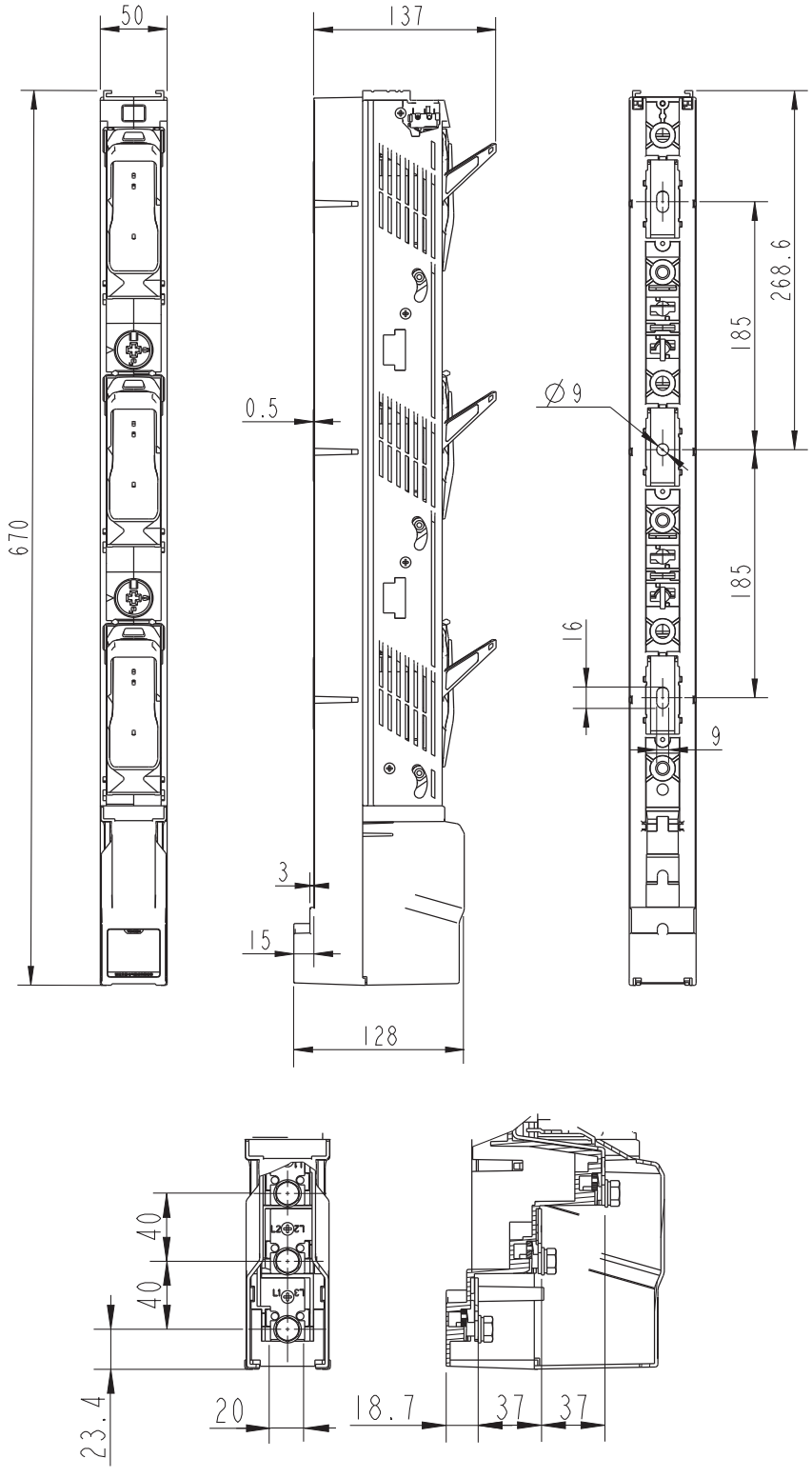
Unit: mm



TGHRT17N Series Fuse Type Switch Disconnector

5.1.2 TGHRT17N-160/3S product outline and installation dimensions

