STANDARD

Not just safety from short-circuit and overload…

+ XL TERMINAL CAPACITY + SLIDING SHUTTERS + HAMMER TRIP MECHANISM

DOMESTIC PRODUCT CATALOGUE

ASPIDA

MCB SINGLE POLE


Safety sliding shutters


Line load reversible

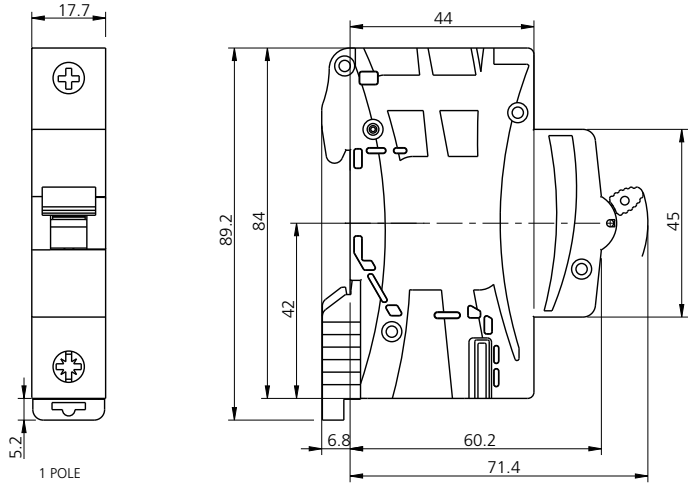

Large termina capacity


Breathing channels

PRODUCT RATING WITH CAT. NUMBER

Current Rating (A)	Cat No. B-Curve	Cat No. C-Curve
0.5 A	-	DSMGCSPF0X5
1 A	-	DSMGCSPF001
2 A	-	DSMGCSPF002
2.5 A	-	DSMGCSPF2X5
3 A	-	DSMGCSPF003
5 A	-	DSMGCSPF005
6 A	DSMGBSPF006	DSMGCSPF006
10 A	DSMGBSPF010	DSMGCSPF010
16 A	DSMGBSPF016	DSMGCSPF016
20 A	DSMGBSPF020	DSMGCSPF020
25 A	DSMGBSPF025	DSMGCSPF025
32 A	DSMGBSPF032	DSMGCSPF032
40 A	DSMGBSPF040	DSMGCSPF040
50 A	DSMGBSPF050	DSMGCSPF050
63 A	DSMGBSPF063	DSMGCSPF063

DIMENSION in mm



MINIATURE CIRCUIT BREAKER

Electricity is an inseparable part of our daily lifestyle. In residential, commercial and industrial sectors there are myriad systems, equipments and sophisticated appliances that depend on electrical energy. Uncontrolled electrical power can be extremely dangerous. Overloads, crowded wiring, short-circuits and all kinds of interruptions in electric supply can lead to devastating losses, least of them being financial.
We at STANDARD are proud to be known and respected all over the world for our range of superior quality electrical control and safety devices. Through these, we speak of our lasting concern for safety, economy and productivity for our customers.

The latest product from STANDARD is 10kA MCB, an advanced Indian design of high performance, current limiting and switching, for control and protection of industrial, commercial & domestic electrical sub circuits. It meets the latest specification IS / IEC : 60898-1 of B & C Characteristics.
The primary function of the MCB is to protect the installation such as cable & other components from damage, caused due to overload & short-circuit fault. Overload can result in heating effect on cable. Protection in this respect is assured by matching the cable rating to the current rating of MCB. Under short-circuit condition, mechanical damage can occur due to strong magnetic field caused by high current peaks and overheating use cables on account use "exclusive let through energy". The current limiting action use"MCB" ensures low value of both peak current "cut off" and minimum let through energy.

FEATURES & BENEFITS

- Design
- Latest & one of the best designed MCB
- Higher performance in a smaller package
- MCBs conforms to the latest Standards IS / IEC : 60898-1 / 2002
- These MCBs provide reliable protection to circuits against overload & short-circuit ideal for industrial, commercial & residential installations

CERTIFICATIONS

- ISI
- Higher breaking capacity
- Breaking capacity of 10kA for the complete range from 6A to 63A in single pole and multipole tested at CPRI

LARGER TERMINALS

Dual termination facility for incoming side and can take wire upto 35 sq. mm cross section. Wire may be of copper or aluminum.

SHOCK PROOF

Offer IP 20 degree of protection. All live parts are out of human reach ensuring safety to user.

LONGER LIFE

Reduced electro magnetic stresses resulting in increased contact life.

FLEXIBILITY

Can be mounted easily in any of the regular Distribution Boards.

ENERGY SAVING

IS / IEC : 60898-1 have recognized the growing importance of limiting power loss in Switchgear devices and stipulated max. permissible power loss values per pole of MCB. MCB having power loss figures of 50% lower watts than IS requirement. Thus, 50% energy & cost saving by application.

PROTECTION UNLIMITED

STANDARD MCBs protect against overload and short circuit.

OVERLOAD PROTECTION

It is achieved by thermal operation of the bimetal strip which deflects when heated by the over current going through it, thereby tripping the operating mechanism and causing the contact to open.

THERMOSTATIC BI-METAL

It is a composite material comprising of two metallic layers of different co-efficient of thermal expansion which are permanently bonded together by pressure welding.

SHORT CIRCUIT PROTECTION

In short circuit, the high current in the range of kA energises the solenoid and a magnetic field is created. Due to this magnetic field the anchor is pulled down which pushes the plunger to strike the inner latch, causing instantaneous opening of the contacts.

ASPIDA

MCB DOUBLE POLE


Safety sliding shutters


Line load reversible

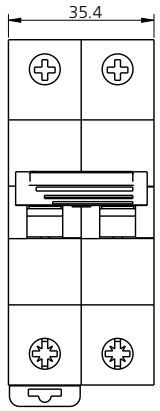

Large termina capacity

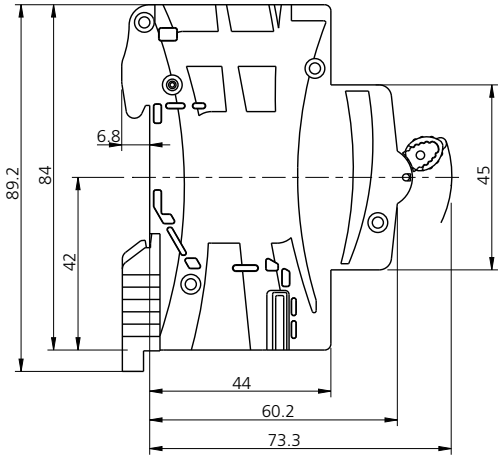

Breathing channels

PRODUCT RATING WITH CAT. NUMBER

Current Rating (A)	Cat No. B-Curve	Cat No. C-Curve
0.5 A	-	DSMGCDPF0x5
1 A	-	DSMGCDPF001
2 A	-	DSMGCDPF002
2.5 A	-	DSMGCDPF2X5
3 A	-	DSMGCDPF003
5 A	-	DSMGCDPF005
6 A	-	DSMGCDPF006
10 A	-	DSMGCDPF010
16 A	-	DSMGCDPF016
20 A	-	DSMGCDPF020
25 A	-	DSMGCDPF025
32 A	-	DSMGCDPF032
40 A	-	DSMGCDPF040
50 A	-	DSMGCDPF050
63 A	-	DSMGCDPF063

DIMENSION in mm



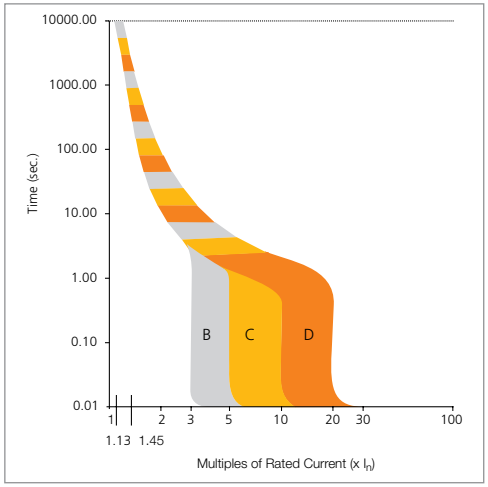


1 Pole + Neutral
& 2 Pole

MINIATURE CIRCUIT BREAKER

CHARACTERISTIC CURVES

As per	Thermal Tripping			Magnetic Tripping		
	No tripping	Tripping	Time	Hold	Trip	Time
IS / IEC 60898-1	Current	Current	Limits	Current	Current	Limits
	I_1	I_2	t	I_4	I_5	t
B Curve	1.13 x I_n		≥1h	3xI_n		≥0.1s
		1.45 x I_n	<1h		5 x I_n	<0.1s
C Curve	1.13 x I_n		≥1h	5xI_n		≥0.1s
		1.45 x I_n	<1h		10 x I_n	<0.1s
D* Curve	1.13 x I_n		≥1h	10xI_n		≥0.1s
		1.45 x I_n	<1h		20 x I_n	<0.1s
I_3 = 2.55 x I_n			1 s < t < 60s for $I_n \leq$ 32A 1 s < t < 120s for I_n > 32A			



TIME CURRENT CHARACTERISTIC CURVES

Based on the Tripping Characteristics, Standard MCBs are available in 'B', 'C' and 'D*' curve to suit different types of applications.

'B' Curve: for protection of electrical circuits with equipment that does not cause surge current (lighting and distribution circuits).

Short circuit release is set to (3 - 5) In

'C' Curve: for protection of electrical circuits with equipment that causes surge current (inductive loads and motor circuits).

Short circuit release is set to (5 - 10) In

'D*' Curve: for protection of electrical circuits which causes high inrush current, typically 12-15 times the thermal rated current (transformers, X-ray machines etc.)

Short circuit release is set to (10 - 20) In

CURRENT LIMITING DESIGN

In a current limiting breaker, the tripping & arc control mechanism is so designed that under short circuit conditions, the contacts are physically separated and the electrodynamic forces set up by fault current assist the extinction in less than half cycle.

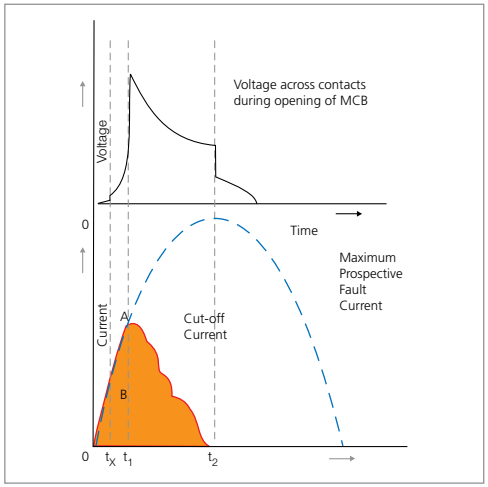
The figure shows the current limiting effect of a circuit breaker. Fault Traces for Voltage & Current

0 = Point of fault initiation

tx = Contact opening time (i.e., creation of arc)

t1 = Current / Voltage peak (i.e., current limitation)

t2 = Time to total extinction of arc (i.e., complete shutdown of fault current)



ASPIDA

MCB TRIPLE POLE


Safety sliding shutters


Line load reversible

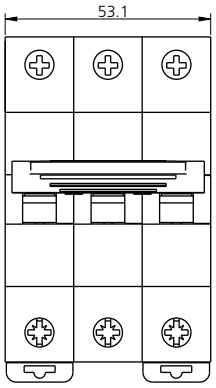

Large termina capacity


Breathing channels

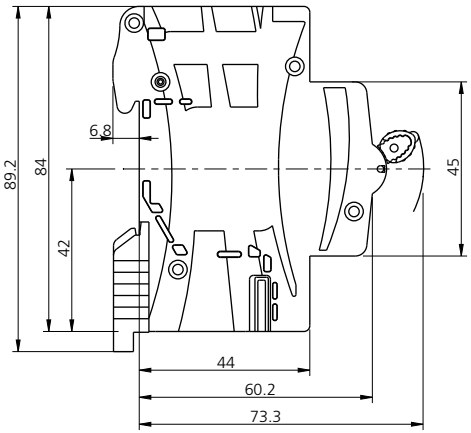
PRODUCT RATING WITH CAT. NUMBER

Current Rating (A)	Cat No. B-Curve	Cat No. C-Curve
0.5 A	-	DSMGCTPF0X5
1 A	-	DSMGCTPF001
2 A	-	DSMGCTPF002
2.5 A	-	DSMGCTPF2X5
3 A	-	DSMGCTPF003
5 A	-	DSMGCTPF005
6 A	-	DSMGCTPF006
10 A	-	DSMGCTPF010
16 A	-	DSMGCTPF016
20 A	-	DSMGCTPF020
25 A	-	DSMGCTPF025
32 A	-	DSMGCTPF032
40 A	-	DSMGCTPF040
50 A	-	DSMGCTPF050
63 A	-	DSMGCTPF063

DIMENSION in mm



3 Pole



MINIATURE CIRCUIT BREAKER

POWER LOSS DETAILS

S. No.	MCB Rating (A)	STANDARD MCBs Power Loss (W)	Max. Permissible Power Loss (W) As per IS/IEC:60898
1	6 A	0.9 W	3.0 W
2	8 A	1.1 W	3.0 W
3	10 A	1.6 W	3.0 W
4	16 A	2.5 W	3.5 W
5	20 A	2.8 W	4.5 W
6	25 A	3.2 W	4.5 W
7	32 A	3.4 W	6.0 W
8	40 A	4.9 W	7.5 W
9	63 A	7.3 W	13 W

TECHNICAL INFORMATION

		MCB		
Standard Conformity		IS / IEC 60898-1		
Type/Series		B	C	D***
Rated Current (In)	A	6 A - 63 A*	0.5 A - 63 A*	0.5 A - 63 A*
Rated Voltage (ac) (Ue)	V	240 V / 415 V		
Rated Frequency (f)	Hz	50 Hz		
Nos. of Poles (Execution)		SP, SPN, DP, TP, TPN, FP **		
Rated Short Circuit	kA	10 kA	10 kA	6 kA to 32 kA - 10 kA
Breaking Capacity				40 kA to 63 kA - 4.5 kA
Utilization Category Magnetic Release Setting		(3-5) In	(5-10) In	(10-20) In
Rated Insulation Voltage (Ui)	V	690 V		
Rated Impulse Voltage (Uimp)	kV	4 kV		
Electrical / Mechanical Endurance Endurance		4,000 (No. of operations)		
Ambient Temperature	(°C)			-5 to +45
Terminal Capacity (Max)	sq.mm	35 mm sq		
Vibration		3 g		
Shock		40 mm free fail		
Protection Class		IP - 20		
Installation Position		Vertical / Horizontal		
Mounting		Clip on DIn Rail (35 mm x 7.5 mm)		
Case & Cover		Moulded, flame retardant thermoplastic material.		

*Current Ratings - 0.5A, 1A, 2A, 3A, 4A, 5A, 6A, 8A, 10A, 13A, 16A, 20A, 25A, 32A, 40A, 50A, 63A

***D* Type MCB are available on request

** SP Single Pole
SPN Single Pole Neutral
DP Double Pole
TP Three Pole
TPN Three Pole Neutral
FP Four Pole

ASPIDA

MCB FOUR POLE


Safety sliding shutters


Line load reversible

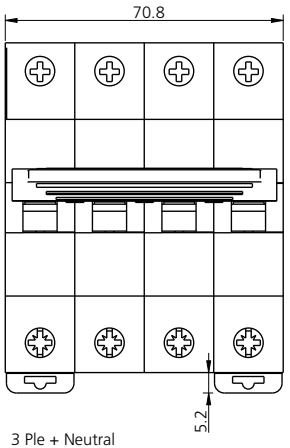

Large termina capacity


Breathing channels

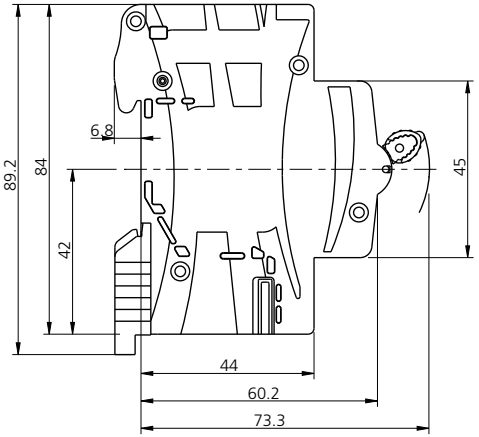
PRODUCT RATING WITH CAT. NUMBER

Current Rating (A)	Cat No. B-Curve	Cat No. C-Curve
0.5 A	-	DSMGCFPF0X5
1 A	-	DSMGCFPF001
2 A	-	DSMGCFPF002
2.5 A	-	DSMGCFPF2X5
3 A	-	DSMGCFPF003
5 A	-	DSMGCFPF005
6 A	-	DSMGCFPF006
10 A	-	DSMGCFPF010
16 A	-	DSMGCFPF016
20 A	-	DSMGCFPF020
25 A	-	DSMGCFPF025
32 A	-	DSMGCFPF032
40 A	-	DSMGCFPF040
50 A	-	DSMGCFPF050
63 A	-	DSMGCFPF063

DIMENSION in mm



3 Ple + Neutral
& 4 Pole



MINIATURE CIRCUIT BREAKER

MCB SELECTION CHART

Appliance	Capacity / wattage (1ϕ, 240 V~)	MCB Current Rating (A)	MCB Type
Air Conditioner	1.0 Ton	10 A	"C" series
	1.5 Ton	16 A	"C" series
	2.0 Ton	20 A	"C" series
Refrigerator	165 L	3 A	"C" series
	350 L	4 A	"C" series
Oven cum Griller	4500 W	32 A	"B" series
	1750 W	10 A	"B" series
Oven	750 W	6 A	"B" series
Hot plate	2000 W	10 A	"B" series
Room Heater	1000 W	6 A	"B" series
	2000 W	10 A	"B" series
Washing Machine	300 W	2 A	"C" series
Washing Machine			
(with heater)	1300 W	8 A	"C" series
Water Heater			
(storage/instant)	1000 W	6 A	"B" series
	2000 W	10 A	"B" series
	3000 W	16 A	"B" series
	6000 W	32 A	"B" series
Electric iron	750 W	6 A	"B" series
	1250 W	8 A	"B" series
Toaster			
(2 slices)	1200 W	8 A	"B" series
Electric Kettle	1500 W	10 A	"B" series

