

POWERGUARD

Heavy Duty Switch disconnecter units in open execution Type 3KA

General description

In the 3KA range of switch disconnectors, the contact system isolates the link on both sides refer Fig. 1. The contact system of 3KA16* is a little different : please refer Fig.2. A specially designed roller contact system ensures high breaking capacity, long contact life and safety under short-circuit conditions.

Therefore, these switch disconnectors can be used for switching under no load conditions, and under the most stringent conditions of inductive motor loads; they can also be used for switching inductive DC loads and capacitor banks.

Standards

The switch disconnectors conform to IEC 60947-3 and IS 13947-3. They are suitable for the most severe utilization category i.e. AC23A.

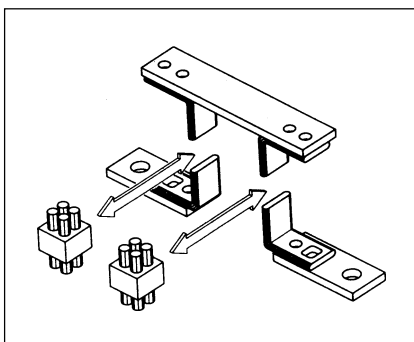


Fig 1 Contact system - schematic

Mechanical OFF state indicator

The OFF state of the switch disconnecter contacts is indicated by a fail proof, mechanical indicator on the right hand side of the unit.

Maintenance free

The switch disconnectors do not require maintenance. Do not clean, grease or replace the contacts.

Mounting of auxiliary switch on 3KA50 & 3KA52

Snap fit the feet of the auxiliary switch in the grooves of the housing provided adjacent to the shaft. To remove the auxiliary switch (if necessary) press the white shim down to disengage the feet from the housing.

Mounting of auxiliary switch on 3KA 25/41/61/10/16

Slip on the cam over the operating shaft and secure it in position using

the grub screw supplied. Mount the limit switch on the mounting plate by means of 2 nos. cheese head screw size M4 x 10, 2 nos. spring washers and 2 nos. punched washers enclosed in the auxiliary switch kit. Now, clamp the mounting plate on the switch unit, using the self tap screws B8x19.



*3KA16 is single break

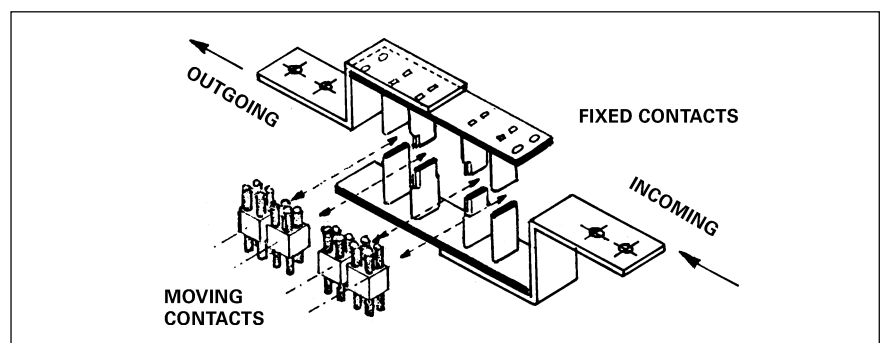
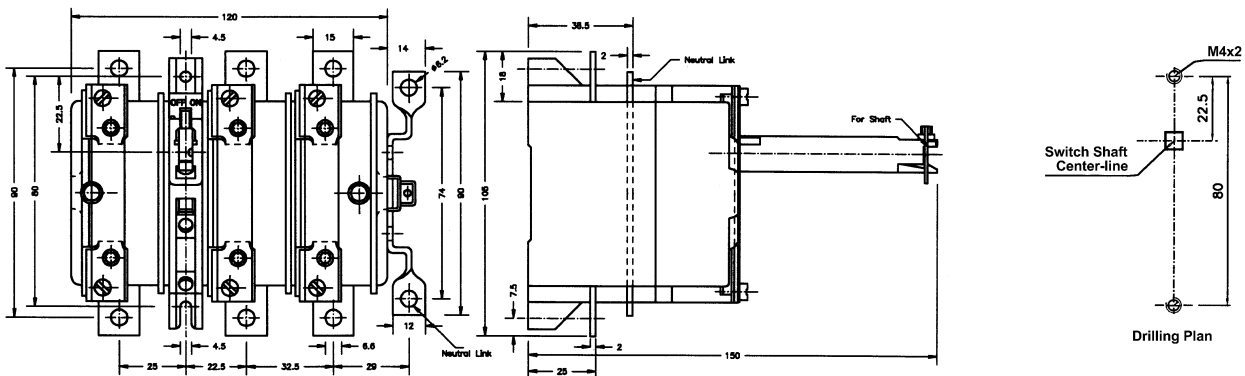


