



TECHNICAL MANUAL

Switch disconnecter

63-100 A PowerSwitch EKF

1 DESCRIPTION

Switch disconnectors PowerSwitch EKF are used in three-phase 50/60 Hz AC networks with rated voltage up to 660 V for manual switching in electrical distribution panels.

The mechanism of switch disconnector provides instantaneous (13,8 m/s) contact opening regardless of handle travel speed.

The housing, made of unsaturated glass fiber reinforced polyester resin, has excellent dielectric, flame-, CO₂-, and impact-resistance properties, ensuring safe operation of the product when used as intended.

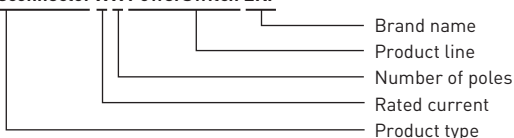
Switch disconnectors provide double break at each pole.

Silver-coated copper alloy contact surfaces ensure large insulation gap.

A mechanical lockout feature is available to prevent accidental handle operation.

TYPE CODE

Switch disconnector X X PowerSwitch EKF



2 TECHNICAL DATA

The main specifications are listed in Table 1.

Table 1 – Technical data of Switch disconnectors 63 A - 100 A EKF

Characteristics		Values		
Rated thermal current I _{th} , A			63	100
Rated current I _n , A			63	100
Rated insulation voltage U _i , V			690	
Dielectric strength, V			1890	
Rated impulse withstand voltage U _{imp} , kV			8	
Rated operating current I _e , A	380-415 V	AC-21B	63	100
		AC-22B	63	100
		AC-23B	50	100
	660 V	AC-21B	50	100
		AC-22B	32	50
		AC-23B	25	40
Motor power, kW	380-415 V		25	40
	660 V		22	33
Rated short-time withstand current I _{cw} , kA			1,26	2
Rated breaking capacity I _{cn} , A			94,5	150

Characteristics		Values	
Rated making capacity Icm, A		94,5	1000
Short-circuit current, kA		2,84	
Mechanical endurance at 380-415 V, O-C cycles		1700	
Electrical endurance at 380-415 V, O-C cycles		300	
Applied force on operating handle, N*m		1,2	
Weight, kg	3 poles	0,37	
	4 poles	0,41	0,62
Operating temperature, °C		-45 to 50	-45 to 50

Switch disconnectors comply with:

- IEC 60947-1 Low-voltage switchgear and controlgear - Part 1: General rules.
- IEC 60947-3 Low-voltage switchgear and controlgear - Part 3: Switches, disconnectors, switch-disconnectors and fuse-combination units.

Switch disconnector is operated manually using a rotary handle. The switch disconnector housing features windows for visual inspection of the contact positions.

The rotary handle for operating the switch disconnector within the enclosure is included in the delivery. Additionally, an external handle is provided for operating the switch disconnector through the enclosure door.

The external handle can be installed either directly to the enclosure door or using an extension shaft.

3 OVERALL AND INSTALLATION DIMENSIONS

For appearance and dimensions of switch disconnectors, refer to Figures 1a & 1b.