ASPIDA

MCB SINGLE POLE NEUTRAL


Safety sliding shutters


Line load reversible

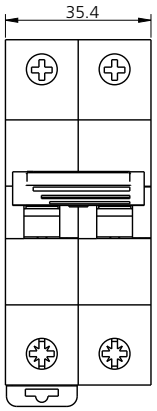

Large termina capacity

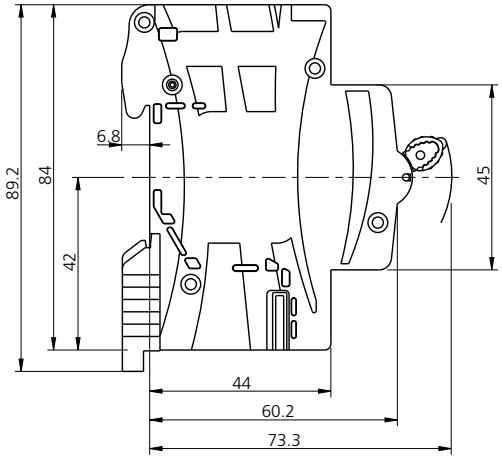

Breathing channels

PRODUCT RATING WITH CAT. NUMBER

Current Rating (A)	Cat No. B-Curve	Cat No. C-Curve
0.5 A	-	DSMGCSNF0X5
1 A	-	DSMGCSNF001
2 A	-	DSMGCSNF002
2.5 A	-	DSMGCSNF2X5
3 A	-	DSMGCSNF003
5 A	-	DSMGCSNF005
6 A	-	DSMGCSNF006
10 A	-	DSMGCSNF010
16 A	-	DSMGCSNF016
20 A	-	DSMGCSNF020
25 A	-	DSMGCSNF025
32 A	-	DSMGCSNF032
40 A	-	DSMGCSNF040
50 A	-	DSMGCSNF050
63 A	-	DSMGCSNF063

DIMENSION in mm





1 Pole + Neutral
& 2 Pole

MINIATURE CIRCUIT BREAKER

RATING OF MCBS FOR SPECIFIED NO. OF FITTINGS ("B" SERIES MCBS)

Lamp (Watt)	Number of Lamps	Rating (A)
20 W	8	1 A
	12	1.5 A
40 W	2	0.5 A
	10	2 A
	12	2.5 A
60 W	1	0.5 A
	4	1.5 A
	8	3 A
	12	4 A
80 W	1	0.5 A
	2	1 A
	5	2 A
	8	4 A
	12	5 A
100 W	1	1
	2	1.5
	4	2.5

Calculation Formula :

Incomer Current Rating, For Single Phase : $\frac{\text{Total Load in Watts}}{240\ \text{V}}$

Incomer Current Rating, For Three Phase : $\frac{\text{Total Load in Watts}}{\sqrt{3} \times 415\ \text{V}}$

"C" series MCB is used for all Motor Applications

Note : One lighting circuit can have up to 800 W or up to 10 lighting points

One power circuit can have up to 2000 W or 1 power points

ASPIDA

MCB TRIPLE POLE NEUTRAL


Safety sliding shutters


Line load reversible

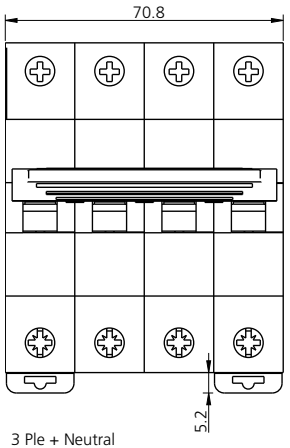

Large termina capacity


Breathing channels

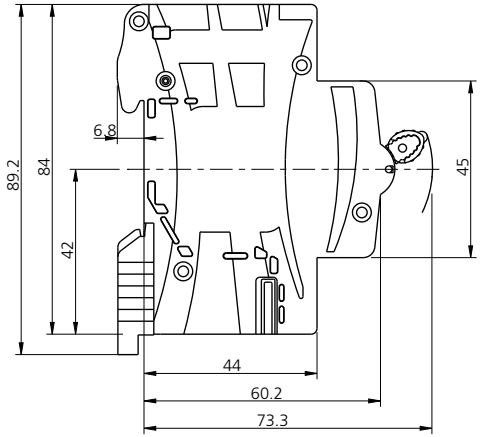
PRODUCT RATING WITH CAT. NUMBER

Current Rating (A)	Cat No. B-Curve	Cat No. C-Curve
0.5 A	-	DSMGCTNF0X5
1 A	-	DSMGCTNF001
2 A	-	DSMGCTNF002
2.5 A	-	DSMGCTNF2X5
3 A	-	DSMGCTNF003
5 A	-	DSMGCTNF005
6 A	-	DSMGCTNF006
10 A	-	DSMGCTNF010
16 A	-	DSMGCTNF016
20 A	-	DSMGCTNF020
25 A	-	DSMGCTNF025
32 A	-	DSMGCTNF032
40 A	-	DSMGCTNF040
50 A	-	DSMGCTNF050
63 A	-	DSMGCTNF063

DIMENSION in mm



3 Ple + Neutral
& 4 Pole



MINIATURE CIRCUIT BREAKER

AUXILLIARY CONTACT

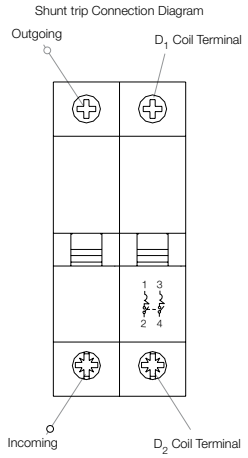
Standard Conformity		IEC : 60947-1
Type/Series		
Rated Current (In)	A	6 A
Rated Voltage (ac) (Ue)	V	240 V
Rated Frequency (f)	Hz	50 Hz
Contact Configration		1 NO + 1 NC / 2NO + 2NC
Utilization Category		AC 11
Rated Insulation Voltage (Ui)	V	690 V
Rated Impulse Voltage (Uimp)	kV	4 kV
Electrical Endurance (Nos.)		1000
Ambient Temperature	(°C)	-5 to 55
Terminal Capacity (Max)	sq.mm	4
Protection Class		IP 20
Mounting		Left side of the MCB Factory (Assembled)
Case & Cover		Moulded, flame retardant thermoplastic material.

SHUNT TRIP COIL

- To trip the Circuit Breaker through Shunt Trip Coil, 70% to 110% of the rated voltage is to be applied across D1 & D2
- The Shunt Trip coil is short time rated and it trip the breaker instantaneously. (i.e., continuous duty not required)

SHUNT TRIP

Standard Conformity		IEC : 60947-3
Type/Series		
Coil Consumption	VA	6
Rated Voltage (ac) (Ue)	V	240 V
Rated Voltage (dc) (Ue)	V	48 V, 24 V & 12 V
Rated Frequency (f)	Hz	50 Hz
Rated Insulation Voltage (Ui)	V	690 V
Operating Voltage range	V	70% - 110% of rated voltage
Electrical Endurance (Nos.)		10000
Ambient Temperature	(°C)	-5 to 55
Terminal Capacity (Max)	sq.mm	35 sq. mm
Protection Class		IP 20
Mounting		Right side of the MCB Factory (Assembled)
Case & Cover		Moulded, flame retardant thermoplastic material.



ASPIDA

HR MCB (80A - 125A) ‘C’ Series,

FEATURES

- Trip Free mechanism
- Positive Contact Indication
- Thermal and Magnetic trip function with Hammer trip operation
- Current Limiting design for short circuit fault protection

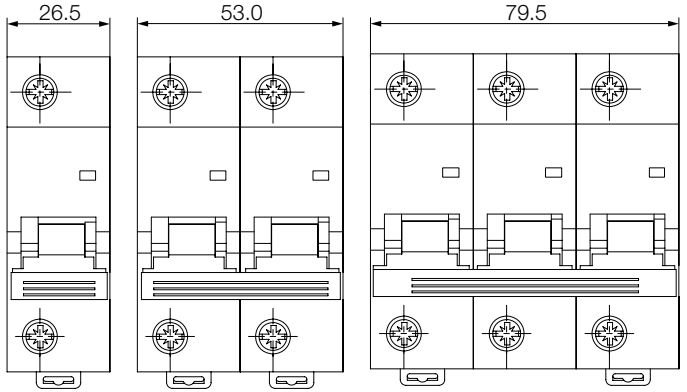
Safety Ensured*

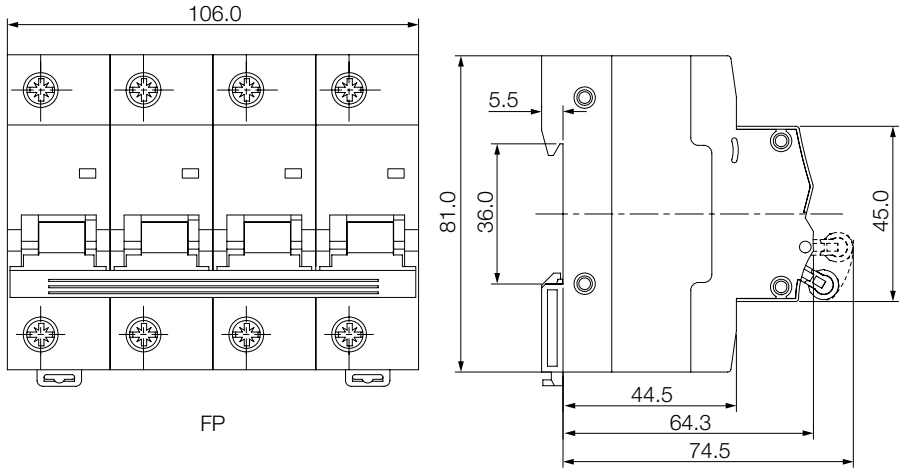
HIGHER RATING MCB (80A - 125A) ‘C’ SERIES,

(In accordance with IS/IEC 60947-2) 240 V / 415 V, 50 Hz, 10kA

Rating (A)	SP Cat. No.	DP Cat. No.	TP Cat. No.	FP Cat. No.
80 A	DSMCCSPF080	DSMCCDPF080	DSMCCTPF080	DSMCCFPF080
100 A	DSMCCSPF100	DSMCCDPF100	DSMCCTPF100	DSMCCFPF100
125 A	DSMCCSPF125	DSMCCDPF125	DSMCCTPF125	DSMCCFPF125

DIMENSION in mm





MINIATURE CIRCUIT BREAKER

RANGE

80A, 100A & 125A - 'C' Curve

EXECUTION

- Single Pole (1P), Double Pole (2P)
- Three Pole (3P), Four Pole (4P)

SPECIFICATION

IS / IEC 60947-2

Standard Conformity		IEC 60947 – 2
Type / Series		C
Rated Current (In)	A	80 A – 125 A*
Rated Voltage (Ue)	V~	240 V / 415 V
Rated Insulation Voltage (Ui)	V	690 V
Rated Impulse Withstand Voltage (Uimp)	kV	4 kV
Rated Frequency	Hz	50 Hz / 60 Hz
No. of Poles		1P, 2P, 3P, 4P**
Rated Ultimate Short Circuit Breaking Capacity (Icu)	kA	10 kA
Rated Service Short Circuit Breaking Capacity (Ics)		75% of Icu
Magnetic Release Setting (In)	A	(10 In - 10 A)
Mechanical Life	No. of Operations	8500
Electrical Life	No. of Operations	1500
Ambient Temperature	°C	- 5 to + 55
Terminal Capacity	mm^2	50
Tightening Torque	Nm	3.5
Protection Class		IP 20
Installation Position		Vertical / Horizontal
Mounting		Clip on DIN Rail (35mm x 7.5mm)

* Current Ratings: 80 A, 100 A, 125 A

** 1P Single Pole 3P Three Pole
2P Double Pole 4P Four Pole

ASPIDA

SWITCH DISCONNECTOR (ISOLATORS)


Safety sliding shutters


Line load reversible


Large termina capacity


Breathing channels

ISOLATOR SINGLE POLE (SP)

Rating (A)	Cat No.
40 A	DSMGISPX040
63 A	DSMGISPX063
100 A	DSMGISPX100
125 A	DSMGISPX125

ISOLATOR DOUBLE POLE (DP)

Rating (A)	Cat No.
40 A	DSMGIDPX040
63 A	DSMGIDPX063
100 A	DSMGIDPX100
125 A	DSMGIDPX125

ISOLATOR TRIPLE POLE (TP)

Rating (A)	Cat No.
40 A	DSMGITPX040
63 A	DSMGITPX063
100 A	DSMGITPX100
125 A	DSMGITPX125

ISOLATOR FOUR POLE (FP)

Rating (A)	Cat No.
40 A	DSMGIFPX040
63 A	DSMGIFPX063
100 A	DSMGIFPX100
125 A	DSMGIFPX125

SWITCH DISCONNECTOR (ISOLATORS)

Standard Conformity		IEC 60947 - 3
Type/Series		
Rated Current (In)	A	40A, 63A, 100A and 125A
Rated Voltage (ac) (Ue)	V	240 V / 415 V
Rated Frequency (f)	Hz	50 Hz
Nos. of Poles (Execution)		SP, DP, TP & FP
Utilization Category Magnetic Release Setting		AC 22A in 40 A & 63 A AC 23 A in 100 A & 125 A
Rated Insulation Voltage (Ui)	V	690 V
Rated Impulse Voltage (Uimp)	kV	4 kV (40 A - 63 A) 6 kV (100 A - 125 A)
Electrical Endurance (Nos.)		10000
Mechanical Endurance (Nos.)		20000
Ambient Temperature	(°C)	-5 to 55
Terminal Capacity (Max) for 40A to 63A	mm^2	35 mm^2
Terminal Capacity (Max) for 100 A to 125 A	mm^2	50 mm^2
Vibration		3 g
Shock		40mm free fall
Protection Class		IP 20
Installation Position		Vertical / Horizontal
Mounting		Clip on DIn Rail (35 mm x 7.5 mm)
Case & Cover		Moulded, flame retardant thermoplastic material.

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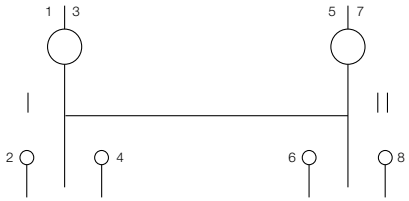
MCB CHANGEOVER SWITCH

Safety Ensured*

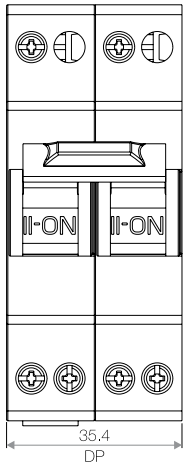
PRODUCT RATING WITH CAT. NUMBER

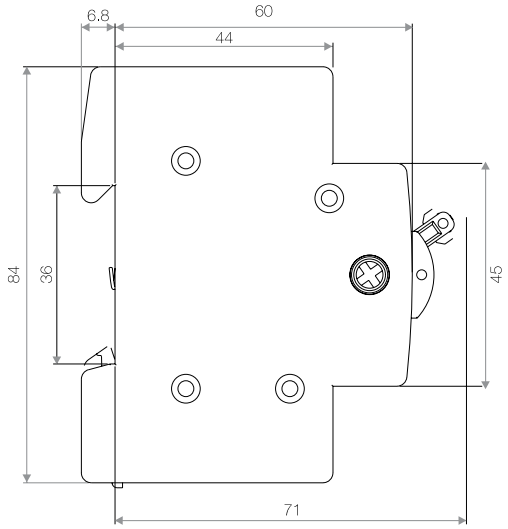
Current Rating (A)	Cat No.
25 A	DSMGODPX025
40 A	DSMGODPX040
63 A	DSMGODPX063



"I" - Incoming terminals (main supply) - 2 & 6
"II" - Incoming terminals (standby supply) - 4 & 8
Outgoing terminals (to load) - 1 & 5
* Mid position of knob is in 'OFF' position

DIMENSION in mm





MCB CHANGEOVER SWITCH

MCB Changeover switch finds wide & varied applications in industries as well as in domestic sphere for use in low voltage distribution circuits, wherever continuity of supply is necessary, for switching to an alternate source of supply from main supply and vice - versa.

These are switch disconnectors with independent manual operation, capable of making, carrying and breaking currents under normal circuit conditions, which may include operating overload condition and also carry currents under specified abnormal circuit conditions such as those of short circuit for a specified time.

FEATURES

- Compact construction
- Double break contacts
- Silver Cadmium Oxide contact tips
- Shrouded terminals
- Front operation with three stable positions I-O-II
- Centre position OFF
- Easy snap on DIN Rail mounting
- Can be mounted with other products viz. MCB, RCCB, Isolator in Distribution Board

CONSTRUCTION

The entire switching mechanism along with the fixed and moving contact assembly are housed in FR thermo plastic moulded case / cover, having high dielectric strength, excellent mechanical & thermal properties.
The switching mechanism is double break type. The contact tips are made of Silver Cadmium oxide for long electrical life, sustained current carrying capacity and ensure temperature rise is within specified limit.

