



Switch-Disconnecter-Fuse Switch-Disconnecter

Type FN

About us

Larsen & Toubro infuses engineering with imagination. The Company offers a wide range of advanced solutions in the field of Engineering, Construction, Electrical & Automation, Machinery and Information Technology.

L&T Switchgear, a part of the Electrical & Automation business, is India's largest manufacturer of low voltage switchgear, with the scale, sophistication and range to meet global benchmarks. With over five decades of experience in this field, the Company today enjoys a leadership position in the Indian market with a growing international presence.

It offers a complete range of products including powergear, controlgear, industrial automation, building electricals & automation, reactive power management, energy meters, and protective relays. These products conform to Indian and International Standards.



Switchgear Factory, Mumbai



Switchgear Factory, Ahmednagar

Salient Features of SDF

Features of FN series:

- Compact design saves space
- Electrodynamic compensation
- Quad break contact system
- Full AC - 23 A rating for the complete range
- Highest fused short circuit capacity
- Quick make / Quick break / Positive break
- Clear ON / OFF indicator
- Separate arcing / Current carrying zone
- High clearance & creepages
- Separate bridge for each pole
- Maximum ground clearance
- Phase barrier & Terminal Shroud as a standard accessory
- Fuse stationary & isolated from both sides
- Direct access to mounting & terminal screws
- Generous terminal capacity
- Replaceable contacts for enhanced life
- Suitable for vertical & horizontal orientation
- Wide range of Spares & Accessories
- Handle coupling as per IS 8623



The handle coupling has the following user-friendly features.

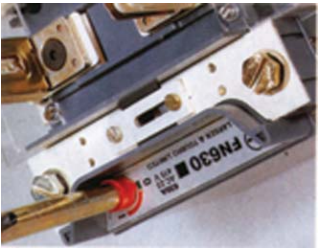
Easy fixing of handle on panel door by two screws.

Door interlock for safety of operating personnel when switch is 'ON'. The interlock can be defeated if required.

Built-in padlocking arrangement to lock the unit in either 'ON' or 'OFF' position.

The handle coupling can take a mismatch or $\pm 3\text{mm}$ in all directions.

Clear ON / OFF indication is provided on the switch (by a red pointer).



Built-in neutral:

Switch-Disconnector-Fuse consists of an integral neutral, making the units suitable for 3 phase, 4 - wire application. FN 32 / 63 has switched neutral while higher ratings have isolable neutral.

Mechanism:

This mechanism is front operated quick-make / quick-break and independent of speed of operation.

Compact construction:

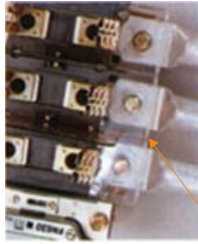
To ensure light weight low operating torque switch which saves panel space.

Easy to maintain contacts.

Interface barriers are provided to eliminate the possibility of interface short circuit.

Contact System:

Contact system is **QUAD BREAK**. There are no. of parallel moving contacts per pole per break. Hence, better arc quenching & more electrical life of contacts. Each pole has separate bridge carrying the moving contacts, achieving a high order of interphase separation & avoiding phase-phase flash over.



Terminal shrouds:

The terminals can be shrouded for protection against phase-phase short circuit through an external conducting path and also for protection against accidental human contact with live terminals.

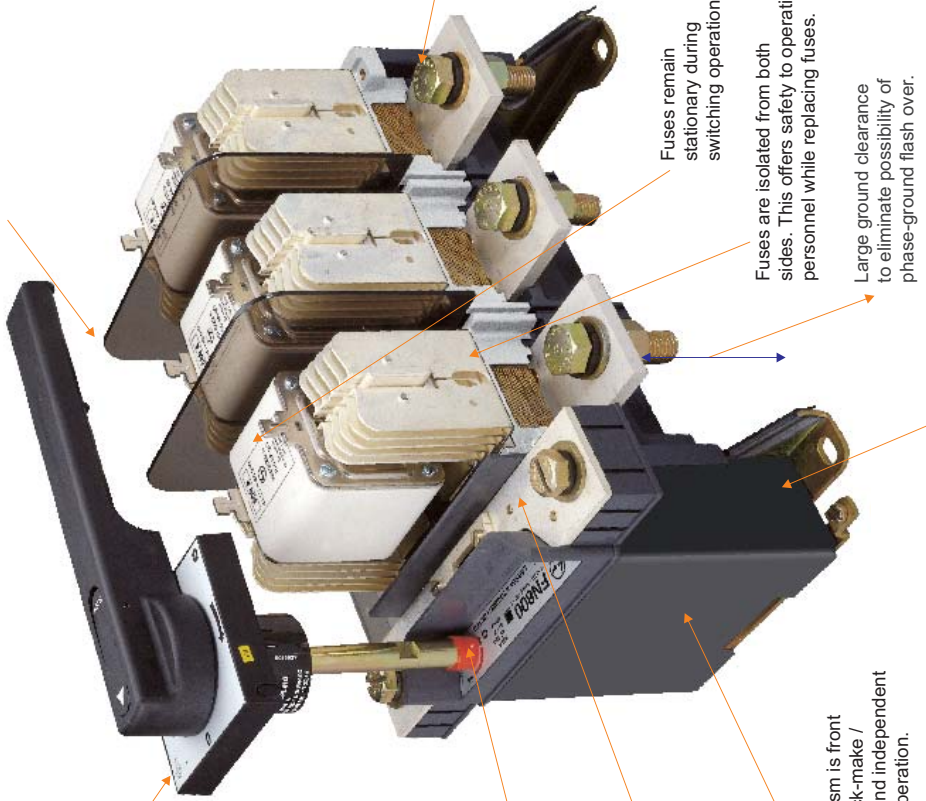
Terminals:

To accommodate Aluminium bus bars.



SDF Interior in Sheet Steel Enclosure:

Complete range of SDF is also available in attractive powder coated sheet steel enclosures. **FN 32 / 63 in sheet steel enclosure comes fitted with gland plate.**



Fuses remain stationary during switching operation.

Fuses are isolated from both sides. This offers safety to operating personnel while replacing fuses.

Large ground clearance to eliminate possibility of phase-ground flash over.

The Switch-Disconnector-Fuse units can be mounted at any angle in a vertical plane.

Technical Data

Switch-Disconnector-Fuse Units - Type FN Conforms to IEC 60947-3, IS / IEC 60947-3

| Type Designation | FN 32 | FN 63 | FN 100 | FN 125 |
|--|-------------------|-------------------|--------------------|---------------|
| No. of Poles | 3+Neutral | 3+Neutral | 3+Neutral | 3+Neutral |
| Neutral # | Switched | Switched | Isolable | Isolable |
| Service temperature | -20 to 50 | -20 to 50 | -20 to 50 | -20 to 50 |
| Rated operational voltage (U _n) | 415 | 415 | 415 | 415 |
| Rated insulation voltage (U _i) | 690 | 690 | 690 | 690 |
| Rated impulse withstand voltage (U _{imp}) | V | 8 | 8 | 8 |
| Rated frequency | V | 50 - 60 | 50 - 60 | 50 - 60 |
| Conventional enclosed thermal current at 40°C (I _{th}) | kV | 32 | 63 | 100 |
| Rated operational current (I _n) at AC - 23 A | Hz | 32 | 63 | 100 |
| Rated making capacity (436 V, cosφ = 0.35) | A | 320 | 630 | 1000 |
| Rated breaking capacity (436 V, cosφ = 0.35) | A | 256 | 504 | 800 |
| Mechanical life (Operating cycles) | A | 15000 | 15000 | 15000 |
| Terminal capacity (main) | A | 35 | 35 | 95 |
| Terminal capacity (neutral) | mm ² | 35 | 35 | 50 |
| Terminal screw | mm | M 6 x 12 | M 8 x 20 | M 8 x 20 |
| Capacitor duty - 415 V, 50 - 60 Hz | kVA | 14 | 29 | 45 |
| DC Rating at 220 V DC | | | | |
| No. of poles in series, utilization category at rated current | 3, DC-23 A | 3, DC-23 A | 2, DC-23 A | 2, DC-23 A |
| Suitable L&T fuse | | | | |
| $\overline{=}$ Rated fused short circuit current | kA | 80** | 100 | 100 |
| \square Rating A / Type / Size | 32 / HF / 14 x 51 | 63 / HF / 14 x 51 | 100 / HN / 00 | 125 / HN / 00 |
| $\overline{=}$ Rated fused short circuit current | kA | 80 | 80 | 80 |
| $\overline{=}$ Rating A / Type / Size | 32 / HQ / A1L | 63 / HQ / A1L | 100 / HQ / A3 & A4 | 125 / HQ / A4 |

* Power factor = 0.45 as required in IS 1347 - (part 3).
..... For 32, 63, 100, 125, 15000 cycles - Neutral is available as accessory.
** Suitable for cylindrical fuses.