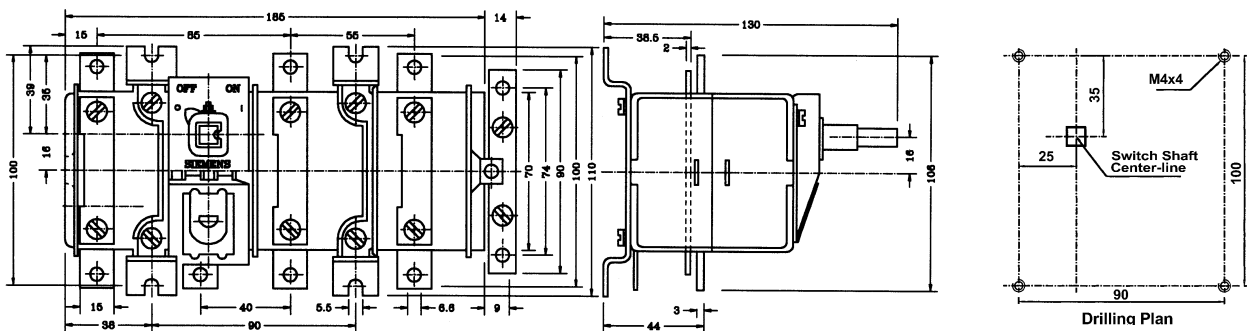
Fig 2 Contact System - Schematic for 3KA16