TECHNICAL INFORMATION

IEC 60947 - 3

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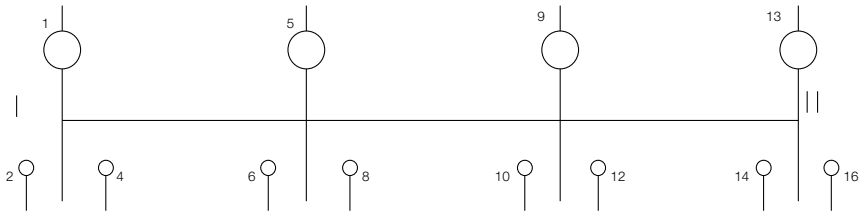
MCB CHANGEOVER SWITCH

Safety Ensured*

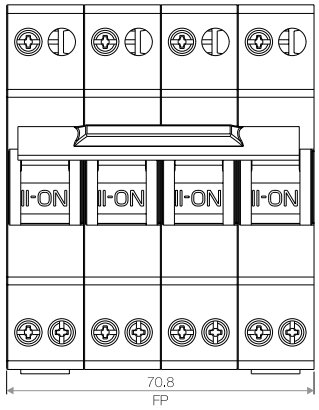
PRODUCT RATING WITH CAT. NUMBER

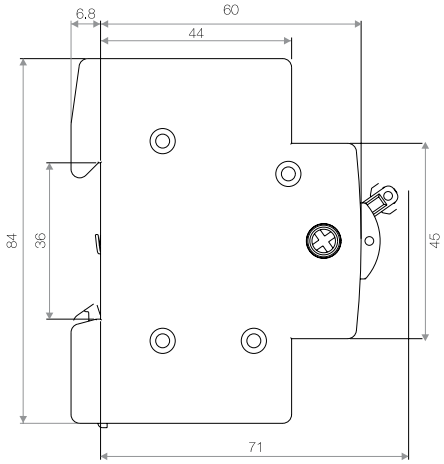
Current Rating (A)	Cat No.
25 A	DSMGOFPX025
40 A	DSMGOFPX040
63 A	DSMGOFPX063



"I" - Incoming terminals (main supply) - 2, 6, 10 & 14
"II" - Incoming terminals (standby supply) - 4, 8, 12 & 16
Outgoing terminals (to load) - 1, 5, 9 & 13
*Mid position of knob is in 'OFF' position

DIMENSION in mm





MCB CHANGEOVER SWITCH

Standard Conformity		IEC 60947 - 3
Type/Series		
Rated Current (In)	A	25 A, 40 A & 63 A
Rated Voltage (ac) (Ue)	V	240 V / 415 V
Rated Frequency (f)	Hz	50 Hz
Nos. of Poles (Execution)		DP & FP
Utilization Category		AC 21A
Dielectric Strength	kV	2.5 kV
Rated Insulation Voltage (Ui)	V	690 V
Rated Impulse Voltage (Uimp)	kV	4 kV
Electrical Endurance (Nos.)		10000
Mechanical Endurance (Nos.)		10000
Ambient Temperature	(°C)	-5 to 55
Terminal Capacity (Max) for	mm^2	25 A & 40 A - 10 mm^2 63 A - 25 mm^2
Shock		40 mm free fall
Protection Class		IP 20
Installation Position		Vertical / Horizontal
Mounting		Clip on DIn Rail (35 mm x 7.5 mm)
Case & Cover		Moulded, flame retardant thermoplastic material.

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RESIDUAL CURRENT CIRCUIT BREAKER (RCCB / ELCB)


Safety against electrocution


Safety against fire


Safety sliding shutters


Line load reversible


Large termina capacity


Breathing channels

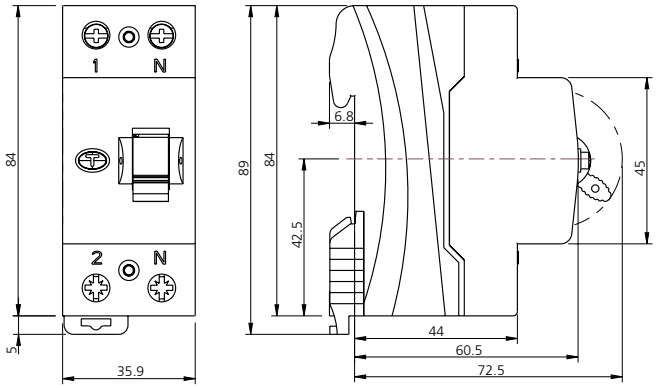
DOUBLE POLE 'AC' TYPE

AC TYPE ~ - STANDARD APPLICATIONS

AC type RCDs detect AC residual current. In the majority of cses (standard applications), they are used for AC current detection at 50 / 60 Hz

Current Rating (A)	Cat No. B-Curve	C-Curve
16 A	30	DSRGCTDF030016
16 A	100	DSRGCTDF100016
16 A	300	DSRGCTDF300016
25 A	30	DSRGCTDF030025
25 A	100	DSRGCTDF100025
25 A	300	DSRGCTDF300025
32 A	30	DSRGCTDF030032
32 A	100	DSRGCTDF100032
32 A	300	DSRGCTDF300032
40 A	30	DSRGCTDF030040
40 A	100	DSRGCTDF100040
40 A	300	DSRGCTDF300040
63 A	30	DSRGCTDF030063
63 A	100	DSRGCTDF100063
63 A	300	DSRGCTDF300063

DIMENSION in mm



RESIDUAL CURRENT CIRCUIT BREAKER (RCCB / ELCB)

PROTECTION - AGAINST ELECTROCUTION

The use of exposed, substandard, badly wired, wrongly connected or damaged equipment as well as frayed or badly repaired cables reduces the safety of an installation and increases the risk of person receiving an electric shock.

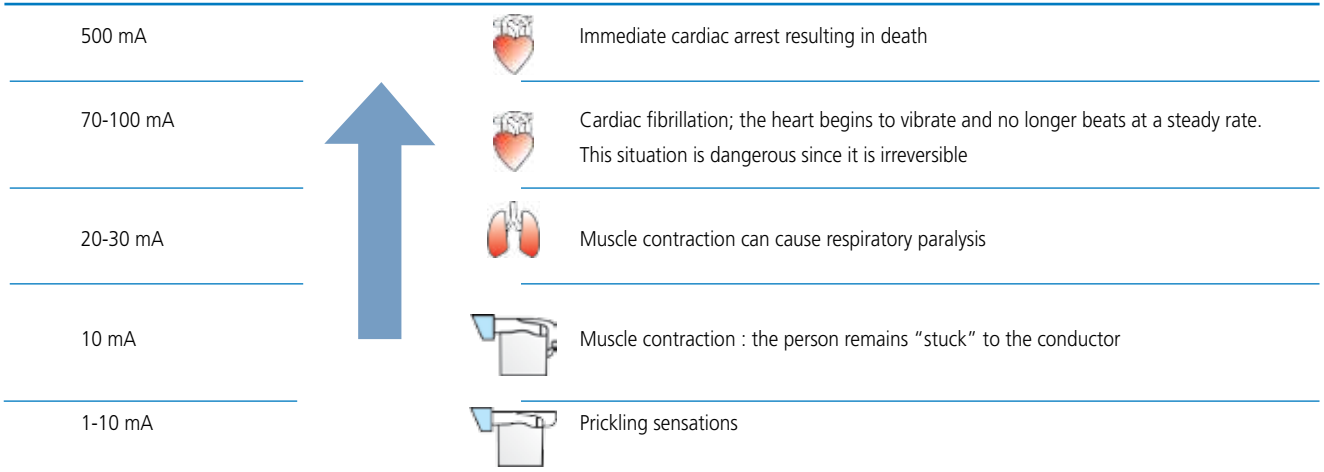
Electrocution is a passage of current through human body, which is dangerous. The flow of current through human body effects vital functions.

1. Breathing
2. Heartbeat

A correctly chosen RCCB can detect current flowing into earth and reduces the risk of electrocution. Effect of electric current through human body has been well researched and following chart summarizes the results.

Effect of electric current through human body has been well researched and following chart summarizes the results.

EFFECT OF ELECTRIC CURRENT THROUGH HUMAN BODY



However, electrocution should not be viewed in terms of "current" alone, but in terms of "contact voltage". A person gets electrocuted by coming in contact with an object that has a different potential from his/her own. The difference in potential causes the current to flow through the body.

The human body has known limits:

- Under normal dry conditions, voltage limit = 50V
- In damp surroundings, voltage limit = 25V

Rated Tripping Current of the RCD	Maximum permissible earth fault loop impedance in
10 mA	5,000
30 mA	1,666
100 mA	500
300 mA	166

ASPIDA

RESIDUAL CURRENT CIRCUIT BREAKER (RCCB / ELCB)


Safety against electrocution


Safety against fire


Safety sliding shutters


Line load reversible


Large termina capacity


Breathing channels

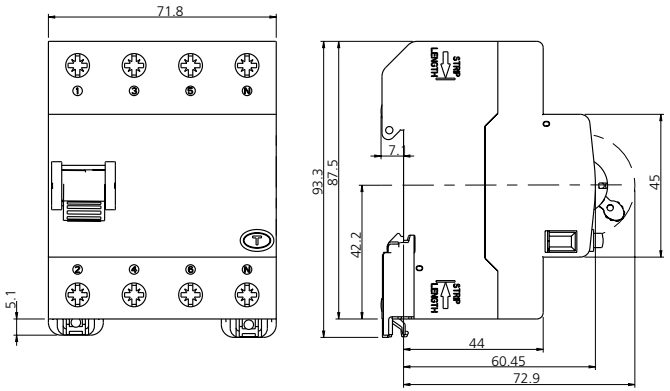
FOUR POLE 'AC' TYPE

AC TYPE ~ - STANDARD APPLICATIONS

AC type RCDs detect AC residual current. In the majority of cses (standard applications), they are used for AC current detection at 50 / 60 Hz

Current Rating (A)	Cat No. B-Curve	C-Curve
16 A	30	DSRGCTFF030016
16 A	100	DSRGCTFF100016
16 A	300	DSRGCTFF300016
25 A	30	DSRGCTFF030025
25 A	100	DSRGCTFF100025
25 A	300	DSRGCTFF300025
32 A	30	DSRGCTFF030032
32 A	100	DSRGCTFF100032
32 A	300	DSRGCTFF300032
40 A	30	DSRGCTFF030040
40 A	100	DSRGCTFF100040
40 A	300	DSRGCTFF300040
63 A	30	DSRGCTFF030063
63 A	100	DSRGCTFF100063
63 A	300	DSRGCTFF300063

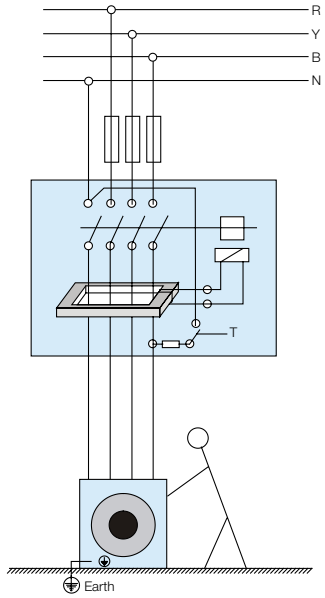
DIMENSION in mm



RESIDUAL CURRENT CIRCUIT BREAKER (RCCB / ELCB)

Technical Information		2P	4P
Standard Conformity		IS 12640-1: IEC/ EN 61008-1	IS 12640-1: IEC / EN 61008-1
Rated Current (In)	A	16 A, 25 A, 32 A, 40 A, 63 A	16 A, 25 A, 32 A, 40 A, 63 A
Sensitivity * (In)	mA	30 mA, 100 mA, 300 mA	30 mA, 100 mA, 300 mA
Rated Voltage (Un)	Vac	240	415
Rated Insulation Voltage (Ui)	V	690 V	690 V
Rated Frequency	Hz	50 Hz	50 Hz
Short circuit Withstand Capacity	kA	6 kA	6 kA
Residual Making Breaking Capacity	A	500 A or 10 In wherever is greater	500 A or 10 In wherever is greater
Ambient Temperature	°C	-25°C to + 55°C	-25°C to + 55°C
Shock Resistance		40 mm free fall	40 mm free fall
Vibration Resistance	g	3 g	3 g
Electrical /Mechanical operations		4000	4000
Mounting		Din Rail (35 x 7.5) mm	Din Rail (35 x 7.5) mm
Degree of Protection		IP 20	IP 20
Terminal Capacity (max)	mm^2	35 mm^2	35 mm^2

***500 mA is available on request**



WORKING PRINCIPLE

The RCCB works on the current balance principle. The supply conductors, i.e. the phases and the neutral, are passed through a torroid and form the primary windings of a current transformer. Its secondary winding is connected to a highly sensitive electromagnetic trip relay, which operates the trip mechanism.

In a healthy circuit, sum of the currents in phases, is equal to the current in the neutral and the vector sum of all currents is equal to zero. If there is any insulation fault in the current and leakage current flows to earth, the currents do not balance and their vector sum is not equal to zero. This imbalance is detected by the core balanced current transformer, the RCCB is tripped and supply to load is interrupted. The trip mechanism is operated at a residual current between 50-100% of its rated tripping current.

SELECTION

30 mA : A 30 mA ELCB will provide a high degree of protection against electrocution in an accidental shock hazard situation. The current flowing through human body could be between 80mA and 240mA depending on the resistance of the human body and the voltage across it.

Zone : Physiological Effects

Zone 1 : Usually no reactions

Zone 2 : Usually no harmful physiological effects

Zone 3 : Usually no organic damage to be expected. Likelihood of muscular contraction and difficulty in breathing, reversible disturbances of formation and conduction of impulse in the heart and transient cardiac arrest without ventricular fibrillation increases with current magnitude and time.

Zone 4 : In addition to the effects of Zone 3, probability of ventricular fabriliation increases upto 5% (curve C2) upto 50% (curve C3) and above 50% beyond curve C3. It increases with magnitude and time, and pathophysiological effects such as cardiac arrest, breathing arrest and heavy burns may occur.

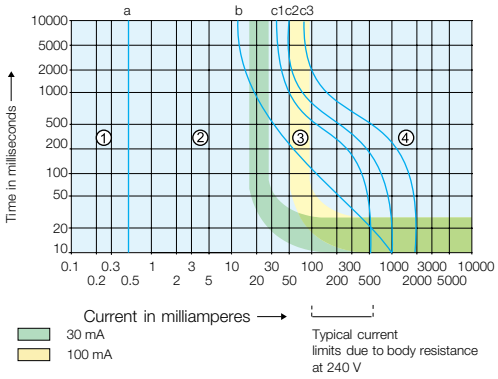
To be within zone of the IEC curve as shown above. It is necessary for the ELCB to operate within 50ms at 240 mA and 150ms at 80mA. Both these conditions are satisfied by 30mA ELCB.

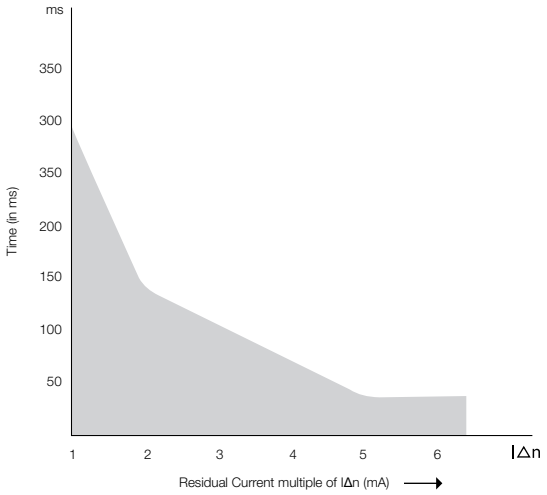
For households, individual outlets, wet areas and temporary installations, ELCB with sensitivity not exceeding 30mA is advisable.

100 mA : A 100mA ELCB will normally give high degree of protection against electrocution but there is a possibility that the shock current could fall below the tripping level of ELCB. This could occur if additional resistances to that of human body are included in the earth path.

The 100mA RCCB protects against leakage current and indirect contact with earth loop impedance upto 500 Ohms.

300 / 500mA : A 300/500 mA ELCB may be used where only fire protection is required. eg., on lighting circuits, where the risk of electric shock is lesser. 300/500mA ELCB will not give any protection against electrocution.

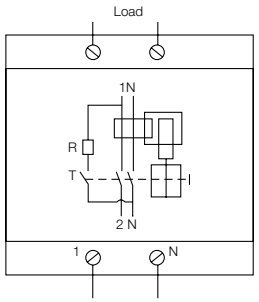




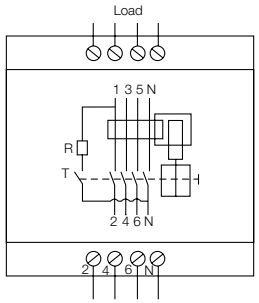
RESIDUAL CURRENT CIRCUIT BREAKER (RCCB / ELCB)

WIRING DIAGRAM

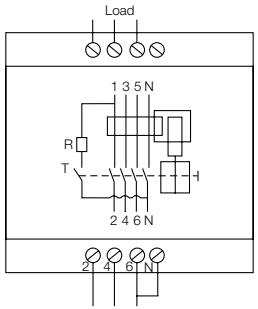
For Single Phase
2 Wire connections



For Three Phase
4 Wire connections



For Three Phase
3 Wire connections



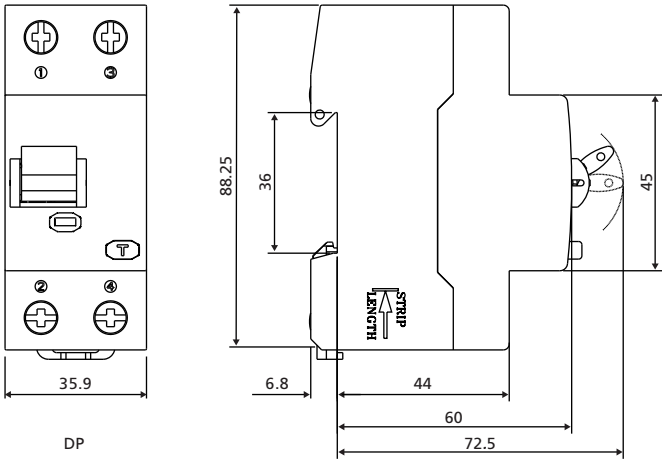
ASPIDA

HR RESIDUAL CURRENT CIRCUIT BREAKER (RCCB / ELCB) : 80 A - 100 A

PRODUCT RATING WITH CAT. NUMBER - DOUBLE POLE 'AC' TYPE

Current Rating (A)	Sensitivity	Cat No.
80 A	30	DSRGCTDF030080
80 A	100	DSRGCTDF100080
80 A	300	DSRGCTDF300080
100 A	30	DSRGCTDF030100
100 A	100	DSRGCTDF100100
100 A	300	DSRGCTDF300100

DIMENSION in mm



RESIDUAL CURRENT CIRCUIT BREAKER (RCCB / ELCB)

The flow of current through electrical facilities always involve risk. Poorly insulated equipment, faulty wires and incorrect use of an electrical device can cause current to flow through the wrong path (i.e. through the insulation/human body) to the earth.

RCCB (also popularly known as ELCB) is a mechanical switching device designed to make, carry and break currents under normal service conditions and to cause the opening of the contacts when the leakage current attains a given value under specified conditions. Standard offers a wide range of RCCBs for protecting human life against fatal electric shocks as well as for providing protection against fire caused by earth faults.

