ISOLATORS
FLOAT SWITCHES
METER
MOULDED CASE CIRCUIT BREAKERS
METAL ENCLOSURE
RESIDUAL
CURRENT
CIRCUIT
BREAKERS
DISTRIBUTION
BOARDS
DOL STARTERS
ENERGY
METER
CHANGEOVER SWITCHES
MOULDED CASE CIRCUIT
BREAKERS
FLOAT SWITCH
ENERGY
METER
STARTERS
ROW DISTRIBUTION
WEATHERPROOF
ENCLOSURE
WEATHERPROOF
METAL ENCLOSURE
CIRCUIT BREAKERS
ISOLATORS
DISTRIBUTION BOAR
MINIATURE
CIRCUIT
FLOAT
SWITCH
BREAKER
ROW DISTRIBUTION BOA
CHANGEOVER SWITCHES
DISTRIBUTION
BOARDS
WEATHERPROOF METAL
MINIATURE CIRCUIT BREAKE
MCCB RCCB ELCBs
ISOLATOR
RESIDUAL CURRENT CIRCUITS
ENERGY METER
DOL STARTE
CHANGEOVER SWITCHES
CIRCUIT BRE
FLOAT SWITCHES
FLOAT
SWITCH
BREAKERS

SWITCHGEAR

RR GLOBAL

RR Switchgear is part of RR Global, a USD 850+ Million conglomerate in the electrical sector with a presence in over 85+ countries globally. Spread across multiple business verticals including Switchgears, RR Global has always endeavored to create products of the highest quality using the latest innovative technology.

RR Switchgear brings to you a vast range of products including MCB's, Isolators, MCCB's, Distribution Boards, Energy Meters, Weather Proof Metal Enclosures to name a few. Our products can be used in residential or commercial areas and adhere to the highest international safety and quality standards, ensuring you get only the most efficient, reliable and long lasting Switchgear products at the most competitive prices.

Distributed from our 65,000 sqft central facility in Sharjah & Dubai, at RR Switchgear, we are committed with providing our clients across the region products of the highest quality. Therefore, we leave no stone unturned in ensuring you get nothing but the finest products that money can buy.

CONTENT

MINIATURE CIRCUIT BREAKERS (MCB)

The needs of the electrical distribution system are continuously evolving in the residential, commercial and industrial sectors. Improved operation safety, continuity of service, greater convenience and operating cost have assumed a tremendous significance. RR Miniature Circuit Breakers have been designed to continuously adapt to these changing needs.

RANGE

- 6A to 40A - 'B' Curve
- 0.5A to 80A - 'C' Curve

EXECUTION

Single Pole (1P)

Single Pole & Neutral (1P + N)

Double Pole (2P)

Three Pole (3P)

Three Pole & Neutral (3P + N)

Four Pole

SPECIFICATION

IS/IEC 60898 - 1 / EN 60898

FEATURES

Quick Trip Mechanism

12 Plates Arc Chute for Effective Arc Quenching

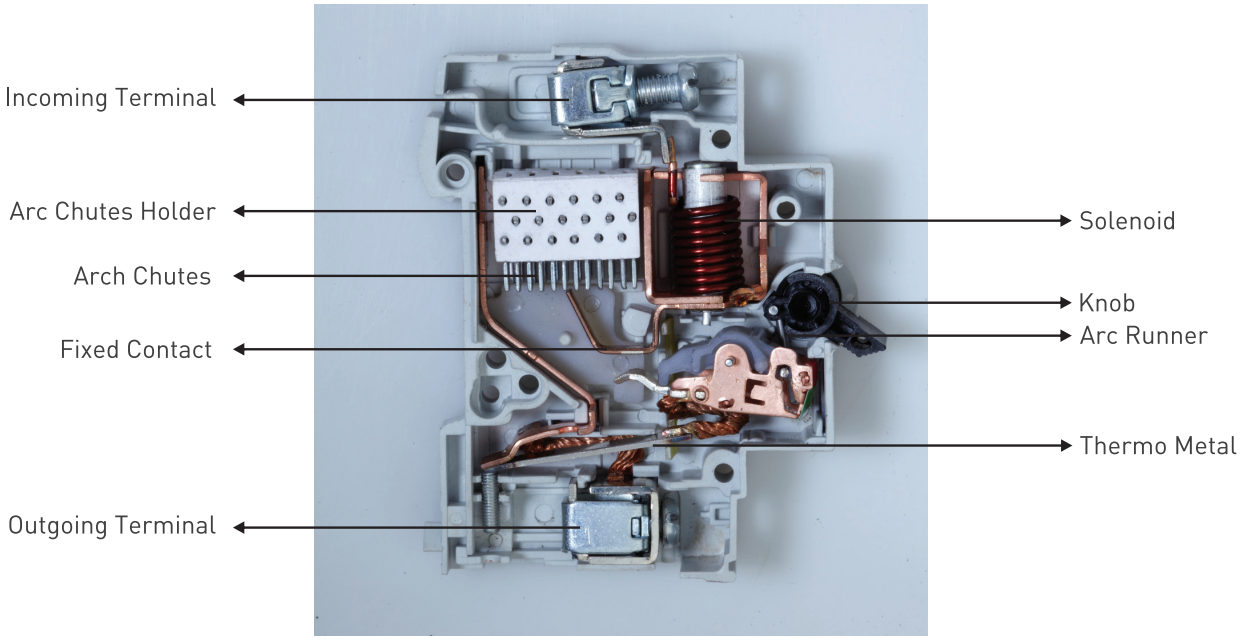
Longer Electrical Operation / Life

Wide Range

Value for Money

Low Power Consumption, thus Cost Effective & Energy saving

Inside



CONSTRUCTION

RR Miniature Circuit Breakers have precisely formed moulded case & cover of flame retardant high strength thermoplastic material having high melting point, low water absorption, high dielectric strength and temperature with stand.

The **Switch Mechanism** is independent, manual and trip free, i.e., the breaker trips internally even if the operating knob is held in ON position.

The **Contact Mechanism** comprises of fixed & moving contacts specially designed for reliability, long life and anti-weld properties.

The **Arc Extinguishing Device** comprises of 12 plates Arc Chute. The Arc under the influence of the magnetic field and arc guide is moved into the arc chute where it is rapidly split and quenched. The tripping mechanism is Thermal Magnetic Type.

THERMAL OPERATION

The thermal operation provides protection from moderate overload. Under overload condition, a thermo-metallic element (bimetallic strip) deflects until it operates a latching mechanism allowing the main contacts to open.

MAGNETIC OPERATION

In magnetic operation, large overloads or short circuit current actuates a solenoid causing a plunger to strike the latching mechanism rapidly opening the main contacts.

Salient Features

Conforms to latest standard

RR MCB conforms to the latest standard IEC 60898-1 in selected ratings.

Energy Saving

The low power loss as stipulated in the IEC 898/95, IEC 60898-1 has been taken care of while designing the MCB. The low power loss figures of RR MCB contributes significantly to energy saving.

Din Rail Mounting

RR MCB's can be mounted on standard 35 mm DIN Rail by snap action. There is no time wastage in installing and replacing the MCB.

Shock Proof

Figure and hand touch safe. Tested as per the test clause 9.6 of IEC 60898-1 protection against electric shock.

Housing

The housing of RR MCB is injection moulded from special grade of Nylon as per international standards. The housing and other moulded components are fire retardant, anti-tracking and non-hygroscopic. The housing can withstand high temperature and is impact resistant.

Contacts

Contacts are made of special silver inlaid copper strip, ensuring higher life and maximum safety against contact welding and erosion. These contacts have low contact resistance resulting in reduced watt loss.

Current Limiting Action

The high speed current limiting action ensures that the MCB operate before the full prospective fault current is allowed to develop. Under fault conditions, damage can be sustained to the installation and associated equipment due to the amount of energy that passes before the current is completely interrupted. The total energy let through depends on the value of current and the time for which it flows, and is denoted by the symbol 12t. The high speed current limiting action of RR MCB ensures that the energy let through and any subsequent damage is minimized. The reduced LET THROUGH ENERGY (Class 3 as per EN 60898-1) assists greatly with both back-up and discrimination considerations.

Operating Mechanism

RR MCB's have a quick make & break trip free m echanism. In the event of an over current or short circuit the MCB automatically interrupts all poles even if the MCB toggle is held in ON position, the handle always indicates the correct contact position.

Moderate Overload Condition

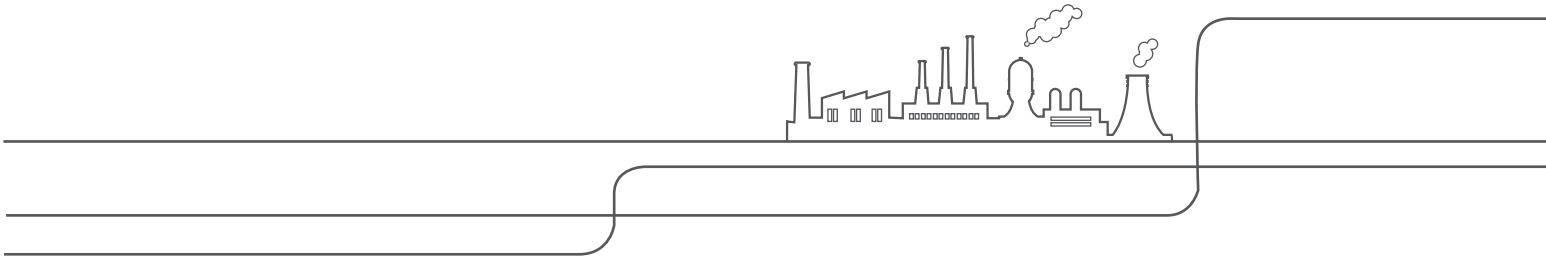
Detection of moderate overload conditions is achieved by the use of a Bimetal Overload Relay, which deflects in response to the current passing through it. The Bimetal Relay moves against the trip bar releasing the trip mechanism.

Perfect connections

The design of terminals makes the wiring easier. Combination box type terminals with combination head screws on both sides with deep serrations ensures sparkless and firm connections. The bi-connection facility simplifies connection in various application areas.

Low Watt Loss

RR MCB's have been designed to minimize energy loss through unique contact configuration & reduction of hot spots. Watt loss per pole in MCB is far lower than that specified in IEC 60898-1.



RATED CURRENT	MAX. ALLOWABLE WATT LOSS PER POLE AS PER IS:8828-1996, IEC 898-95	MAX. WATT LOSS PER POLE
06 < In < 10	3.0	0.75
10 < In < 16	3.5	2.00
16 < In < 25	4.5	2.60
25 < In < 32	6.0	3.30
32 < In < 40	7.5	4.00
40 < In < 50	9.0	4.60
50 < In < 63	13.0	5.20
80 < In < 100	Consideration	9.20

TECHNICAL DATA	
Specifications	IEC 60898 - 1 / EN 60898-1
Number of Poles	1, 1+N, 2, 3, 3+N & 4
Tripping Characteristic and Related	B characteristics - 0.5A to 100A
Currents (In)	C characteristics - 0.5A to 100A
Rated Breaking Capacity	10000A, 10KA
Energy Limiting Class	Class 3 as per EN 60898
Rated Voltages (Ue) Single Pole Multi Pole	240 / 415V AC 415V AC
Insulation Voltage (Ui)	660V
Rated Frequencies	50 / 60 Hz
Impulse Withstand Voltage (Uimp)	4 KV (1.2 / 50)
Impulse Power Frequency Volatge	2KV (50)
Housing Material	Polybutylene Terephthalate in grey colour
Degree of Protection	IP 20 as per IEC 60898-1
Mounting Position	Any Position
Mounting	Quick snap to mounting rails, 35mm
Connecting Terminals	Combination box terminals on incoming and outgoing sides. Suitable for single core, stranded and flexible conductors upto 25 sq mm, combination crosshead screw, max. tightening torque 2 Nm
Electrical Service Life	Min. 30,000 make / break operations
Ambient Temperature	Tmax : 55oC Tmin : (-) 25oC
Impact Resistance	3g, at least 2 impacts duration 13ms

	CAT. NO.	DESCRIPTION
 Single Pole	RR-MSP06	6A MCB Single Pole ,10kA, C Curve
	RR-MSP10	10A MCB Single Pole ,10kA, C Curve
	RR-MSP16	16A MCB Single Pole ,10kA, C Curve
	RR-MSP20	20A MCB Single Pole ,10kA, C Curve
	RR-MSP25	25A MCB Single Pole ,10kA, C Curve
	RR-MSP32	32A MCB Single Pole ,10kA, C Curve
	RR-MSP40	40A MCB Single Pole ,10kA, C Curve
	RR-MSP63	63A MCB Single Pole ,10kA, C Curve
 Double Pole	RR-MDP06	6A MCB Double Pole ,10kA, C Curve
	RR-MDP10	10A MCB Double Pole ,10kA, C Curve
	RR-MDP16	16A MCB Double Pole ,10kA, C Curve
	RR-MDP20	20A MCB Double Pole ,10kA, C Curve
	RR-MDP25	25A MCB Double Pole ,10kA, C Curve
	RR-MDP32	32A MCB Double Pole ,10kA, C Curve
	RR-MDP40	40A MCB Double Pole ,10kA, C Curve
	RR-MDP63	63A MCB Double Pole ,10kA, C Curve
 Three Pole	RR-MTP06	6A MCB Three Pole ,10kA, C Curve
	RR-MTP10	10A MCB Three Pole ,10kA, C Curve
	RR-MTP16	16A MCB Three Pole ,10kA, C Curve
	RR-MTP20	20A MCB Three Pole ,10kA, C Curve
	RR-MTP25	25A MCB Three Pole ,10kA, C Curve
	RR-MTP32	32A MCB Three Pole ,10kA, C Curve
	RR-MTP40	40A MCB Three Pole ,10kA, C Curve
	RR-MTP63	63A MCB Three Pole ,10kA, C Curve

RATED CURRENT	MAX. ALLOWABLE WATT LOSS PER POLE AS PER IS:8828-1996, IEC 898-95	MAX. WATT LOSS PER POLE
06 < In < 10	3.0	0.75
10 < In < 16	3.5	2.00
16 < In < 25	4.5	2.60
25 < In < 32	6.0	3.30
32 < In < 40	7.5	4.00
40 < In < 50	9.0	4.60
50 < In < 63	13.0	5.20
80 < In < 100	Consideration	9.20

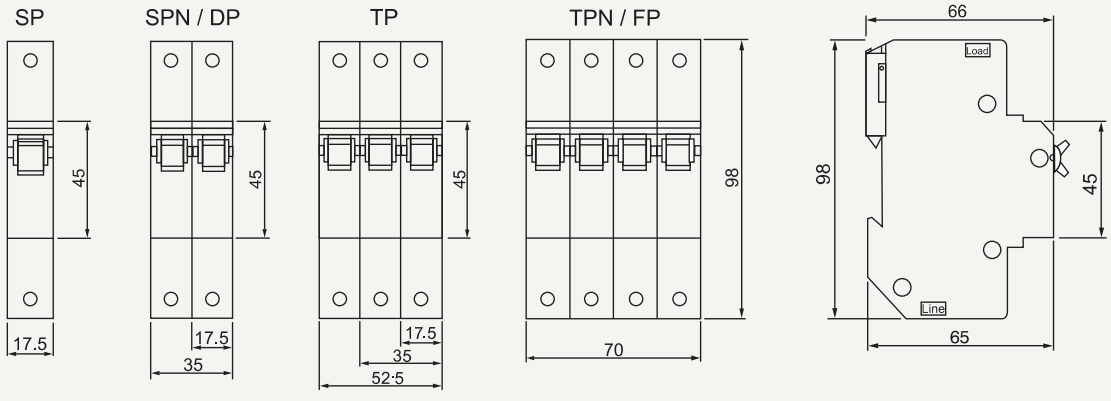
TECHNICAL DATA	
Specifications	IEC 60898 - 1 / EN 60898-1
Number of Poles	1, 1+N,2,3, 3+N & 4
Tripping Characteristic and Related	B characteristics - 0.5A to 100A
Currents (In)	C characteristics - 0.5A to 100A
Rated Breaking Capacity	10000A; 6000A
Energy Limiting Class	Class 3 as per EN 60898
Rated Voltages (Ue) Single Pole	240 / 415V AC
Multi Pole	415V AC
Insulation Voltage (Ui)	660V
Rated Frequencies	50 / 60 Hz
Impulse Withstand Voltage (Uimp)	4 KV (1.2 / 50)
Impulse Power Frequency Volatge	2KV (50)
Housing Material	Polybutylene Terephthalate in grey colour
Degree of Protection	IP 20 as per IEC 60898-1
Mounting Position	Any Position
Mounting	Quick snap to mounting rails, 35mm
Connecting Terminals	Combination box terminals on incoming and outgoing sides. Suitable for single core, stranded and flexible conductors upto 25 sq mm, combination crosshead screw, max. tightening torque 2 Nm
Electrical Service Life	Min. 30,000 make / break operations
Ambient Temperature	Tmax : 55oC Tmin : (-) 25oC
Impact Resistance	3g, at least 2 impacts duration 13ms