Switch disconnecter in open execution

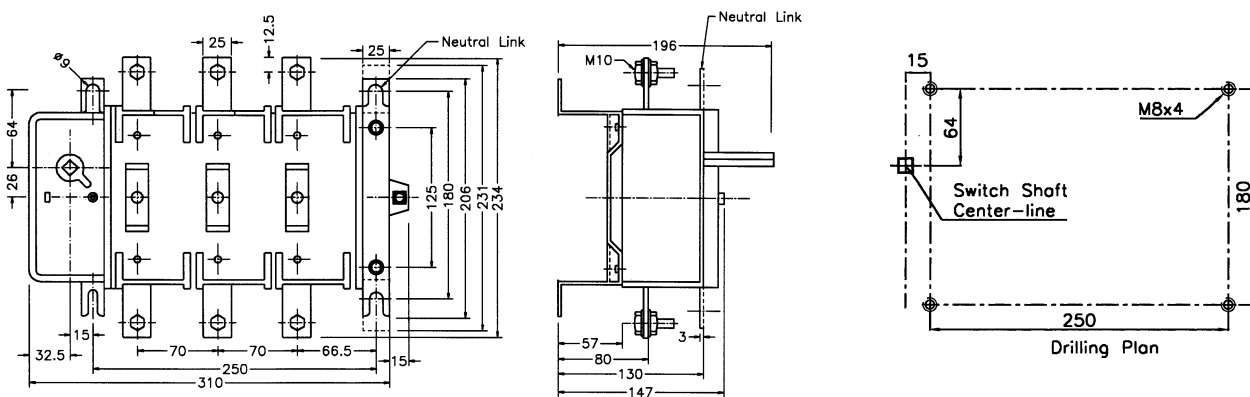
Type: 3KA 50



Type: 3KA 52

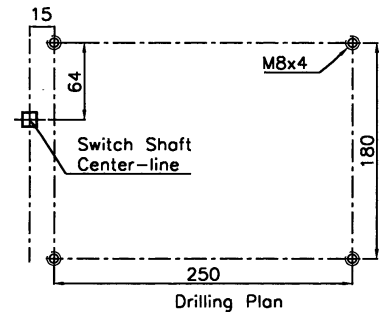
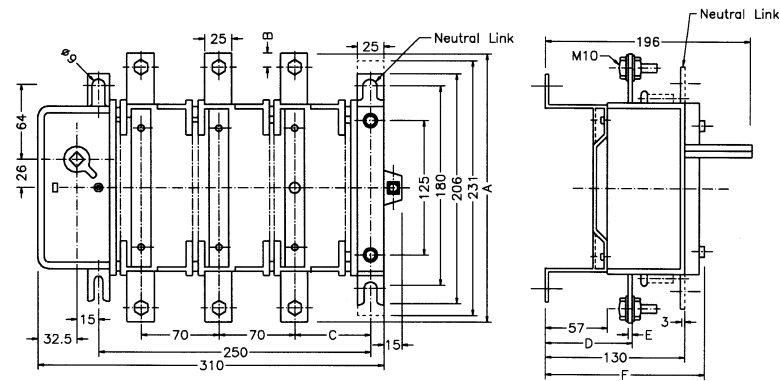


Type: 3KA 25



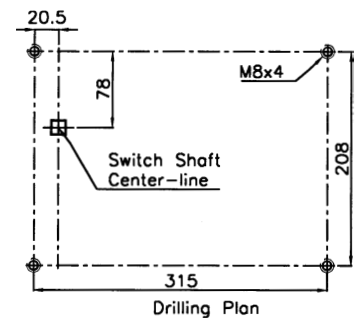
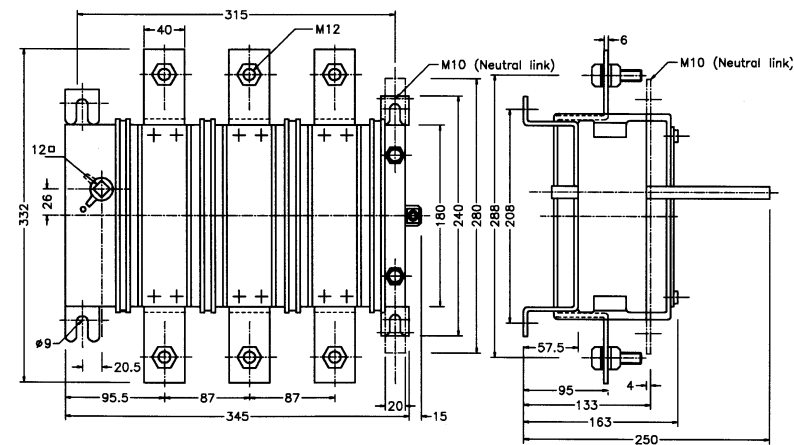
Switch disconnecter in open execution

Type: 3KA 41 / 3KA 61

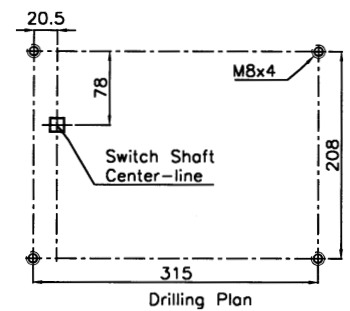
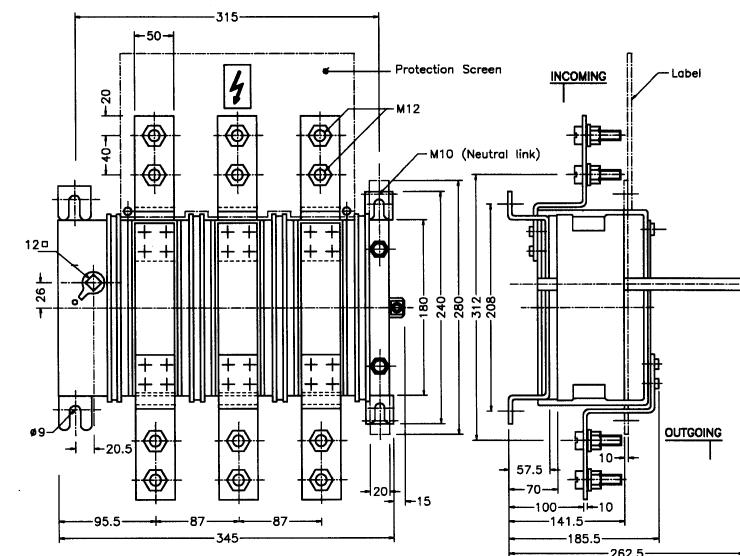