FEATURES

- Short circuit breaking with stand capacity 10 kA
- Different knob position to indicate whether it is switched by a fault or manually switched OFF (mid trip)
- Test button for regular inspection
- Contact position indication
- Positive termination for simultaneous conection of bus-bars and wires.
- CE marking. RoHS Complaint, 'Green Product'

RANGE

80 A - 100 A

SENSITIVITY

30 mA, 100 mA & 300 mA

EXECUTION

Double Pole (2P)

Four Pole (4P)

SPECIFICATION

IS 12640 Part 1/IEC 61008-1 / EN 61008 - 1

ASPIDA

HR RESIDUAL CURRENT CIRCUIT BREAKER (RCCB / ELCB) : 80 A - 100 A

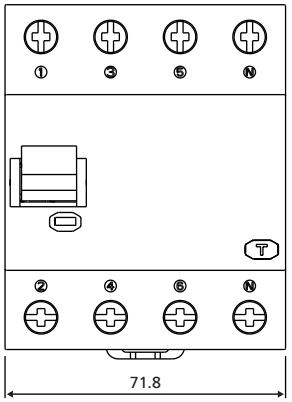
PRODUCT RATING WITH CAT. NUMBER - FOUR POLE 'AC' TYPE

AC TYPE ~ - STANDARD APPLICATIONS

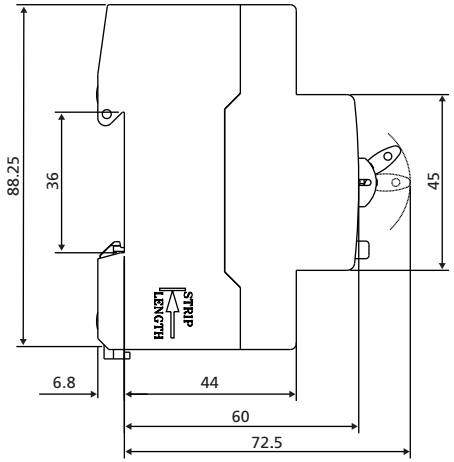
AC type RCDs detect AC residual current. In the majority of cses (standard applications), they are used for AC current detection at 50 / 60 Hz

Current Rating (A)	Sensitivity	Cat No.
80 A	30	DSRGCTFF030080
80 A	100	DSRGCTFF100080
80 A	300	DSRGCTFF300080
100 A	30	DSRGCTFF030100
100 A	100	DSRGCTFF100100
100 A	300	DSRGCTFF300100

DIMENSION in mm



FP



RESIDUAL CURRENT CIRCUIT BREAKER (RCCB / ELCB)

Technical Specification		2P	4P
Specification reference		IS 12640-1 IEC / EN 61008-1	IS 12640-1 IEC / EN 61008-1
Rated current (In)	A	80 A, 100 A	80 A, 100 A
Sensitivity (IDn)	mA	30 mA, 100 mA, 300 mA	30 mA, 100 mA, 300 mA*
Rated voltage (Ue)	V	240 ac	415 ac
Rated insulation voltage (Ui)	V	690 V	690 V
Rated frequency	Hz	50 Hz	50 Hz
Trip time		1 x IΔn < 300 ms 5 IΔn < 40 ms	1 x IΔn < 300 ms 5 IΔn < 40 ms
Short circuit withstand capacity	kA	10 kA	10 kA
Residual making breaking capacity	A	10 In	10 In
Ambient working temperature	°C	-25°C to + 55°C	-25°C to + 55°C
Shock resistance		40mm free fall	40mm free fall
Vibration resistance	g	3 g	3 g
Electrical endurance	operations	>2000	>2000
Mechanical endurance	operations	>3000	>3000
Mounting		Din Rail (35 x7.5 mm)	Din Rail (35 x7.5 mm)
Degree of protection		IP 20	IP 20
Terminals capacity (Max)	mm2	50	50

*500 mA is available on request

ASPIDA

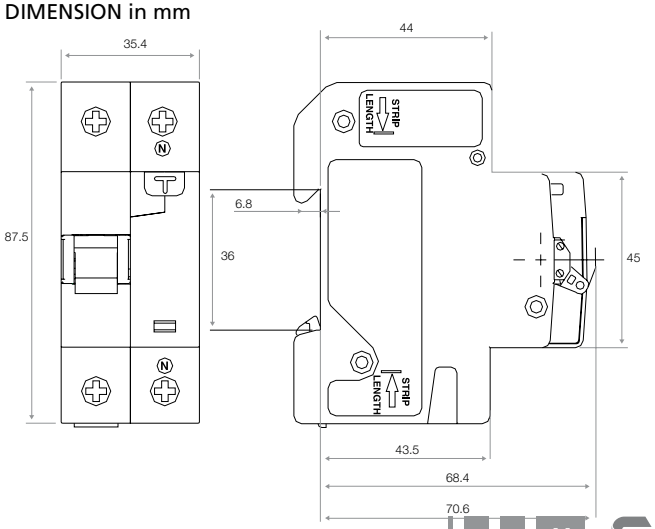
RESIDUAL CURRENT CIRCUIT BREAKER WITH OVER CURRENT PROTECTION (RCBO)

Safety Ensured*

PRODUCT RATING WITH CAT. NUMBER

Current Rating (A)	Sensitivity mA	Cat No. SP&N
6 A	30	DSBEACSN2030006
6 A	100	DSBEACSN2100006
6 A	300	DSBEACSN2300006
10 A	30	DSBEACSN2030010
10 A	100	DSBEACSN2100010
10 A	300	DSBEACSN2300010
16 A	30	DSBEACSN2030016
16 A	100	DSBEACSN2100016
16 A	300	DSBEACSN2300016
20 A	30	DSBEACSN2030020
20 A	100	DSBEACSN2100020
20 A	300	DSBEACSN2300020
25 A	30	DSBEACSN2030025
25 A	100	DSBEACSN2100025
25 A	300	DSBEACSN2300025
32 A	30	DSBEACSN2030032
32 A	100	DSBEACSN2100032
32 A	300	DSBEACSN2300032
40 A	30	DSBEACSN2030040
40 A	100	DSBEACSN2100040
40 A	300	DSBEACSN2300040

DIMENSION in mm



RESIDUAL CURRENT CIRCUIT BREAKER WITH OVER CURRENT PROTECTION (RCBO)

STANDARD new RCBO is a single composite device which provides protection against over current and earth leakage faults in the same width and profile as that of a standard MCB. It is designed for use in domestic, commercial and industrial distribution systems at the most downstream circuit for ensuring high degree of protection to the user for a particular circuit. In normal use, it is safe to use and free of to user as well as to environment.

FEATURES

- Pulsating dc protection - Type A
- Discrimination using time delay - Type S RCBO
- Controlled response VD RCBO (Electronic)
- Protection in case of loss of supply neutral in SPN RCBO only
- Enhanced immunity to nuisance tripping
- Positive contact indication: Red for ON , Green for OFF
- Short circuit breaking capacity 10 kA
- Large terminal capacity: RCBOs have 35 mm2 for cool running while in operation
- Protection in case of loss of supply neutral: Even in event of loss of supply neutral, STANDARD RCBO provides protection against earth faults . The Functional Earth (FE) white color wire connected to earth provides this protection
- Controlled response & immunity to nuisance tripping: The trip level and the response time of the STANDARD VD (Voltage Dependent) RCBO using electronic circuit is set to very precise values and thereby provide greater immunity to nuisance tripping that can be caused by mains borne noise, surge voltages, lighting surges, reactive loads, mains filters, etc
- Neutral to earth faults: A connection that occurs between N and E on the load side of any RCBO will impact on its performance and cause the trip level to increase. In the case of a N - E fault, the user may have no way of knowing that this fault exists and that the RCBO has been desensitised. Under this condition, the Standard VD RCBO provides a far greater level of protection than a normal VI (Voltage Independent) RCBO

AESTHETICS & CONVENIENCE

- The new module's unique compact construction enables far more devices to be fitted into a distribution board than previously possible, and 2 Module RCBO can simply replace existing MCB 2 pole when upgrading a board.
- High stacking density = smaller chasis & distribution boards.

  Reliability & continuity of service
- Enhanced discrimination with STANDARD MCBs
- Back up to 10 kA with BS & DIN fuses
- Retrofits Standard MCBs in distribution boards with no modifications in general
- Robust construction.

ENERGY LIMITING

STANDARD RCBO meets the requirements for energy let through by IEC & British Standard for energy limiting class 3.

ADDITIONAL RANGE - TYPE A & S

Type A - Pulsating DC Protection: Any electrical appliance with power control has the ability to produce earth fault current with pulsating DC (rectified AC) components. RCBOs that provide this type of protection are referred to as Type A RCBOs.

VI RCBOs do not provide this protection, and are referred to as Type AC RCBOs. STANDARD VD RCBOs have been specifically designed to provide protection against pulsating DC fault currents.

- Type S- Selective or Time Delay: RCBOs are also divided into two categories determined by their response time to an earth fault current, as follows
- General Type - having a trip time<300mS for fault currents of IDN and < 40ms for fault currents > 5 IDN.
- S Type- having a trip time of 150 - 500mS for IDN, and 40 - 130mS for >5 IDN.

(IDn is the rated residual operating current of the RCBO)

As the name implies, general types are intended for general purpose use. However, S (selective) types are normally used in conjunction with downstream general type RCBOs.

The S type effectively provides discrimination in terms of the response time to earth fault currents for upstream and downstream RCBOs. For example, when two RCBOs are connected in series the first RCBO will often be an S type.

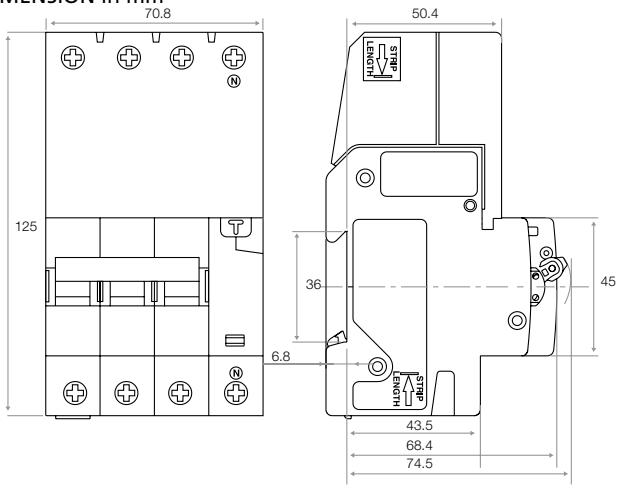
ASPIDA

RESIDUAL CURRENT CIRCUIT BREAKER WITH OVER CURRENT PROTECTION (RCBO)

PRODUCT RATING WITH CAT. NUMBER

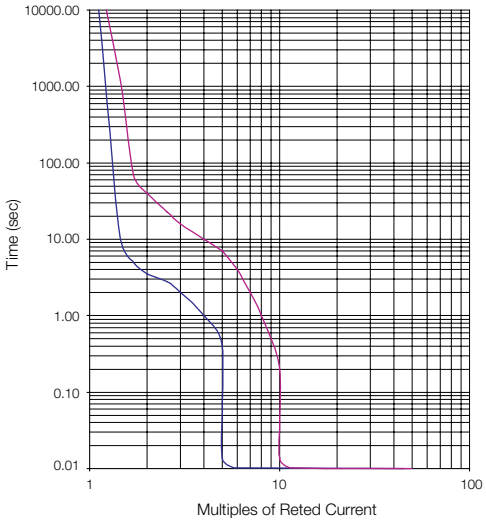
Current Rating (A)	Sensitivity mA	Cat No. TP&N
6 A	30	DSBEACTN4030006
6 A	100	DSBEACTN4100006
6 A	300	DSBEACTN4300006
10 A	30	DSBEACTN4030010
10 A	100	DSBEACTN4100010
10 A	300	DSBEACTN4300010
16 A	30	DSBEACTN4030016
16 A	100	DSBEACTN4100016
16 A	300	DSBEACTN4300016
20 A	30	DSBEACTN4030020
20 A	100	DSBEACTN4100020
20 A	300	DSBEACTN4300020
25 A	30	DSBEACTN4030025
25 A	100	DSBEACTN4100025
25 A	300	DSBEACTN4300025
32 A	30	DSBEACTN4030032
32 A	100	DSBEACTN4100032
32 A	300	DSBEACTN4300032
40 A	30	DSBEACTN4030040
40 A	100	DSBEACTN4100040
40 A	300	DSBEACTN4300040

DIMENSION in mm

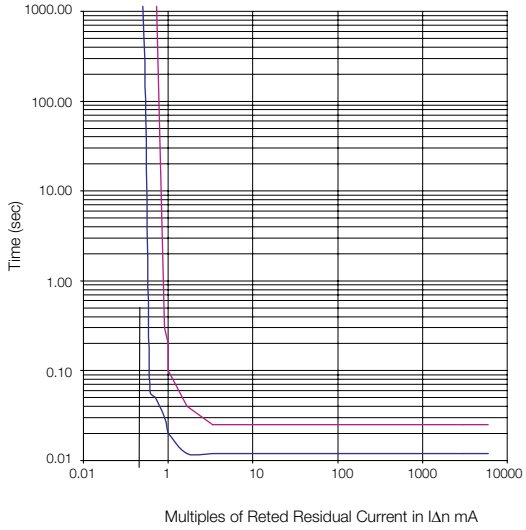


RESIDUAL CURRENT CIRCUIT BREAKER (RCCB / ELCB)

Time Current Characteristics C Curve



Residual Current Tripping Characteristics (General Type)



Technical Information		SPN (2M)	TPN (4M)
Specification		SPN (2M)	TPN (4M)
Specification reference		IS 12640 (Part 2) & IEC 61009	IS 12640 (Part 2) & IEC 61009
Rated current	In	6 A, 10 A, 16 A, 20 A, 25 A, 32 A, 40 A	6 A, 10 A, 16 A, 20 A, 25 A, 32 A, 40 A
Rated residual operating current	I_{DN}	30 mA, 100 mA, 300 mA.	30 mA, 100 mA, 300 mA.
Instantaneous tripping current		'C' curve	'C' curve
Rated voltage	Un (Vac)	240 V~	415 V~
Rated insulation voltage	Un (Vac)	690 V	690 V
Rated frequency		50 Hz	50 Hz
No. of pole		1P+N	3P+N
Rated short circuit capacity	Icn	10 kA	10 kA
Rated residual making breaking capacity	IΔm	500 A	500 A
Operating characteristics in case of residual currents		'A' type	'A' type
Method of mounting		Panel board type (DIN rail)	Panel board type (DIN rail)
Degree of protection		IP 20	IP 20
Terminals for external conductors (mm^2)		35	35
Net weight (in Kg)		0.420	0.840
Ambient working temperature		-5°C to + 55°C	-5°C to + 55°C
Mechanical endurance (No. of operations)		4000	4000
Electrical endurance (No. of operations)		4000	4000
Trip time (milli second)		< 40	< 40
Shock resistance		40 mm free fall	40 mm free fall
Vibration resistance		3 g	3 g

POWERSHELL +

SPN DOUBLE DOOR DISTRIBUTION BOARDS & ENCLOSURES

FEATURES

- Soft design with rounded corners and elegant knob.
- Raised neutral link for easy wiring
- Suitable for surface & flush mounting
- Detachable din bar with end stoppers for easy assembly of breakers
- Supplied with fully shielded bus-bars
- Level marks for providing indication for fitment in wall
- Supplied with neutral & earth link
- Unique 'plaster guard', to protect from contamination during site installation work
- Door Earthing for reliable earth continuity

RANGE

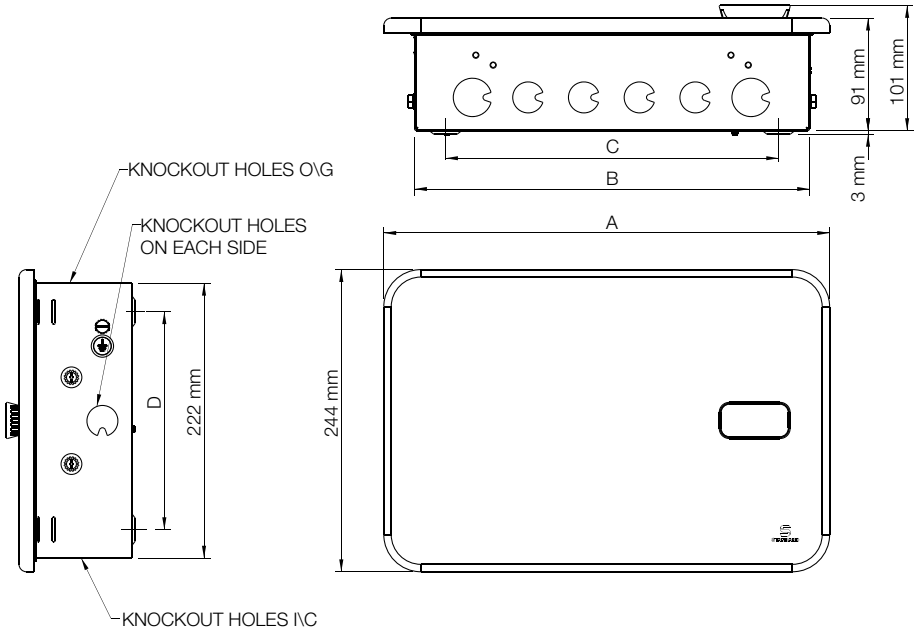
Powershell Plus SPN DD - 4, 6, 8, 12 & 16 Ways

SPECIFICATION

IS: 13032, IEC 61439 - 3 & IS: 8623

Dimensions (in mm)

Ways	Powershell Plus Description	Cat No.	A (mm)	B (mm)	C (mm)	D (mm)	Knockout holes				
							Top		Bottom		Side
							Ø25 (mm)	Ø31 (mm)	Ø25 (mm)	Ø31 (mm)	(Each Side)
4	SPN 4 WAY DD DB	DSDNSHODXW04	216	175	125	166	2	1	2	1	1
6	SPN 6 WAY DD DB	DSDNSHODXW06	252	211	151	166	2	2	2	2	1
8	SPN 8 WAY DD DB	DSDNSHODXW08	288	247	187	166	3	2	3	2	1
12	SPN 12 WAY DD DB	DSDNSHODXW12	360	319	269	176	4	2	4	2	1
16	SPN 16 WAY DD DB	DSDNSHODXW16	432	391	341	172	6	2	2	2	1



POWERSHELL +

TPN DOUBLE DOOR DISTRIBUTION BOARDS & ENCLOSURES

FEATURES

- Soft design with rounded corners and elegant knob.
- Raised neutral link for easy wiring
- Suitable for surface & flush mounting
- Detachable din bar with end stoppers for easy assembly of breakers
- Supplied with fully shielded bus-bars
- Level marks for providing indication for fitment in wall
- Supplied with neutral & earth link
- Unique 'plaster guard', to protect from contamination during site installation work
- Door Earthing for reliable earth continuity

