



Over the last five decades, through insightful research and innovation in power management, Indo Asian has grown to be a vibrant multi-product, transnational company. With a strong portfolio of state-of-the-art products equipped with superior technology, Indo Asian ensures all-round efficiency in distribution, protection, control and conservation of electricity.

When it comes to the arena of protection, our Circuit Breakers have passed most stringent tests, and hence driving us to be one of the top players in this field.

Since its inception, Indo Asian has laboured tirelessly to give products that would act as a benchmark for safety, efficiency and convenience in power consumption. Continuing its rich legacy of innovation, Indo Asian presents Gold Plus.

Gold Plus, a category with premium range of MCBs, RCCBs, Distribution Boards and Isolators, ensures to cover the entire scale of electric supply chain from distribution to protection. This premium range makes it easy and effortless in terms of installation, usage and protection of circuit. Gold Plus is meant to be a solution for final low voltage with standard and customized DBs, fulfilling the needs of different segments, right from residential, commercial buildings, industrial plants to OEMs. Along with all other Indo Asian products, Gold Plus perfectly meets the standards and quality required by industry experts, and is all set to deliver what it promises to all its users.



Salient Features

- Elegant appearance; cover and handle in arc shape for comfortable operation
- Contact position indicating window
- In case of overload and short-circuit to protected circuit, MCB knob trips and stays at mid position, which enables a quick solution to the faulty line (the knob cannot stay in such position when operated manually)
- High short-circuit capacity of 10kA for whole range due to the powerful electric arc extinguishing system
- High electrical endurance of more than 4000 cycles
- MCB knob can be locked either at "ON" position or at "OFF" position to prevent unwanted operation of the product

Technical Parameters

- Conforms to IS/IEC: 60898-1
- Degree of Protection:
 - IP 20, it protects against a hazardous finger or instrument touch as well as against small foreign objects; it is without any protection against water leakage (water protection is to be solved with design of the switchboard casing)
- Number of Poles: SP/SPN/DP/TP/TPN/FP
- Rated current (A): 0.5A - 63A
- Rated Voltage: 240V/415V
- Tripping Characteristics Curve: B, C & D as per IEC: 60947-2
 - B Curve: The short-circuit release will start initiating between $3I_n$ to $5I_n$. It serves especially for protection of circuits with such devices which do not cause any current surges (lights or socket circuit etc.)
 - C Curve: The short-circuit release will start initiating between $5I_n$ to $10I_n$. It serves especially for protection of circuits with such devices which cause some current surges (group of bulbs, motors etc.)
 - D Curve: The short-circuit release will start initiating between $10I_n$ to $20I_n$. It serves especially for protection of circuits with such devices which cause high current surges (transformers, motors with heavy inductive load)
- Rated Short-Circuit Breaking Capacity (I_{cn}): 10kA
- Rated Service Short-Circuit Breaking Capacity (I_{cs}): 7.5kA
- Rated Frequency: 50/60 Hz
- Energy Limiting Class: 3



Technical Parameters



- Rated Impulse Withstand Voltage: 4kV
- Contact Position Indicating Window
- Fastening Torque: 2.0 Nm
- Installation: On Symmetrical Din Channel 35mm
- Combination Box Type Termination on both sides
- Ambient Temperature: -5° C to +55° C
- Calibration Temperature: +30° C
- Maximum Back-up Fuse: 100AgG(> 10kA)
- Mechanical Life: > 10,000 cycles
- Electrical Life: > 4,000 cycles
- Mounting:
 - By means of a unique two step mounting clip on Din channel of width 35mm
 - Removal from Din Channel:
 - By means of a screw driver, the MCBs can be removed even from a row of devices by lifting the clip without dismantling the whole row
- Line-Load Reversibility
- Ability to connect for conductors (maximum cross-sections):
 - 35mm² solid conductor
 - 25mm² stranded conductor
- Tropicalisation Altitude: 2000 m
- Housing Material: PBT