Switch Type	A	B	C	D	E	F
3KA 41 3	254	12.5	66.5	80	4	147
3KA 61 3	270	15	70	75	6	156

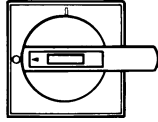
Type: 3KA 10



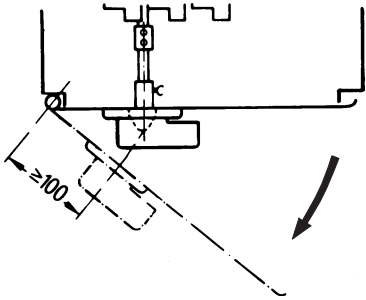
Type: 3KA 16



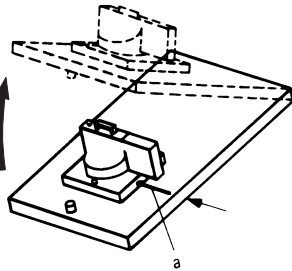
Features



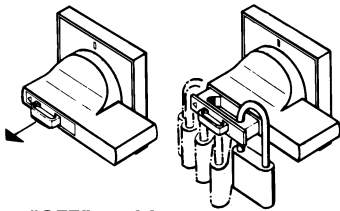
Mounting position for switches and Rotary mechanism with "0" position.



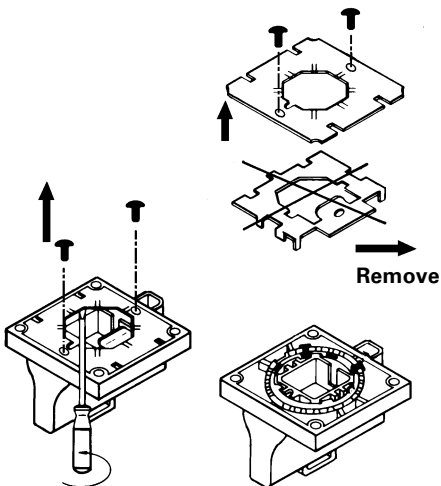
Door hinge spacing
Minimum distance between handle and the door hinge to be $\geq 100\text{mm}$



To defeat Door Interlock
Break-Open the knockout (a) and actuate with pin (dia. $< 4\text{mm}$)
With close knockout - IP65;
With open knockout - IP44.

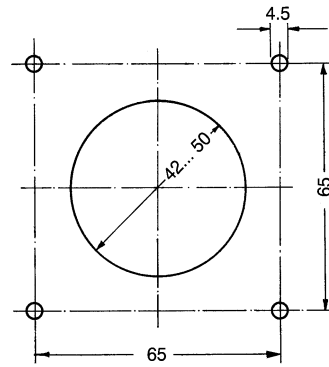


Padlocking in "OFF" position.

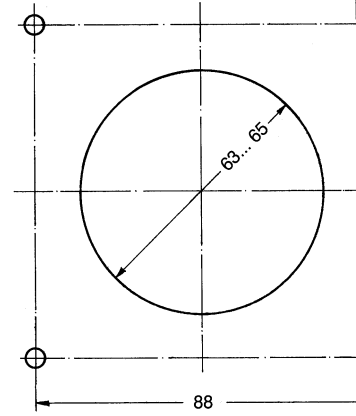


To Remove the Door Interlock.