RANGE

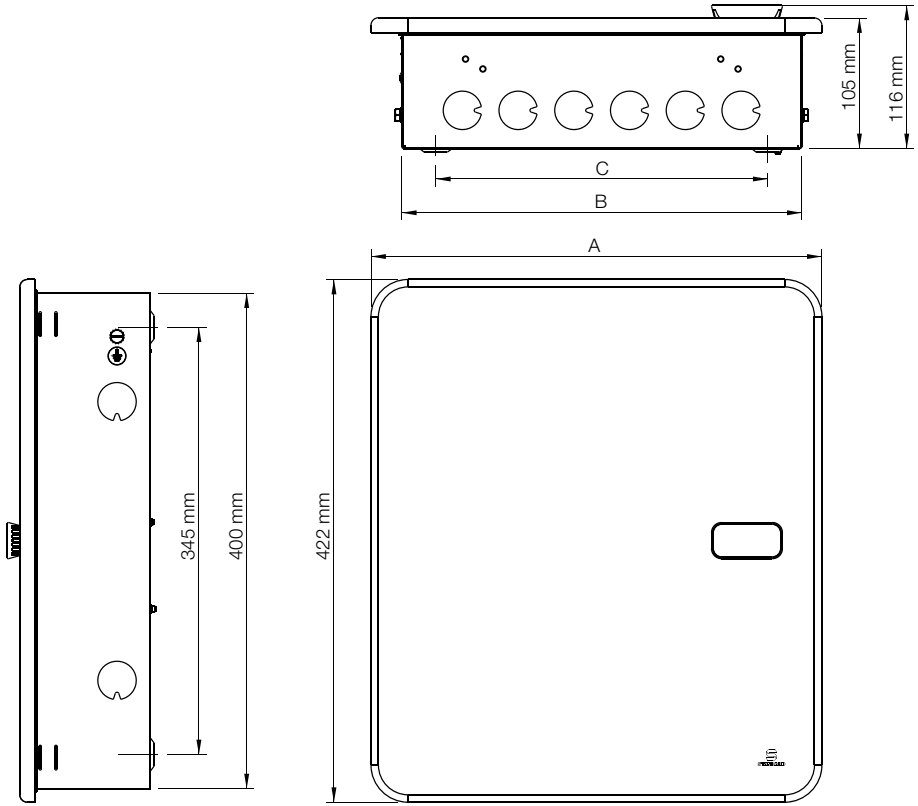
Powershell Plus TPN DD - 4, 6, 8, & 12 Ways

SPECIFICATION

IS: 13032, IEC 61439 - 3 & IS: 8623

Dimensions (in mm)

Ways	Powershell Plus Description	Cat No.	A (mm)	B (mm)	C (mm)	Knockout holes (Ø31 mm)		
						Top	Bottom	Each Side
4 W	TPN 4 WAY DD DB	DS-DNTHODXW04	292	251	196	5	5	2
6 W	TPN 6 WAY DD DB	DS-DNTHODXW06	364	323	268	6	6	2
8 W	TPN 8 WAY DD DB	DS-DNTHODXW08	436	395	340	7	7	2
12 W	TPN 12 WAY DD DB	DS-DNTHODXW12	580	539	484	10	10	2



DISTRIBUTION BOARDS

FEATURES

Masking - (Cement guard)

During the construction stage the DBs can get ingressed with water & cement dust. This can spoil the decor and more importantly alter the performance parameters. STANDARD Smart Trek DBs come with a masking arrangement that keeps water and cement dust away.

IP 42 DESIGN

Masking (Cement guard)

Inner door

Outer door

RANGE

S.No.	Type	Configuration	Application
(a)	SPN	SPN Consumer	Simple, Economical & Safe distribution
(b)	TPN	TPN Horizontal	Three phase & neutral incoming and outgoing can be only single phase
		TPN Vertical	Three phase and neutral incoming, outgoing can be single phase as well as multi phase
		Per Phase Isolation (PPI)	DP RCCB in each phase is provided to avoid the total outage as only the phase where earth leakage fault exist, get isolated.
(c)	Special	Extended loose Wire	Most flexible design
		Three Tier	Most flexible design
		Power Line	For fault level higher then 10kA with a provision for MCCB incomer
		7 Segment DB	Single point distribution where per phase isolation facility is required
		Phase Selector(40&63A)	Used for selection of a phase in case other phase fails
		Plug & Socket	Used for Air conditioner and motor protection
		MCB Enclosures	To isolate / connect electrical appliances independently

HOME SHIELD

SPN DOUBLE DOOR DISTRIBUTION BOARDS

FEATURES

- Door reversible
- Door Earthing
- IK 08
- IP 42 design
- Three Piece Design
- Neutral & Earth bar on left & right side of box for ease of wiring
- Suitable for surface & flush mounting
- Supplied with fully shielded bus bars
- Level marks for providing indication for fitment in the wall
- Supplied with masking sheet to protect components from cement during plastering
- Metal door with flush design

RANGE

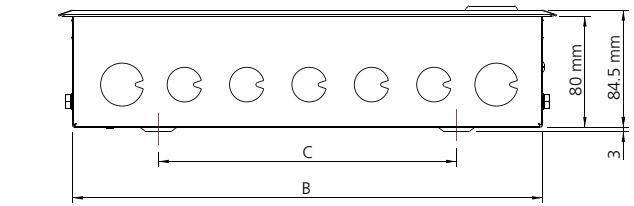
SPN DD - 4, 6, 8 , 12 & 16 Ways

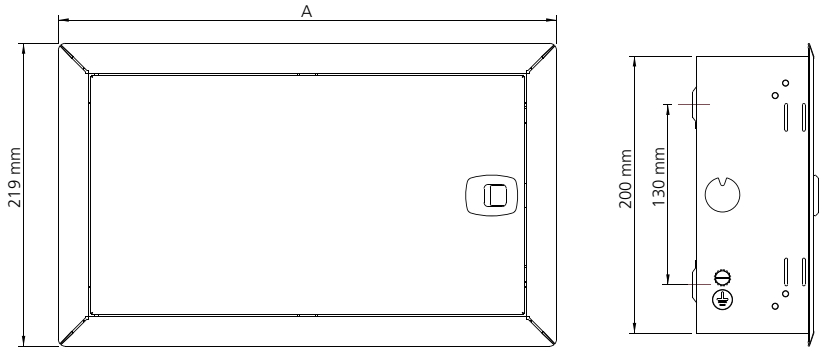
SPECIFICATION

IS: 13032 , IEC 61439 - 3 & IS:8623

Dimensions (in mm)

Ways	Home Shield Description	Cat No. SPN Double Door	Dimensions			Knockout holes				
						Top		Bottom		Side (Each Side)
			A	B	C	(Ø25)	(Ø31)	(Ø25)	(Ø25)	
4	SPN 4W DD DB	DSDMSHCDOW04	215	195	71	2	1	2	1	1
6	SPN 6W DD DB	DSDMSHCDOW06	251	231	107	2	2	2	2	1
8	SPN 8W DD DB	DSDMSHCDOW08	287	267	143	3	2	3	2	1
12	SPN 12W DD DB	DSDMSHCDOW12	359	339	215	5	2	5	2	1
16	SPN 16W DD DB	DSDMSHCDOW16	431	411	287	6	2	6	2	1





HOME SHIELD

TPN DOUBLE DOOR DISTRIBUTION BOARDS

FEATURES

- Metal door with flush design
- Door reversible
- Door Earthing
- IK 08
- IP 42 design
- Neutral & Earth Bar on left & right for easy wiring
- Three Piece Design
- Suitable for surface & flush mounting
- Supplied with fully shielded bus bars
- Level marks for providing indication for fitment in the wall
- Supplied with masking sheet to protect components from cement during plastering

RANGE

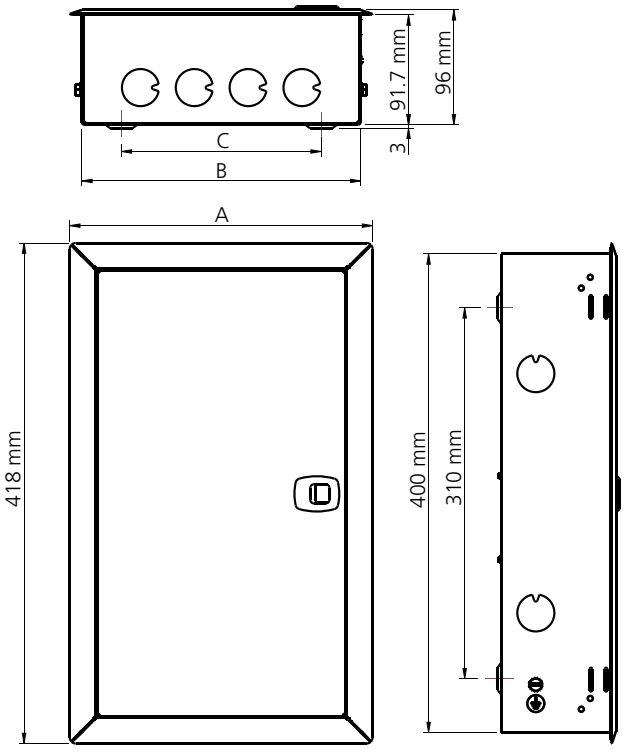
TPN DD - 4, 6, 8 & 12 Ways

SPECIFICATION

IS: 13032 , IEC 61439 - 3 & IS:8623

Dimensions (in mm)

Ways	Powershell Plus Description	Cat No.	A	B	C	Knockout holes (Ø31) Top	Bottom	Side (Each Side)
4	TPN 4W DD DB	DSDMTHCDOW04	253	233	167	4	4	2
6	TPN 6W DD DB	DSDMTHCDOW06	343	323	259	6	6	2
8	TPN 8W DD DB	DSDMTHCDOW08	397	377	311	8	8	2
12	TPN 12W DD DB	DSDMTHCDOW12	541	521	455	10	10	2



POWERSHELL

SPN DOUBLE DOOR
DISTRIBUTION BOARDS & ENCLOSURES - IP 42

FEATURES

- Aesthetically Pleasing Design
- Elegent color combination
- Corners of the top cover have been beautifully covered with new unique design of side channels.
- Cement guard to protect the DB from construction spill over.

RANGE

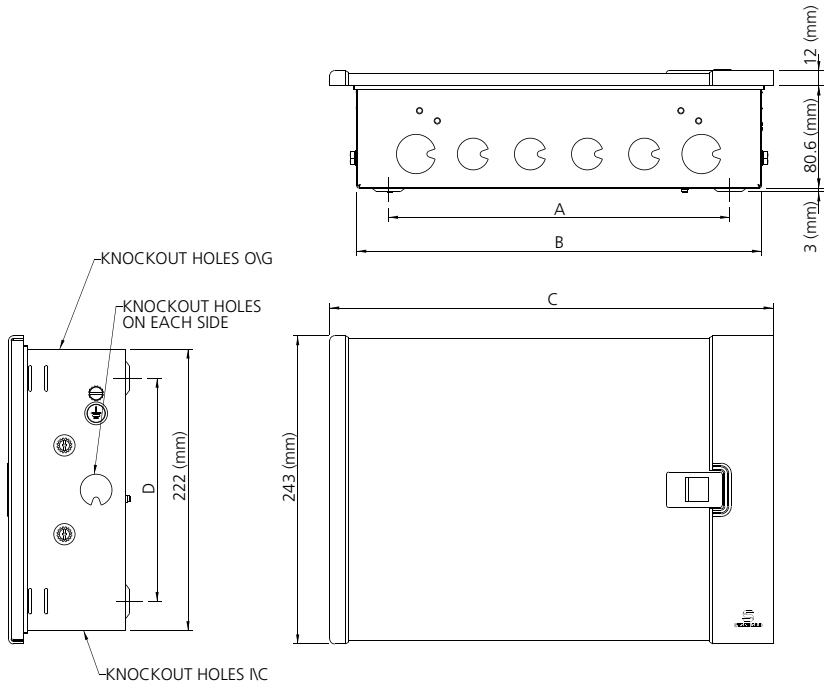
Powershell SPN DD - 4, 6, 8, 12 & 16 Ways

SPECIFICATION

IS: 13032, IEC 61439 - 3 & IS:8623

Dimensions (in mm)

Ways	Powershell Description	Cat No. SPN Double Door	Dimensions				Knockout holes				
							Top		Bottom		Side (Each Side)
			A	B	C	D	(Ø25)	(Ø31)	(Ø25)	(Ø25)	
4	SPN 4W DD DB	DSDPSHODIW04	125	175	207	166	2	1	2	1	1
6	SPN 6W DD DB	DSDPSHODIW06	151	211	243	166	2	2	2	2	1
8	SPN 8W DD DB	DSDPSHODIW08	187	247	279	166	3	2	3	2	1
12	SPN 12W DD DB	DSDPSHODIW12	269	319	349	176	4	2	4	2	1
16	SPN 16W DD DB	DSDPSHODIW16	341	391	423	172	6	2	6	2	1



POWERSHELL

TPN DOUBLE DOOR
DISTRIBUTION BOARDS & ENCLOSURES - IP 42

FEATURES

- Aesthetically Pleasing Design
- Elegent color combination
- Corners of the top cover have been beautifully covered with new unique design of side channels.
- Cement guard to protect the DB from construction spill over.

RANGE

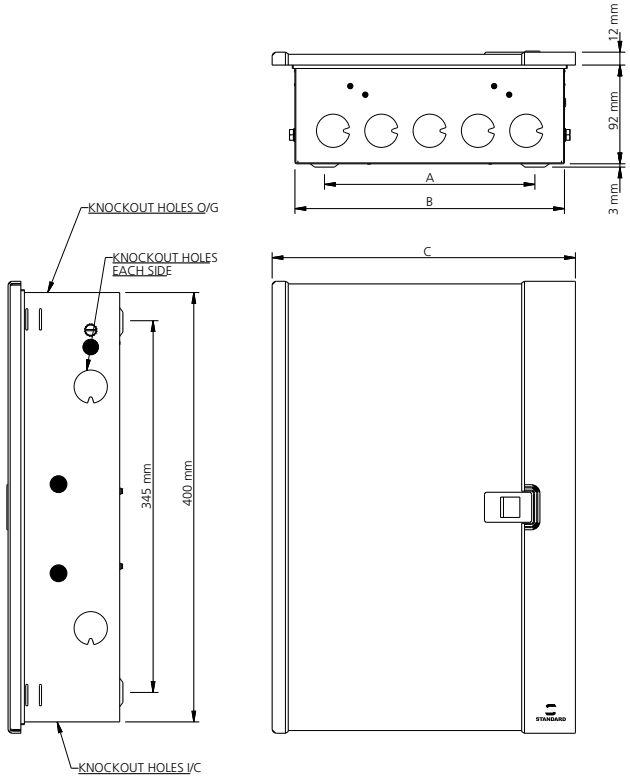
Powershell SPN DD - 4, 6, 8 & 12 Ways

SPECIFICATION

IS: 13032 , IEC 61439 - 3 & IS:8623

Dimensions (in mm)

Ways	Powershell Plus Description	Cat No.	A	B	C	Knockout holes (Ø31) Top	Bottom	Side (Each Side)
4	TPN 4W DD DB	DSDPTHODIW04	196	251	282	5	5	2
6	TPN 6W DD DB	DSDPTHODIW06	268	323	355	6	6	2
8	TPN 8W DD DB	DSDPTHODIW08	340	395	427	7	7	2
12	TPN 12W DD DB	DSDPTHODIW12	479	534	566	10	10	2



POWERSHELL

SPN DOUBLE DOOR
DISTRIBUTION BOARDS & ENCLOSURES - IP 43

FEATURES

- •• Aesthetically Pleasing Design
- Elegent color combination
- Corners of the top cover have been beautifully covered with new unique design of side channels
- Transparent cement guard to protect the DB from construction spill over
- Better ingress of protection IP 43

RANGE

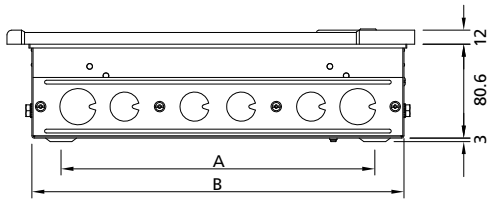
Powershell SPN DD - 4, 6, 8, 12 & 16 Ways

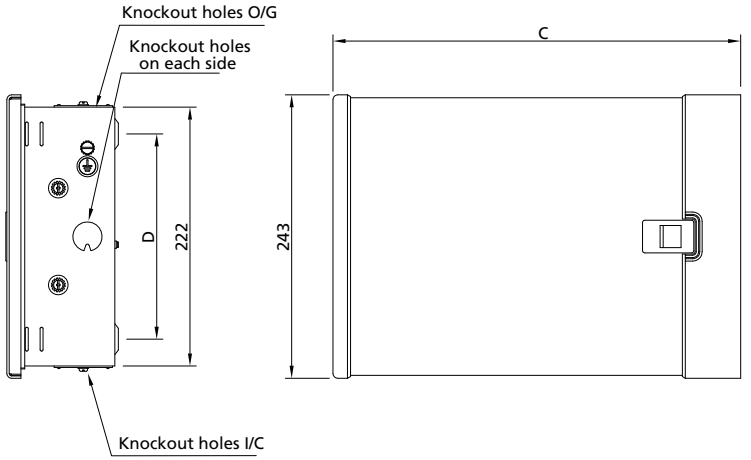
SPECIFICATION

IS: 13032 , IEC 61439 - 3 & IS:8623

Dimensions (in mm)

Ways	Powershell Description	Cat No. SPN Double Door	Dimensions A	B	C	D	Knockout holes Top (Ø25)	Top (Ø31)	Bottom (Ø25)	Bottom (Ø25)	Side (Each Side)
4	SPN 4W DD DB	DSDNSHODIW04	125	175	207	172	3	-	3	-	1
6	SPN 6W DD DB	DSDNSHODIW06	151	211	243	166	3	-	3	-	1
8	SPN 8W DD DB	DSDNSHODIW08	187	247	279	166	2	2	2	2	1
12	SPN 12W DD DB	DSDNSHODIW12	269	319	349	176	4	2	4	2	1
16	SPN 16W DD DB	DSDNSHODIW16	341	391	423	172	4	2	4	2	1