ISOLATOR

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

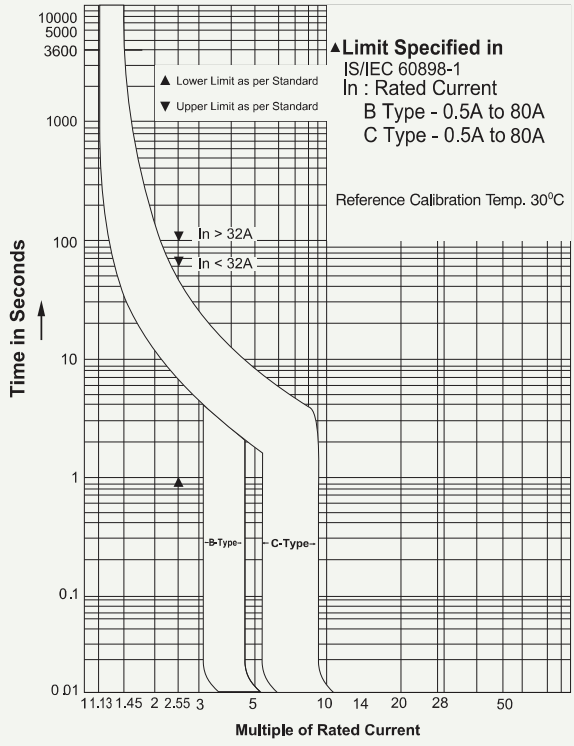
Features

RR Isolators conforms to IS/IES 60898-1. We have maintained a standard thickness of 17.5 mm, similar to the lower rating of MCB (0.5 A to 63A) to facilitate easy mounting in any Distribution Box without requirement of any extra space or special Distribution Boards. Box type terminal has been designed for easy termination of cable up to 50 mm². Heavy duty screws have been provided for better tightening of contracts. Heavy duty ETP copper terminals and extra thick silver inlaid contacts ensure low temperature rise and low watt loss.

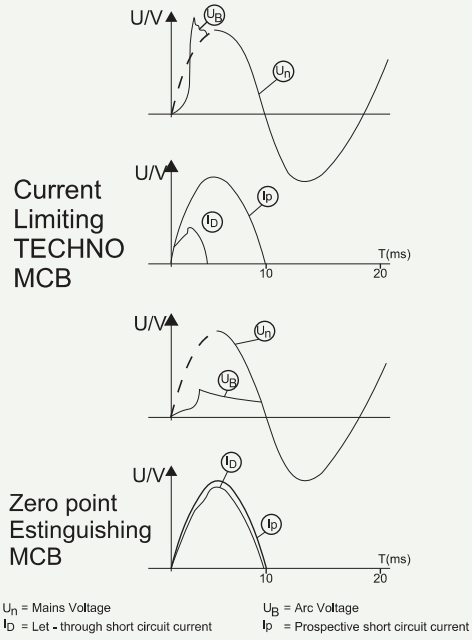


Isolators 0.5A To 63A

TRIPPING CHARACTERISTICS CURVE TYPE B & C



TECHNO MCB Vs Zero Point Extinguishing MCB

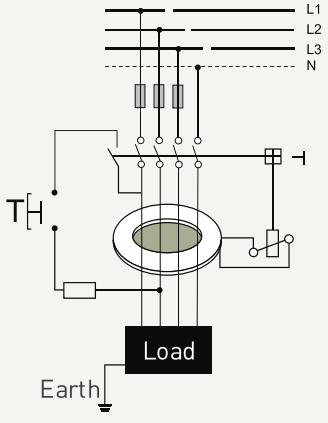


CAT. NO.	DESCRIPTION
RR-ISOSP6	Isolator 6A Single Pole
RR-ISOSP10	Isolator 10A Single Pole
RR-ISOSP16	Isolator 16A Single Pole
RR-ISOSP20	Isolator 20A Single Pole
RR-ISOSP25	Isolator 25A Single Pole
RR-ISOSP32	Isolator 32A Single Pole
RR-ISOSP40	Isolator 40A Single Pole
RR-ISOSP63	Isolator 63A Single Pole
RR-ISODP40	Isolator 40A Double Pole
RR-ISODP63	Isolator 63A Double Pole
RR-ISODP80	Isolator 80A Double Pole
RR-ISODP100	Isolator 100A Double Pole
RR-ISODP125	Isolator 125A Double Pole
RR-ISOTP40	Isolator 40A Three Pole
RR-ISOTP63	Isolator 63A Three Pole
RR-ISOTP80	Isolator 80A Three Pole
RR-ISOTP100	Isolator 100A Three Pole
RR-ISOTP125	Isolator 125A Three Pole
RR-ISOFP40	Isolator 40A Four Pole
RR-ISOFP63	Isolator 63A Four Pole
RR-ISOFP80	Isolator 80A Four Pole
RR-ISOFP100	Isolator 100A Four Pole
RR-ISOFP125	Isolator 125A Four Pole

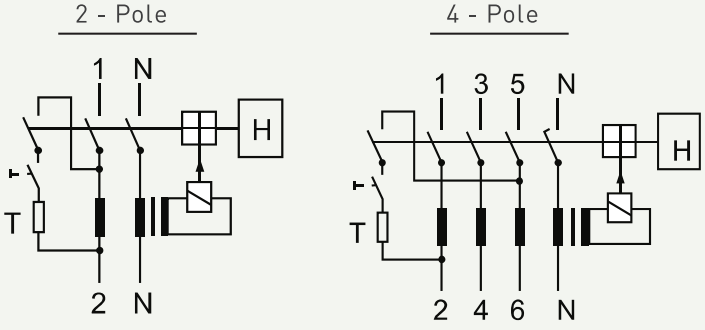
TECHNICAL DATA	
Specifications	IEC 60947-3
Number of Poles	SP, DP, TP & FP
Utilization Category	AC 22A
Rated Voltages	240 / 415V AC
Rated Currents	40 to 125 Amp.

RESIDUAL CURRENT CIRCUIT BREAKERS (RCCB) / ELCBs

- Residual Current Circuit Breaker - RCCB
- Shape compatible with and suitable for standard busbar connection to other devices
- Twin - purpose terminal (lift / open - mouthed) above and below
- Busbar positioning optionally line or load
- Free terminal space despite installed busbar
- Contact position indicator red - green (Fi7 - 4 pole)
- Suitable for being used with standard fluorescent tubes with or without electrical ballast (typically up to 20 units per phase conductor)
- The device functions irrespective of the position of installation
- Types with 80A permissible short-circuit back-up fuse: Taking into account an overload protection
- Tripping is line voltage-indepedent. Consequently, the RCCB is suitable for "Fault current/ residual current protection" and "additional protection" within the meaning of the applicable installation rules
- Mains connection at either side
- The 4-pole device can also be used for 3-pole connection. For this purpose use terminals 1-2, 3-4 and 5-6
- The 4-pole device can also be used for 2-pole connection. For this purpose use terminals N-N and 5-6
- Pressing the test key "T" serves the only purpose of function testing the residual current circuit breaker (RCCB). This test does not make earthing resistence measurement (R E), or proper checking of the earth conductor condition redundant, which must be performed separately

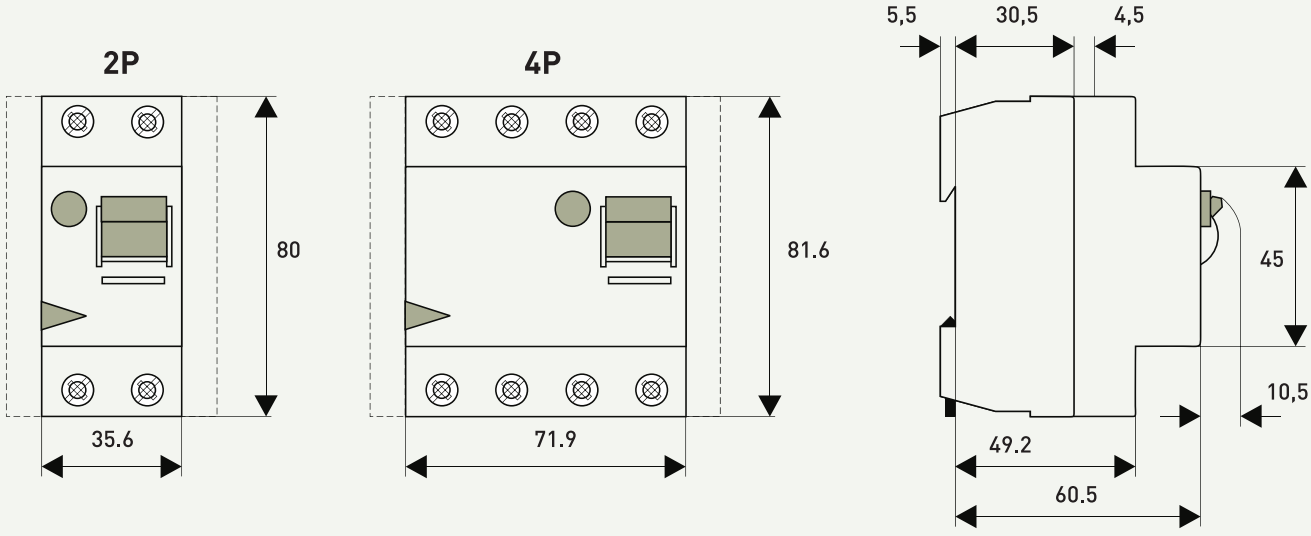


Wiring Scheme for RCCB



Connection Diagrams

Dimensions



Technical Data

ELECTRICAL	
Mode	Electro-Magnetic Type, Electronic Type
Rated Voltage Ue	AC 240/415
Rated Sensitivity IΔn	0.01, 0.03, 0.1, 0.3, 0.5
Type	AC, A
Rated Current In	16, 25, 32, 40, 63A
Poles	2, 4
Insulation Voltage Ui	500
Rated residual making and breaking capacity IΔm	630
Rated Short Circuit Strength	6000A
Max. Back-up Fuse for Short Circuit Protection	6000
Protection degree	IP 20
Ambient Temperature (with daily average ≤35°C)	-25 + 40
Pollution Degree	2
Mechanical Life Electrical Life	4000 Change over 8000 Change over

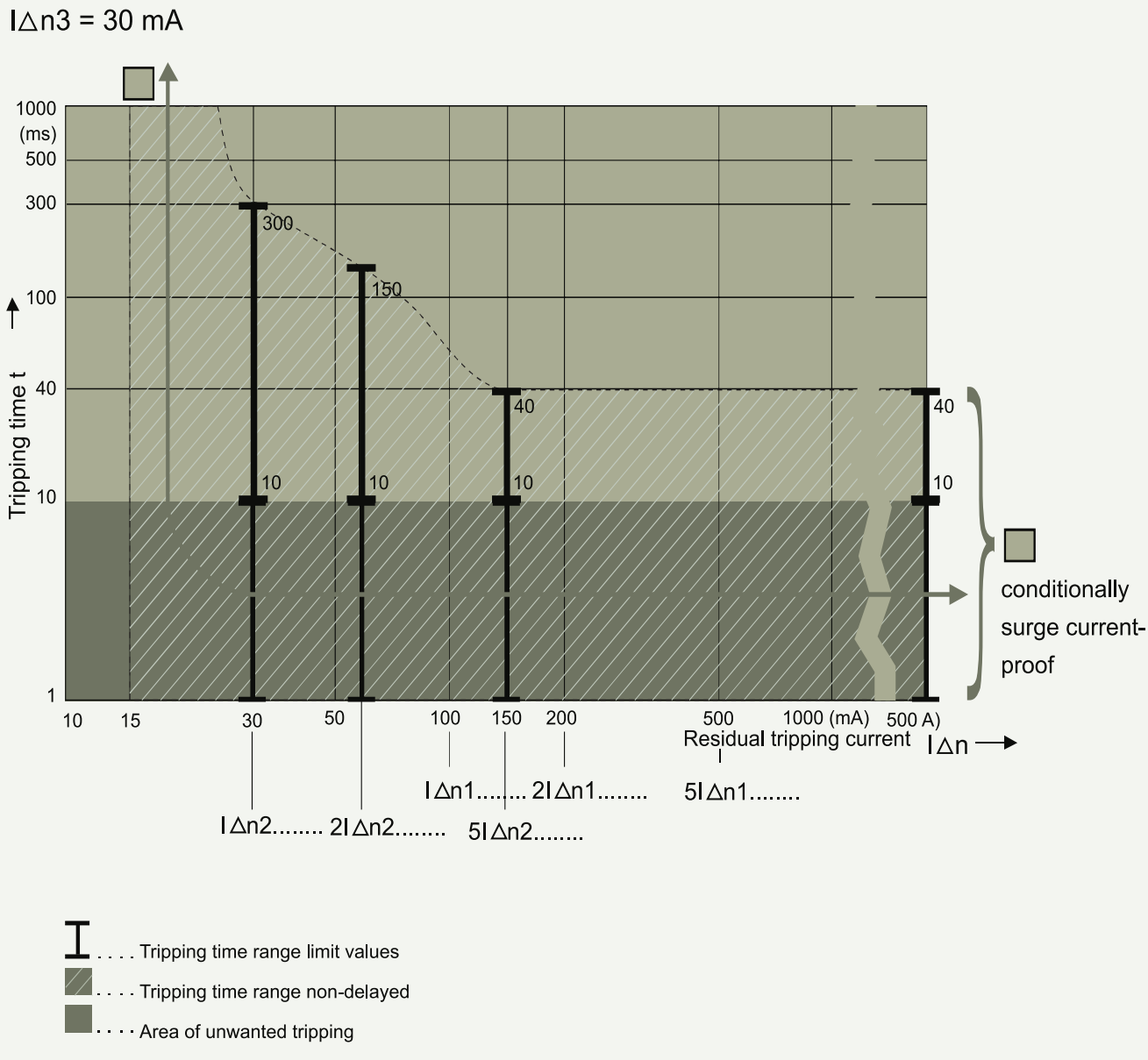
MECHANICAL	
Terminal Connection Type	Cable / U type Busbar/pin-type busbar
Terminal Size Top/Bottom for cable	25 mm² / 18-3 (AWG)
Terminal Size Top/Bottom for Busbar	25 mm² / 18-3 (AWG)
Tightening Torque	2.5 Nm / 22 (In-lbs)
Mounting	On DIN rail EN60715 (35 mm) by means of fast clip device
Connection	From Top and Bottom