Ordering Information

Ordering Suffix 0000 for all * Example: FN 32 Interior with handle * Ordering Information - SK955180000

| Description | FN 32 | FN 63 | FN 100 | FN 125 |
|-----------------------------------|---------|---------|---------|---------|
| SDF suitable for DIN Fuses | | | | |
| Interior with handle TPN | SK95518 | SK95421 | SK95568 | SK95001 |
| Interior in sheet steel enclosure | SK95612 | SK95613 | SK95569 | SK95005 |
| Interior with handle TP | | | ST30287 | ST27894 |
| SDF Suitable for BS Fuses | | | | |
| Interior with handle TPN | SK95653 | SK95651 | SK95570 | SK95009 |

| FN 160 | FN 200 | FN 250 | FN 315 | FN 400 | FN 630 | FN 800 |
|---------------|---------------|--------------------|---------------|---------------|---------------|--------------|
| 3+Neutral | 3+Neutral | 3+Neutral | 3+Neutral | 3+Neutral | 3+Neutral | 3+Neutral |
| Isolable | Isolable | Isolable | Isolable | Isolable | Isolable | Isolable |
| -20 to 50 | -20 to 50 | -20 to 50 | -20 to 50 | -20 to 50 | -20 to 50 | -20 to 50 |
| 415 | 415 | 415 | 415 | 415 | 415 | 415 |
| 690 | 690 | 690 | 690 | 690 | 690 | 690 |
| 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| 50 - 60 | 50 - 60 | 50 - 60 | 50 - 60 | 50 - 60 | 50 - 60 | 56-60 |
| 160 | 200 | 250 | 315 | 630 | 630 | 800 |
| 160 | 200 | 250 | 315 | 630 | 630 | 800 |
| 1600 | 2000 | 2500 | 3150 | 6300 | 6300 | 8000 |
| 1280 | 1600 | 2000 | 2520 | 5040 | 5040 | 6400 |
| 15000 | 10000 | 100000 | 10000 | 10000 | 10000 | 10000 |
| 185 | 240 | 240 | 400 | 2 x 400 | 2 X 625 | 2 X 625 |
| 50 | 120 | 120 | 240 | 240 | 400 | 400 |
| M 8 X M 20 | M 10 x 30 | M 10 x 30 | M 10 x 30 | M12 x 40 | M 16 x 50 | M 16 x 50 |
| 57 | 92 | 115 | 145 | 240 | 270 | 270 |
| 2, DC-23 A | 2, DC-23 A | 2, DC-23 A | 2, DC-23 A | 2, DC-23 A | 2, DC-23 A | 2, DC-23 A |
| 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| 160 / HN / 00 | 200 / HN / 0 | 250 / HN / 1 | 315 / HN / 1 | 400 / HN / 2 | 630 / HN / 3 | 800 / HN / 3 |
| 80 | 80 | 80 | 80 | 80 | 80 | 80 |
| 160 / HQ / A4 | 200 / HQ / B2 | 250 / HQ / B2 & B3 | 315 / HQ / B3 | 400 / HQ / B4 | 630 / HQ / C2 | |

| FN 160 | FN 200 | FN 250 | FN 315 | FN 400 | FN 630 | FN 800 |
|---------|---------|---------|---------|---------|---------|---------|
| SK95713 | SK95418 | SK95642 | SK95461 | SK95481 | SK95521 | SK95679 |
| SK95715 | SK95511 | SK95681 | SK95514 | SK95515 | SK95547 | SK95705 |
| SK95998 | ST27895 | ST31731 | ST27897 | ST27898 | ST27899 | ST31732 |
| SK95714 | SK95588 | SK95682 | SK95590 | SK95591 | SK95592 | |

Technical Data

Switch-Disconnector - Type FN Conforms to IEC 60947-3, IS / IEC 60947-3

| Type Designation | FN 32 | FN 63 | FN 100 | FN 125 |
|--|--------------------|--------------------|--------------------|--------------------|
| No. of Poles | 3+Neutral | 3+Neutral | 3+Neutral | 3+Neutral |
| Neutral | Switched | Switched | Isolable | Isolable |
| Service temperature | -20 to 50 | -20 to 50 | -20 to 50 | -20 to 50 |
| Rated operational voltage (U _n) | V 415 | V 415 | V 415 | V 415 |
| Rated insulation voltage (U _i) | V 690 | V 690 | V 690 | V 690 |
| Rated impulse withstand voltage (U _{imp}) | kV 8 | kV 8 | kV 8 | kV 8 |
| Rated frequency | Hz 50 - 60 | Hz 50 - 60 | Hz 50 - 60 | Hz 50 - 60 |
| Conventional enclosed thermal current at 40°C (I _{th}) | A 32 | A 63 | A 100 | A 125 |
| Rated operational current (I_n) | | | | |
| AC 20 A utilization category | A 32 | A 63 | A 100 | A 125 |
| AC 21 A utilization category | A 32 | A 63 | A 100 | A 125 |
| AC 22 A utilization category | A 32 | A 63 | A 100 | A 125 |
| AC 23 A utilization category | A 32 | A 63 | A 100 | A 125 |
| Rated making capacity (436 V, cosφ = 0.35) | A 320 | A 630 | A 1000 | A 1250 |
| Rated breaking capacity (436 V, cosφ = 0.35) | A 256 | A 504 | A 800 | A 1000 |
| Capacitor duty - 415 V 50 - 60 Hz | kVA 14 | kVA 29 | kVA 45 | kVA 57 |
| Mechanical life (Operating cycles) | 15000 | 15000 | 15000 | 15000 |
| Terminal capacity (main) | mm ² 35 | mm ² 35 | mm ² 95 | mm ² 95 |
| Terminal capacity (neutral) | mm ² 35 | mm ² 35 | mm ² 50 | mm ² 50 |
| Terminal screw | mm M 6 x 12 | mm M 6 x 12 | mm M 8 x 20 | mm M 8 x 30 |
| Short circuit withstand current (without fuses) for 1 sec | kA 1.5 | kA 1.5 | kA 4 | kA 4 |
| DC Rating at 220 V DC | | | | |
| No. of poles in series, utilization category at rated current | 3, DC-23 A | 3, DC-23 A | 2, DC-23 A | 2, DC-23 A |