POWERSHELL

TPN DOUBLE DOOR
DISTRIBUTION BOARDS & ENCLOSURES - IP 43

FEATURES

- •• Aesthetically Pleasing Design
- Elegent color combination
- Corners of the top cover have been beautifully covered with new unique design of side channels
- Transparent cement guard to protect the DB from construction spill over
- Better ingress of protection IP 43

RANGE

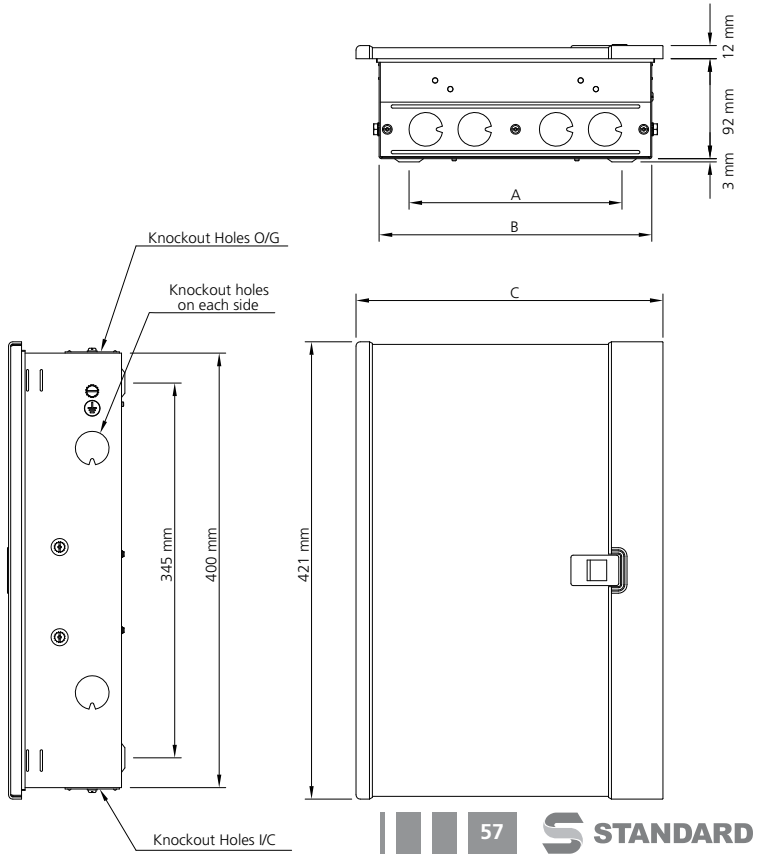
Powershell SPN DD - 4, 6, 8 & 12 Ways

SPECIFICATION

IS: 13032 , IEC 61439 - 3 & IS:8623

Dimensions (in mm)

Ways	Powershell Plus Description	Cat No.	A	B	C	Knockout holes (Ø31) Top	Bottom	Side (Each Side)
4	TPN 4W DD DB	DSDNTHODIW04	196	251	282	4	4	2
6	TPN 6W DD DB	DSDNTHODIW06	268	323	345	6	6	2
8	TPN 8W DD DB	DSDNTHODIW08	340	395	430	6	6	2
12	TPN 12W DD DB	DSDNTHODIW12	479	534	569	8	8	2



POWERSHELL

SPN 2 + DOUBLE DOOR DISTRIBUTION BOARDS & ENCLOSURES - IP 42

FEATURES

- Aesthetically Pleasing Design
- Elegent color combination
- Corners of the top cover have been beautifully covered with new unique design of side channels
- Cement guard to protect the DB from construction spill over
- Proper isolation between incomer & outgoing

RANGE

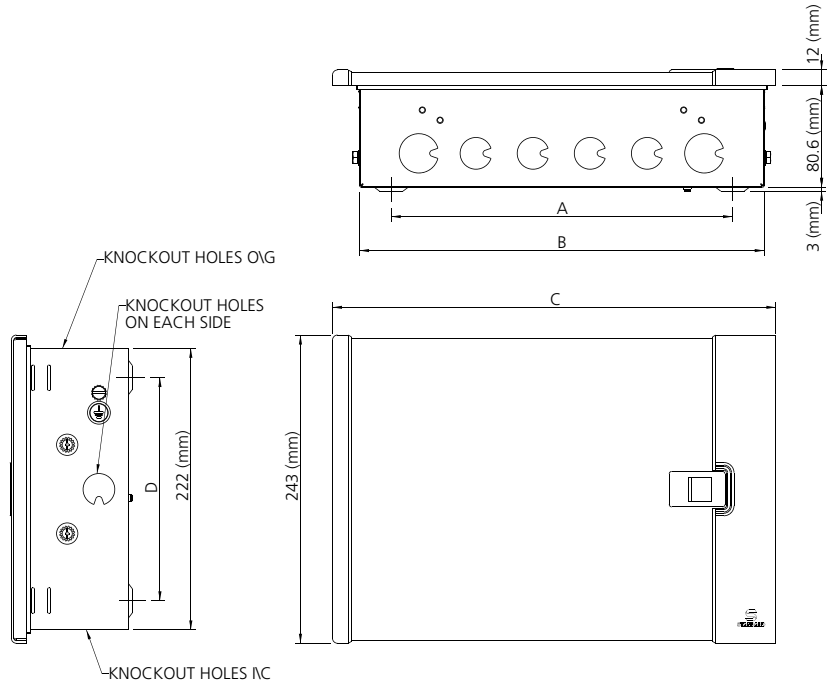
2+4, 2+6, 2+8, 2+10, 2+12, 2+14 Ways

SPECIFICATION

IS: 13032 , IEC 61439 - 3 & IS:8623

Dimensions (in mm)

Ways	Powershell Description	Cat No. SPN Double Door	Dimensions A	B	C	D	Knockout holes Top (Ø25)	Top (Ø31)	Bottom (Ø25)	Bottom (Ø25)	Side (Each Side)
2 + 4	SPN 4W DD DB	DSDNSHODIW04	151	211	243	166	2	2	2	2	1
2 + 6	SPN 6W DD DB	DSDNSHODIW06	187	247	279	166	3	2	3	2	1
2 + 8	SPN 8W DD DB	DSDNSHODIW08	233	283	315	176	3	2	3	2	1
2 + 10	SPN 8W DD DB	DSDNSHODIW10	269	319	351	176	4	2	4	2	1
2 + 12	SPN 12W DD DB	DSDNSHODIW12	305	355	387	172	5	2	5	2	1
2 + 14	SPN 16W DD DB	DSDNSHODIW16	341	391	423	172	6	2	6	2	1



SPN SINGLE DOOR
DISTRIBUTION BOARDS & ENCLOSURES

FEATURES

- Compact design, requires minimum space
- Suitable for flush & surface mounting
- Supplied with fully shielded busbar
- Level marks for providing indication for fitment in wall

RANGE

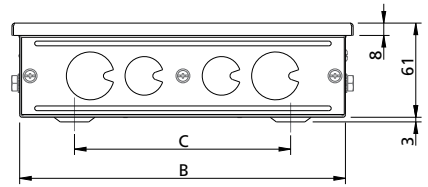
SPN SD - 4, 6, 8, 12 & 16 Ways

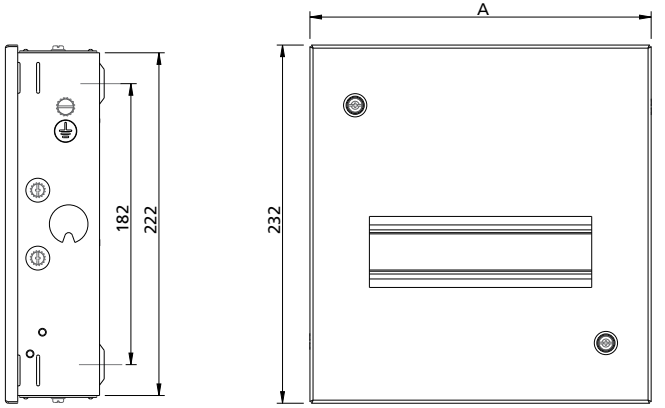
SPECIFICATION

IS: 13032 , IEC 61439 - 3 & IS:8623

Dimensions (in mm)

Ways	Cat No. SPN Double Door	Dimensions A	B	C	D	Knockout holes Top (Ø31)	Top (Ø25)	Bottom (Ø25)	Bottom (Ø25)
4 W	DSDMSNHOSI04	145	135	75	225	-	2	-	2
6 W	DSDMSNHOSI06	182	172	111	225	1	2	1	2
8 W	DSDMSNHOSI08	217	207	147	225	2	2	2	2
12 W	DSDMSNHOSI12	289	279	217	225	2	2	2	2
16 W	DSDMSNHOSI16	361	351	291	225	2	4	2	4





TPN SINGLE DOOR
DISTRIBUTION BOARDS & ENCLOSURES - IP 40

FEATURES

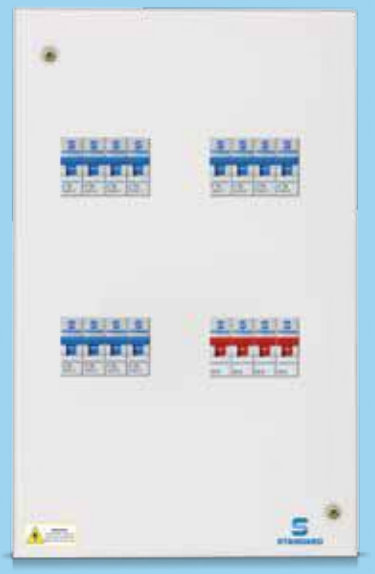
- Compact design, requires minimum space
- Suitable for flush & surface mounting
- Supplied with fully shielded busbar
- Level marks for providing indication for fitment in wall

RANGE

TPN SD - 4, 6, 8, 12 & 16 Ways

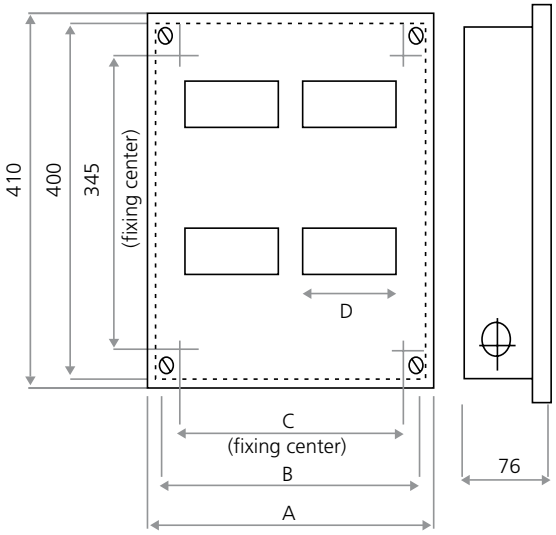
SPECIFICATION

IS:13032 , IEC 61439-3 & IS:8623



Dimensions (in mm)

		Dimensions					Knockout holes (Ø31)		
Ways	Cat No.	A	B	C	D	Sheet Thickness	Top	Bottom	Side (Each Side)
4	DSDMTNHCSI04	251	192	261	72	1.0	4	4	2
6	DSDMTNHCSI06	323	264	333	144	1.0	6	6	2
8	DSDMTNHCSI08	395	336	405	144	1.0	6	6	2
12	DSDMTNHCSI12	539	480	549	144	1.0	8	8	2



VERTICAL TYPE

VERTICAL SINGLE DOOR & DOUBLE DOOR DISTRIBUTION BOARDS & ENCLOSURES

FEATURES

- Suitable for flush & surface mounting
- Raised neutral link for easy wiring
- Provision for FP Isolator / RCCB as incomer & SP / TP mcb as out-going
- Supplied with 125 A copper busbar flat type
- Supplied with neutral & earth bars
- Pan assembly for ease of installation

RANGE

VERTICAL DD - 4, 8, & 12 Ways

SPECIFICATION

IS: 13032 & IS: 8623 and IEC 61439 - 3

DISTRIBUTION BOARDS

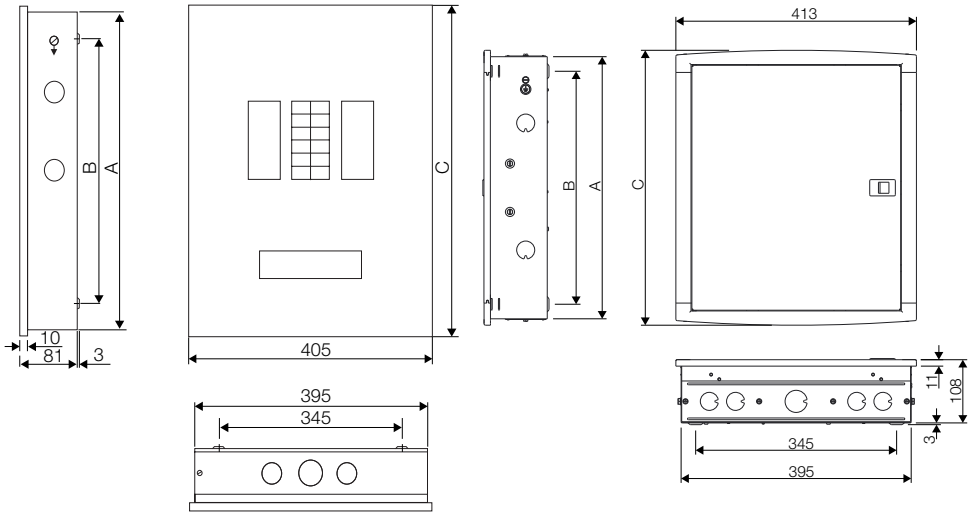
Dimensions (in mm) - Single Door

Ways	Cat No.	A	B	C	Top	Bottom Ø31	Bottom Ø38	Side	Sheet Thickness
4	DSDMTNVOSI04	450	400	460	5	2	1	2	1.0
8	DSDMTNVOSI08	558	508	568	5	2	1	2	1.0
12	DSDMTNVOSI12	666	616	676	5	2	1	2	1.0

Knockout Holes (Ø31 & Ø38)

Ways	Cat No.	A	B	C	Top	Bottom Ø31	Bottom Ø38	Side	Sheet Thickness
4	DSDMTNVODI04	450	400	472	5	2	1	2	1.0
8	DSDMTNVODI08	558	508	580	5	2	1	2	1.0
12	DSDMTNVODI12	666	616	688	5	2	1	2	1.0

Knockout Holes (Ø31 & Ø38)



POWERLINE VERTICAL TYPE

TPN DOUBLE DOOR DISTRIBUTION BOARDS - IP 42 (PROTECTION)

FEATURES

- Suitable for Flush mounting and Surface mounting
- With 160A & 250A copper busbar
- With neutral bars & earth bars
- With provision for TP/FP 160 A & 250 A MCCB as incomer and SP / TP MCBs as outgoing
- IP 42

RANGE

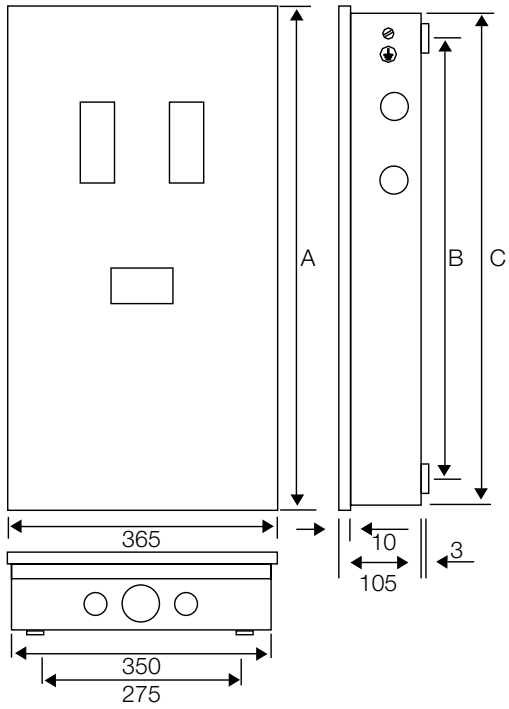
POWERLINE DD 4 W, 8 W & 12 W

SPECIFICATION

IEC 61439 - 3 / IS: 13032 & IS: 8623

Dimensions (in mm)

Ways	Cat No.	A	B	C	Top	Bottom Ø31	Bottom Ø38	Side	Sheet Thickness
4	DSDPVDIBEOTO04	685	596	670	7	4	1	2	1.2
8	DSDPVDIBEOTO08	793	703	778	7	4	1	2	1.2
12	DSDPVDIBEOTO12	901	811	886	7	4	1	2	1.2



DISTRIBUTION BOARDS

PREWIRED

SPN DOUBLE DOOR DISTRIBUTION BOARDS

FEATURES

- Phase/Neutral terminal block for termination of incoming and outgoing wires
- Colored flame retardant Polyamide terminal blocks and FRLS wiring for easy identification, Phases & Neutral
- A detachable cassette is provided for safe removal of MCB/RCCB from DB without loosening the internal cable connection of Phase & Neutral Circuit
- DBs are provided with integral loose wire box in SPN for accommodating extra bunch of wires
- IP 42

RANGE

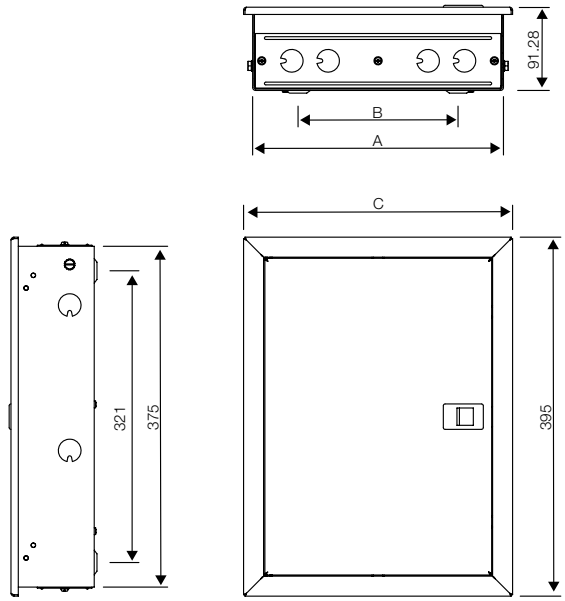
SPN DD - 6, 8, 10, 12 & 16 Ways

SPECIFICATION

IEC 61439 - 3 / IS: 13032 & IS: 8623

Dimensions (in mm) - Double Door

Ways	Cat No.	Sheet Thickness	Dimensions A	Dimensions B	Dimensions C	Knock out holes Top	Knock out holes Bottom	Knock out holes Side (Each Side)
6	DSDMSHMDIW06000	1.6	276	176	296	4	4	2
8	DSDMSHMDIW08000	1.6	312	212	332	4	4	2
10	DSDMSHMDIW10000	1.6	348	248	368	4	4	2
12	DSDMSHMDIW12000	1.6	384	284	404	6	6	2
16	DSDMSHMDIW16000	1.6	456	356	476	8	8	2