RR-ELCB DP 16/30	ELCB Double POLE, 16A, 30MA
RR-ELCBDP 20/30	ELCB Double POLE, 20A, 30MA
RR-ELCBDP 25/30	ELCB Double POLE, 25A, 30MA
RR-ELCBDP 40/30	ELCB Double POLE, 40A, 30MA
RR-ELCBDP 50/30	ELCB Double POLE, 50A, 30MA
RR-ELCBDP 63/30	ELCB Double POLE, 63A, 30MA
RR-ELCBDP 16/100	ELCB Double POLE, 16A, 100MA
RR-ELCBDP 20/100	ELCB Double POLE, 20A, 100MA
RR-ELCBDP 25/100	ELCB Double POLE, 25A, 100MA
RR-ELCBDP 40/100	ELCB Double POLE, 40A, 100MA
RR-ELCBDP 50/100	ELCB Double POLE, 50A, 100MA
RR-ELCBDP 63/100	ELCB Double POLE, 63A, 100MA
RR-ELCBDP 16/300	ELCB Double POLE, 16A, 300MA
RR-ELCBDP 20/300	ELCB Double POLE, 20A, 300MA
RR-ELCBDP 25/300	ELCB Double POLE, 25A, 300MA
RR-ELCBDP 40/300	ELCB Double POLE, 40A, 300MA
RR-ELCBDP 50/300	ELCB Double POLE, 50A, 300MA
RR-ELCBDP 63/300	ELCB Double POLE, 63A, 300MA

RR-ELCB FP 16/30	ELCB Four POLE, 16A, 30MA
RR-ELCB FP 20/30	ELCB Four POLE, 20A, 30MA
RR-ELCB FP 25/30	ELCB Four POLE, 25A, 30MA
RR-ELCB FP 40/30	ELCB Four POLE, 40A, 30MA
RR-ELCB FP 50/30	ELCB Four POLE, 50A, 30MA
RR-ELCB FP 63/30	ELCB Four POLE, 63A, 30MA
RR-ELCB FP 16/100	ELCB Four POLE, 16A, 100MA
RR-ELCB FP 20/100	ELCB Four POLE, 20A, 100MA
RR-ELCB FP 25/100	ELCB Four POLE, 25A, 100MA
RR-ELCB FP 40/100	ELCB Four POLE, 40A, 100MA
RR-ELCB FP 50/100	ELCB Four POLE, 50A, 100MA
RR-ELCB FP 63/100	ELCB Four POLE, 63A, 100MA
RR-ELCB FP 16/300	ELCB Four POLE, 16A, 300MA
RR-ELCB FP 20/300	ELCB Four POLE, 20A, 300MA
RR-ELCB FP 25/300	ELCB Four POLE, 25A, 300MA
RR-ELCB FP 40/300	ELCB Four POLE, 40A, 300MA
RR-ELCB FP 50/300	ELCB Four POLE, 50A, 300MA
RR-ELCB FP 63/300	ELCB Four POLE, 63A, 300MA

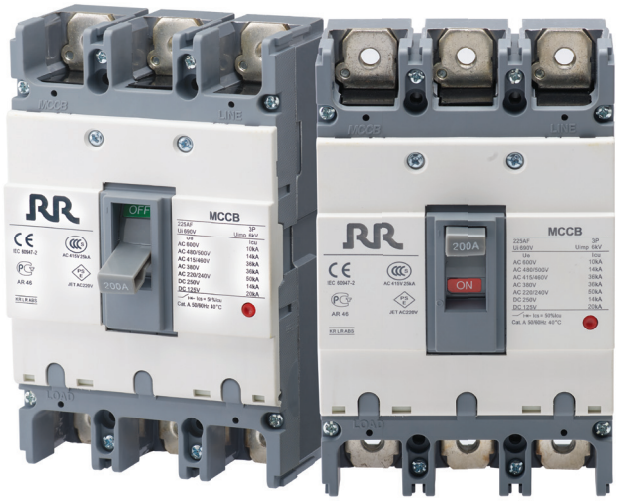
Tripping Characteristics (IEC / EN 61008)

Tripping characteristics, tripping time range and selectively of instantaneous, surge current - proof residual current circuit breaker.



Series connection of main RCCB and circuit RCCB's recommended by the installation rules set forth in ÖVE / ÖNORM E8001-1, is compulsory for agricultural installations according to §56 of ÖVE-EN1, Part 4. The device is ok if the result of measurement is within the time range specified by the manufacturer of the measuring instrument.

MOULDED CASE CIRCUIT BREAKERS (MCCB)



MCCB is suitable for circuit in individual enclosures switch board lighting and power panels as well as motor control centers.

MCCB is assigned to protect systems against overload and short circuit up to 65ka with full range of accessories.

SPECIFICATIONS	THE TAB 1 SERIES
Rated Current	20A, 30A, 40A, 50A, 60A, 75A, 100A
No. of Poles	3
Rated Service Voltage Ue (V), AC	600V
Rated Service Voltage Ue (V), DC	220V
Rated Frequency	50 / 60 Hz
Reference Ambient Calibration Temperature	40°C
Rated Ultimate S.C. Breaking Capacity (at 600V VAC, 50/60 Hz) Icu in kA	10 kA
Rated Ultimate S.C. Breaking Capacity (at 480V/500V VAC, 50/60 Hz) Icu in kA	14 kA
Rated Ultimate S.C. Breaking Capacity (at 415/460 VAC, 50/60 Hz) Icu in kA	25 kA
Rated Ultimate S.C. Breaking Capacity (at 220/240 VAC, 50/60 Hz) Ics in kA	50 kA
Rated Ultimate S.C. Breaking Capacity (at 250 VAC, 50/60 Hz) Ics in kA	14 kA
Rated Ultimate S.C. Breaking Capacity (at 125V DC) Ics in kA	20 kA
Type of Releases	Thermal - Magnetic
Release Setting Thermal	Fixed
Release Setting Magnetic	Fixed
Terminal Capacity (Cables)	50 mm^2 max.
Terminal Capacity (Link)	50 mm^2 max.
Terminal Capacity (Busbar width for direct mounting)	50 mm^2 max.
Size (H x B X D)	**3P Unit**
	H 155mm
	W 90mm
	D 56mm
Weight	1.2 Kg (3P)
Reference Standard	IEC 60947-2

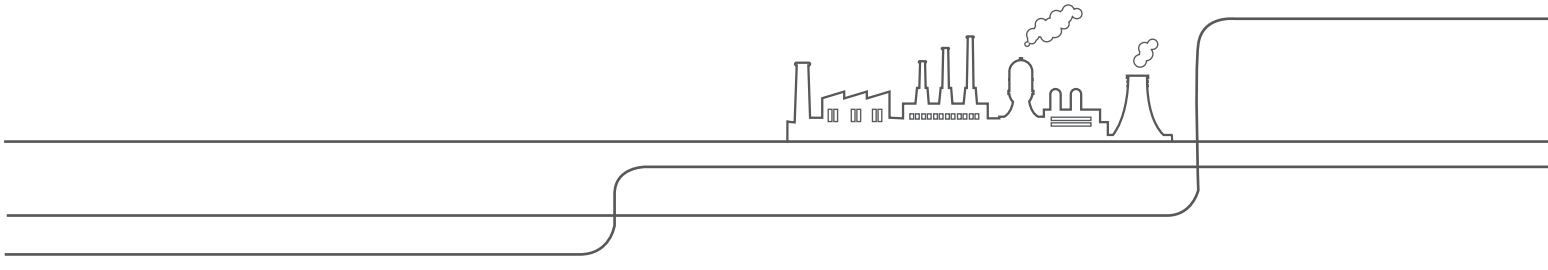
THE TAB 2 SERIES	THE TAB 3 SERIES	THE TAB 4 SERIES
125A, 150A, 175A, 200A, 225A	250A, 300A, 350A, 400A	500A, 600A
3	3	3
600V - 1000V	1000V	1000V
220V	220V	220V
50 / 60 Hz	50 / 60 Hz	50 / 60 Hz
40°C	40°C	40°C
10 kA	22 kA	22 kA
14 kA	25 kA	25 kA
36 kA	35 kA	35 kA
50 kA	42 kA	42 kA
14 kA	50 kA	50 kA
20 kA	20 kA	20 kA
Thermal - Magnetic	Thermal - Magnetic	Thermal - Magnetic
Fixed	Fixed	Fixed
Fixed	Fixed	Fixed
70 mm^2 max.	150, 240 mm^2 max.	240, 300 mm^2 max.
70 mm^2 max.	150, 240 mm^2 max.	240, 300 mm^2 max.
70 mm^2 max.	150, 240 mm^2 max.	240, 300 mm^2 max.
3P Unit	**3P Unit**	**3P Unit**
H 165mm	H 257mm	H 280mm
W 105mm	W 140mm	W 210mm
D 56mm	D 95mm	D 113mm
2.0 Kg (3P)	4.0 Kg (3P)	6.0 Kg (3P)
IEC 60947-2	IEC 60947-2	IEC 60947-2

CAT. NO.	DESCRIPTION
RR-MCFTP20-25K	20A TP MCCB 25 KA
RR-MCFTP30-25K	30A TP MCCB 25 KA
RR-MCFTP40-25K	40A TP MCCB 25 KA
RR-MCFTP50-25K	50A TP MCCB 25 KA
RR-MCFTP60-25K	60A TP MCCB 25 KA
RR-MCFTP75-25K	75A TP MCCB 25 KA
RR-MCFTP100-25K	100A TP MCCB 25 KA

CAT. NO.	DESCRIPTION
RR-MCFTP125-25K	125A TP MCCB 25 KA
RR-MCFTP150-25K	150A TP MCCB 25 KA
RR-MCFTP175-25K	175A TP MCCB 25 KA
RR-MCFTP200-25K	200A TP MCCB 25 KA
RR-MCFTP250-25K	250A TP MCCB 25 KA

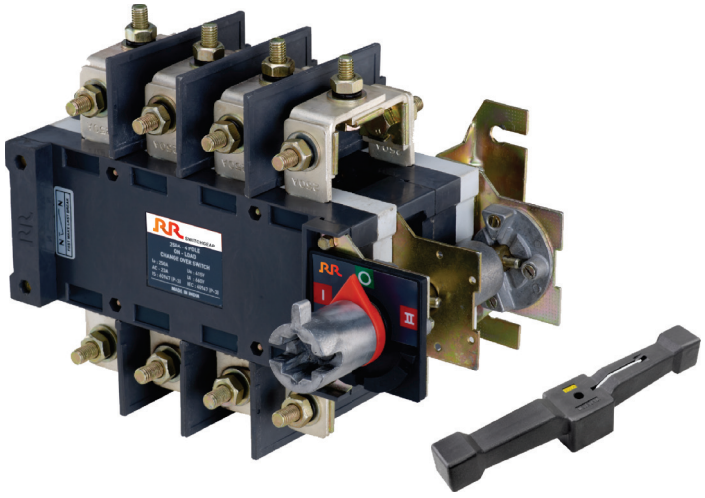
CAT. NO.	DESCRIPTION
RR-MCFTP250-35K	250A TP MCCB 35 KA
RR-MCFTP300-35K	300A TP MCCB 35 KA
RR-MCFTP350-35K	350A TP MCCB 35 KA
RR-MCFTP400-35K	400A TP MCCB 35 KA

CAT. NO.	DESCRIPTION
RR-MCFTP500-35K	500A TP MCCB 35 KA
RR-MCFTP600-35K	600A TP MCCB 35 KA



CHANGEOVER SWITCHES

RR Switchgear range of compact On Load Changeover Switches are manually front operated four pole switches which helps to save the space in panel boards resulting in low costing of the same. These comprise of two On Load Switch Disconnectors, which are coupled together and are mechanically interlocked with common outgoing. These are used in low voltage distribution circuits and motor circuits and at places where continuity of supply is necessary for switching from main supply to an alternate source of supply and vice versa. All On Load Changeover Switches are capable of making, carrying and breaking currents under normal circuit conditions, which may include operating under overload conditions and also carrying currents under specified abnormal circuit conditions such as short circuit for a specified time.

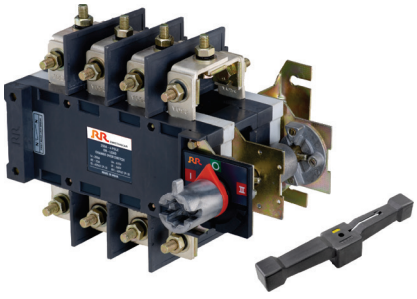


RANGE

Current range 40 Amp. to 3150 Amp. in nine frame sizes in Four Pole 415V AC 50 Hz.

CONFIRMITY TO STANDARD

Conforms to IEC-60947-1 & 3 , IS/IEC- 60947-3



400 Amps. Four Pole 415V
(Open Execution)

SPECIFICATION

Rated Operating Voltage (V)	415
Rated Insulation Voltage (Ui)	1000V
Rated Frequency (Hz)	50
Utilization Category	AC 23A (63A-320A), AC 22A (400A-3150A)
Rated Impulse Withstand Voltage (Uimp)	10 kV

Salient Features

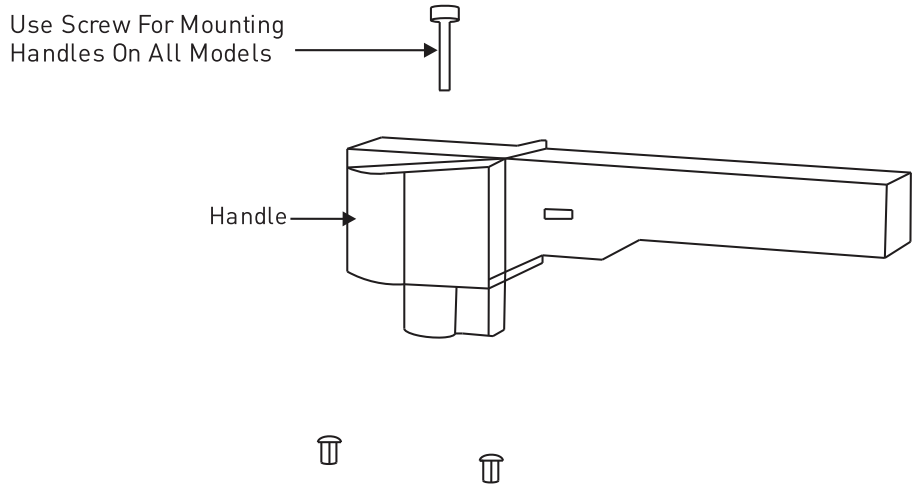
- While breaking the circuit, guaranteed sufficient air sectioning clearance
- Utilization category - AC 23A / AC 22A
- Flexibility in mounting - horizontal or vertical
- Strong endurance and resistance to heat (Tropicalised)
- Flag indicator for two stable positions (I-0-II) & possible switching on or off, on load, thereby fulfilling the roll of switching device
- All current carrying parts are of special grade E.T.P. Copper and are silver plated
- Knife type contact system with self wipe feature allows cleaning of contact during each operation, calling for lesser maintenance and higher life
- Torque required for switch operation is low
- Easy add on auxiliary contact up to 1 NO & 1 NC for signalisation & interlocking
- Bolt locking system for easy installation
- The moulded body's raw material is Glass Fiber reinforced polyester (SMC) which has high mechanical & dielectric strength
- Protection against over current and short circuit fault of high rupturing capacity upto 80 kA
- Compact and standardized sizes for range 40A-3150 A - ideal for switch board manufacturers
- Phase barriers between each phase terminal

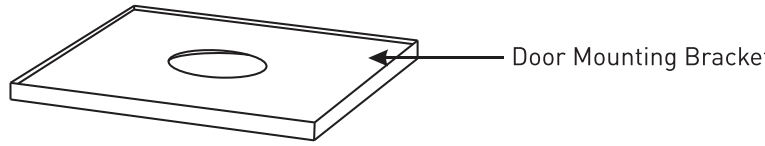
CONSTRUCTION

RR Switchgears manufactures a complete range of on load changeover switches that have been designed and developed indigenously to meet various needs of distribution circuits. They provide breaking or switching off on load and safety isolation. The switching mechanism is quick make, quick break type independent of the speed of the operation. There are four breaks per pole thereby resulting into faster quenching of arc. The load and line can be connected on either side by virtue of isolation on both the sides. The entire switching mechanism along with the fixed and moving contact assembly are housed in a polyester reinforced, moulded frame / cover, having high dielectric strength & thermal withstand capacity.