| FN 200 | FN 250 | FN 315 | FN 400 | FN 630 | FN 800 | FN 1000 | FN 1000H |
|------------|------------|------------|------------|------------|------------|------------|-----------|
| 3+Neutral | 3+Neutral | 3+Neutral | 3+Neutral | 3+Neutral | 3+Neutral | 3+Neutral | 3+Neutral |
| Isolable | Isolable | Isolable | Isolable | Isolable | Isolable | Isolable | Isolable |
| -20 to 50 | -20 to 50 | -20 to 50 | -20 to 50 | -20 to 50 | -20 to 50 | -20 to 50 | -20 to 50 |
| 415 | 415 | 415 | 415 | 415 | 415 | 415 | 415 |
| 690 | 690 | 690 | 690 | 690 | 690 | 690 | 690 |
| 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| 50 - 60 | 50 - 60 | 50 - 60 | 50 - 60 | 50 - 60 | 50 - 60 | 50 - 60 | 50 - 60 |
| 200 | 250 | 315 | 400 | 630 | 800 | 1000 | 1000 |
| 200 | 250 | 315 | 400 | 630 | 800 | 1000 | 1000 |
| 200 | 250 | 315 | 400 | 630 | 800 | 1000 | 1000 |
| 200 | 250 | 315 | 400 | 630 | 800 | 1000 | 1000 |
| 2000 | 2500 | 3150 | 4000 | 6300 | 8000 | 10000 | 10000 |
| 1600 | 2000 | 2520 | 3200 | 5040 | 6400 | 8000 | 8000 |
| 92 | 115 | 145 | 175 | 270 | 270 | 270 | 270 |
| 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | 6000 | 6000 |
| 240 | 400 | 400 | 2 x 400 | 2 x 625 | 2 x 625 | 2 x 625 | 2 x 625 |
| 120 | 120 | 120 | 240 | 400 | 400 | 400 | 400 |
| M 10 x 30 | M 10 x 30 | M 10 x 30 | M 12 x 40 | M 16 x 50 | M 16 x 50 | M 16 x 50 | M 16 x 50 |
| 6 | 10 | 14 | 14 | 20 | 20 | 25 | 50 |
| 2, DC-23 A | 2, DC-23 A | 2, DC-22 A | 2, DC-22 A | 2, DC-22 A | 2, DC-22 A | 2, DC-22 B | |

Ordering Information

Ordering Suffix 0000 for all * Example: FN 32 Interior with handle * Ordering Information - SK955410000

| Description | FN 32 | FN 63 | FN 100 | FN 125 |
|--------------------------|---------|---------|---------|---------|
| Interior with handle TPN | SK95541 | SK95540 | SK95571 | SK95405 |

| FN 200 | FN 250 | FN 315 | FN 400 | FN 630 | FN 800 | FN 1000 | FN 1000H |
|---------|---------|---------|---------|---------|---------|---------|----------|
| SK95607 | SK95608 | SK95609 | SK95610 | SK95611 | SK95551 | SK95710 | SK95992 |

Spares & Accessories

Wide range of spares & accessories are available for Switch-Disconnecter-Fuse units type FN.

Accessories

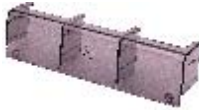
Switched Neutral:

In FN 32 / 63 Switched-Neutral pole is an integral part of the Switch-Disconnecter-Fuse. For higher ratings, a double break, site-fitted switched neutral pole can be provided. This is operated by the main mechanism.



Terminal Shroud:

The terminals can be shrouded for protection against phase-short circuit through an external conducting path and against accidental human contact with live terminals.



Mechanical Interlock Kit:

Two Switch-Disconnecter-Fuse units can be interlocked by mechanical interlock kit. After interlocking, the following three positions are possible:

- SDFU 1 in ON position SDFU 2 in OFF position
- SDFU 2 in ON position SDFU 1 in OFF position
- Both SDFUs in OFF position hence two mechanically interlocked SDFUs can be used as a changeover switch



Castell Interlock:

Switch-Disconnecter-Fuse units can be locked on OFF position with help of castell interlock. Castell interlock can also be used to interlock two SDF units. (Different variety of locks are available).



Shaft Extension Kit:

Shaft length can be increased with shaft extension kit.



Fuse Puller:

A fuse puller is provided to facilitate easy & safe removal of fuses.



Handle Coupling (type A & B):

Irrespective of the switch orientation (vertical or horizontal), operation in any of the four quadrants is possible by selecting right handle coupling (Refer table on next page).

Auxiliary Contacts:

1 NO + 1 NC auxiliary contact is available as an accessory. This can be suitably wired in the control circuit.

- Rated operational current I_o (AC - 15) - 4 A
- Rated operational voltage U_o - 415 V



Spares

Moving Contacts:

Moving contacts are available for ranges FN 100 to FN 800. One set of moving contact spare contains, spring, guide & moving contact.



Front Housing assembly:

Complete front housing assembly is available from FN 100 to FN 800.

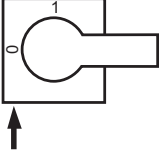
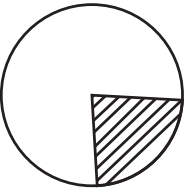
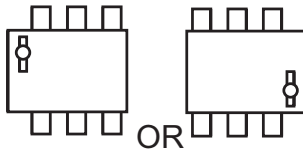

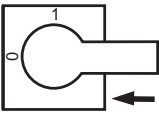
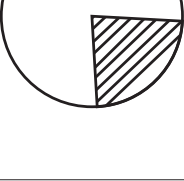
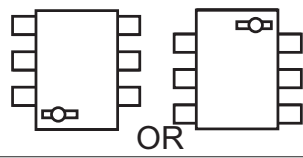

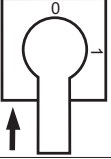
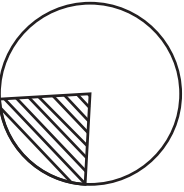
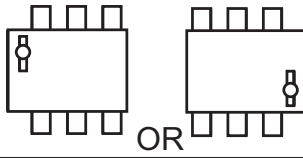

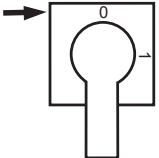
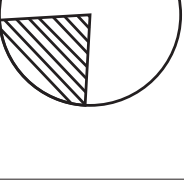
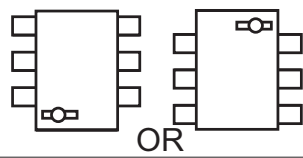

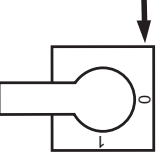
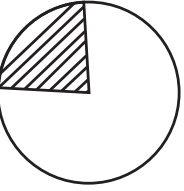
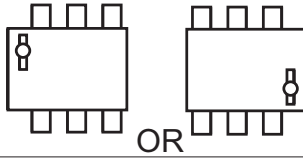

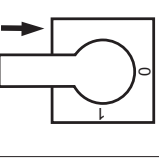
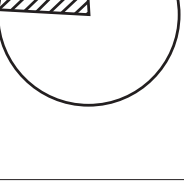
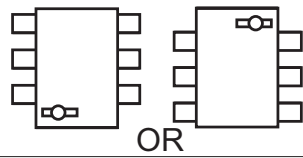

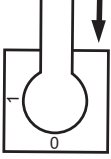
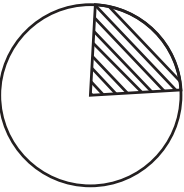
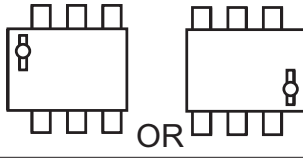

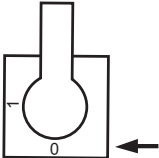
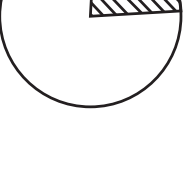
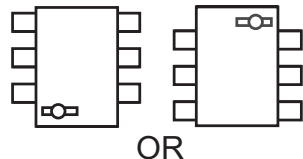