Unit: mm

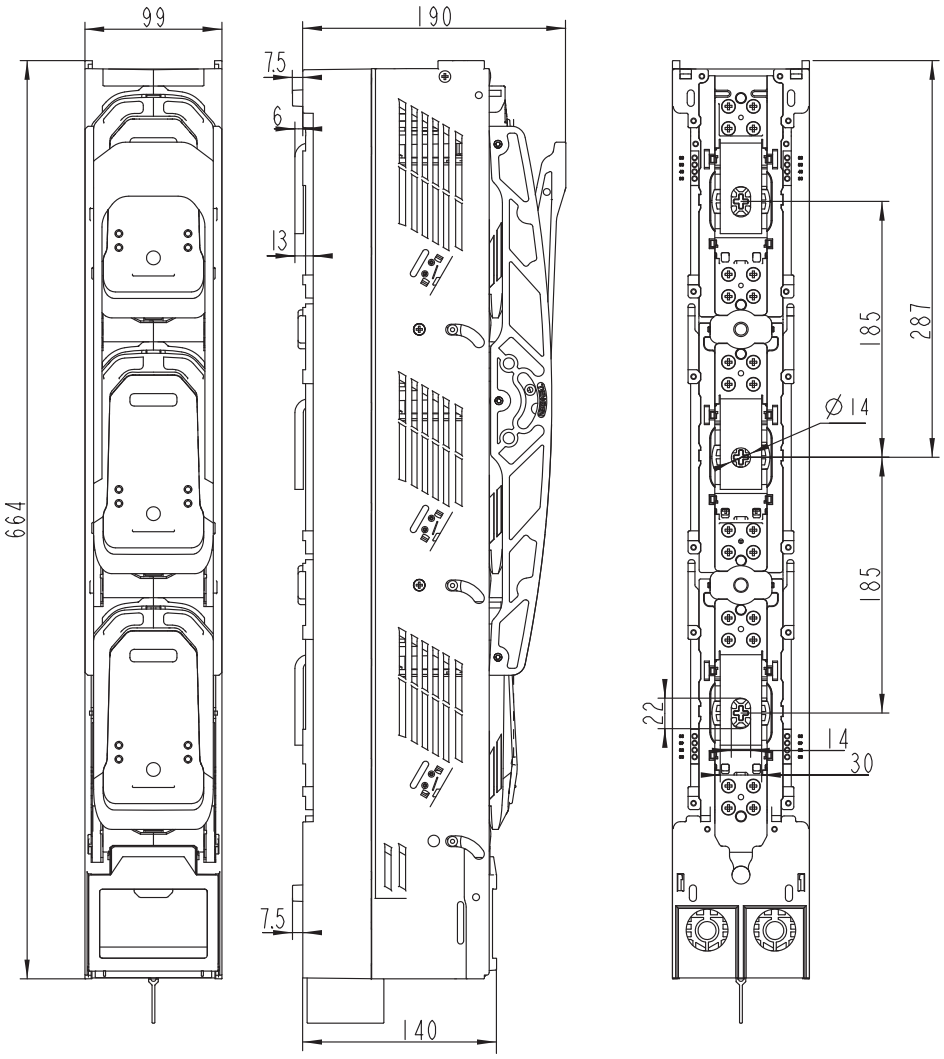


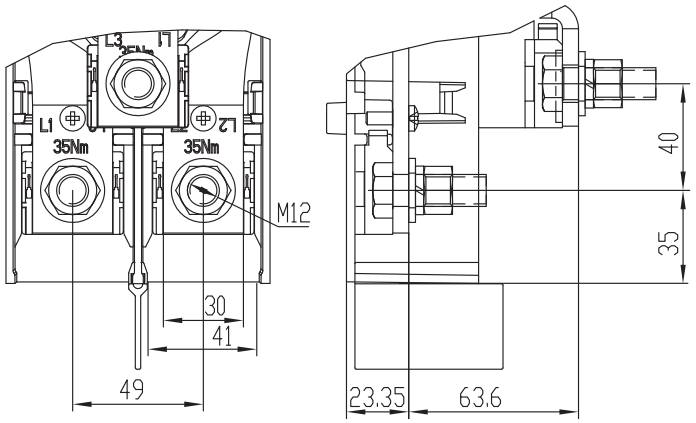
TGHRT17N Series Fuse Type Switch Disconnector