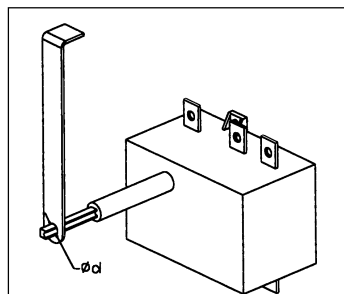
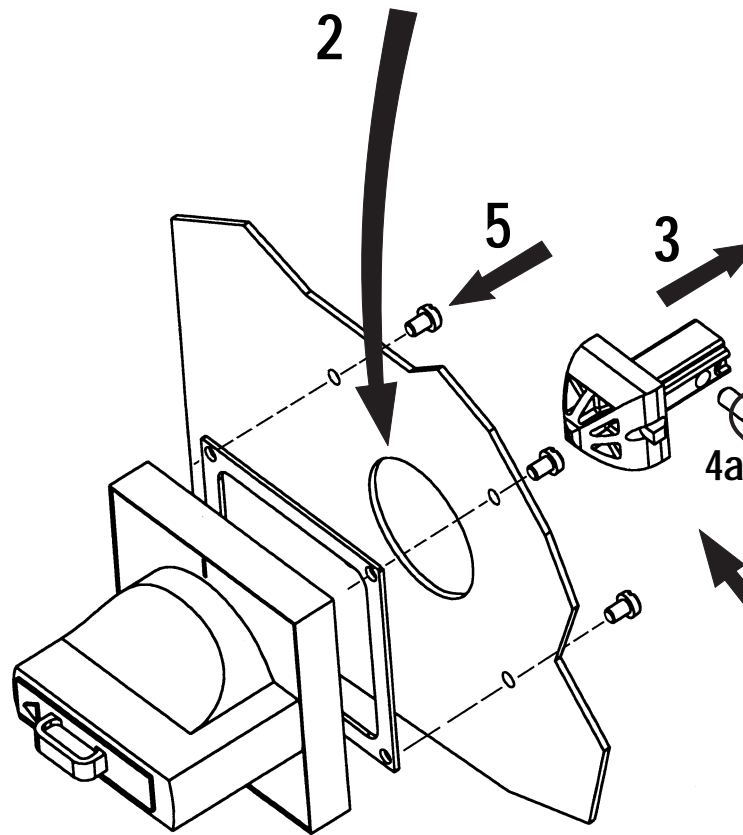
Mounting Sequence of Front Drive