Spares & Accessories for FN Range - Ordering Information

| Versions | | FN 32 / 63 | FN 100 | FN 125/160 | FN 200 | FN 250 | FN 315 | FN 400 | FN 630 | FN 800 | FN 1000/1000H | |
|------------------------------|-----------------------------|-------------------|---------------|------------|---------|---------|-------------------|---------|---------|---------|---------------|--|
| Spares | Moving Contact | Not Available | SK91373 | | SK91374 | SK91375 | SK91376 | SK91377 | SK91378 | SK91379 | Not Available | |
| | Front Housing Assembly | Not Available | ST31677 | ST31678 | ST31679 | ST31729 | ST31681 | ST31682 | ST31683 | ST31730 | Not Available | |
| Accessories | Terminal Shroud Kit | SK91190 | SK91137 | | SK91335 | | SK91346 | | SK91347 | | | |
| | Switched Neutral Kit | Built-in | SK95233 | | SK95516 | | SK95517 | | SK95546 | | | |
| | Aux. Contact (1 NO + 1 NC) | SK91302 | SK91328 | | SK91329 | | SK91330 | | | | | |
| | Handle Coupling (Type - A) | SK91257 | SK91258 | | | | | SK91259 | | | | |
| | Handle Coupling (Type - B) | SK91277 | SK91278 | | | | | SK91279 | | | | |
| | Handle Coupling (Type - CE) | SK91337 | Not Available | | | | | | | | | |
| | Fuse Puller | SK91185 | | | | | | SF90126 | | | | |
| | Shaft Extension Kit | Not Available | SK95600 | | | | | SK91331 | | | | |
| | Mechanical Interlock Kit | Not Available | SK95232 | | | | | SK95545 | | | | |
| Castell Lock (Type A-Type D) | Not Available | SK00333 - SK00336 | | | | | SK00345 - SK00348 | | | | | |

Selection of Handle

Seen from front of the door

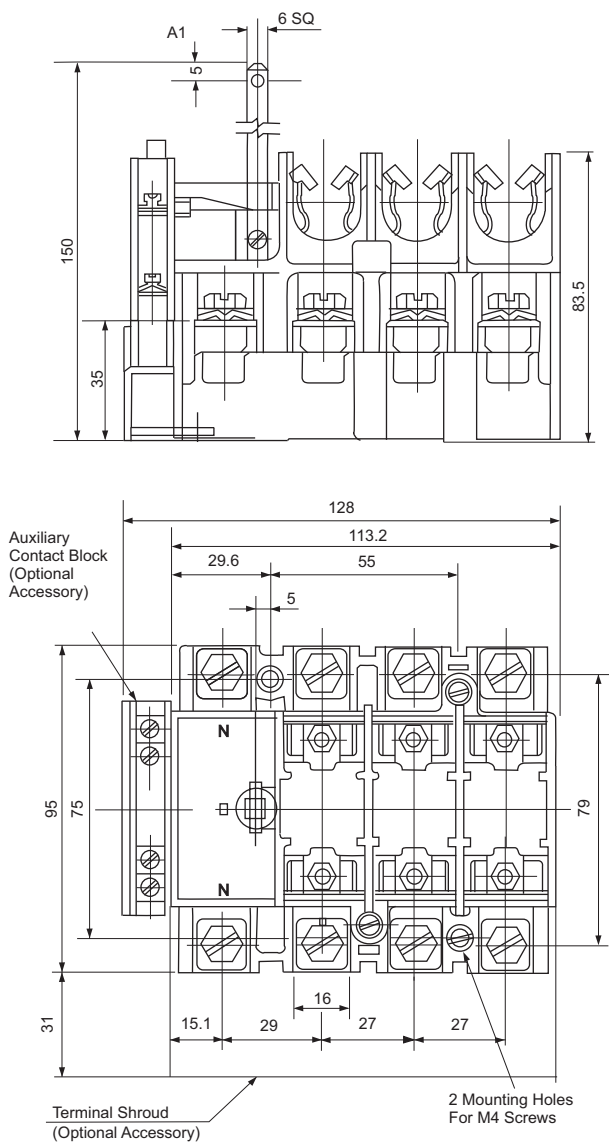
| Sr. No. | Handle (off) Position | Operating Quadrant (hand) | Switch Orientation | Door Cut-out | Handle Coupling Type |
|---------|---|---|--|---|----------------------|
| 1 |  |  |  |  | A |
| 2 |  |  |  |  | B |
| 3 |  |  |  |  | B |
| 4 |  |  |  |  | A |
| 5 |  |  |  |  | A |
| 6 |  |  |  |  | B |
| 7 |  |  |  |  | B |
| 8 |  |  |  |  | A |

Note : Arrow (←) indicates position of Interlock Defeat Key
 Type A : supplied as standard with all S-D-Fs
 Type B : supplied on request

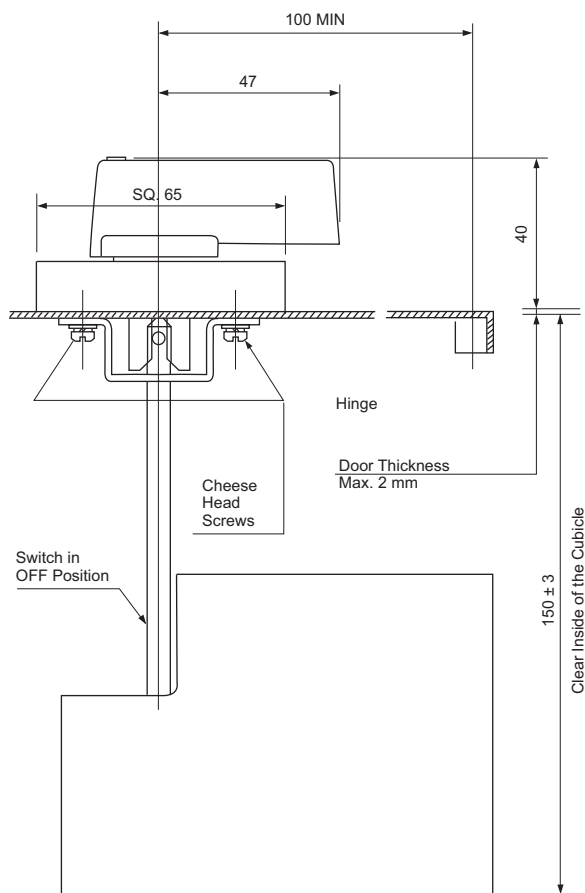
Overall Dimensions

Switch-Disconnecter-Fuse (suitable for DIN type fuses)

SDF - FN 32 / 63

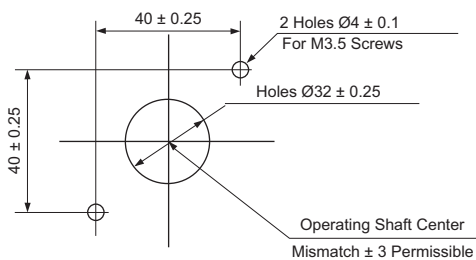


Assembly of Handle Coupling on Door - FN 32 / 63

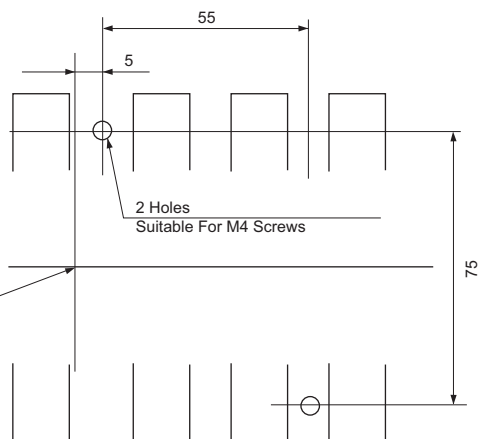


Drilling details FN 32 / 63

Drilling details on door for mounting handle coupling seen from front of the door



Drilling details on base plate for mounting switch seen from front of the door

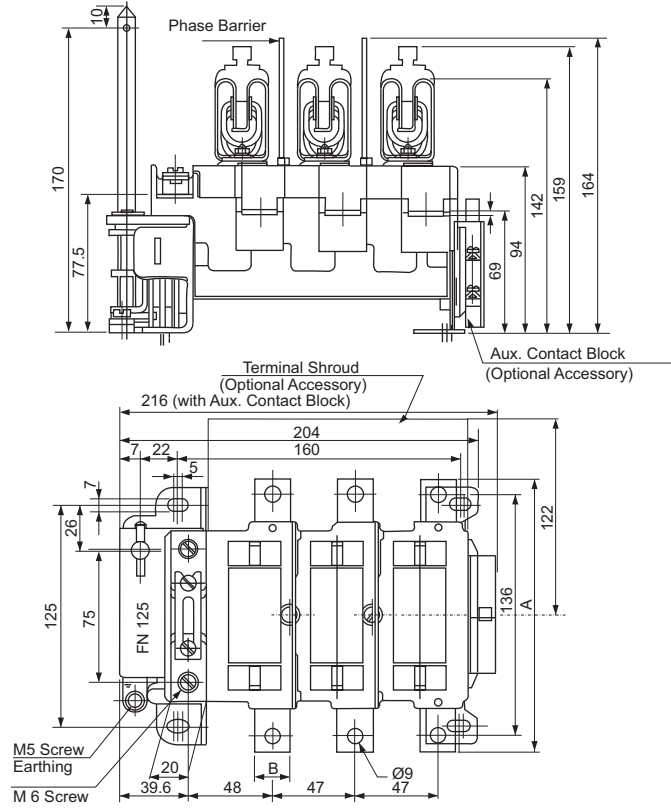


Note : All dimensions are in mm.