CONTACT MECHANISM

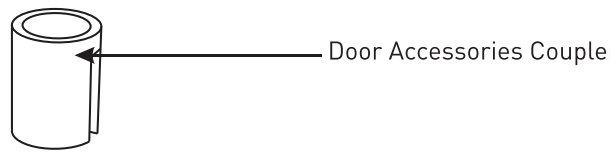
The contact mechanism is knife blade type with self cleaning action during operation. The fixed contact terminals in each phase have separate main and arcing contacts. The moving contact assembly has a four set of contact on moving carrier and the each set of contacts. Loaded with bouncing type strip springs which assist in the true movement during the making and breaking. The moving contact mates with the fixed contact by a slide movement of the moving contact assembly. The contact is first made with the arcing contact and thereafter with the main contact. During breaking, the arc formation is across the arcing contacts thereby protecting the main contacts which results into an enhanced life of the switch. The arc is effectively confined & quenched by the arc barrier in each phase. The switches can be mounted inside a panel either in horizontal or vertical mode without any effect on the performance.

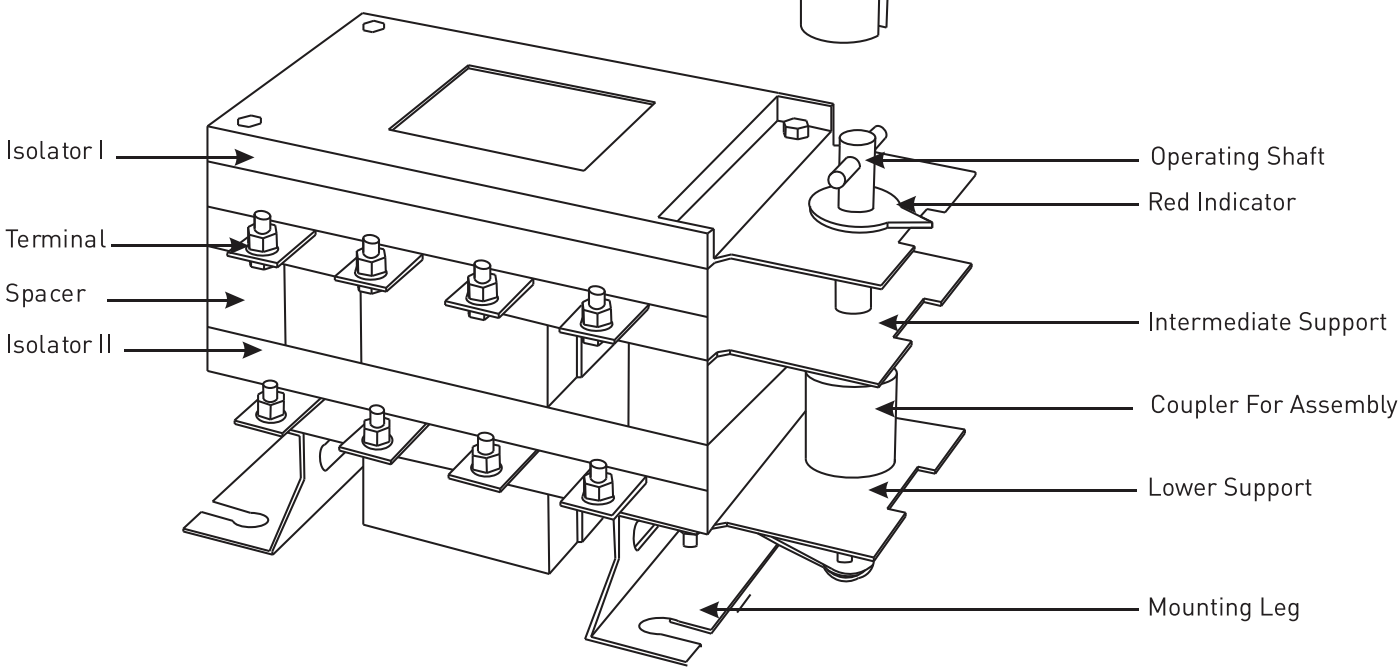


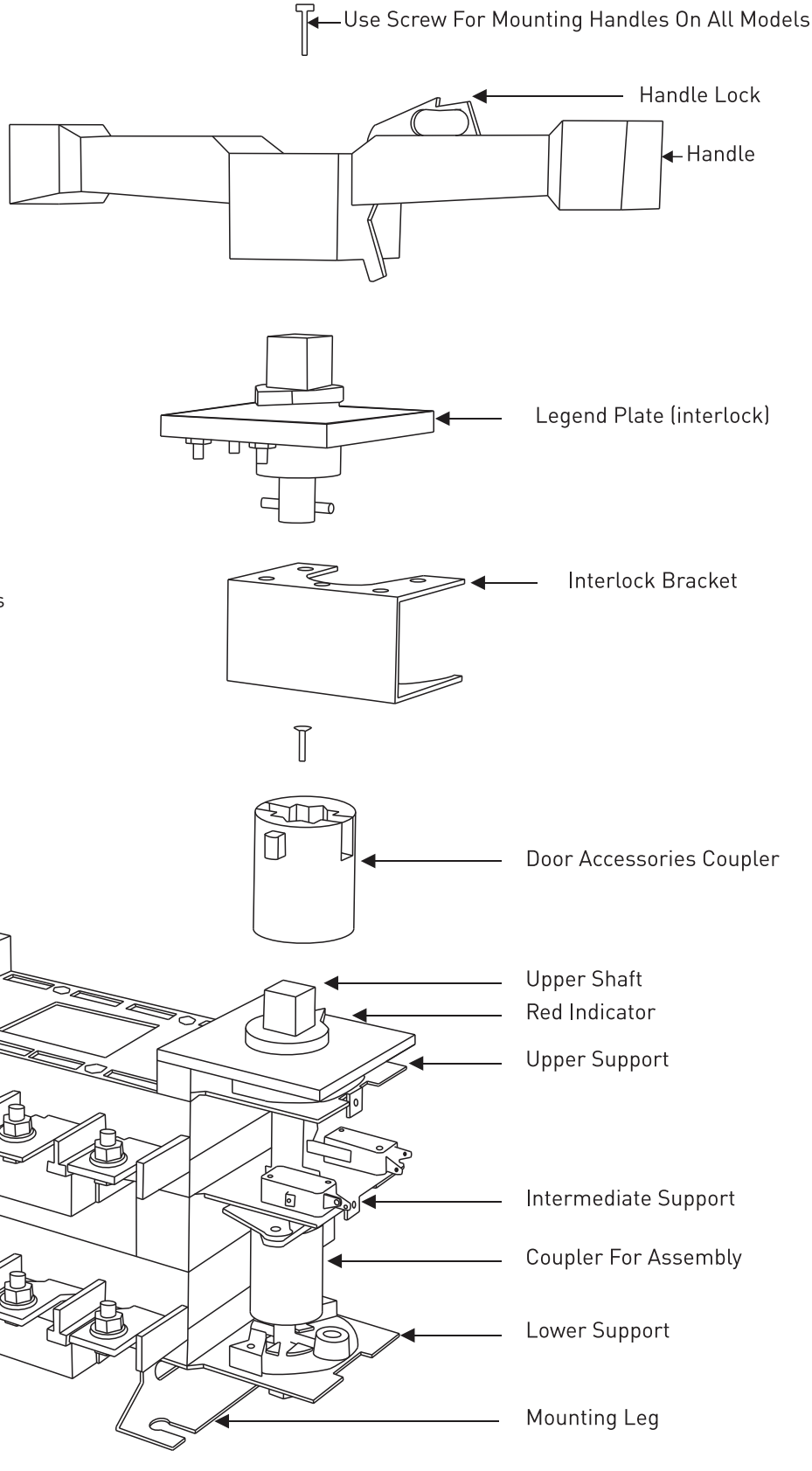


INSTALLATION INSTRUCTIONS

- Use copper lugs for proper termination
- Use of bolt lock & washer during connections
- NO / NC switches for indication of contacts
- Operation can lock with handle lock
- Slot on mounting leg for mounting







INSTALLATION INSTRUCTIONS

- Use copper lugs for proper termination
- Use of bolt lock & washer during connections
- NO / NC switches for indication of contacts
- Operation can lock with handle lock
- Slot on mounting leg for mounting

TECHNICAL DATA FOR ON LOAD CHANGEOVER SWITCHES CONFORMS TO IEC 60947, IS/IEC 60947-3

ELECTRICAL & MECHANICAL CHARACTERISTICS

Thermal Current At 40°C, 1st	**40A**	**63A**	**80A**
Nos. of Poles	4	4	4
Insulation Voltage Ui (V)	1000	1000	1000
Rated Operational Voltage, Ue (V) AC	415	415	415
Dielectric Strength (V) 50 Hz 60 Sec.	5000	5000	5000
Impulse Voltage (kV) (uimp)	10	10	10
Rated Operational Current Le (a)			
415V AC : AC 23A / AC23B	63/63	63/63	63/63
500V AC: AC 23A / AC 23B	55/55	55/55	55/55
Rated Making Capacity Amp, 415V AC 23A, P.f.-0.35	630	630	630
Rated Breaking Capacity Amp, 415V AC 23A, P.f. -0.35	504	504	504
Rated Operational Power			
Rated Motor Power 415V, 3 O (kw)	22	22	22
Rated Capacitor Power 415V (kvar)	20	20	20
Fuse Protected Short Circuit Withstand			
Rated Max. Current Of Gg Fuses (A)	63	63	63
Rated Conditional Short Circuit Current (karms)	80	80	80
Max. Allowed Cut Off Current (kapeak)	12	12	12
Rated Short Time Withstand Current (1sec.) (karms)	7.5	7.5	7.5
Withstand			
Mechanical Endurance	10000	10000	10000
Electrical Endurance	8500	8500	8500
No. of On Load Operating Cycle P.f. = 0.65 AC 23A 415V	1500	1500	1500
Temperature Withstand Range (Ambient)(°C)	-5 to 50	-5 to 50	-5 to 50
Operating Force (nm)	9.00	9.00	9.00
Terminal Connection			
Al. Cable Cross Section (sq.mm)	25	25	25
Maximum Bar Width (Cu) (sq.mm)	16	16	16
Weight			
Open Execution (Kg)	2.25	2.5	2.75
In Thick Sheet Enclosure (Kg)	6.5	8.1	8.5

Product improvement is a continous process. Above technical data is subject to be changed at any time owing to latest technological development.

100A	125A	160A	200A	250A	320A
4	4	4	4	4	4
1000	1000	1000	1000	1000	1000
415	415	415	415	415	415
5000	5000	5000	6000	6000	6000
10	10	10	10	10	10
100/100	125/125	125/125	200/200	250/250	320/320
80/80	105/105	105/105	165/200	210/250	265/320
1000	1250	1250	2000	2500	3200
800	1000	1000	1600	2000	2560
33	55	55	90	132	160
30	50	50	80	100	125
100	125	125	200	250	320
80	80	80	80	80	80
12	20	20	30	45	45
7.5	7.5	7.5	10	10	15
10000	8000	8000	8000	8000	8000
8500	7000	7000	7000	7000	7000
1500	1000	1000	1000	1000	1000
-5 to 50	-5 to 50	-5 to 50	-5 to 50	-5 to 50	-5 to 50
9.00	10.00	10.00	11.00	12.00	12.00
35	70	70	150	240	240
16	50	50	95	150	185
2.9	5.7	5.95	6	11.3	10.2
8.6	11.85	12	12	20.7	20.9

Product improvement is a continous process. Above technical data is subject to be changed at any time owing to latest technological development.

TECHNICAL DATA FOR ON LOAD CHANGEOVER SWITCHES CONFORMS TO IEC 60947, IS/IEC 60947-3

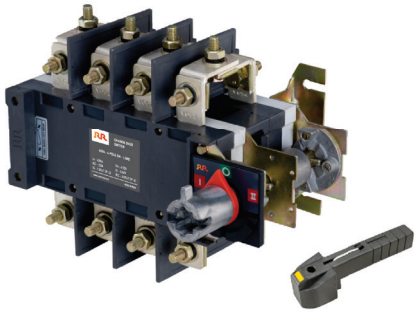
ELECTRICAL & MECHANICAL CHARACTERISTICS

Thermal Current At 40°C, I	**400A**	**630A**	**800A**
Nos. of Poles	4	4	4
Insulation Voltage Ui (V)	1000	1000	1000
Rated Operational Voltage, Ue (V) AC	415	415	415
Dielectric Strength (V) 50 Hz 60 Sec.	8000	8000	10000
Impulse Voltage (kV) (uimp)	12	12	12
Rated Operational Current Le (a)			
415V AC : AC 23A / AC 23B	400/400	630/630	800/800
500V AC: AC 23A / AC 23B	335/400	525/630	665/800
Rated Making Capacity Amp, 415V AC 23A, P.f.-0.35	4000	6300	8000
Rated Breaking Capacity Amp, 415V AC 23A, P.f. -0.35	3200	5040	6400
Rated Operational Power			
Rated Motor Power 415V, 3 O (kw)	220	315	450
Rated Capacitor Power 415V (kvar)	160	250	300
Fuse Protected Short Circuit Withstand			
Rated Max. Current Of Gg Fuses (A)	400	630	630/800
Rated Conditional Short Circuit Current (karms)	80	80	80
Max. Allowed Cut Off Current (kapeak)	45	100	100
Rated Short Time Withstand Current (1sec.) (karms)	80	80	80
Withstand			
Mechanical Endurance	5000	4000	4000
Electrical Endurance	4000	3000	3000
No. of On Load Operating Cycle P.f. = 0.65 AC 23A 415V	1000	1000	1000
Temperature Withstand Range (Ambient)(°C)	-5 to 50	-5 to 50	-5 to 50
Operating Force (nm)	20.00	20.00	40.00
Terminal Connection			
Al. Cable Cross Section (sq.mm)	300	2x300	3x300
Maximum Bar Width (Cu) (sq.mm)	240	240	240
Weight			
Open Execution (Kg)	21.6	28.75	36.6
In Thick Sheet Enclosure (Kg)	47.5	49.85	62.5

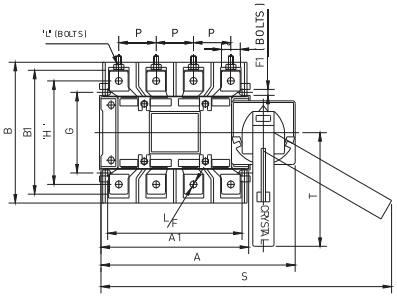
Product improvement is a continous process. Above technical data is subject to be changed at any time owing to latest technological development.

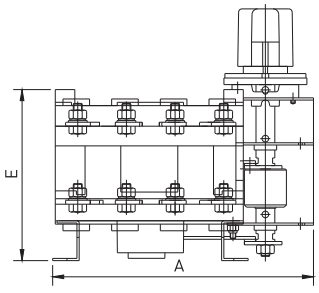
1000A	1250A	1600A	2000A	2500A	3150A
4	4	4	4	4	4
1000	1000	1000	1000	1000	1000
415	415	415	415	415	415
10000	10000	10000	10000	10000	10000
12	12	12	12	12	12
1000/1000	1200/1250	1600/1600	1600/2000	1600/2000	1600/2000
840/1000	1040/1250	1350/1600	1350/1600	1350/1600	1350/1600
10000	12500	16000	20000	20000	20000
8000	10000	12800	16000	16000	16000
560	600	650	800	950	1100
400	450	500	600	700	825
1000	1250	2x800	2x1000	2x1250	2x1250
80	80	80	80	80	80
110	110	110	110	110	110
80	80	80	80	80	80
4000	4000	4000	4000	4000	2000
3000	3000	3000	3000	3000	1500
1000	1000	1000	1000	1000	500
-5 to 50	-5 to 50	-5 to 50	-5 to 50	-5 to 50	-5 to 50
42.00	45.00	50.00	60.00	70.00	70.00
4x300	50x8x4	100x10x3	100x10x3	100x10x4	150x10x4
240	100x5x2	100x5x3	125	100x5x4	100x10x3
46	49	52	120	130	140
82.7	85.5	90.1	162	176	188

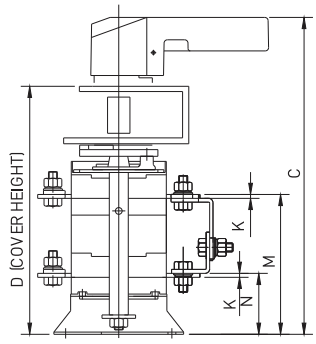
Product improvement is a continous process. Above technical data is subject to be changed at any time owing to latest technological development.