Isolators

Technical Parameters

- Conforms to IEC:60947-3
- Degree of Protection: IP 20
- Number of Poles: DP/TP/FP
- Rated Current (A): 40A/63A/80A/100A/125A
- Rated Voltage: 240V/415V
- Utilization Category: AC 23A
- Insulation Voltage (Ui): 500V
- Impulse Voltage (Uimp): 4kV
- Short Time Withstand Capacity (Icw): 12In
- Mechanical Life: ≥ 10,000 cycles
- Electrical Life: ≥ 4,000 cycles



Salient Features

- Dual Tripping System:
 - Overload tripping through precisely calibrated bimetal and short-circuit tripping through electromagnetic coil
- DC MCB incorporates a built-in permanent magnet which directs the arc into the arc-quenching chamber
- Free from nuisance tripping caused by vibrations
- Clear indication of polarity by positive (+) and negative (-) sign stickers on the poles of MCB
- Time Constant: 5ms
- DC MCB offers a unique feature of knob assuming mid-trip position in the event of fault, this enables clear visual indication of the faulty circuit
- Housing of DC MCB is made up of fire retardant, anti-tracking and non-hygroscopic injection moulded thermoplastic polyester
- Properly spaced zinc plated de-ionising plates for quick arc extinction are a part of well-designed arc chute

Technical Parameters

- Conforms to IEC: 60947-2
- Degree of Protection: IP 20
- Number of Poles: SP/DP
- Rated Current (A): 0.5A-63A
- Rated Voltage: 220V DC
- Rated Short Circuit Breaking Capacity: 6kA
- Insulation Voltage: 500V
- Mounting: On Din Channel of 35mm
- Connecting Terminals: Screw Type
- Mechanical Life: $\geq 10,000$ cycles
- Electrical Life: $\geq 4,000$ cycles
- Vibration Level: 3g, 50 cycles

Auxiliary Switch

The auxiliary switch is used for remote signaling, auxiliary supplies and for other similar functions. The auxiliary switch is switched-on and switched-off together with the MCB through internal linkage. This switch is factory fitted on left side of the MCB and can be used in the following configurations:



Configuration	Combination of Terminals to be used
N.C. & N.O.	21-22, 11-14
N.C. & C.O.	21-22, 11-12, 14
N.C. & N.C.	21-22, 11-12

Technical Parameters

- Degree of Protection: IP 20
- Rated Current (A): 5A AC/1A DC
- Maximum Rated Voltage:
 - 220 V AC
 - 110 V DC
- Mechanical Life: $\geq 10,000$ cycles
- Electrical Life: $\geq 4,000$ cycles
- Conductor Cross-Section: up to 1 mm²
- Module Width: 9 mm

Shunt Trip

The MCB is provided with shunt trip. The two leads are taken out for application of tripping voltage to the coil. For tripping, the required tripping voltage is applied across the coil via leads. Once the voltage is supplied, the switch opens within few milliseconds. After opening of switch the coil becomes inoperative due to its inherent feature and hence, safe even if the tripping voltage is applied for more time or continuously. This is factory fitted on the right side of the MCB.



Technical Parameters

- No. of Poles: SP/DP/TP
- Rated Voltage (Un):
 - 24V - 415V AC
 - 22V - 220 V DC
- Rated Frequency: 50Hz
- Module Width: 17.5 mm
- Connecting Terminal: 6 inch long flexible wires
-



Degree of Protection: IP 20

All the live parts are shrouded/inaccessible ensuring safety of installers.



Mid-Trip Feature

Apart from ON & OFF, there is a trip position in the middle, ensuring easy identification of MCB connected to faulty circuit.



Bi-connect Terminals

Both the sides of Gold Plus MCB terminals are Bi-connect type, giving ultimate flexibility.



Large Terminals

Gold Plus MCBs 35 sq. mm terminal makes it suitable for copper as well as aluminium cables.



Positive Contact Indication

The indicator on the front face shows the true position of the contacts inside (RED = Contact Closed; GREEN = Contact Open).



Isolation

Gold Plus MCBs ensure complete electrical isolation of the downstream circuit when switched off, thus enhancing safety for users.



Dual Position Clip

Dual position plastic clip helps in easy mounting and removal of MCBs on Din channel.



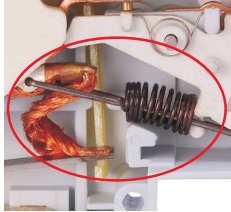
Energy Limiting Class: 3

Minimum let through energy in case of fault; ensures safety & longevity of downstream circuit/installation.