Switch-Disconnecter-Fuse (suitable for DIN type fuses)

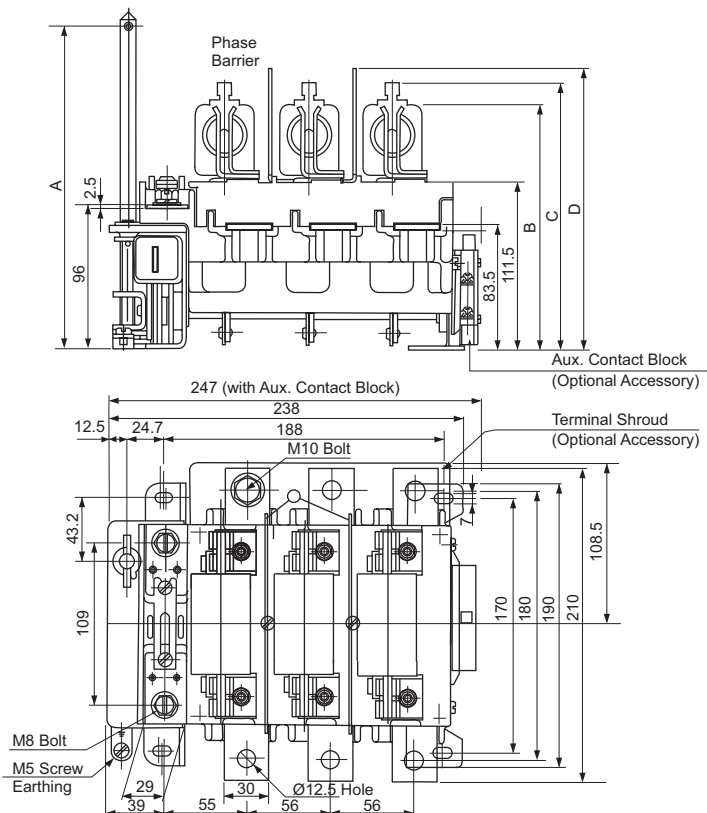
FN 100 / 125 / 160

| Type | A | B |
|--------------|-----|----|
| FN 100 / 125 | 154 | 20 |
| FN 160 | 164 | 25 |



FN 200 / 250

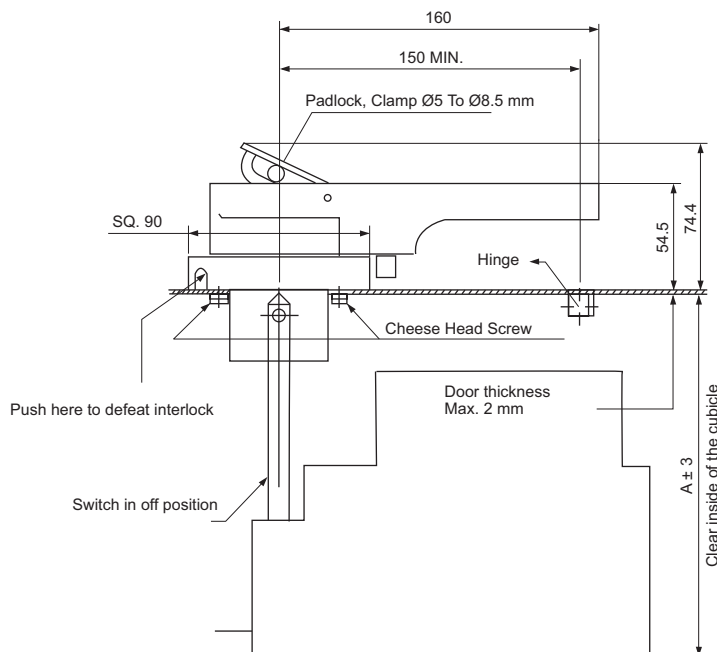
| Type | A | B | C | D |
|--------|-----|-------|-------|-------|
| FN 200 | 190 | 162.5 | 178 | 187.5 |
| FN 250 | 206 | 108.5 | 194.5 | 204 |



Note : All dimensions are in mm.

Overall Dimensions

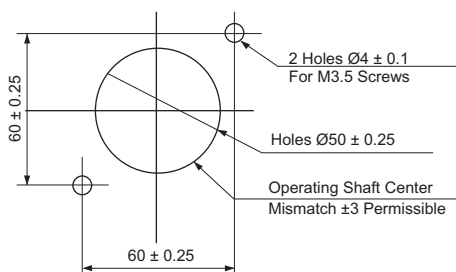
Assembly of Handle Coupling on Door FN 100 / 125 / 160 / 200 / 250



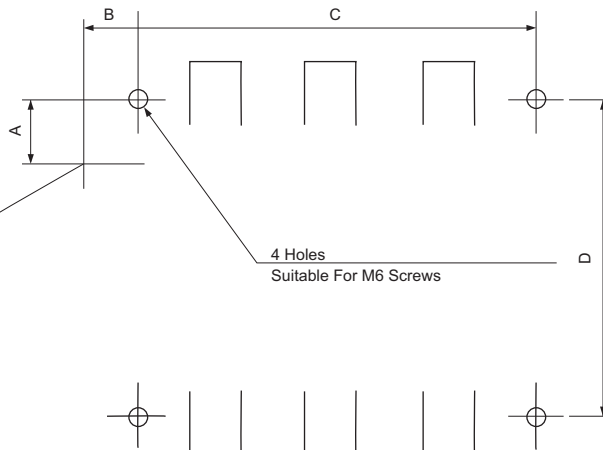
| Dimension | FN 100 / 125 / 160 | FN 200 | FN 250 |
|-----------|--------------------|--------|--------|
| A | 180 | 200 | 216 |

Drilling details FN 100 / 125 / 160 / 200 / 250

Drilling details on door
for mounting handle coupling
seen from front of the door



Drilling details on base plate
for mounting switch
seen from front of the door

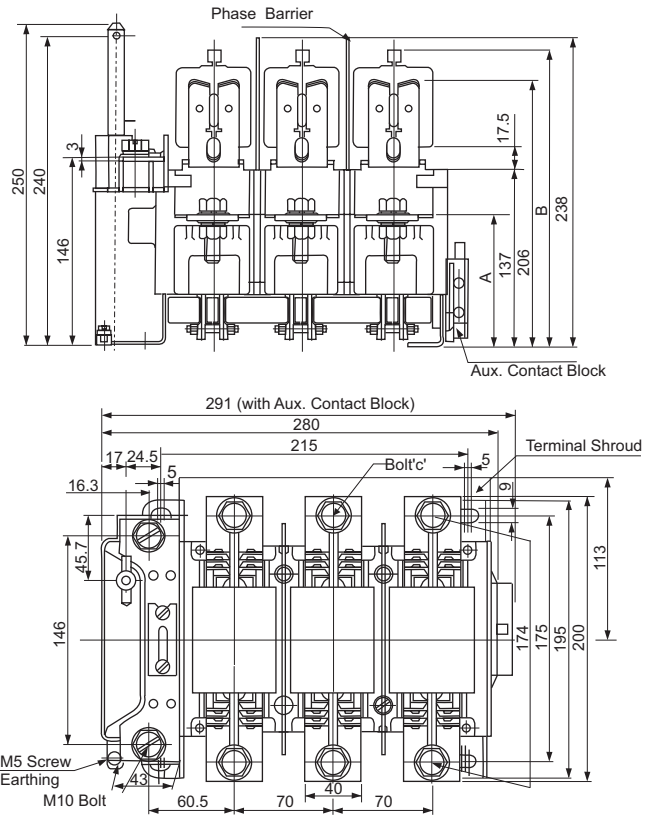


| Type | A | B | C | D |
|--------------------|------|------|-----|-----|
| FN 100 / 125 / 160 | 26 | 22 | 160 | 125 |
| FN 200 | 43.2 | 24.7 | 188 | 170 |
| FN 250 | 43.2 | 24.7 | 188 | 170 |

Note : All dimensions are in mm.