Current Rating (A)	Open Execution Cat. No.
40A	RR-OLCHOE40A-4P
63A	RR-OLCHOE63A-4P

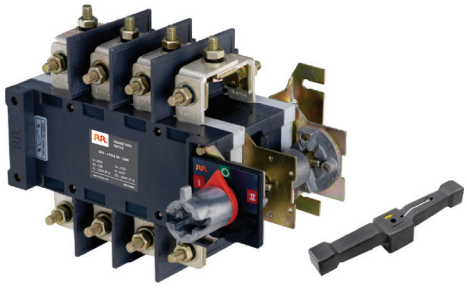




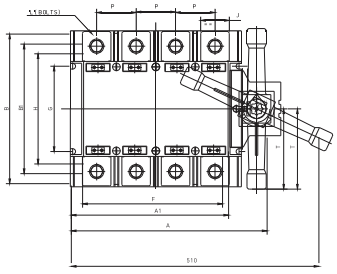


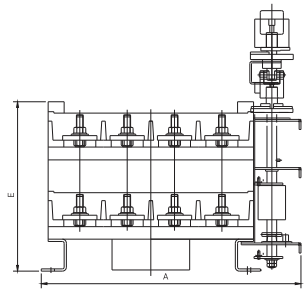
All dimensions are in mm.

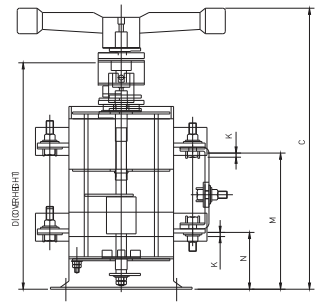
Amps Frame		Over All Dimensions							Feet Hole			Terminal Dimensions							
		Total Length	Total Width	Total Height	Cover Height							Terminal Width	Terminal Thickness	Terminal Bolts					
		A	B	C	D	A1	B1	E	F	G	H	J	K	L	M	N	P	S	T
40A	1	190	130	200	150	145	130	113	125	95	115	16	2.5	6	92	42	32	270	65
63A	1	190	130	200	150	145	130	113	125	95	115	16	2.5	6	92	42	32	270	65



Current Rating (A)	Open Execution Cat. No.
80A	RR-OLCHOE80A-4P
100A	RR-OLCHOE100A-4P





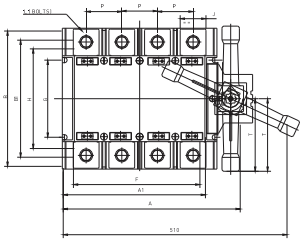


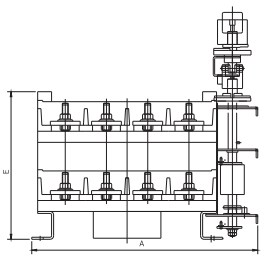
All dimensions are in mm.

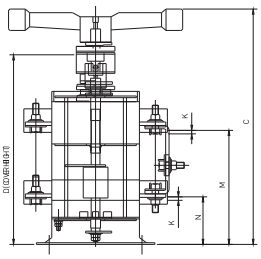
Amps Frame		Over All Dimensions							Feet Hole			Terminal Dimensions							
		Total Length	Total Width	Total Height	Cover Height							Terminal Width	Terminal Thickness	Terminal Bolts					
		A	B	C	D	A1	B1	E	F	G	H	J	K	L	M	N	P	S	T
80A	1	215	135	200	150	170	135	115	145	95	115	18.5	3.0	8	92	42	36	290	105
100A	1	215	135	200	150	170	135	115	145	95	115	18.5	3.0	8	92	42	36	290	105

Product improvement is a continous process. Above technical data is subject to be changed at any time owing to latest technological development.

Current Rating (A)	Open Execution Cat. No.
125A	RR-OLCHOE125A-4P
160A	RR-OLCHOE160A-4P
200A	RR-OLCHOE200A-4P

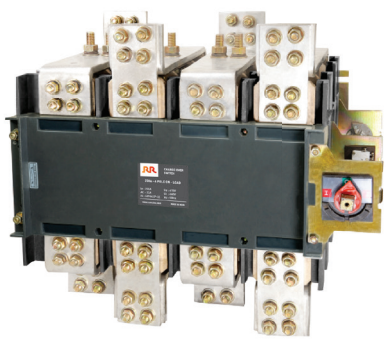




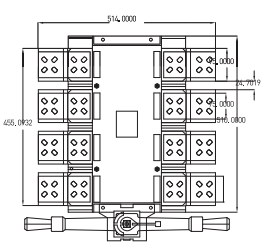


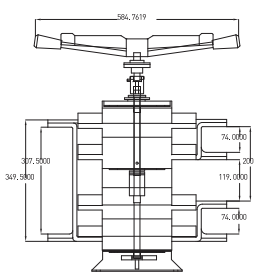
All dimensions are in mm.

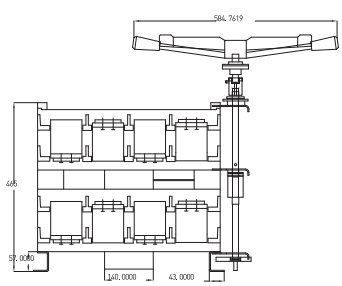
Amps Frame	Over All Dimensions							Feet Hole			Terminal Dimensions							
	Total Length	Total Width	Total Height	Cover Height							Terminal Width	Terminal Thickness	Terminal Bolts					
	A	B	C	D	A1	B1	E	F	G	H	J	K	L	M	N	P	S	T
125A 1	225	150	320	245	170	150	150	150	95	125	22	3.5	8	120	53	44	315	135
160A 1	225	150	335	265	170	150	165	150	95	125	22	4.0	8	130	56	44	315	135
200A 1	225	150	335	265	170	150	165	150	95	125	22	5.0	8	130	56	44	315	135



Current Rating (A)	Open Execution Cat. No.
250A	RR-OLCHOE250A-4P
320A	RR-OLCHOE320A-4P



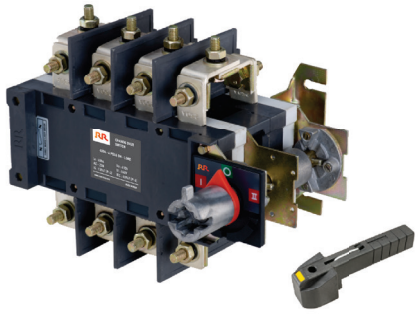




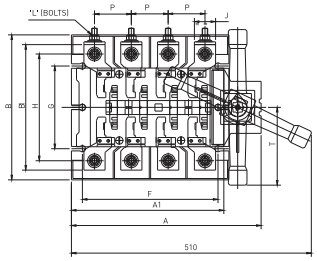
All dimensions are in mm.

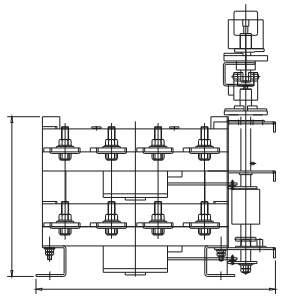
Amps Frame	Over All Dimensions							Feet Hole			Terminal Dimensions							
	Total Length	Total Width	Total Height	Cover Height							Terminal Width	Terminal Thickness	Terminal Bolts					
	A	B	C	D	A1	B1	E	F	G	H	J	K	L	M	N	P	S	T
250A 1	300	200	340	265	245	200	175	205	111	155	32	5.0	12	142	64	62	420	160
320A 1	300	200	340	265	245	200	175	205	111	155	32	5.6	12	142	64	62	420	160

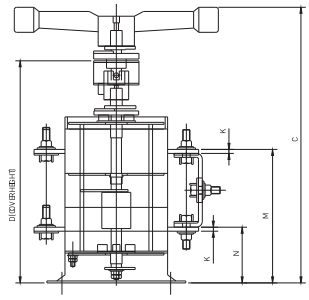
Product improvement is a continous process. Above technical data is subject to be changed at any time owing to latest technological development.



Current Rating (A)	Open Execution Cat. No.
400A	RR-OLCHOE400A-4P
630A	RR-OLCHOE630A-4P

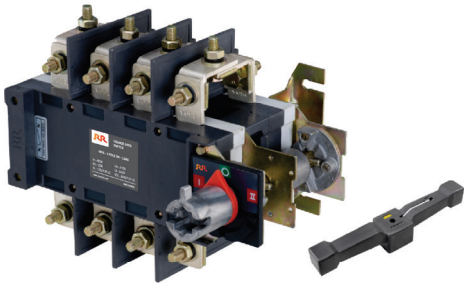




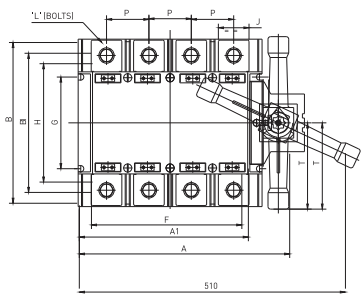


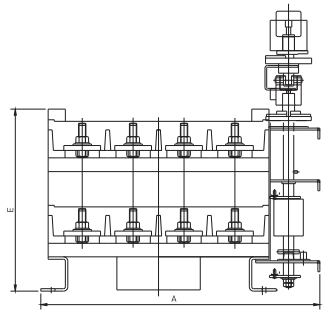
All dimensions are in mm.

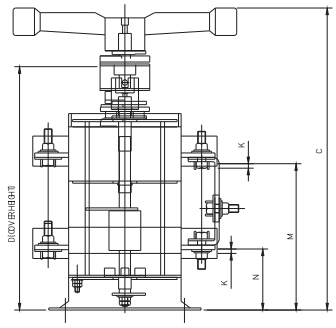
Amps Frame	Over All Dimensions							Feet Hole			Terminal Dimensions							
	Total Length	Total Width	Total Height	Cover Height							Terminal Width	Terminal Thickness	Terminal Bolts					
	A	B	C	D	A1	B1	E	F	G	H	J	K	L	M	N	P	S	T
400A 1	375	290	400	335	320	270	240	290	180	230	46	6.0	12	198	88	80	480	170
630A 1	375	290	400	335	320	270	240	290	180	230	52	7.0	16	198	88	80	480	170



Current Rating (A)	Open Execution Cat. No.
800A	RR-OLCHOE800A-4P





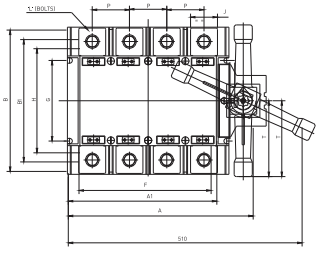


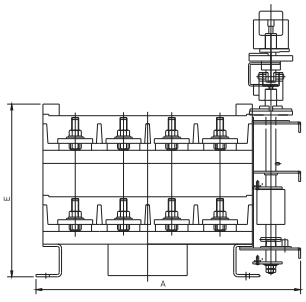
All dimensions are in mm.

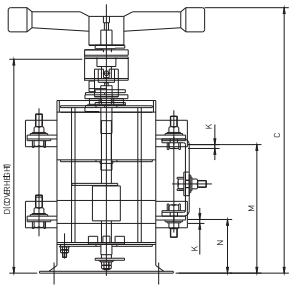
Amps Frame	Over All Dimensions							Feet Hole			Terminal Dimensions							
	Total Length	Total Width	Total Height	Cover Height							Terminal Width	Terminal Thickness	Terminal Bolts					
	A	B	C	D	A1	B1	E	F	G	H	J	K	L	M	N	P	S	T
800A 1	445	330	460	385	360	320	300	360	225	270	60	7.0	16	235	100	80	560	170

Product improvement is a continous process. Above technical data is subject to be changed at any time owing to latest technological development.

Current Rating (A)	Open Execution Cat. No.
1000A	RR-OLCHOE1000A-4P
1250A	RR-OLCHOE1250A-4P
1650A	RR-OLCHOE1650A-4P



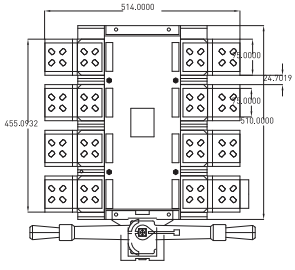


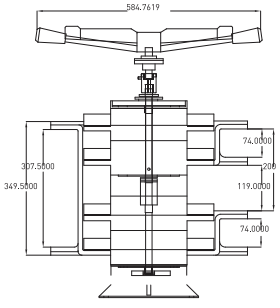


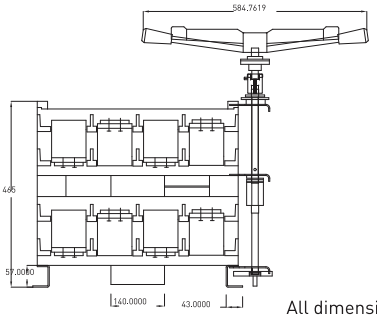
All dimensions are in mm.

Amps Frame	Over All Dimensions							Feet Hole			Terminal Dimensions							
	Total Length	Total Width	Total Height	Cover Height							Terminal Width	Terminal Thickness	Terminal Bolts					
	A	B	C	D	A1	B1	E	F	G	H	J	K	L	M	N	P	S	T
1000A 1	595	340	460	390	510	340	300	510	225	280	70	7.0	10	245	110	120	630	170
1250A 1	595	340	460	390	510	340	300	510	225	280	70	9.0	10	245	110	120	630	170
1650A 1	595	340	460	390	510	340	300	510	225	280	100	12.0	12	245	110	120	630	170

Current Rating (A)	Open Execution Cat. No.
2000A	RR-OLCHOE2000A-4P
2500A	RR-OLCHOE2500A-4P
3150A	RR-OLCHOE3150A-4P







All dimensions are in mm.

Amps Frame	Over All Dimensions							Feet Hole			Terminal Dimensions							
	Total Length	Total Width	Total Height	Cover Height							Terminal Width	Terminal Thickness	Terminal Bolts					
	A	B	C	D	A1	B1	E	F	G	H	J	K	L	M	N	P	S	T
2000A 1	595	340	630	550	510	520	460	510	225	380	100	14.0	12	285	110	150	915	365
2500A 1	595	340	630	550	510	520	460	510	225	280	100	18.0	12	285	110	150	915	365
3150A 1	595	340	630	550	510	520	460	510	225	280	100	24.0	12	285	110	150	915	365

Product improvement is a continous process. Above technical data is subject to be changed at any time owing to latest technological development.

ON LOAD CHANGEOVER SWITCHES (SHEET ENCLOSURE)

RR Switchgears On Load Changeover Switch with thick steel sheet enclosure duly powder coated, are manually operated 4 pole switches having compact design for application in low voltage distribution circuits and motor circuits. RR Switchgear range of co-series, compact version On Load Changeover switches in thick steel sheet enclosure are manually front operated 4 pole switches with very compact design which helps to save the space in panel boards resulting in the low. These comprise of two On Load Switch Disconnectors, which are coupled together and are mechanically interlocked with common outgoing. These are used in low voltage distribution circuits and motor circuits and at places where continuity of supply is necessary for switching from main supply to an alternate source of supply and vice versa.

RANGE

Current range 40 Amp to 3150 Amp in Seven frame & thick Steel Sheet enclosure in Four Pole 415V AC 50 Hz.