Low Watt Loss

Power loss values are much lesser than IS/IEC specified values, making it one of the most energy efficient MCBs.

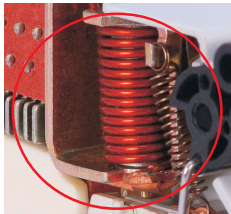
Thermal Tripping: Overload Protection



The overload protection is achieved with a thermal bimetal strip which is made from a combination of materials. This strip gets heated in case of overload (increased current from rated capacity) and deflected which in turn pulls the latch which separates moving contact from fixed contact.

The overload protection works only up to the level where magnetic tripping starts.

Magnetic Tripping: Short-Circuit Protection

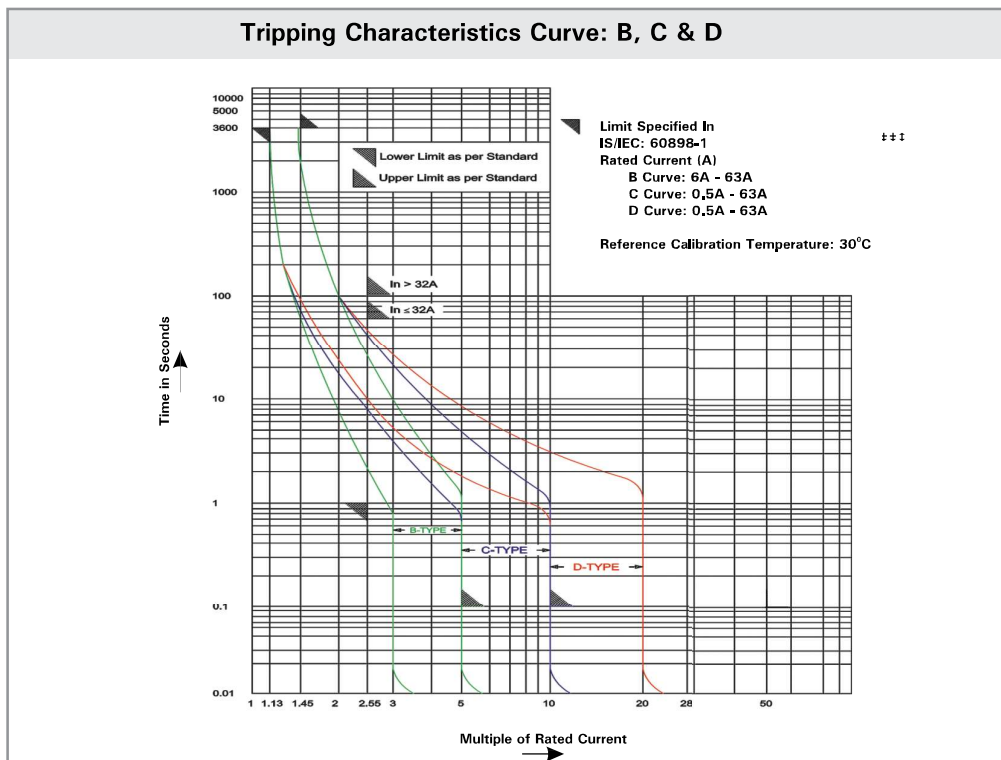
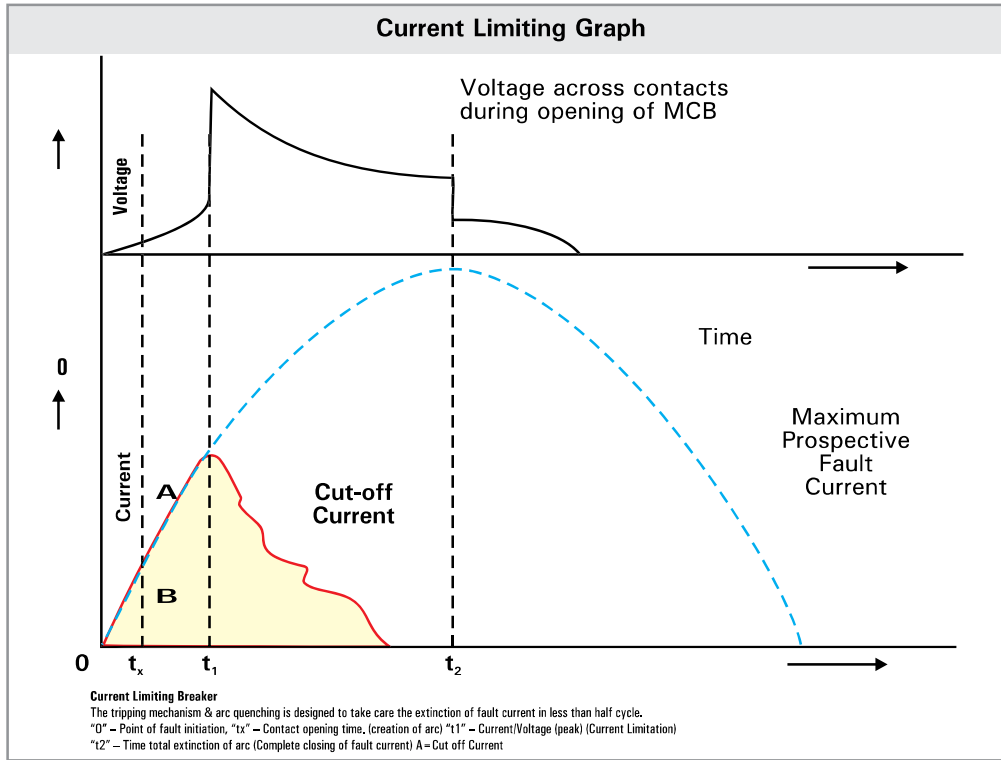