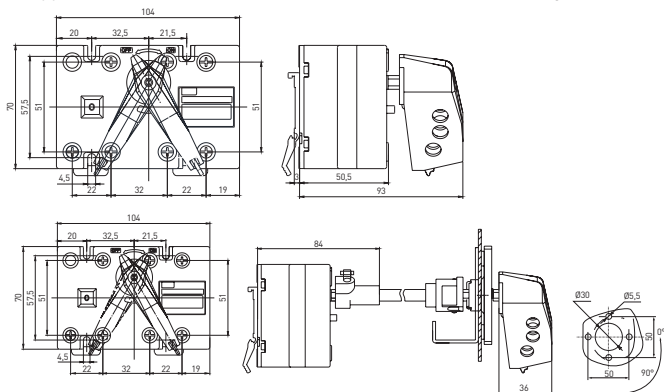


Figure 1a - Installation dimensions of 63 A models

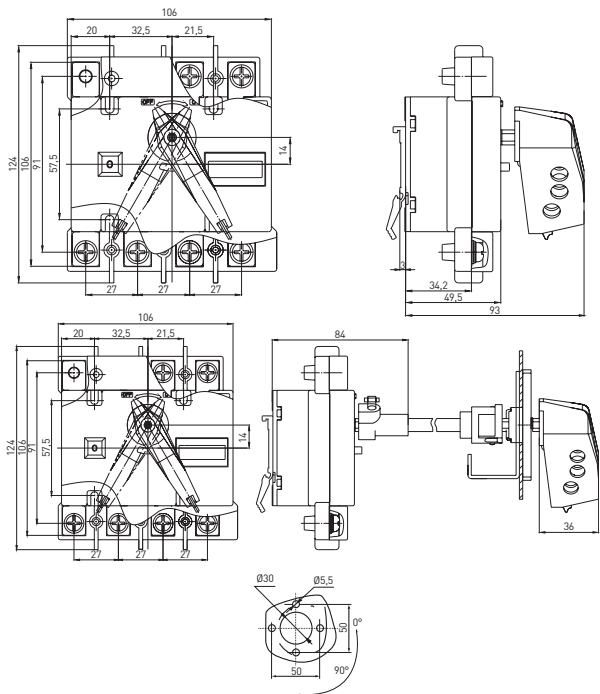


Figure 1b - Installation dimensions of 100 A models

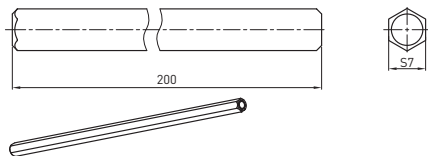


Figure 1c - Extension shaft overall dimensions

4 WIRING DIAGRAM

For wiring diagram of switch disconnectors, refer to Figure 2.

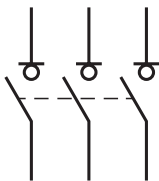


Figure 2

5 INSTALLATION

The switch disconnectors must be mounted and connected by qualified electrical personnel. The switch disconnectors are mounted onto DIN rail. For operating position of switch disconnectors, refer to Figure 3.

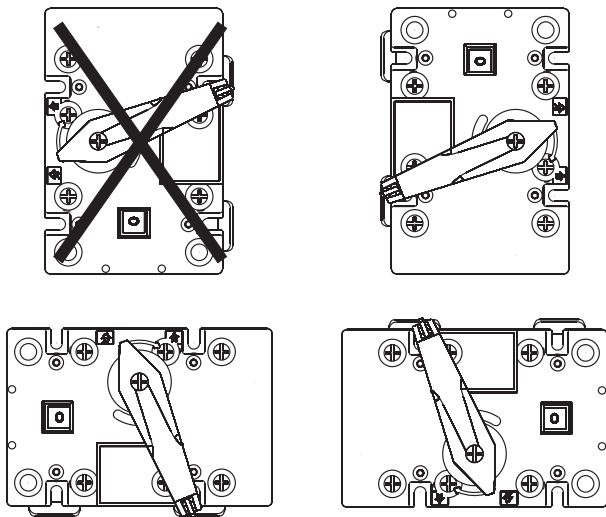


Figure 3

Before installation of the switch disconnect, make sure:

- The switch disconnect complies with intended purpose.
- There is no visible damage.

For DIN rail mounting, refer to Figure 4.

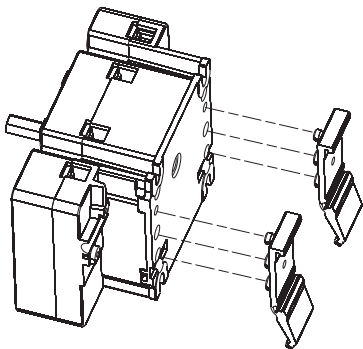


Figure 4

For handle direct mounting to the switch disconnect, refer to Figure 5.

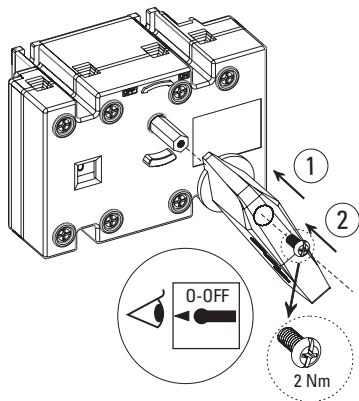


Figure 5

For handle lockout, refer to Figure 6.