PREWIRED

TPN SINGLE DOOR DISTRIBUTION BOARDS

FEATURES

- Phase/Neutral terminal block for termination of incoming and outgoing wires
- Colored flame retardant Polyamide terminal blocks and FRLS wiring for easy identification, Phases & Neutral
- A detachable cassette is provided for safe removal of MCB/RCCB from DB without loosening the internal cable connection of Phase & Neutral Circuit
- DBs are provided with integral loose wire box for accommodating extra bunch of wires
- IP 42

RANGE

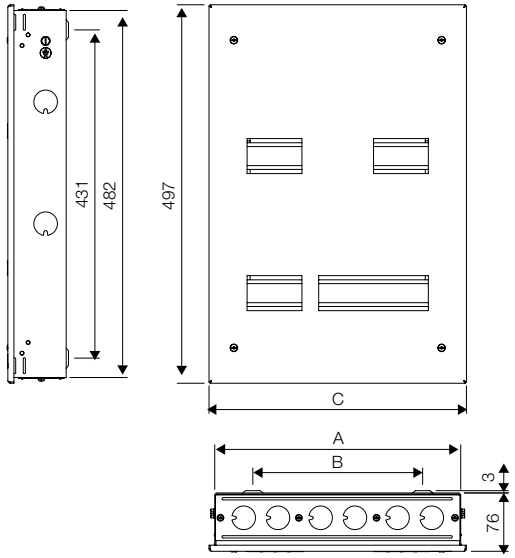
TPN SD - 4, 6, 8, & 12 Ways

SPECIFICATION

IEC 61439 - 3 / IS: 13032 & IS: 8623

Dimensions (in mm) - Single Door

Ways	Cat No.	Dimensions A (mm)	B (mm)	C (mm)	Knock out holes Top	Bottom	Side	Sheet thickness
4	DSDMTHMSIW04000	323	223	338	6	6	2	1.6
6	DSDMTHMSIW06000	359	259	374	6	6	2	1.6
8	DSDMTHMSIW08000	423	323	438	6	6	2	1.6
12	DSDMTHMSIW12000	567	467	618	8	8	2	1.6



PREWIRED

TPN DOUBLE DOOR DISTRIBUTION BOARDS

FEATURES

- Phase/Neutral terminal block for termination of incoming and outgoing wires
- Colored flame retardant Polyamide terminal blocks and FRLS wiring for easy identification, Phases & Neutral
- A detachable cassette is provided for safe removal of MCB/RCCB from DB without loosening the internal cable connection of Phase & Neutral Circuit
- DBs are provided with integral loose wire box for accommodating extra bunch of wires
- IP 42

RANGE

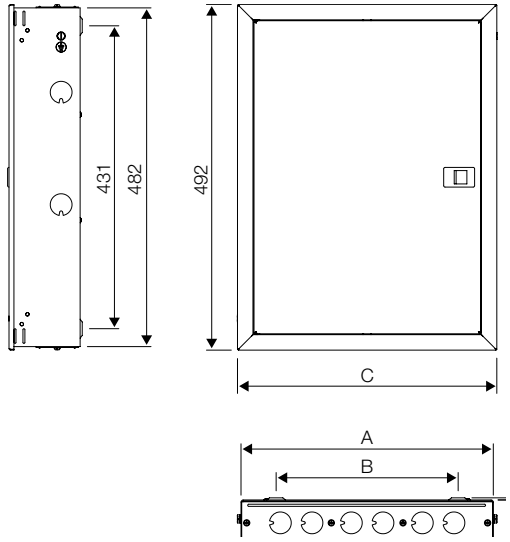
TPN DD - 4, 6, 8, & 12 Ways

SPECIFICATION

IEC 61439 - 3 / IS: 13032 & IS: 8623

Dimensions (in mm) - Double Door

Ways	Cat No.	Dimensions A (mm)	Dimensions B (mm)	Dimensions C (mm)	Knock out holes Top	Knock out holes Bottom	Knock out holes Side	Sheet thickness
4	DSDMTHMDIW04000	323	223	333	6	6	2	1.6
6	DSDMTHMDIW06000	359	259	369	6	6	2	1.6
8	DSDMTHMDIW08000	423	323	433	6	6	2	1.6
12	DSDMTHMDIW12000	567	467	577	8	8	2	1.6



CONSUMER UNIT

DISTRIBUTION BOARDS - IP 40

FEATURES

- Compact DBs which occupy minimum space
- Raised neutral link for easy wiring
- Suitable for surface & flush mounting
- DIN-bar
- Supplied with fully shielded bus-bars
- Supplied with neutral & earth link, top & bottom detachable plates
- IP 40

RANGE

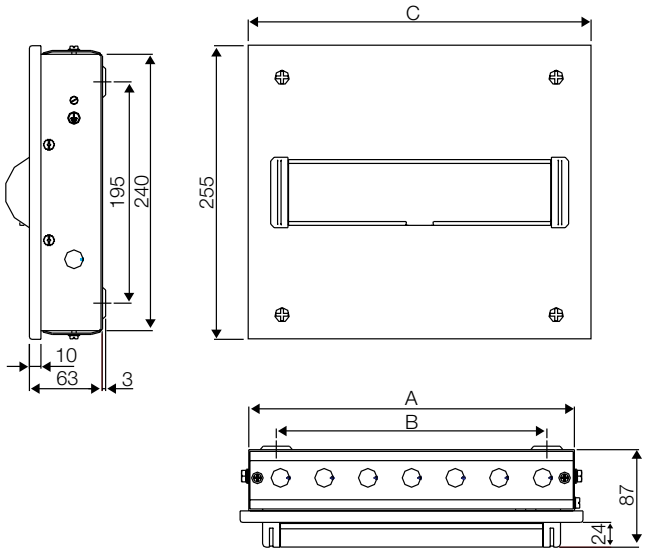
Consumer unit - 4 W, 8 W & 12 W

SPECIFICATION

IEC 61439 - 3 / IS: 13032 & IS: 8623

Dimensions (in mm) - Single Door

Ways	Cat No.	Dimensions A (mm)	Dimensions B (mm)	Dimensions C (mm)	Knock out holes Top	Knock out holes Bottom	Knock out holes Side	Sheet thickness
4	DSDCSNHOSI04	139	89	154	3	3	1	1
8	DSDCSNHOSI08	211	161	226	5	5	1	1
12	DSDCSNHOSI12	283	233	298	7	7	1	1



PER PHASE ISOLATION

TPN HORI PPI DOUBLE DOOR DISTRIBUTION BOARDS

FEATURES

- DBs with phase segregation and separation between incomer and outgoing
- Suitable for Flush mounting and Surface mounting
- With 100A copper busbar for each phase
- With neutral bar, earth bar and cable ties for cable management
- Fully insulated busbar
- With per phase neutral & earth bar
- Supplied with wire set
- IP 42

RANGE

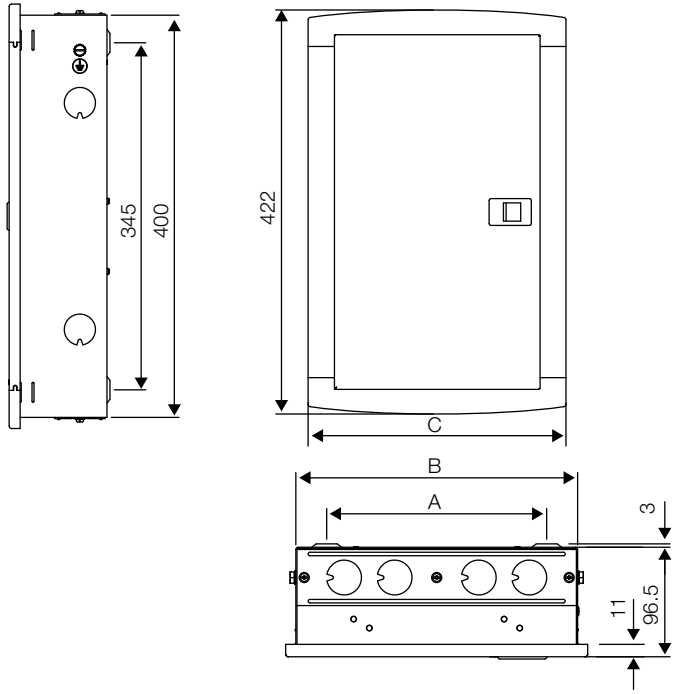
TPN DD - 4, 6 & 8 Ways

SPECIFICATION

IEC 61439 - 3 / IS: 13032 & IS: 8623

Dimensions (in mm) - Double Door

Ways	Cat No.	Capacity of 17.8 mm Module Incomer + Outgoing	A	B	C	Top	Bot-tom	Side	Sheet Thick-ness
2+4	DSDPTHPDRW04	4 + (6+12)	323	268	341	6	6	2	1
2+6	DSDPTHPDRW06	4 + (6+18)	395	340	413	8	8	2	1
2+8	DSDPTHPDRW08	4 + (6+24)	534	479	552	11	11	2	1



PER PHASE ISOLATION (PPI) VERTICAL

DISTRIBUTION BOARDS - IP 42 PROTECTION

FEATURES

- DBs with phase segregation and separation between incomer and outgoing
- Suitable for Flush mounting and Surface mounting
- With 100 A copper busbar for each phase
- With neutral bar, earth bar and cable ties for cable management
- Fully insulated busbar
- With per phase neutral & earth bar
- Supplied with wire set
- IP 42

RANGE

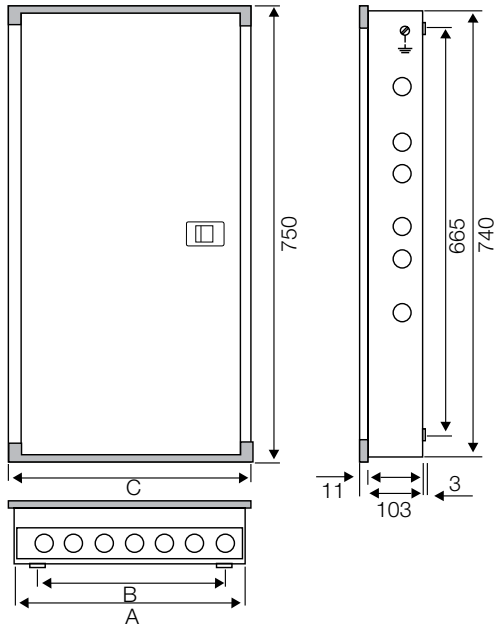
PPI Vertical DB - 4 Tier - 2+8 W & 2+12 W

SPECIFICATION

IEC 61439 - 3 / IS: 13032 & IS: 8623

Dimensions (in mm) - Double Door

Ways	Cat No.	Capacity of 17.8 mm Module Incomer + Outgoing	A	B	C	Top	Bot-tom	Side	Sheet Thick-ness
2 + 8	DSDPTVPDRW08	4 + (6+24)	323	248	338	7	7	6	1.2
2 + 12	DSDPTVPDRW12	4 + (6+36)	395	320	405	7	7	6	1.2



PHASE SELECTOR HORI

DOUBLE DOOR DISTRIBUTION BOARDS

FEATURES

- With inbuilt 3 nos. of 40A/63A phase selector switches and 3 nos piano switches
- Suitable for Flush mounting and Surface mounting
- With 100A copper busbar for each phase
- With neutral bar, earth bar and cable ties for cable management
- Fully insulated busbar
- Provision for 8W incomer, indicator light R, Y, B (FP MCB/ Isolator/ RCCB)
- Supplied with wire set
- IP 42

RANGE

Phase Selector (Horizontal - 4 Quadrant) - 4, 6 & 8 WAYS

SPECIFICATION

IEC 61439 - 3 / IS: 13032 & IS: 8623

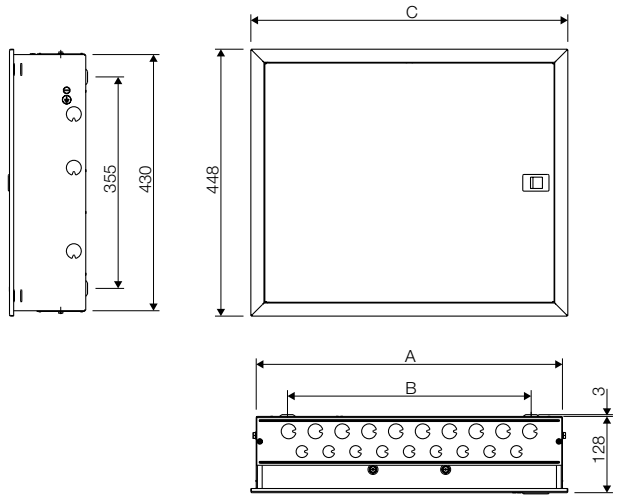
DISTRIBUTION BOARDS

Dimensions (in mm) - Double Door

Ways		A	B	C	D	E	Top (Ø20)	Top (Ø25)	Bottom (Ø20)	Bottom (Ø25)	Side (Each Side)	Sheet Thickness
4	DSDSCHDRZ04000	478	373	496	430	355	8	9	8	9	3	1
6	DSDSCHDRZ06000	514	409	532	430	355	9	10	9	10	3	1
8	DSDSCHDRZ08000	550	445	568	430	355	10	11	10	11	3	1

Ways	Rating	Cat No. (DD) Horizontal	
4	40A	DSDSCHDRZ04040	with eight way incomer slot
4	63A	DSDSCHDRZ04063	with eight way incomer slot
6	40A	DSDSCHDRZ06040	with eight way incomer slot
6	63A	DSDSCHDRZ06063	with eight way incomer slot
8	40A	DSDSCHDRZ08040	with eight way incomer slot
8	63A	DSDSCHDRZ08063	with eight way incomer slot

PHASE SELECTOR DBS (Without Rotary Switches & Wires)



PHASE SELECTOR - With Rotary Switches & Wires

PHASE SELECTOR DB (VERTICAL)

FEATURES

- With inbuilt 3 nos. of 63A phase selector switches and 3 nos. piano switches
- Suitable for Flush mounting and Surface mounting
- With 100A copper busbar for each phase
- With neutral bar, earth bar and cable ties for cable management
- Fully insulated busbar and neutral bar
- Provision for 8W incomer, indicator light R, Y, B (FP MCB/ Isolator/ RCCB)
- Supplied with wire set

RANGE

Phase Selector (Vertical) – 4, 6 & 8 Ways

SPECIFICATION

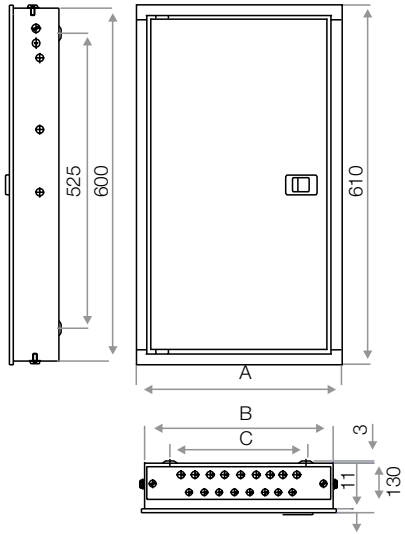
IEC 61439 - 3 / IS: 13032 & IS: 8623

Dimensions (in mm) - Double Door

Ways	Capacity of 17.8 mm module Incoming + Outgoing	Rating	A	B	C	Knockout Holes				
						Top		Bottom		Each Side
						Ø25	Ø20	Ø25	Ø20	Ø25
4	8+12	40A	333	323	248	9	8	9	8	3
4	8+12	63A	333	323	248	9	8	9	8	3
6	8+18	40A	405	395	320	9	8	9	8	3
6	8+18	63A	405	395	320	9	8	9	8	3
8	8+24	40A	405	395	320	9	8	9	8	3
8	8+24	63A	405	395	320	9	8	9	8	3

Ways	Rating	Cat No. (DD) Horizontal
4	40A	DSDSNVDRZ04040
4	63 A	DSDSNVDRZ04063
6	40 A	DSDSNVDRZ06040
6	63 A	DSDSNVDRZ06063
8	40 A	DSDSNVDRZ08040
8	63 A	DSDSNVDRZ08063

PHASE SELECTOR DBS (Without Rotary Switches & Wires)



PHASE SELECTOR SWITCH

DOUBLE DOOR DISTRIBUTION BOARDS

FEATURES

- Compact DBs which occupy minimum space
- Phase selector DBs provide flexibility in selecting and interchanging the phases in case there is power outage in one particular phase
- Suitable for surface & flush mounting
- Cost effective solution
- Supplied with rotary switches, duly wired
- Suitable for use on 240/415V, 50Hz supply
- IP 40

RANGE

40A to 63A

SPECIFICATION

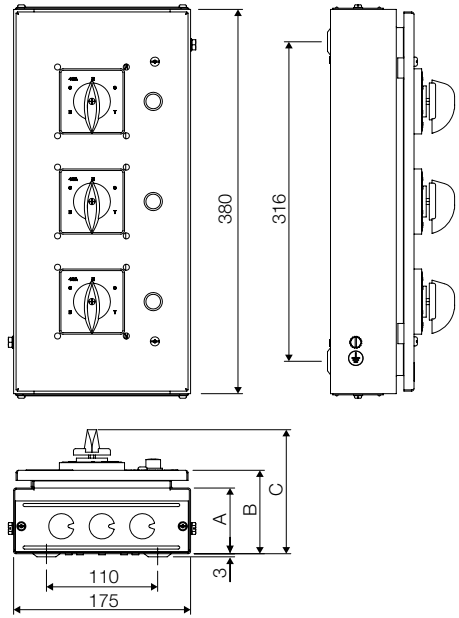
IEC 61439 - 3 / IS: 13032 & IS: 8623

Dimensions (in mm) - Single Door

Rating	A	B	C	Top	Bottom	Sheet Thickness
40 A	65	83	123	3	3	1.2
63 A	91	109	144	3	3	1.2

Knockout Holes (Ø25)