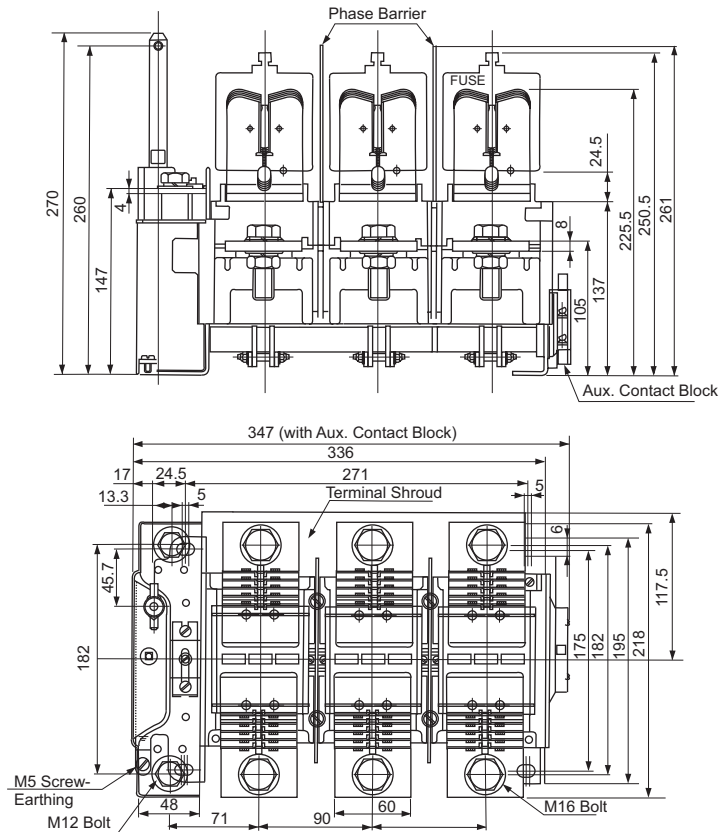
Switch-Disconnecter-Fuse (suitable for DIN type fuses)

FN 315 / 400



| Type | A | B | C |
|--------|-----|-----|-----|
| FN 315 | 103 | 220 | M10 |
| FN 400 | 102 | 228 | M12 |

FN 630 / 800

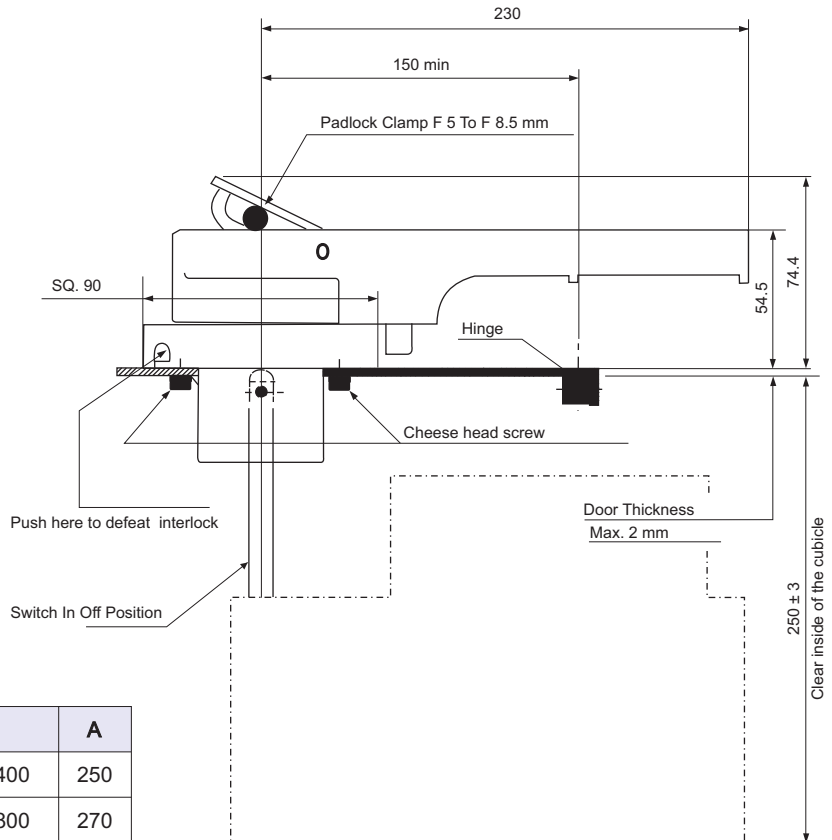


| Type | A |
|--------|---|
| FN 630 | 6 |
| FN 800 | 8 |

Note : All dimensions are in mm.

Overall Dimensions

Assembly of Handle Coupling on Door FN 315 / 400 / 630 / 800

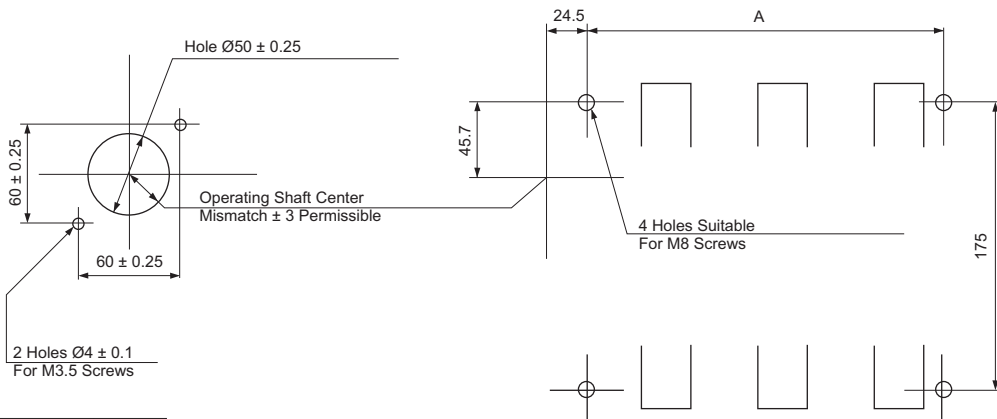


| Type | A |
|-----------------|-----|
| FN 315 / FN 400 | 250 |
| FN 630 / FN 800 | 270 |

Drilling details FN 315 / 400 / 630 / 800

Drilling details on door for mounting handle coupling seen from front of the door