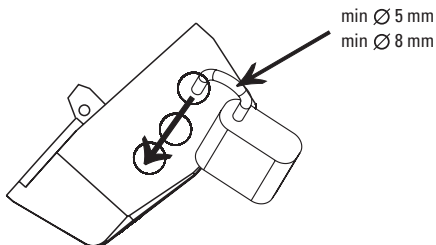


Figure 6

For external handle mounting to an enclosure door, refer to Figures 7, 8 and 9.

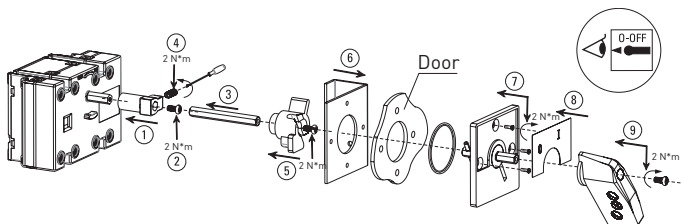


Figure 7

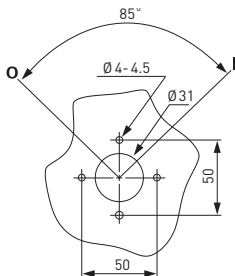


Figure 8 - Installation dimensions. Enclosure door mount

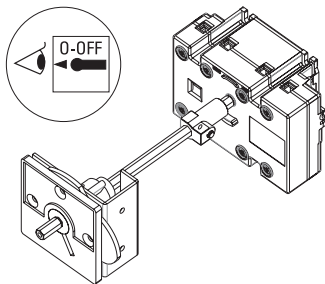


Figure 9 - Assembled rotary handle

6 OPERATION

Make sure the power is off before installation and maintenance!

Under normal operating conditions, visually inspect the switch disconnectors once a year and after every short circuit.

During inspection:

- Remove dust and grease;
- Tighten the screws;
- Switch the device on/off without loads.

Do not touch terminals and non-insulated live conductors when operating the device.

7 OPERATION CONDITIONS

The switch disconnectors shall be stored indoors in the original package at the ambient temperature from -45°C to $+50^{\circ}\text{C}$ and relative humidity of max. 95%.

Altitude above sea level shall not exceed 2000 m.

Do not operate switch disconnectors in corrosive environment.

Do not operate the switch disconnectors in Ex-zone!

8 DELIVERY SCOPE

The switch disconnectors are supplied in the group package. For all available documentation, scan the QR-code on the insert or on the inside of the package.

9 TRANSPORTATION AND STORAGE

Switch disconnectors can be transported by any means of enclosed transport that protects the packaged goods from mechanical impact and weather exposure.

The switch disconnectors shall be stored indoors in the original package at the ambient temperature from -45°C to $+50^{\circ}\text{C}$ and relative humidity of max. 50% at $+40^{\circ}\text{C}$.

10 DISPOSAL

Life-expired and failed switch disconnectors shall be disposed of in compliance with the national and local laws and regulations in force. To dispose of the device, send it to an authorized company for recycling in compliance with the effective national and local laws and regulations.

11 MANUFACTURER'S WARRANTY

The manufacturer guarantees that the switch disconnectors PowerSwitch EKF comply with the requirements of IEC 60947-1 & IEC 60947-3, provided that consumers follow the operation, transportation and storage conditions.

Warranty period: 7 years from the date of sale specified in the sales receipt.

Shelf life: 7 years from the date of manufacture specified on the product package or housing.

Service life: 10 years.

Manufacturer: OOO Elektroresheniya, Otravnaya st., 2b/9, 127273, Moscow, Russia, tel. +7 (495) 788-88-15.

MEA regional headquarters: EKF ELECTRICAL SOLUTION FZCO, Techno Hub-2, DSO, P. O. box 341079, Dubai, United Arab Emirates, tel. +971-4-547-06-18.

Importer and EKF trademark service representative in the territory of the Republic of Kazakhstan: TOO «Energoresheniya Kazakhstan», Kazakhstan, Almaty, Bostandyk district, Turgut Ozal st., 247, apt 4.

12 CERTIFICATE OF ACCEPTANCE

The switch disconnectors PowerSwitch EKF have been manufactured in compliance with laws and regulations in force and have been approved for operation.

Date of manufacture: for information, refer to the product package.

Quality control stamp



EAC

v3



[ekfggroup.com](http://ekfgroup.com)