5.2 TGHRT17N-630 product outline and installation dimensional drawings

5.2.1 TGHRT17N-630/3L fixed type product outline and installation dimensions

Unit: mm

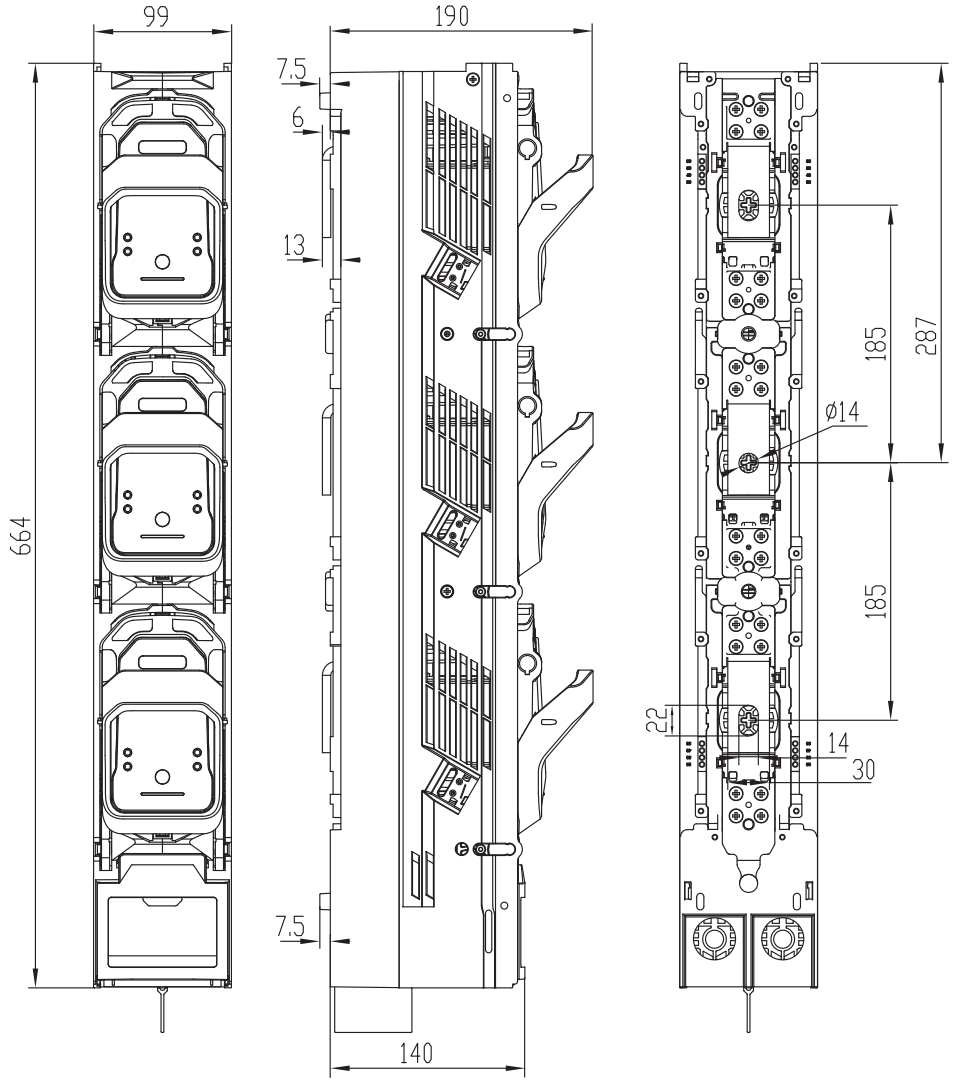


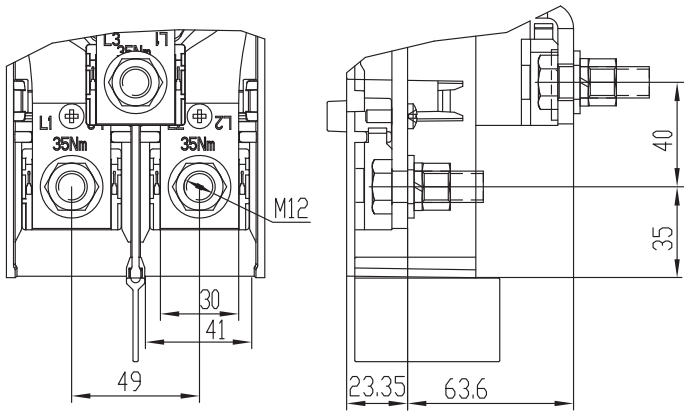


TGHRT17N Series Fuse Type Switch Disconnector

5.2.2 TGHRT17N-630/3S fixed type product outline and installation dimensions

Unit: mm





TGHRT17N Series Fuse Type Switch Disconnector

6 Installation, Operation and Maintenance

6.1 Inspection Before Installation of Fuse Type Switch Disconnector

The switch disconnector shall be equipped with a fuse of the corresponding model listed in Table 1 or complying with GB / T 13539 with corresponding sizes, short circuit breaking and current limiting capacity. Confirm that the product is manually turned on / off several times flexibly without any damage before installation.

6.2 Installation Method

The switch disconnector can be put into normal operation only after vertical installation.

6.3 Recommended sectional areas of wires or busbars

Table 4

Rated current (A)	Cable		Cupper busbar	
	Qty.	Sectional area (mm^2)	Qty.	Sectional area (mm^2)
160	1	70	-	-
250	1	120	-	-
400	1	240	-	-
630	2	185	2	40×5

6.4 Recommended Torque

Table 5

Rated current (A)	Bolt	Torque (Nm)
160	M8	12
250、400、630	M12	35

7 Accessory Installation

Accessory overview diagram

Table 6

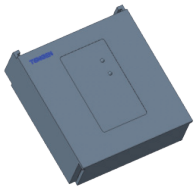
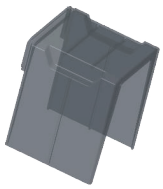
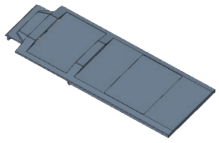
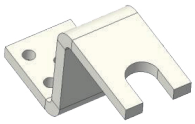
No.	Accessory type	Diagram	Name	Available disconnector spec.	Standard	Optional	Remarks
1	Product accessory		Insulation partition	250, 400, 630	√		
2			Electronic fuse detection module	160, 250, 400, 630		√	

Table 6, continued

No.	Accessory type	Diagram	Name	Available disconnector spec.	Standard	Optional	Remarks
3	Product accessory		Cable protective cover	250, 400, 630		√	
4			Expansion shield	250, 400, 630		√	
5	State indicator		Aux. switch	160, 250, 400, 630		√	
6	Busbar		U-shaped busbar	250, 400, 630		√	Customized

8 Storage Method

Stored in a warehouse where the ambient temperature is ranged -40 ° C to +75 ° C and the relative humidity (at the ambient temperature +25 ℃) is 90% and below, and there is no acidic, alkaline or other corrosive gases.