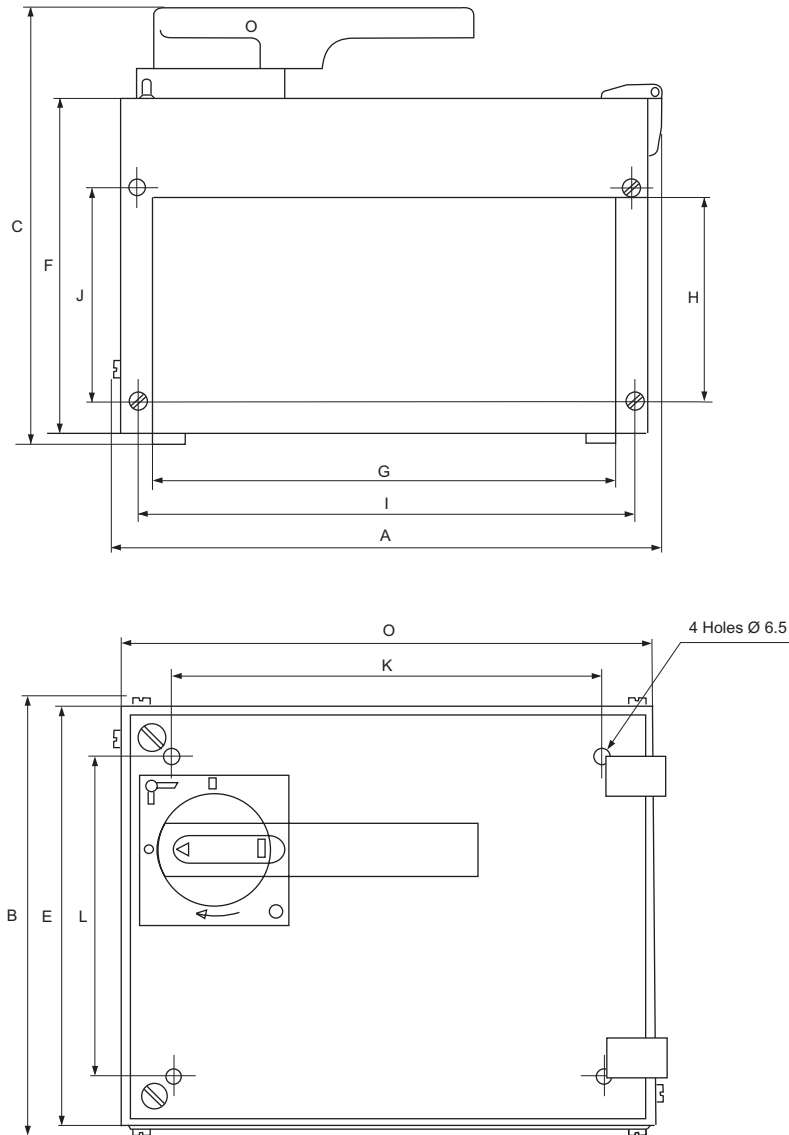
Drilling details on base plate for mounting switch seen from front of the door



| Type | A |
|-----------------|-----|
| FN 315 / FN 400 | 215 |
| FN 630 / FN 800 | 271 |

Note : All dimensions are in mm.

FN in Sheet Steel Enclosure

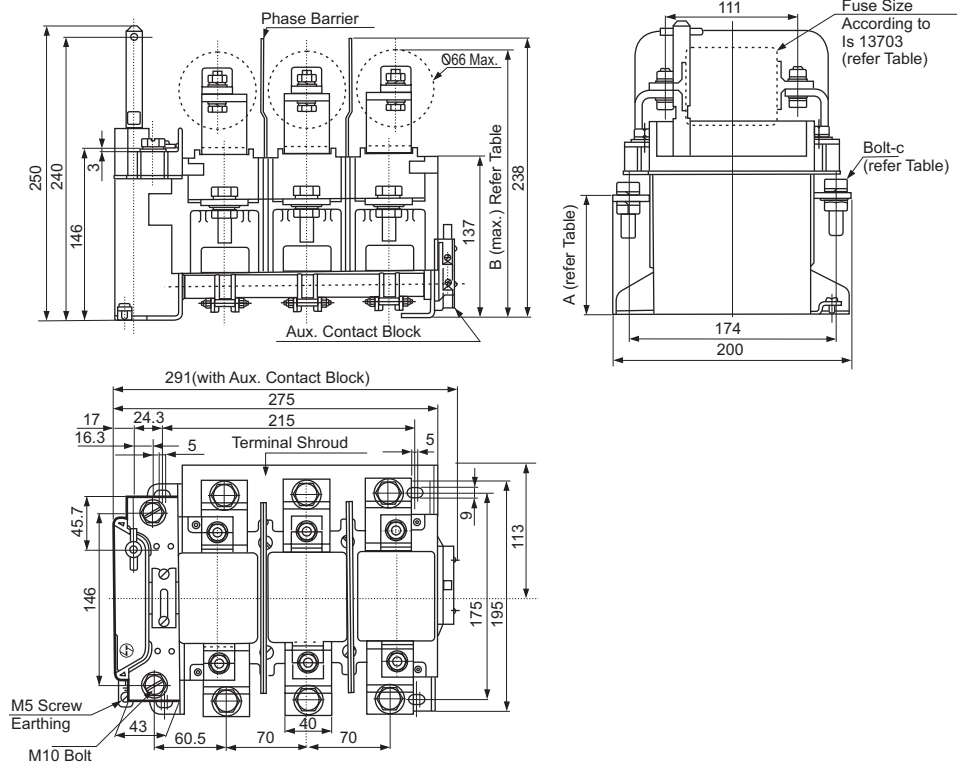


| Type | Extreme overall dimension | | | Basic enclosure dimension | | | Cutout for Cables | | GI and Plate mounting dimension | | Enclosure mounting dimension | |
|--------------------|---------------------------|-----|-----|---------------------------|-----|-----|-------------------|-----|---------------------------------|-----|------------------------------|-----|
| | A | B | C | D | E | F | G | H | I | J | K | L |
| FN 32 / 63 | 245 | 238 | 196 | 230 | 226 | 153 | 190 | 73 | 210 | 80 | 170 | 165 |
| FN 100 / 125 / 160 | 288 | 265 | 245 | 273 | 253 | 183 | 233 | 104 | 253 | 110 | 213 | 193 |
| FN 200 | 335 | 265 | 265 | 320 | 253 | 203 | 280 | 124 | 300 | 130 | 260 | 193 |
| FN 250 | 335 | 265 | 281 | 320 | 253 | 219 | 280 | 124 | 300 | 130 | 260 | 193 |
| FN 315 / 400 | 365 | 265 | 315 | 350 | 253 | 253 | 310 | 185 | 330 | 191 | 300 | 203 |
| FN 630 / 800 | 421 | 285 | 337 | 406 | 273 | 273 | 366 | 185 | 386 | 191 | 346 | 223 |

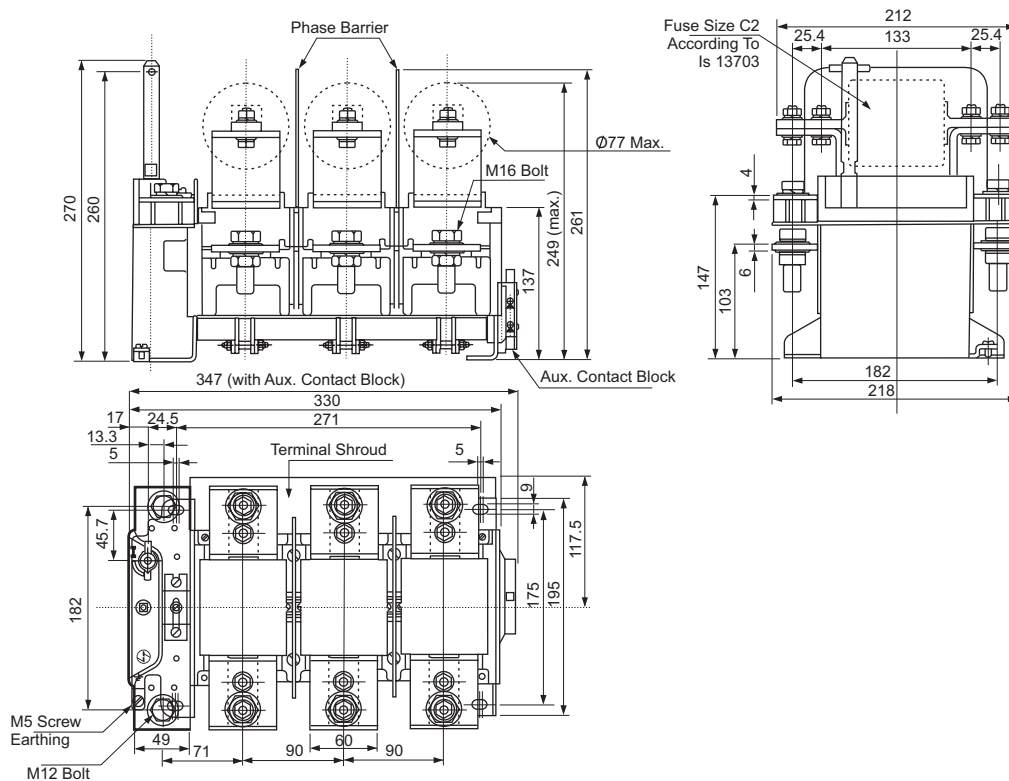
Note : All dimensions are in mm.