PHASE SELECTOR DBS (Without Rotary Switches & Wires)



7 SEGMENT - DOUBLE DOOR DISTRIBUTION BOARDS

FEATURES

- DBs with phase segregation and separation between incomer and outgoings
- Suitable for Flush mounting and Surface mounting
- With 100A copper busbar for each phase
- With neutral bar, earth bar
- Fully insulated busbar
- Main Incomer FP Isolator & FP Changeover, DP RCCB as sub-incomer and SP MCBs as outgoing
- Supplied with wire set
- IP 42

RANGE

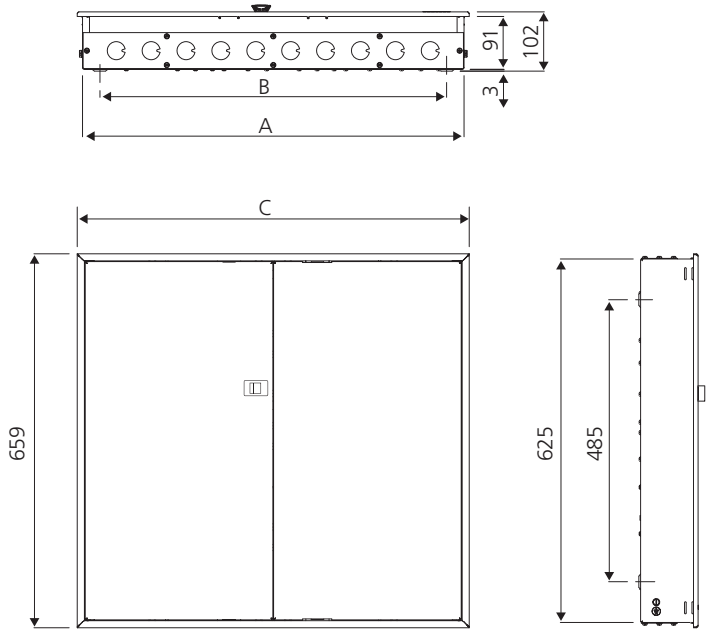
7 Segment DB - (TPN DD) - 4, 6, 8 & 12W

SPECIFICATION

IEC 61439 - 3 / IS: 13032 & IS: 8623

Dimensions (in mm)

Ways	Cat No.	Sheet Thickness	Dimensions A	Dimensions B	Dimensions C	Knock out holes (Ø31) Top	Knock out holes (Ø31) Bottom
4	DSDMTHDDRW04	1.2	440	380	474	7	7
6	DSDMTHDDRW06	1.2	548	488	582	8	8
8	DSDMTHDDRW08	1.6	656	596	690	10	10
12	DSDMTHDDRW12	1.6	872	812	906	13	13



MCB SHEET STEEL ENCLOSURES

FEATURES

- Enclosure for independent cut of / connection of electrical appliances

RANGE

40A to 63A

SPECIFICATION

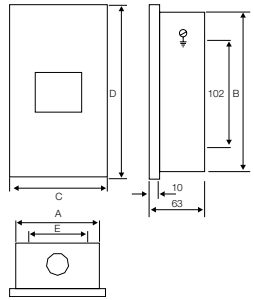
IEC 61439 - 3 / IS: 13032 & IS: 8623

DISTRIBUTION BOARDS

Dimensions (in mm) - Sheet Steel Enclosure

Ways	Dimensions					Knock out holes (Ø25)		Sheet Thickness
	A	B	C	D	E	Top	Bottom	
2	60	160	70	170	30	1	1	1
4	98	180	108	190	62	2	2	1

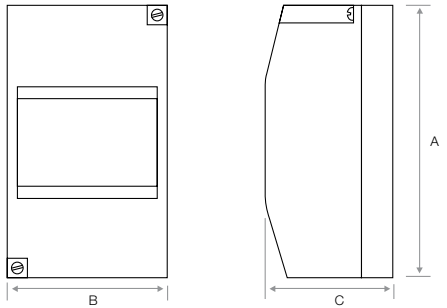
Ways (amp.)	Cat No.
1	DSDESSP
2	DSDESDP
3	DSDESTP
4	DSDESFP



Dimensions (in mm) - Plastic Enclosure

Ways	Dimensions		
	A	B	C
2	140	45	65
4	140	81	65

Ways	Cat No.
1/2	DSDEPDP
3/4	DSDEPFP



MCB PROTECTED SOCKET & POWERSHIELD ENCLOSURES

FEATURES MCB PROTECTED SOCKET

- Aesthetic appeal
- Ideal for local sectioning - Selectivity
- High quality contacts ensures reliability
- Built in MCBs protection, short circuit breaking capacity (3kA)
- Suitable for protection of home appliances like ACs, LCD, Geyser, Microwave etc.

RANGE
25A

RATED VOLTAGE UN
25A

RATED FREQUENCY
50 Hz

TERMINAL CAPACITY
6 mm²

FEATURES; POWERSHEILD

- Appealing & contemporary aesthetics
- compact & space saving design
- Overload & short circuit protection
- Proven MCB mechanism for longer life
- Easy to operate & replace
- Completely insulated design
- Indication of supply
- In plastic enclosure with mini MCB

RANGE
32A

RATED VOLTAGE UN
240V ac Rated Frequency : 50 Hz

TERMINAL CAPACITY
6 mm²

DISTRIBUTION BOARDS

MCB protected socket is a new concept to provide safety for appliances which are plugged in to power sockets in residences as well as commercial premises. It provides inbuilt protection over current & short circuit with the help of MCB. It is designed for quick and easy installation and is new style statement for safety.

Dimensions (in mm)

MCB PROTECTED SOCKET (MODULAR AC BOX) 3 Module

Rating	Description	Cat No.
25A	Sheet Metal	DSDMCSN0251025
25A	Plastic	DSDTCSN0251025

MCB PROTECTED SOCKET (MODULAR AC BOX) 4 Module

Rating	Description	Cat No.
25A	Sheet Metal	DSDMCDP0251025
25A	Plastic	DSDTCDP0251025

MINI MCB WITH ENCLOSURE

Rating	Cat No.
32A	DSMPCDPA032

PLUG & SOCKET ENCLOSURES

FEATURES

- The DB can be supplied with neutral and earth bars if so required
- The enclosures are made of special grade CRCA steel sheet manufactured with latest CNC punch and brake presses to attain higher degree of perfection
- Adequate number of knockouts at the end plates are provided for ease of wiring
- Din rails are provided for snap mounting of MCBs/RCCBs
- The DB is suitable for IP 40 degree of protection

ACCESSORIES

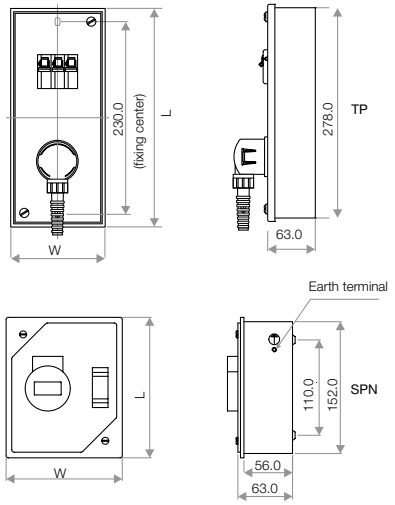
- Neutral Bar/Earth Bar
- Neutral Bar
- Blanking Plate 1/2

DISTRIBUTION BOARDS

Dimensions (in mm)

Rating (Amp.)	Cat No.
20 A / SPN / DP (AC Box)	DSDPUSN020
20 A / TP	DSDPUTN020
30 A / TP	DSDPUTN032

Rating Code	Item	Surface Mounting		Knock out Incoming	Knockout Outgoing
		W	L		
20	KSPS/SP	133	162	1 No. ø 25	1 No. ø 25
20	KSPS/TP	129	293	1 No. ø 25	1 No. ø 25
30	KSPS/TP	129	293	1 No. ø 25	1 No. ø 25



METAL CLAD PLUG & SOCKET ENCLOSURES

FEATURES MCB PROTECTED SOCKET

- Finger protection from accidental contact with plug pins by provision of an over hang around the pins of the plug.
- Protective cap / cover provided for socket when not in use.
- Contact tubes of socket deeply recessed to prevent finger contact.
- Provision of scraping earth. The earth connection makes first & breaks last.
- Visible earth terminal for ease of checking earth connection.
- Rubber cable guard in the plug for protection of incoming flexible cable.
- Different circuits cannot be accidentally interconnected i.e. non Reversible.

RANGE

3 PIN, 20A FOR SINGLE PHASE (2P + E) CONFIGURATION
4 Pin, 20A & 30A for three phase (3P + E) configuration

SPECIFICATION

Conforms to IEC : 60309-1 & 3

DISTRIBUTION BOARDS

Metal clad Plug & Socket are designed for heavy duty industrial applications so that better safety to installation & equipment can be provided. Suitable for humid and dusty / corrosive atmosphere, the metal clad and socket can be used for domestic, commercial and industrial applications.

CONSTRUCTION

The outer casting are made of non-corroding die cast aluminium alloy. The interiors are moulded out of superior grade phenolic/polyester compound to lend better mechanical strength and electrical properties. Protective cap/cover for socket provides safety when socket not in use. Contact tubes of socket are deeply recessed to prevent finger contact. An overhang around the pins of the plug provide finger protection from accidental contact. The earth connection makes first and breaks last. Rubber cable guard in the plug provides protection to incoming flexible cable.

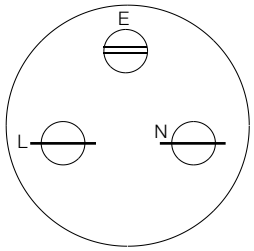
Dimensions (in mm)

Description	Current Rating (A)	Cat No.
Plug		
2 Pole + Earth	20 A	ISQPDP020
3 Pole + Earth	20 A	ISQPTP020
3 Pole + Earth	30 A	ISQPTP030
Socket		
2 Pole + Earth	20 A	ISQSDP020
3 Pole + Earth	20 A	ISQSTP020
3 Pole + Earth	30 A	ISQSTP030

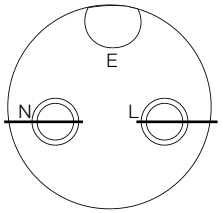
Current Rating	Type	No. of Pole	Rated Voltage	Insulation Voltage	Thermal Rating	Max. HP for Rated Voltage	Recommended MCB Protection
20 A	Plug Socket	2 + E	250 V	500 V	25 A	6.0 HP . 240 V	25 A 'C' Series
20 A	Plug Socket	3 + E	500 V	660 V	25 A	12.5 HP . 415 V	25 A 'C' Series
30 A	Plug Socket	3 + E	500 V	660 V	32 A	20.0 HP . 415 V	32 A 'C' Series

Note

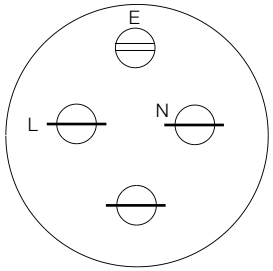
- Where motors are being started, the ratings of Plugs & Sockets should be selected on the above basis.
- For constant load applications, these Plugs & Sockets can be safely used upto 30% continuous overloading



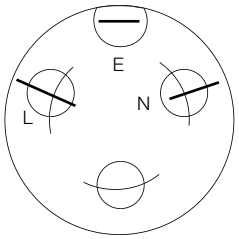
Plug
2 Pole + E



Socket
2 Pole + E



Plug
3 Pole + E



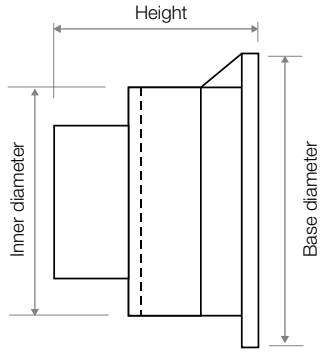
Socket
3 Pole + E

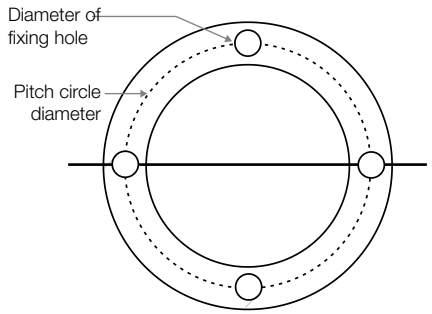
THREE PIN & FOUR PIN

METAL CLAD PLUG & SOCKET

DIMENSIONAL DETAILS (IN MM) - SOCKET

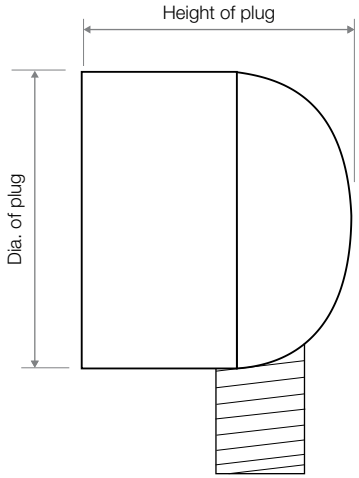
Rating (A)	A	B	C	D(f)	PCD
20 SP	67	50.3	37.5	4.5	59.8
20 TP	76	59	42	4.5	67.3
30 TP	83.5	67.5	55	4.5	76





DIMENSIONAL DETAILS (IN MM) - BOLTED TYPE FUSE LINKS - PLUG

Rating (A)	E	F
20 SP	44.2	46
20 TP	47	51
30 TP	78	66



DISTRIBUTION BOARDS

IP RATINGS

The IP (International Protection) rating given to an enclosure states the degree of protection it offers by means of two digits. A summary of these is shown below, for a more detaileddefition, see IEC 529 : 1989, BS EN 60529 : 1992.

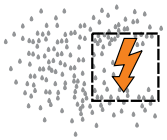
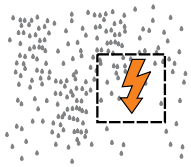
FIRST DIGIT

Protection against solid foreign objects and access to hazardous parts.The first digit covers protection against penetration by solid objects, which includes hands and tools such as screwdrivers.

At the lowest of seven levels, 0, no protection is offered, either of the equipment itself from damage by intrusion or of a person contacting live or moving parts. At the highest, there shall be no entry of dust.

SECOND DIGIT

Protection against ingress of water. The second digit covers the degree of protection against the entry of water, on a progressive scale. for example, number 1 indicates that dripping water shall have no harmful effect, and number 6, that water projected in powerfuljets against the enclosure from any direction shall have no harmful effects.

No Protection	0		No Protection	0
Protected against solid objects up to 50 mm. e.g. accidental touch by hands	1		Protected against vertically falling drops of water e.g. condensation	1
Protected against solid objects up to 12 mm e.g. fingers	2		Protected against direct sprays of water up to 15° from the vertical	2
Protected against solid objects over 2.5 mm e.g. tools and wires	3		Protected against sprays of water up to 60° from the vertical	3
Protected against solid objects over 1 mm e.g. tools, wires and small wires	4		Protected against after splash from all directions -limited ingress permitted	4
Protected against dust -limited ingress, no harmful deposits	5		Protected against low pressure jets of water from all directions - limited ingress permitted	5
Totally protected against dust.	6		Protected against strong jets of water e.g. for use on ship decks -limited ingress permitted	6

The letter X can be used in place of the first or second digit to indicate that tests have either not been made or are not applicable.

DISTRIBUTION BOARDS

CATEGORY OF DUTY

The category of duty defines the basic type of circuit and switching capability of the device, and selection should be made accordingly.

UTILISATION CATEGORY TYPICAL APPLICATIONS

AC20/DC20 Connecting and disconnecting under no-load.

Assumes all switching operations are carried out by other capable devices before this device is operated.

AC21/DC21 Switching of resistive loads including moderate overloads.

Suitable for purely resistive type loads devices can switch 150% of its rated current under fault conditions

AC22/DC22 Switching of mixed resistive / inductive loads, including moderate overloads.

Suitable for mixed resistive / inductive loads. Devices can switch 300% of its rated current under fault conditions.

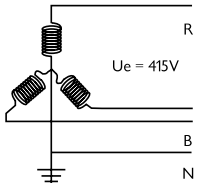
AC23/DC23 SWITCHING OF HIGHLY INDUCTIVE LOADS.

Devices complying with AC23/DC23 are provided mainly as back-up to other means of switching. e.g. contacts. In the event of failure of functional devices, an AC23 / DC23 type device can safety interrupt a stalled motor current. Where devices are the only means of controlling individual motors, they should comply with the requirements of appendix A of the standard. (IEC 60947-3)

Ue = Rated Operational Voltage

The normal line-to-line voltage of the

system should not exceed (Ue)



Ui = Rated Insulation Voltage

The voltage on which the dielectric properties have conventionally been based using tests at high voltage and mains frequency. It is intended to replace this value with (Uimp)

Ui = 660V

Tested@

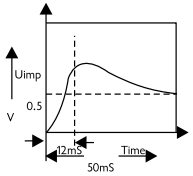
2500V ac 50Hz

Uimp = The voltage on which clearance distances are based.

The value of transient peak voltage the circuit breaker can withstand from switching surges or lighting strikes imposed on the supply.

e.g. Uimp = 8kV, Tested @8kV peak with

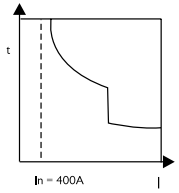
1.2/50m (ms)S impulse wave



In = Rated Current

The current which the circuit breaker will carry continuously under specified conditions and on which the time / current characteristics are based.

Unless otherwise slated (In) is based on a reference ambient temperature of 30° centigrade.

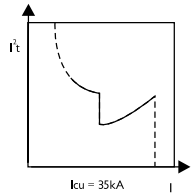


Icu Rated Ultimate Short Circuit

Breaking Capacity

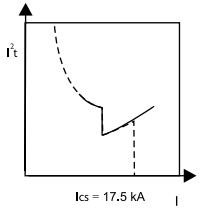
The calculated prospective fault current at the incoming terminals of the circuit breaker should not exceed (Icu).

Exception: Using back-up protection as specified by the manufacturer.



Ics Rated Short-time Withstand Current

The maximum level of fault current operation after which further service is assured without loss of performance.



Icw Rated Short-time Withstand Current

Circuit breakers of utilisation category 'B' have a short-time delay allowing time-graded selectivity between circuit breakers in series.

(Icw) is the current the circuit breaker will withstand for the maximum short-time delay time. Preferred times are 0.05, 0.1, 0.25, 0.5 and 1.0 second.