Door Drilling template provided For 8UC 61/62*

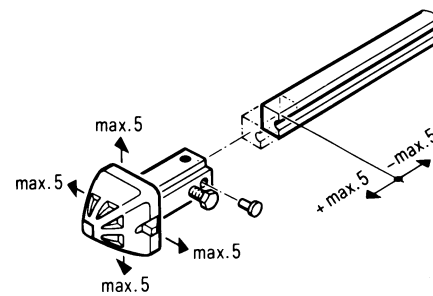


Door Drilling template provided For 8UC 63/64**

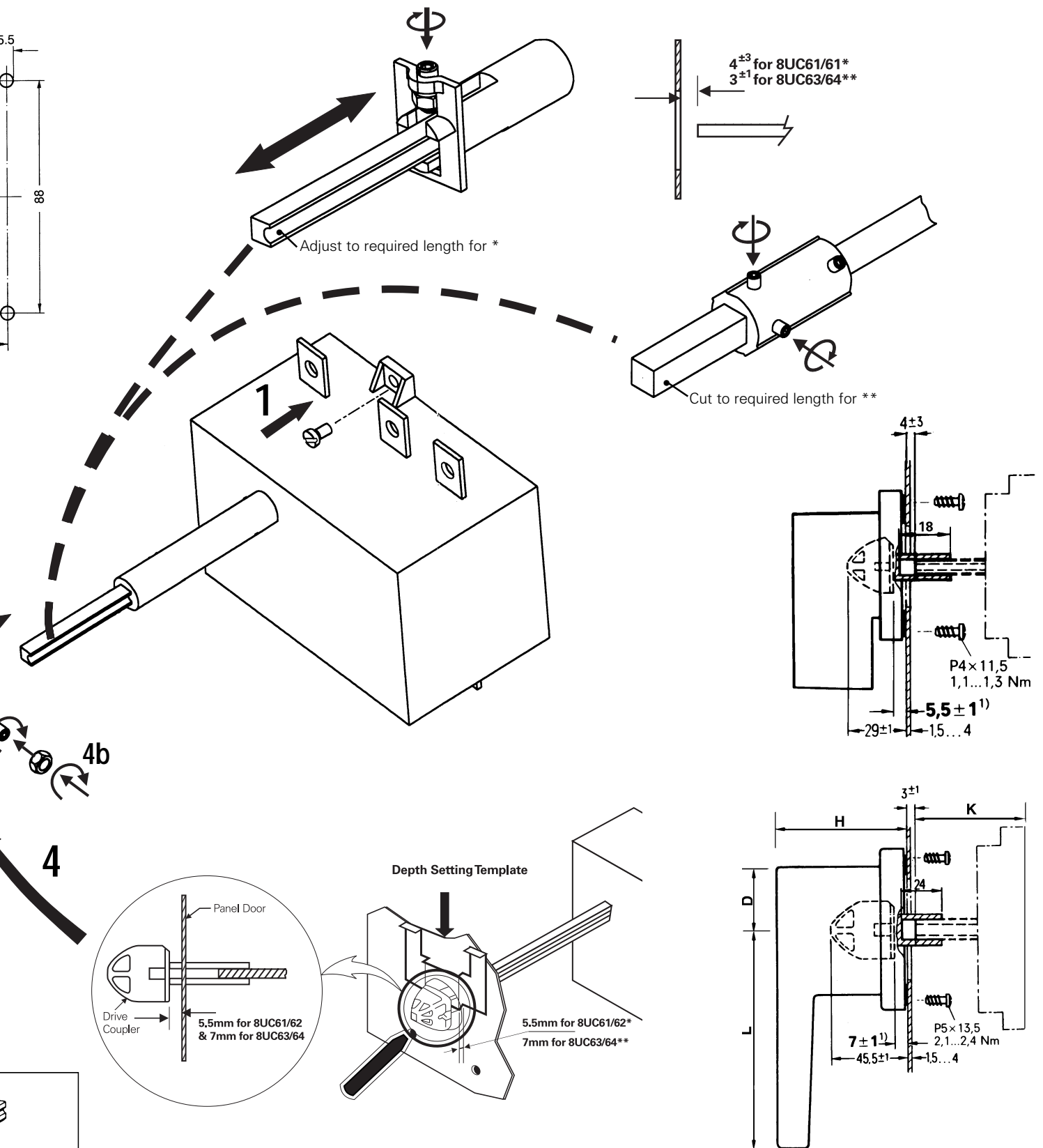


Drive support, close to panel door is recommended when shaft extension is used.

$\varnothing d = 9\text{mm}$ for 8UC61
12mm for 8UC62
18mm for 8UC63/64



Tolerances of drive coupler and operating or extension shaft are $\pm \text{max. } 0.5\text{mm}$.
Pull-out strength : The pull-out strength (=being pulled out of the shaft or destruction of the mechanism) of locked mechanism is $\geq 800\text{N}$ with pulling force exerted directly on the shaft in the direction of the shaft.



Sequence for mounting the 8UC drive

1. Mount the unit on the panel.
2. Make the cut-outs on the panel door with the help of **Door Drilling Template** (provided in the supply) ensuring the centre of the unit in the line with the door cutout.
3. Mount drive coupler on the shaft of the unit.
Close the panel door fully, as is the case during operation.
4. Adjust the drive coupler with the help of **Depth Setting Template** by adjusting the shaft length as shown. Tighten the grub screw and nut of the drive coupler fully.
5. Mount the handle and rubber gasket on the door.

SDF/SD Unit	Front Drive	L	D	H	K (Min)	K (Max)
3KA50	8UC61	36	28	66	180	260
3KA52	8UC62	62	28	66	180	240
3KA25/41/61	8UC63	140	40	88	231	256
3KA10/16	8UC64	200	40	88	285	310

* 3KA50/52

** 3KA25/41/61/10/16

Type References

Description	63 A	125 A	250 A	400 A	630 A	1000A	1600A
TPN Switch disconnecter in open execution	3KA50 30-1Y___	3KA52 30-1Y___	3KA25 30-1Y___	3KA41 30-1Y___	3KA61 30-1Y___	3KA10 30-1Y___	3KA16 30-1Y___
Front Drive with ... - Door interlocking, defeat and padlocking facility	8UC61	8UC62	8UC63	8UC63	8UC63	8UC64	8UC64

Summary of Technical Details

Rated Operational Voltage : 550V AC, 50Hz. Other voltages on enquiry.