Switch-Disconnecter-Fuse (suitable for BS type fuses)

FN 315 / 400



FN 630



Note : All dimensions are in mm.

HRC Fuses - Cylindrical

Fuse Links Type HF

(Fuse links with cylindrical contact caps)

- Conforms to IEC60269 / IS13703
- Low watt loss - Saves power
- Low let through energy
- High breaking capacity - 80 kA
- Rated voltage - 415 V
- Immediate fault indication through red pop up indicator
- Lower power loss in our fuses result in cooler running of associated products



Ordering Details

| Size | Fuse Rating (A) | Cat. Nos. | Rated watt loss |
|---------|-----------------|-----------|-----------------|
| 14 x 51 | 2 | SF90144 | 0.6 |
| | 4 | SF90145 | 0.6 |
| | 6 | SF90146 | 1.1 |
| | 8 | SF90147 | 1.2 |
| | 10 | SF90148 | 1.0 |
| | 16 | SF90150 | 2.4 |
| | 20 | SF90151 | 2.4 |
| | 25 | SF90152 | 3.2 |
| | 32 | SF90142 | 5.0 |
| | 40 | SF90143 | 5.0 |
| | 50 | SF90158 | 5.0 |
| | 63 | SF90159 | 7.4 |

Fuse-pulling handle should be used for safe and easy removal of fuse links

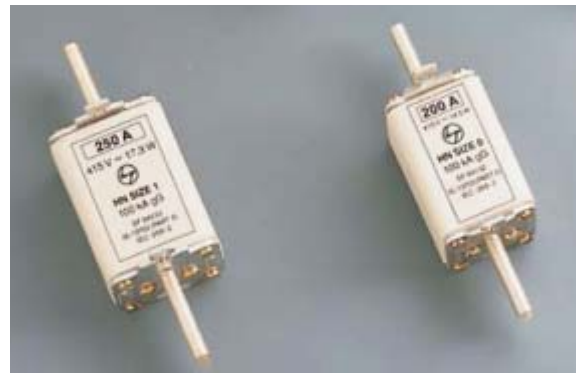
Suitable fuse - pulling handle for type HF : SK91185

HRC Fuses - Blade / Knife type

Fuse Links Type HN

(Fuse links with blade contacts)

- Conforms to IEC60269 / IS13703
- Low watt loss - Saves power
- Cooler running of associated products
- Low let through energy
- High breaking capacity - 100 kA
- Immediate fault indication
- Rated voltage - 415 V



| Size of the fuse link | Rating (A) | Cat. Nos. | Rated watt loss | Watt loss limits as per IS 13703 |
|-----------------------|----------------|-----------|-----------------|----------------------------------|
| Size 000 | 63 | SF94940 | 5.3 | 100 Amp, Fuse-7.5 W |
| | 80 | SF94941 | 6.2 | |
| | 100 | SF94942 | 7 | |
| | New 125 | SF94946 | 9.5 | |
| Size 00 | 63 | SF94027 | 5.7 | 100 Amp, Fuse-7.5 W |
| | 80 | SF94028 | 6.9 | |
| | 100 | SF94029 | 7.5 | |
| | 125 | SF94030 | 9.8 | |
| | 160 | SF94939 | 12 | |
| Size 0 | 80 | SF94128 | 8.3 | 160 Amp, Fuse-16 W |
| | 100 | SF94129 | 9.1 | |
| | 125 | SF94130 | 11.3 | |
| | 160 | SF94131 | 12.7 | |
| | 200 | SF94132 | 14.5 | |
| Size 1 | 125 | SF94230 | 10.3 | 250 Amp, Fuse-23 W |
| | 160 | SF94231 | 12.3 | |
| | 200 | SF94232 | 14.3 | |
| | 250 | SF94233 | 17.3 | |
| | 315 | SF94234 | 25.5 | |
| Size 2 | 200 | SF94332 | 14.1 | 400 Amp, Fuse-34 W |
| | 250 | SF94333 | 16.9 | |
| | 315 | SF94334 | 20.2 | |
| | 400 | SF94335 | 24.9 | |
| Size 3 | 315 | SF94434 | 20.5 | 630 Amp, Fuse-48 W |
| | 400 | SF94435 | 26.7 | |
| | 500 | SF94436 | 36.1 | |
| | 630 | SF94437 | 42.2 | |
| | 800 | SF94938 | 48 | |

Fuse-pulling handle should be used for safe and easy removal of fuse links
 Suitable fuse - pulling handle for type HN : SF90126

HRC Fuses - Bolted

Fuse Links Type HG and HQ

(Fuse links for bolted connections)

- Conforms to IEC60269 / IS13703
- Low watt loss
- Low let through energy
- High breaking capacity - 80kA
- Rated voltage - 415V

Type HQ

| Size of the fuse | Rating (A) | Cat. Nos. | Rated Watt Loss |
|------------------|------------|-----------|-----------------|
| A1 | 2 | ST30736 | 0.3 |
| | 4 | ST30737 | 0.5 |
| | 6 | ST30738 | 1.2 |
| | 10 | ST30739 | 1.4 |
| | 16 | ST30740 | 1.8 |
| | 20 | ST30741 | 2.2 |
| | 25 | ST30742 | 2.9 |
| A1L | 32 | ST30743 | 3.0 |
| | 20 | ST34527 | 2.4 |
| | 25 | ST34528 | 3.1 |
| | 32 | ST34529 | 3.4 |
| | 50 | ST35827 | 4.0 |
| A2 | 63 | ST35828 | 4.7 |
| | 4 | ST30747 | 0.8 |
| | 6 | ST30748 | 1.4 |
| | 10 | ST30749 | 1.5 |
| | 16 | ST30750 | 2.0 |
| | 20 | ST30751 | 2.8 |
| | 25 | ST30752 | 3.8 |
| A3 | 32 | ST30753 | 4.4 |
| | 35 | ST30759 | 4.5 |
| | 50 | ST30760 | 6.2 |
| A4 | 63 | ST30761 | 6.8 |
| | 80 | ST30767 | 9.1 |
| | 100 | ST30768 | 9.5 |
| | 125 | ST30769 | 14 |
| B1 | 160 | ST35829 | - |
| | 80 | ST30774 | 9.2 |
| | 100 | ST30775 | 10.5 |
| B2 | 125 | ST30776 | 16.0 |
| | 125 | ST30777 | 15.0 |
| | 160 | ST30778 | 19.5 |
| B3 | 200 | ST30779 | 20.5 |
| | 250 | ST30781 | 28 |
| B4 | 315 | ST30782 | 32 |
| | 355 | ST30783 | 34 |
| C2 | 400 | ST30784 | 38 |
| | 400 | ST30785 | 38 |
| | 500 | ST30786 | 50 |
| C3 | 630 | ST30787 | 55 |
| | 630 | ST30788 | 58 |



Type HG

| Size | Rating (A) | Cat. Nos. | Rated Watt Loss |
|------|------------|-----------|-----------------|
| F1 | 2 | ST30725 | 0.3 |
| F1 | 4 | ST30726 | 0.5 |
| F1 | 6 | ST30727 | 1.2 |
| F1 | 10 | ST30728 | 1.4 |
| F1 | 16 | ST30729 | 1.8 |
| F1 | 20 | ST30730 | 2.2 |
| F1 | 25 | ST30731 | 2.9 |
| F1 | 32 | ST30732 | 3.0 |

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