CONFORMITY TO STANDARDS

Conforms to IEC-60947-3, IS/IEC-60947 -3

RANGE & FRAME SIZE

Current range 40A to 3150A in seven frame sizes in four pole in thick steel sheet enclosure.

SIZE 1 40A, 63A, 80A, 100A

SIZE 2 125A,160A, 200A

SIZE 3 250A, 320A

SIZE 4 400A, 630A

SIZE 5 800A

SIZE 6 1000A, 1250A, 1600A

SIZE 7 2000A, 2500A, 3150A

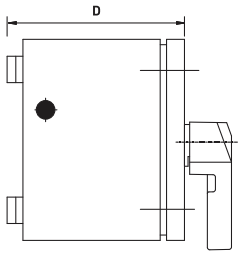
400 Amps. Four Pole 415V
(Sheet Enclosure)

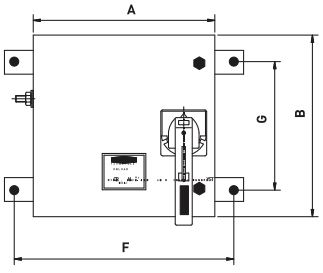
Salient Features

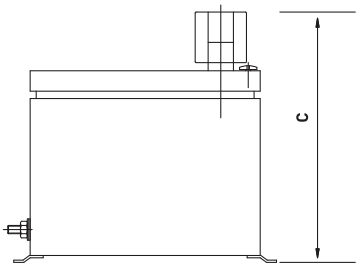
- Enclosure is of fabricated thick steel sheet duly phosphated with seven tank process and with powder coated
- Two earth connection points provided in enclosure
- Strong and ergonomic operating handle with door interlock and padlock facility
- Utilization category - AC 23A / AC 22A
- Degree of protection IP-23
- While breaking the circuit, guaranteed sufficient air sectioning clearance
- Protection against over current and short circuit fault of high rupturing capacity upto 80 kA
- Compact and standardized sizes for range 40A - 3150A idealfor switch board manufacturers
- Strong endurance and resistance to heat (Tropicalised)
- Elegant & sleek in appearance
- All current carrying parts are of special grade ETP copper & silver plated
- Phase barriers provided between each phase terminal
- Flag indicator for two stable positions (I-0-II) and a possible switching on or off, on load, thereby fulfilling the roll of a switching device
- The moulded body's raw material is Glass Fiber reinforced polyester (SMC) which has high mechanical and dielectric strength
- Ample space for copper / aluminum cabling

400 Amps. Four Pole 415V
(Sheet Enclosure)

Current Rating (A)	Sheet Enclosure Cat. No.
40A	RR-OLCHWE40A-4P
63A	RR-OLCHWE63A-4P
80A	RR-OLCHWE80A-4P
100A	RR-OLCHWE100A-4P

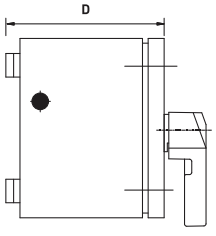


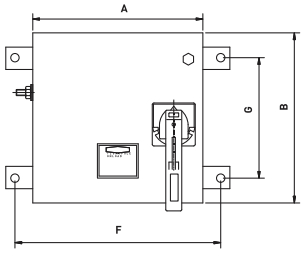


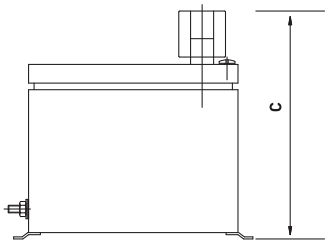


		A	B	C	D	F	G
40A	1	250	275	210	160	190	210
63A	1	250	275	210	160	190	210
80A	1	275	320	210	160	210	240
100A	1	275	320	210	160	210	240

Current Rating (A)	Sheet Enclosure Cat. No.
125A	RR-OLCHWE125A-4P
160A	RR-OLCHWE160A-4P
200A	RR-OLCHWE200A-4P
250A	RR-OLCHWE250A-4P
320A	RR-OLCHWE320A-4P

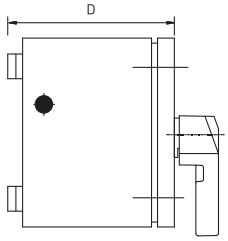


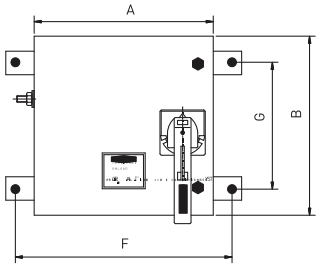


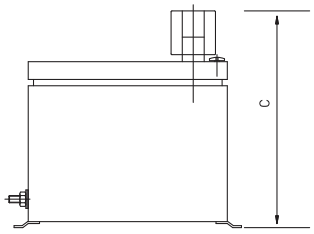


		A	B	C	D	F	G
125A	1	300	320	330	255	210	240
160A	1	300	330	340	265	210	240
200A	1	300	330	340	265	210	240
250A	1	375	420	350	270	400	300
320A	1	375	420	350	270	400	300

Current Rating (A)	Sheet Enclosure Cat. No.
400A	RR-OLCHWE400A-4P
630A	RR-OLCHWE630A-4P
800A	RR-OLCHWE800A-4P

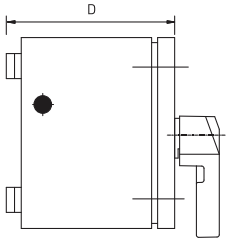


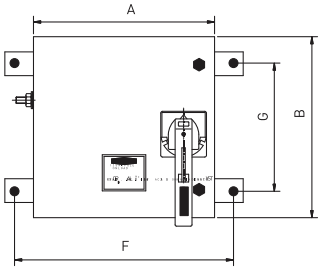


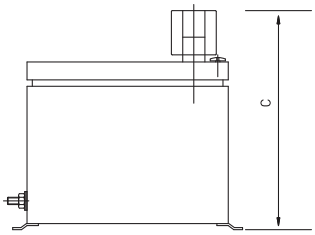


		A	B	C	D	F	G
400A	1	525	550	410	345	560	400
630A	1	525	550	410	345	560	400
800A	1	550	700	470	410	600	500

Current Rating (A)	Sheet Enclosure Cat. No.
1000A	RR-OLCHWE1000A-4P
1250A	RR-OLCHWE1250A-4P
1600A	RR-OLCHWE1600A-4P
2000A	RR-OLCHWE2000A-4P
2500A	RR-OLCHWE2500A-4P
3150A	RR-OLCHWE3150A-4P







		A	B	C	D	F	G
1000A	1	700	700	470	410	760	550
1250A	1	700	700	470	410	760	550
1600A	1	700	700	470	410	760	550
2000A	1	700	850	680	590	760	700
2500A	1	700	850	680	590	760	700
3150A	1	700	850	680	590	760	700

Product improvement is a continous process. Above technical data is subject to be changed at any time owing to latest technological development.

OFF LOAD SIDE HANDLE CHANGEOVER SWITCHES

A comprehensive range of Changeover Switches with side handle manual operation find wide application in all domestic as well as industries where individual system require safe and reliable transfer of power from main supply to alternate source of supply and vice versa. These are supplied in sheet enclosure with three stable positions i.e. ON -OFF-ON (Center OFF position).

RANGE

415V AC 50 Hz

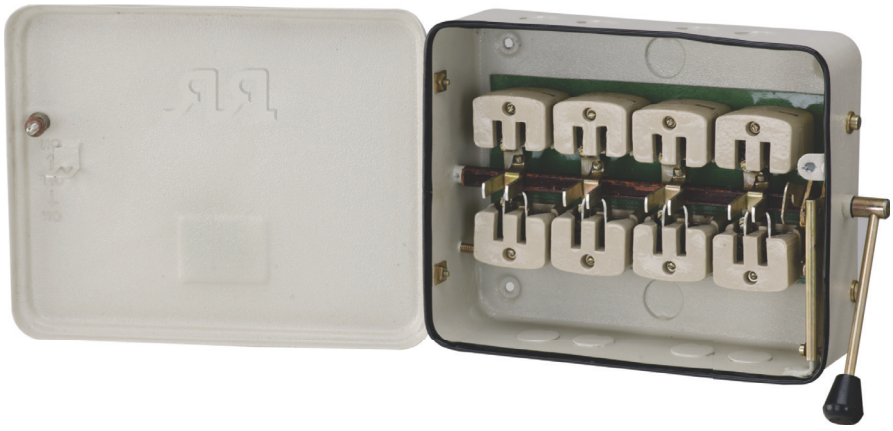
Type	: CHU (U- type)
Rating	: 16 Amp. & 32 Amp. 415V, 50Hz
Execution	: DP, TP & FP
Type	: Type CHK (Knife type)
Rating	: 63 Amp. to 2000 Amp. 415V, 50Hz
Execution	: DP, TP & FP

Four Pole 415V
(Knife Type)

CONFORMITY TO STANDARDS

Conforms to	IEC-60947-3
	IS/IEC-60947-3

OFF LOAD SIDE HANDLE CHANGEOVER SWITCHES



RANGE

Type	: CHU (U- type)
Rating	: 16 Amp. & 32 Amp. 240/415V, 50 Hz
Execution	: DP, TP & FP
IEC	: 60947-3

32 Amps. Four Pole 415V
(U Type

SPECIFICATIONS

Rated Operational Voltage (V)	240/415
Rated Insulation Voltage (Ui)	1000
Rated Frequency (Hz)	50/60
Utilization Category	AC 23A
Rated Impulse Withstand Voltage (Uimp)	10 kV
No. of Poles	Double Pole / Four Pole

CONSTRUCTION (U - TYPE)

Contacts - Contacts are made of electrolytic copper, tin plated for longer contact life / increase of current carrying capacity and to ensure temperature rise with in permissible limits.

Operating Handle & Interlocking - The operating handle is made of steel and is provided on the right hand side of the switch enclosure. Door interlock ensures that the door cannot to be opened when the switch is in ON position thereby providing safety.

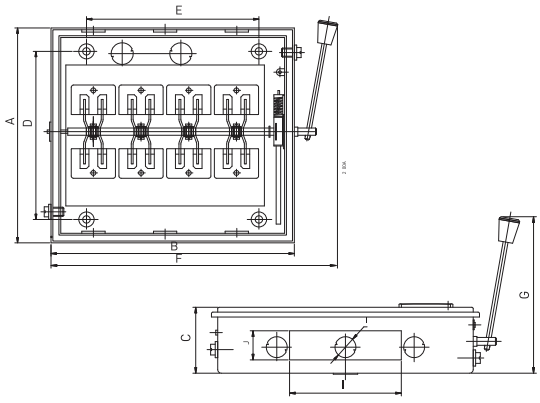
Terminal Blocks - Terminal Blocks are made of ceramic which has an excellent thermal, mechanical and dielectric properties. Terminal Blocks are provided for cable termination.

Enclosure - The enclosure are powder coated and made of sheet steel suitable for an individual Mounting. They are provided with adequate knockout for cable entry.

Salient Features

- Conventional side handle operated switches suitable for an individual mounting for OFF LOAD applications.
- Quick make and quick break mechanism
- Copper alloy used for moving current carrying parts with tin plating
- Totally enclosed fabricated thick steel sheet, dust proof, sleek enclosures with phosphate coating by seven tank system and powder coating for a longer life
- Ample space for copper / aluminium cabling
- Door interlocking to prevent accidental opening of the changeover switch in "ON" position
- Switches power from one source to the other source reliably, safely and positively
- High class insulation provided. SMC & epoxy glass material used in high range of changeover switches
- Utilization category AC-22A, AC-23A with IP-23

DIMENSIONS (U - TYPE)



DOUBLE POLE 415 V A.C.

Current Rating(A)	Reference Cat. No.
16A	RRCOFUOO16A2S
32A	RRCOFUOO32A2S
63A	RRCOFUOO63A2S
100A	RRCOFUO100A3S
200A	RRCOKFO200A3S

TRIPLE POLE 415 V A.C.

Current Rating (A)	Reference Cat. No.
16A	RRCOFUOO16A3S
32A	RRCOFUOO32A3S
63A	RRCOKFOO63A2S
100A	RRCOKFO100A3S
200A	RRCOKFO200A3S
320A	RRCOKFO320A3S

All dimensions are in mm.

Rating	A	B	C	D	E	F	G	Size Of Cable Entry Of Exit
16A	210	137	92	155	73	177	170	19Ø
32A	235	150	92	183	80	182	175	25Ø
63A	322	203	213	259	137	280	355	38Ø
100A	385	203	233	308	137	303	355	38Ø
200A	430	292	260	304	320	508	355	248 x 67
CHANGE OVER SWITCHES TRIPLE POLE 415V AC								
16A	210	172	92	155	98	210	175	19Ø
32A	235	204	92	183	214	234	175	25Ø
63A	322	270	213	259	200	347	355	38Ø
100A	385	292	233	308	166	392	355	248 x 67
200A	430	330	260	304	357	413	405	297 x 88
320A	430	330	260	304	357	413	405	297 x 88

Product improvement is a continous process. Above technical data is subject to be changed at any time owing to latest technological development.

OFF LOAD SIDE HANDLE CHANGE OVER SWITCHES (KNIFE TYPE)

RANGE

Type : Type CHK (Knife type)

Rating : 63 Amp. to 2000 Amp. 415V, 50Hz

Execution : DP, TP & FP

IEC : 60947-3

Utilization Category : AC 22B

400 Amps.
Four Pole 415V
(Knife Type)

CONSTRUCTION (KNIFE - TYPE)

Contacts (Moving/Fixed) : Moving Contacts are made of electrolytic copper, tin plated in the shape of a knife blade type with self cleaning action during operation, the fixed contact terminals in each phase have a separate main and arcing contacts for longer contact life / increase of current carrying capacity and to ensure temperature rise with in permissible limits.

Operating Handle & Interlocking : The operating handle is made of steel and is provided on the right hand side of the switch enclosure. Door interlock ensures that the door cannot to be opened when the switch is in ON position thereby providing safety.

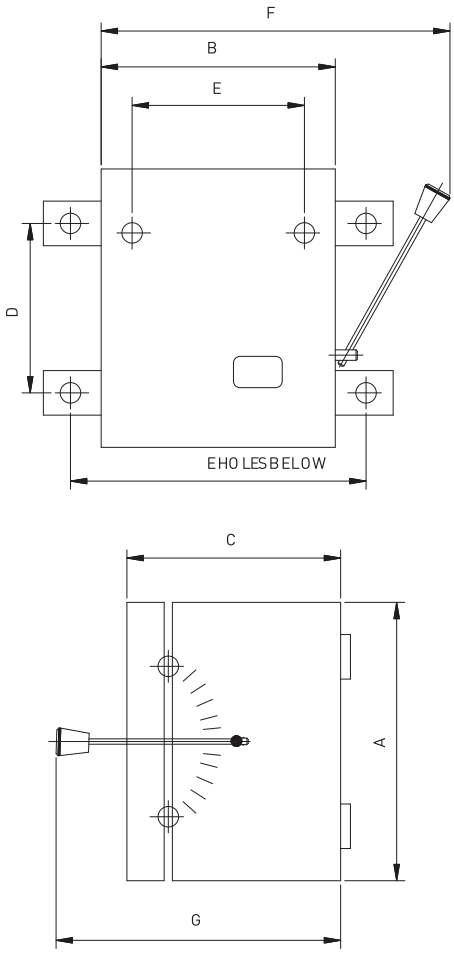
Terminal Blocks : Terminal Blocks are made of SMC/DMC which has an excellent thermal, mechanical and dielectric properties. Terminal Blocks are provided for cable termination.

Enclosure : The enclosure is powder coated which is made of sheet steel suitable for individual mounting. They are provided with adequate knockout for cable entry.