	63A	125A	250A	400A	630A	1000A	1600A
Max. Permissible back up fuse rating	63A	125A	250A	400A	630A	1000A	1600A
1 sec. rating (rms)	2kA	8kA	14kA	20kA	25kA	50kA	50kA
Terminal sizes suitable for Al cables with lugs							
- Main Terminals mm ²	1x35	1x70	1x300	2x300	2x400	2x630	4x60x10mm**
- Neutral Terminals mm ²	1x16	1x35	1x150	2x150	2x185	2x300	2x40x10mm**
Terminal Screw							
- Size##	M6	M6	M10	M10	M10	M12	M12
- Tightening Torque Nm	6-7.5	7-10	35-45	35-45	35-45	56	56
Suitable for Max. Capacitor bank (KVAR)	29	58	116	186	186	467	Upon enquiry
Approx. weight of unit in open execution, without drive, in kg	0.65	2.7	7	8	8	11.7	16

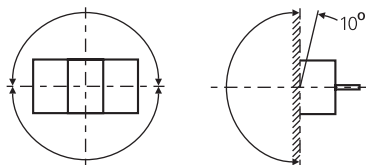
**Flats

Auxiliary Contacts

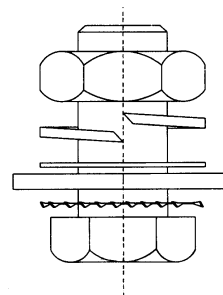
Rated thermal current I _{th}	Amp	10	Aux Cont rating is identical for units upto 1600 A
Rated Insulation ratings	Volts	500 AC 600 DC	
I _e /AC 12 at	415V	10A	
I _e /DC 12 at	24V	10A	
	110V	4A	
	220V	1A	
Max, fuse rating for short circuit protection - Amps		10A Delayed action cartridge type fuses	

*Note : Please ensure proper cable supports are provided to avoid deformation of terminals

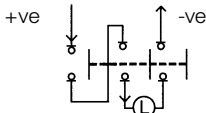
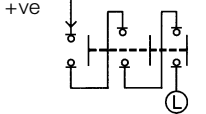
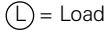
Permissible mounting position



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DC Ratings of Switch disconnectors

Type		Type of connection	DC rating
3KA50	Two poles in series Three poles in series	le/DC23 at 220V = 63A le/DC23 at 440V = 63A	Two poles in series +ve  -ve
3KA52	Two poles in series Three poles in series	le/DC23 at 220V = 125A le/DC23 at 440V = 125A	Three poles in series +ve  -ve
3KA25/3KA41/3KA61	Two poles in series	le/DC22 at 440V = 250A	
3KA10 3KA16	Two poles in series	le/DC22 at 440V = 630A Upon Enquiry	 = Load

Selection Table for 3KA Accessories

Description	3KA50 Order No.	3KA52 Order No.	3KA25/41/61 Order No.	3KA10/3KA16 Order No.
Protection Guard Kit	3KX34 87-1YB	3KX35 27-1YB	3KX35 57-1YB	3KX35 87-1YB
Aux. Switch Kit (1NO + 1NC)	3SB14 00-0A	3KX35 22-1YC	3KX35 52-1YC	3KX35 82-1YC
Aux. Switch Kit (2NO + 2NC)	—	3KX35 22-1YD	3KX35 52-1YD	3KX35 82-1YD
Front Drive with door - interlock, defeat and padlocking facility	8UC61	8UC62	8UC63	8UC64
Add-on switched neutral	—	3KX35 28-1YN	3KX35 58-1YN	—
Castell interlock (2 locks & 2 keys)	—	—	3KX35 88-1YP ^Φ	3KX35 88-1YP ^Φ
Switch coupler to replace old 3KX drive by new 8UC drive	—	—	8UC92 55	8UC92 55
Depth Setting Template (for quick and correct mounting of 8UC drive)	←————— 8UC60 46 —————→			

^Φ The 11th place of the order number indicates the alphabet type of the lock & key; combinations available are A,B,C,D,E & F.

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Siemens Ltd.
SGR-01-109-037
This replaces SGR-01-109-021

Product upgradation is a continous process. Hence, data in this booklet is subject to change without prior notice. For the latest information, please get in touch with our Sales Offices.

Order No. 4I-0066-0109572201