SALIENT FEATURES

- Conventional side handle operated switches suitable for an individual mounting for OFF LOAD applications
- Quick make and qzuick break mechanism
- Copper alloy used for moving current carrying parts with tin plating
- Totally enclosed fabricated thick steel sheet, dust proof, sleek enclosures with phosphate coating by seven tank system and powder coating for a long life
- Ample space for copper/aluminium cabling
- Door interlocking to prevent accidental opening of the changeover switch in "ON" position
- Switches power from one source to the other source reliably, safely and positively
- Cable entry holes/slot covered with removable end plates are provided at the bottom and also at the rear side of the switch to facilitate cable connections from any side
- 320 Amps. and above rating are provided with central back side connection provision
- High class insulation provided. SMC & epoxy glass material used in high range of changeover switches
- DMC / SMC terminal individual mould are provided for cable transmission having an excellent mechanical thermal and dielector properties

DIMENSION (KNIFE - TYPE)



OFF LOAD CHANGE OVER SWITCHES - DOUBLE POLE

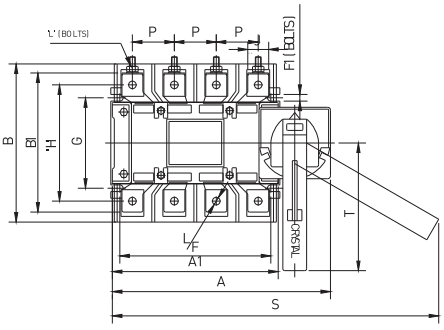
Current Rating (A)	Reference Cat. No.
16A	KGCOFOO16A2S
32A	KGCOFOO32A2S
63A	KGCOFOO63A2S
100A	KGCOFO100A2S
200A	KGCOFO200A2S
320A	KGCOFO320A2S
400A	KGCOFO400A2S
630A	KGCOFO630A2S
800A	KGCOFO800A2S
1000A	KGCOF1000A2S
1250A	KGCOF1250A2S
1600A	KGCOF1600A2S
2000A	KGCOF2000A2S

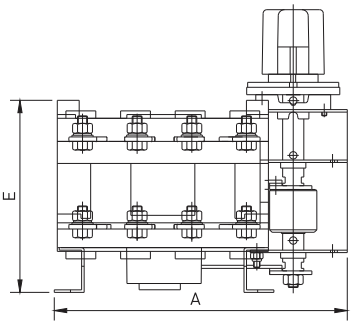
CHANGE OVER SWITCHES DOUBLE POLE 415V AC

Rating	A	B	C	D	E	F	G	Size Of Cable Entry Of Exit
16A	210	229	92	155	150	267	170	19Ø
32A	235	260	92	183	165	300	175	25Ø
63A	322	311	213	256	137	388	355	38Ø
100A	385	380	233	308	171	480	385	248 x 67
200A	430	425	260	304	452	508	405	297 x 88
320A	460	457	320	300	497	550	515	410 x 100
400A	510	505	335	294	545	610	555	470 x 117
630A	584	584	390	351	620	710	610	540 x 133
800A	630	630	420	400	673	770	660	585 x 135
1000A	630	630	420	400	673	770	660	585 x 135
1250A	740	735	500	443	785	890	645	685 x 155
1600A	740	735	500	443	785	890	645	685 x 155
2000A	880	880	575	443	930	970	670	820 x 170

AUTOMATIC TRANSFER SWITCH

125 Amps Four Pole 415V





Current Rating (A)	Reference Cat. No.
125A	RRATS01254POX3S
160A	RRATS01604POX3S
200A	RRATS02004POX3S
250A	RRATS02504POX3S
320A	RRATS03204POX3S
400A	RRATS04004POX3S
630A	RRATS06304POX3S
800A	RRATS08004POX3S
1000A	RRATS10004POX3S
1250A	RRATS12504POX3S
1600A	RRATS16004POX3S

All dimensions are in mm.

Amps Frame		Over All Dimensions							Feet Hole			Terminal Dimensions							
		Total Length	Total Width	Total Height	Cover Height							Terminal Width	Terminal Thickness	Terminal Bolts					
		A	B	C	D	A1	B1	E	F	G	H	J	K	L	M	N	P	S	T
40A	1	345	165	200	150	145	130	113	125	95	115	16	2.5	6	92	42	32	270	106
63A	1	345	165	200	150	145	130	113	125	95	115	16	2.5	6	92	42	32	270	106
80A	1	370	165	200	150	170	135	115	145	95	115	18.5	3	8	92	42	36	290	105
100A	1	370	165	200	150	170	135	115	145	95	115	18.5	3	8	92	42	36	290	105
125A	1	370	195	320	250	170	150	150	155	95	125	22	3.5	8	120	53	44	315	135
160A	1	370	195	320	250	170	150	150	155	95	125	22	3.5	8	120	53	44	315	135
200A	1	370	195	320	250	170	150	150	155	95	125	22	3.5	8	120	53	44	315	135
250A	1	445	210	340	265	245	210	175	205	111	155	30	5	10	144	64	50	420	135
320A	1	445	210	340	265	245	210	175	205	111	155	30	5	10	144	64	50	420	135
400A	1	520	300	400	320	320	267	240	290	180	230	42	6	12	198	88	64	480	135
630A	1	520	300	400	320	320	267	240	290	180	230	42	6	12	198	88	64	480	135
800A	1	560	330	460	385	360	320	300	360	225	270	60	7	16	235	100	80	560	170
1000A	1	595	340	460	390	510	340	300	510	225	280	70	7	10	245	110	120	630	170
1250A	1	595	340	460	390	510	340	300	510	225	280	70	9	10	245	110	120	630	170
1600A	1	595	340	460	390	510	340	300	510	225	280	100	12	12	245	110	120	630	170

DISTRIBUTION BOARD

DESIGN

RR Distribution Boards are Sheet Steel Enclosure fabricated with utmost precision. Compact designs have been developed to ensure convenience and ease of installation and operation. Designs match with the National & International technology. RR Db's are a system, class product.

CONSTRUCTION

The enclosure are fabricated out of best quality CRCA steel sheet for better strength and finish. The distribution system are supplied duly fitted with Din channel, neutral link earth bar and bus bar, so that the MCB's of desired number and ratings can be fitted conveniently at site, except for one to four pole enclosure, which are only fitted with Din Channel.

POWDER PAINT

High quality powder paint is coated and baked at high temperature. Before powder coating the housing goes through rigorous anti-trust conditioning in seven tank processes to ensure smooth and lasting finish and protection against corrosive atmosphere.

RR Elegant Distribution Systems are designed with the best combination of engineering technology and aesthetics to suit various applications. All Db's are available with / without Miniature Circuit Breakers.

DOUBLE DOOR DISTRIBUTION BOARD

DOUBLE DOOR SPN DISTRIBUTION BOARD

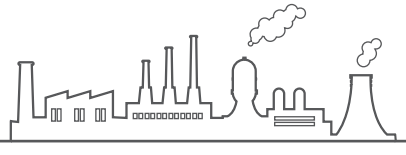
CAT. NO.	DESCRIPTION
RR-DD04	Double Door 4 Way SPN Distribution Board,
RR-DD06	Double Door 6 Way SPN Distribution Board,
RR-DD08	Double Door 8 Way SPN Distribution Board,
RR-DD12	Double Door 12 Way SPN Distribution Board,
RR-DD16	Double Door 16 Way SPN Distribution Board,

DOUBLE DOOR TPN DISTRIBUTION BOARD

CAT. NO.	DESCRIPTION
RR-TDD04	Double Door 4 Way TPN Distribution Board
RR-TDD06	Double Door 6 Way TPN Distribution Board
RR-TDD08	Double Door 8 Way TPN Distribution Board
RR-TDD12	Double Door 12 Way TPN Distribution Board

DOUBLE DOOR VERTICAL TPN DISTRIBUTION BOARD

CAT. NO.	DESCRIPTION
RR-VTDD04	Double Door 4 Way Vertical TPN Distribution Board
RR-VTDD08	Double Door 8 Way Vertical TPN Distribution Board
RR-VTDD12	Double Door 12 Way Vertical TPN Distribution Board



FLUSH TYPE DOUBLE DOOR DISTRIBUTION BOARD

DOUBLE DOOR SPN DISTRIBUTION BOARD

CAT. NO.	DESCRIPTION
RR-DD04-FF	Flush Type Double Door 4 Way SPN Distribution Board
RR-DD06-FF	Flush Type Double Door 6 Way SPN Distribution Board
RR-DD08-FF	Flush Type Double Door 8 Way SPN Distribution Board
RR-DD12-FF	Flush Type Double Door 12 Way SPN Distribution Board
RR-DD16-FF	Flush Type Double Door 16 Way SPN Distribution Board

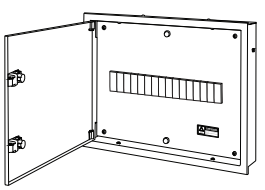
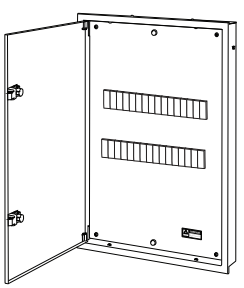
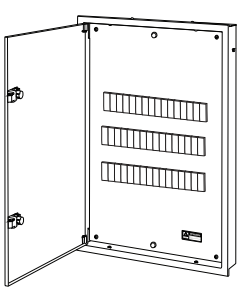
DOUBLE DOOR TPN DISTRIBUTION BOARD

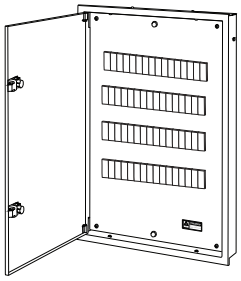
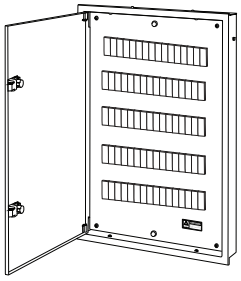
CAT. NO.	DESCRIPTION
RR-TDD04-FF	Flush Type Double Door 4 Way TPN Distribution Board
RR-TDD06-FF	Flush Type Double Door 6 Way TPN Distribution Board
RR-TDD08-FF	Flush Type Double Door 8 Way TPN Distribution Board
RR-TDD12-FF	Flush Type Double Door 12 Way TPN Distribution Board
RR-TDD16-FF	Flush Type Double Door 16 Way TPN Distribution Board

DOUBLE DOOR VERTICAL TPN DISTRIBUTION BOARD

CAT. NO.	DESCRIPTION
RR-VTDD04-FF	Flush Type Double Door 4 Way Vertical TPN Distribution Board
RR-VTDD08-FF	Flush Type Double Door 8 Way Vertical TPN Distribution Board
RR-VTDD12-FF	Flush Type Double Door 12 Way Vertical TPN Distribution Board

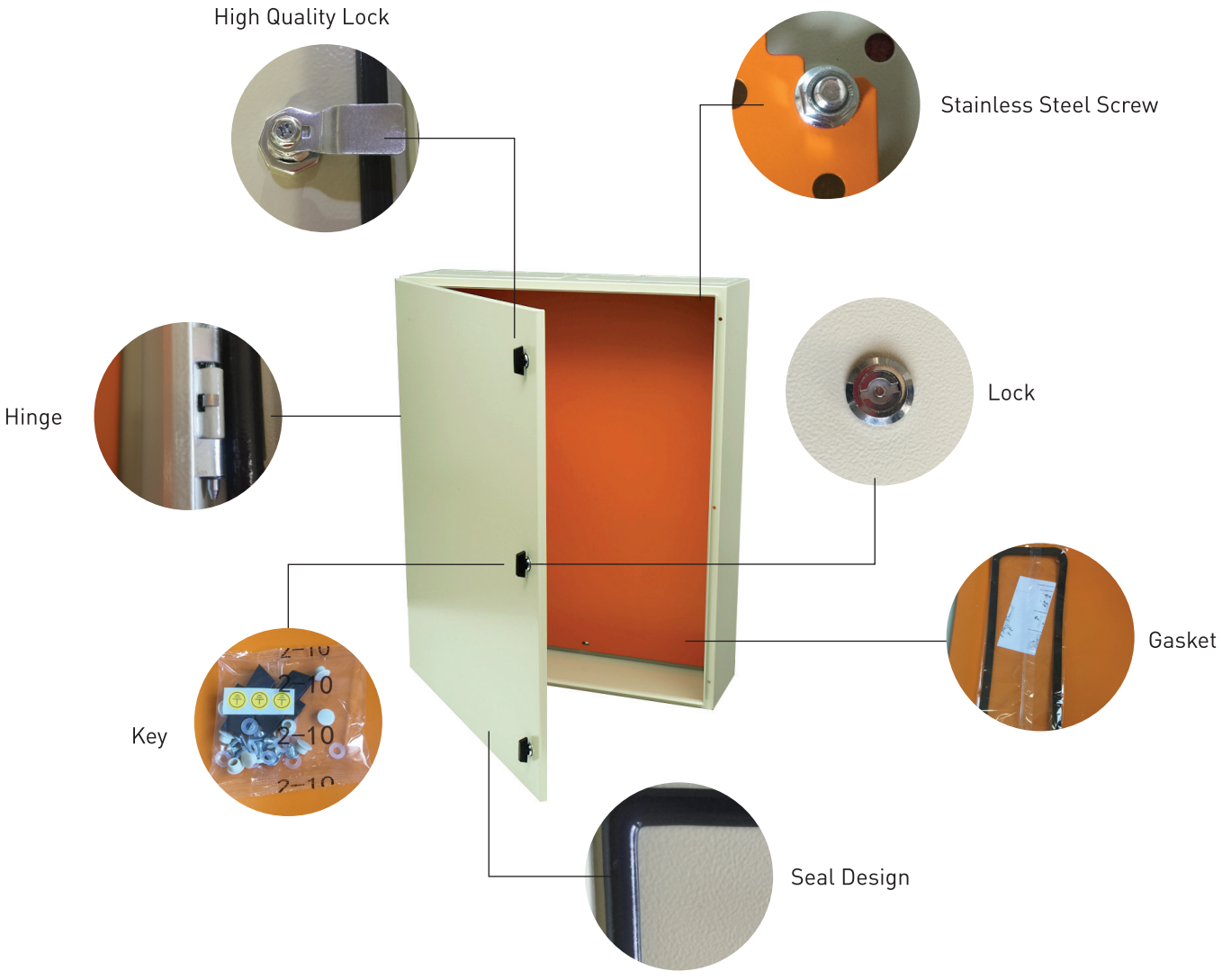
ROW DISTRIBUTION BOARDS - FLUSH TYPE

	CAT. NO.	DESCRIPTION	SIZE (in mm) W x H x D
	RR-RD1-10	Double Door 1 Row Distribution Box 10way Accommodate 10SP MCB	357*325*120
	RR-RD1-12	Double Door 1 Row Distribution Box 12way Accommodate 12SP MCB	393*325*120
	RR-RD1-14	Double Door 1 Row Distribution Box 14way Accommodate 14SP MCB	429*325*120
	RR-RD1-16	Double Door 1 Row Distribution Box 16way Accommodate 16SP MCB	465*325*120
	RR-RD2-10	Double Door 2 Row Distribution Box 10way Accommodate 20SP MCB	357*475*120
	RR-RD2-12	Double Door 2 Row Distribution Box 12way Accommodate 24SP MCB	393*475*120
	RR-RD2-14	Double Door 2 Row Distribution Box 14way Accommodate 28SP MCB	429*475*120
	RR-RD2-16	Double Door 2 Row Distribution Box 16way Accommodate 32SP MCB	465*475*120
	RR-RD3-10	Double Door 3 Row Distribution Box 10way Accommodate 30SP MCB	357*625*120
	RR-RD3-12	Double Door 3 Row Distribution Box 12way Accommodate 36SP MCB	393*625*120
	RR-RD3-14	Double Door 3 Row Distribution Box 14way Accommodate 42SP MCB	429*625*120
	RR-RD3-16	Double Door 3 Row Distribution Box 16way Accommodate 48SP MCB	465*625*120

	CAT. NO.	DESCRIPTION	SIZE (in mm) W x H x D
	RR-RD4-10	Double Door 4 Row Distribution Box 10way Accommodate 40SP MCB	357*775*120
	RR-RD4-12	Double Door 4 Row Distribution Box 12way Accommodate 48SP MCB	393*775*120
	RR-RD4-14	Double Door 4 Row Distribution Box 14way Accommodate 56SP MCB	429*775*120
	RR-RD4-16	Double Door 4 Row Distribution Box 16way Accommodate 64SP MCB	465*775*120
	RR-RD4-24	Double Door 4 Row Distribution Box 24way Accommodate 96SP MCB	610*775*120
	RR-RD5-10	Double Door 5 Row Distribution Box 10way Accommodate 50SP MCB	357*925*120
	RR-RD5-12	Double Door 5 Row Distribution Box 12way Accommodate 60SP MCB	393*925*120
	RR-RD5-14	Double Door 5 Row Distribution Box 14way Accommodate 70SP MCB	429*925*120
	RR-RD5-16	Double Door 5 Row Distribution Box 16way Accommodate 80SP MCB	465*925*120
	RR-RD5-24	Double Door 5 Row Distribution Box 24way Accommodate 120SP MCB	610*925*120

WEATHERPROOF METAL ENCLOSURE

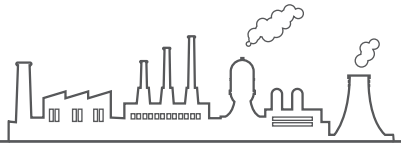
RR weather Proof Metal Enclosures (IP66) are designed to accommodate various types of switchgear Control gear assemblies, Network communication and Automation product assembly to suit a variety of electrical installations in Residential, commercial and industrial buildings.

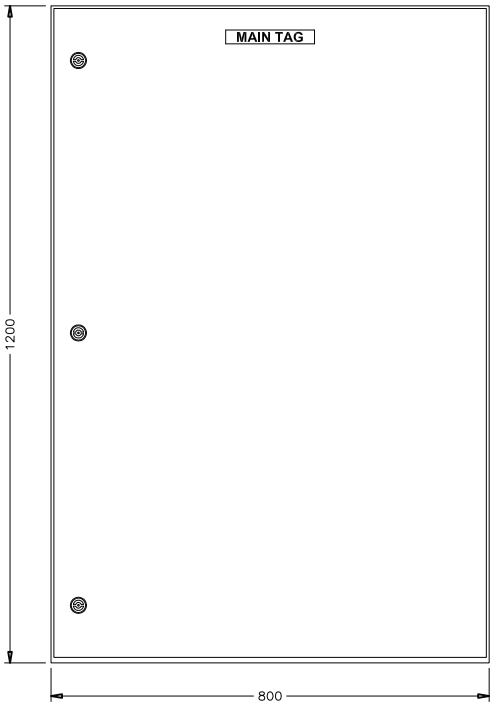


WEATHERPROOF ENCLOSURE

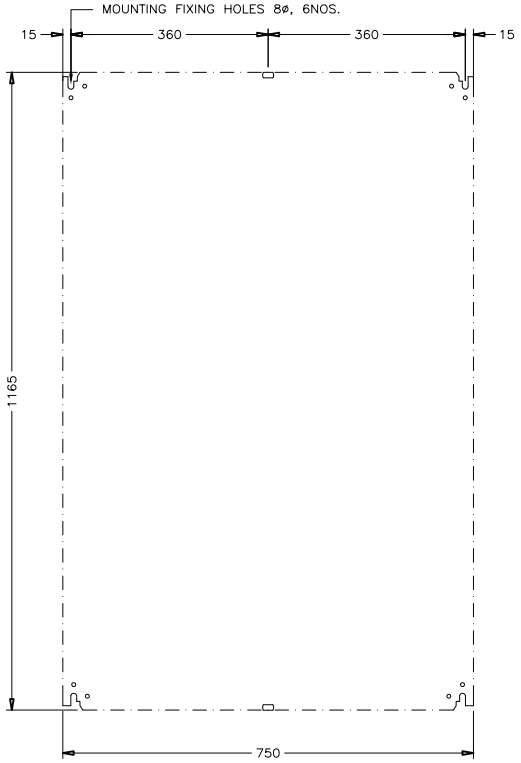
SPECIFICATIONS & FEATURES

- Made of high quality electro-galvanized steel sheet of thickness up to 1.5mm
- Matt-finish polyester powder coated in RAL-7032 light grey colour.
- Standard mounting plate made of hot dip galvanized steel sheet of 2mm thickness with holes for strips
- Complies with IEC 60529/62208 standards
- Complies with CE standards
- Degree of protection IP66
- Earthing studs are provided on both the enclosure and the door
- CNC machine formed polyurethane gasket for reliable sealing
- Corner formed door ensures better weatherproofing and gives aesthetic looks
- Easily removable hinges, ideal for changing the door opening direction (for certain sizes)
- Special profiled lip for better waterproofing
- Lock features: Quarter turn cylindrical lock – Metal keys and locking mechanism for durability key engaged when the lock is open
- A kit containing assembly hardware and instruction manual is provided with the enclosure

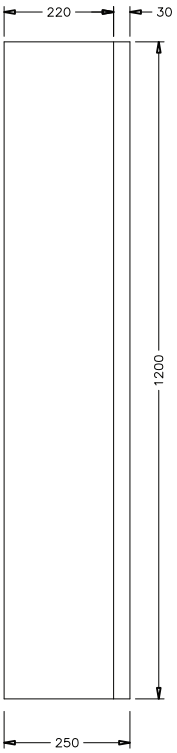




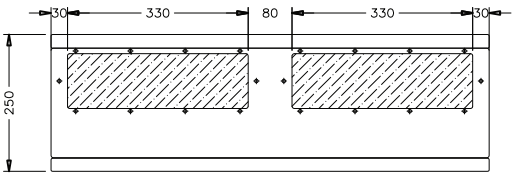
FRONT VIEW



MOUNTING PLATE



SIDE VIEW



GLAND PLATE

GLAND BOX

CAT. NO.	DESCRIPTION	MOUNTING PLATE SIZE W x H (mm)
RR-WPEN2-2515	H250 x W200 x D150 (mm) Metal Wall Mount Enclosure, Door & Body 1.2MM THK, Orange MP 2MM THK, IP66	150*215
RR-WPEN25-2515	H250 x W250 x D150 (mm) Metal Wall Mount Enclosure, Door & Body 1.2MM THK, Orange MP 2MM THK, IP66	200*215
RR-WPEN25-315	H300 x W250 x D150 (mm) Metal Wall Mount Enclosure, Door & Body 1.2MM THK, Orange MP 2MM THK, IP66	200*265
RR-WPEN3-315	H300 x W300 x D150 (mm) Metal Wall Mount Enclosure, Door & Body 1.2MM THK, Orange MP 2MM THK, IP66	250*265
RR-WPEN3-320	H300 x W300 x D200 (mm) Metal Wall Mount Enclosure, Door & Body 1.2MM THK, Orange MP 2MM THK, IP66	250*265
RR-WPEN3-415	H400 x W300 x D150 (mm) Metal Wall Mount Enclosure, Door & Body 1.2MM THK, Orange MP 2MM THK, IP66	250*365
RR-WPEN3-420	H400 x W300 x D200 (mm) Metal Wall Mount Enclosure, Door & Body 1.2MM THK, Orange MP 2MM THK, IP66	250*365
RR-WPEN4-415	H400 x W400 x D150 (mm) Metal Wall Mount Enclosure, Door & Body 1.2MM THK, Orange MP 2MM THK, IP66	350*365
RR-WPEN4-420	H400 x W400 x D200 (mm) Metal Wall Mount Enclosure, Door & Body 1.2MM THK, Orange MP 2MM THK, IP66	350*365
RR-WPEN4-520	H500 x W400 x D200 (mm) Metal Wall Mount Enclosure, Door & Body 1.2MM THK, Orange MP 2MM THK, IP66	350*465
RR-WPEN4-620	H600 x W400 x D200 (mm) Metal Wall Mount Enclosure, Door & Body 1.2MM THK, Orange MP 2MM THK, IP66	350*565
RR-WPEN5-620	H600 x W500 x D200 (mm) Metal Wall Mount Enclosure, Door & Body 1.2MM THK, Orange MP 2MM THK, IP66	450*565
RR-WPEN6-620	H600 x W600 x D200 (mm) Metal Wall Mount Enclosure, Door & Body 1.2MM THK, Orange MP 2MM THK, IP66	550*565
RR-WPEN5-720	H700 x W500 x D200 (mm) Metal Wall Mount Enclosure, Door & Body 1.2MM THK, Orange MP 2MM THK, IP66	450*665
RR-WPEN5-725	H700 x W500 x D250 (mm) Metal Wall Mount Enclosure, Door & Body 1.2MM THK, Orange MP 2MM THK, IP66	450*665
RR-WPEN6-820	H800 x W600 x D200 (mm) Metal Wall Mount Enclosure, Door & Body 1.5MM THK, Orange MP 2MM THK, IP66	550*765
RR-WPEN6-825	H800 x W600 x D250 (mm) Metal Wall Mount Enclosure, Door & Body 1.5MM THK, Orange MP 2MM THK, IP66	550*765
RR-WPEN6-830	H800 x W600 x D300 (mm) Metal Wall Mount Enclosure, Door & Body 1.2MM THK, Orange MP 2MM THK, IP66	550*765

*All the above sizes as: HxWxD

CAT. NO.	DESCRIPTION	MOUNTING PLATE SIZE W x H (mm)
RR-WPEN8-820	H800 x W800 x D200 (mm) Metal Wall Mount Enclosure, Door & Body 1.5MM THK, Orange MP 2MM THK, IP66	750*765
RR-WPEN8-825	H800 x W800 x D250 (mm) Metal Wall Mount Enclosure, Door & Body 1.5MM THK, Orange MP 2MM THK, IP66	750*765
RR-WPEN6-1025	H1000 x W600 x D250 (mm) Metal Wall Mount Enclosure, Door & Body 1.5MM THK, Orange MP 2MM THK, IP66	550*965
RR-WPEN8-1025	H1000 x W800 x D250 (mm) Metal Wall Mount Enclosure, Door & Body 1.2MM THK, Orange MP 2MM THK, IP66	750*965
RR-WPEN8-1030	H1000 x W800 x D300 (mm) Metal Wall Mount Enclosure, Door & Body 1.5MM THK, Orange MP 2MM THK, IP66	750*965
RR-WPEN10-1030	H1000 x W1000 x D300 (mm) Metal Wall Mount Enclosure, Door & Body 1.5MM THK, Orange MP 2MM THK, IP66	950*965
RR-WPEN6-1225	H1200 x W600 x D250 (mm) Metal Wall Mount Enclosure, Door & Body 1.5MM THK, Orange MP 2MM THK, IP66	550*1165
RR-WPEN6-1230	H1200 x W600 x D300 (mm) Metal Wall Mount Enclosure, Door & Body 1.5MM THK, Orange MP 2MM THK, IP66	550*1165
RR-WPEN8-1225	H1200 x W800 x D250 (mm) Metal Wall Mount Enclosure, Door & Body 1.5MM THK, Orange MP 2MM THK, IP66	750*1165
RR-WPEN8-1230	H1200 x W800 x D300 (mm) Metal Wall Mount Enclosure, Door & Body 1.5MM THK, Orange MP 2MM THK, IP66	750*1165
RR-WPEN10-1230	H1200 x W1000 x D300 (mm) Metal Wall Mount Enclosure, Door & Body 1.5MM THK, Orange MP 2MM THK, IP66	950*1165
RR-WPEN10-1230DD	H1200 x W1000 x D300 (mm) Metal Wall Mount Enclosure, Door & Body 1.5MM THK, Orange MP 2MM THK, IP66, with Double Door	950*1165
RR-WPEN10-1240	H1200 x W1000 x D400 (mm) Metal Wall Mount Enclosure, Door & Body 1.5MM THK, Orange MP 2MM THK, IP66	950*1165
RR-WPEN12-1230DD	H1200 x W1200 x D300 (mm) Metal Wall Mount Enclosure, Door & Body 1.5MM THK, Orange MP 2MM THK, IP66 with Double Door	1150*1165
RR-WPEN8-1430	H1400 x W800 x D300 (mm) Metal Wall Mount Enclosure, Door & Body 1.5MM THK, Orange MP 2MM THK, IP66	750*1365
RR-WPEN8-1440	H1400 x W800 x D400 (mm) Metal Wall Mount Enclosure, Door & Body 1.5MM THK, Orange MP 2MM THK, IP66	750*1365
RR-WPEN10-1430	H1400 x W1000 x D300 (mm) Metal Wall Mount Enclosure, Door & Body 1.5MM THK, Orange MP 2MM THK, IP66	950*1365
RR-WPEN10-1430DD	H1400 x W1000 x D300 (mm) Metal Wall Mount Enclosure, Door & Body 1.5MM THK, Orange MP 2MM THK, IP66 with Double Door	950*1365

*All the above sizes as: HxWxD

CAT. NO.	DESCRIPTION	MOUNTING PLATE SIZE W x H (mm)
RR-WPEN10-1440	H1400 x W1000 x D400 (mm) Metal Wall Mount Enclosure, Door & Body 1.5MM THK, Orange MP 2MM THK, IP66	950*1365
RR-WPEN10-1440DD	H1400 x W1000 x D400 (mm) Metal Wall Mount Enclosure, Door & Body 1.5MM THK, Orange MP 2MM THK, IP66 with Double Door	950*1365
RR-WPEN12-1440DD	H1400 x W1200 x D400 (mm) Metal Wall Mount Enclosure, Door & Body 1.5MM THK, Orange MP 2MM THK, IP66 with Double Door	1150*1365
RR-WPEN8-1630	H1600 x W800 x D300 (mm) Metal Wall Mount Enclosure, Door & Body 1.5MM THK, Orange MP 2MM THK, IP66	750*1565
RR-WPEN8-1640	H1600 x W800 x D400 (mm) Metal Wall Mount Enclosure, Door & Body 1.5MM THK, Orange MP 2MM THK, IP66	750*1565
RR-WPEN10-1640	H1600 X W1000 x D400 (mm) Metal Wall Mount Enclosure, Door & Body 1.5MM THK, Orange MP 2MM THK, IP66	950*1565
RR-WPEN10-1640DD	H1600 X W1000 x D400 (mm) Metal Wall Mount Enclosure, Door & Body 1.5MM THK, Orange MP 2MM THK, IP66 with Double Door	950*1565
RR-WPEN10-1840	H1800 x W1000 x D400 (mm) Metal Wall Mount Enclosure, Door & Body 1.5MM THK, Orange MP 2MM THK, IP66 with Double Door	950*1765
RR-WPEN12-1840	H1800 x W1200 x D400 (mm) Metal Wall Mount Enclosure, Door & Body 1.5MM THK, Orange MP 2MM THK, IP66 with Double Door	1150*1765
RR-WPEN1810/4	H1800 x W1000 x D400 (mm), Front door 2mm, Body:1.5, Orange mp:2.5mm IP66	900*1695
RR-WPEN2012/4	H2000 x W1200 x D400 (mm), Front Door 2mm, Body: 1.5, Orange mp:2.5mm IP66	1100*1895
RR-GB6252	H600 X W250 X D200 (mm) Gland Box with Gland Plate	
RR-GB8325	H800 X W300 X D250 (mm) Gland Box with Gland Plate	

*All the above sizes as: HxWxD

RR ELECTRICAL MIDDLE EAST FZC
2903, 2904, 2905 & 2906, Iris Bay, Al Mustaqbal Street, Business Bay, Dubai - U.A.E.
T: +971 - 4 - 330 3466 • **F:** +971 - 4 - 3301533 • **E:** rrelectrical@me-rrglobal.com

Registered Office:
Ram Ratna House, Utopia City, P. B. Marg, Worli, Mumbai - 400 013, INDIA.
T: +91 - 22 - 2494 9009 / 2492 4144 • **F:** +91 - 22 - 2493 0203 / 2493 2339

www.rrglobal.com | YouTube

CC/0921/RRSG-EXB/60PGS/INTL-MENA