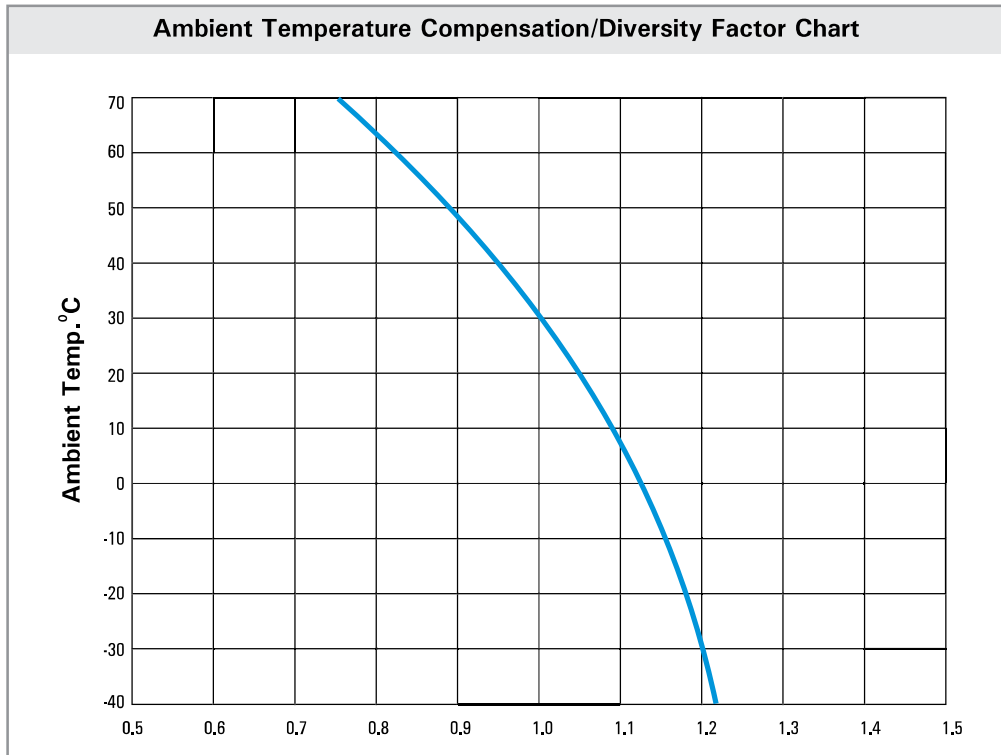
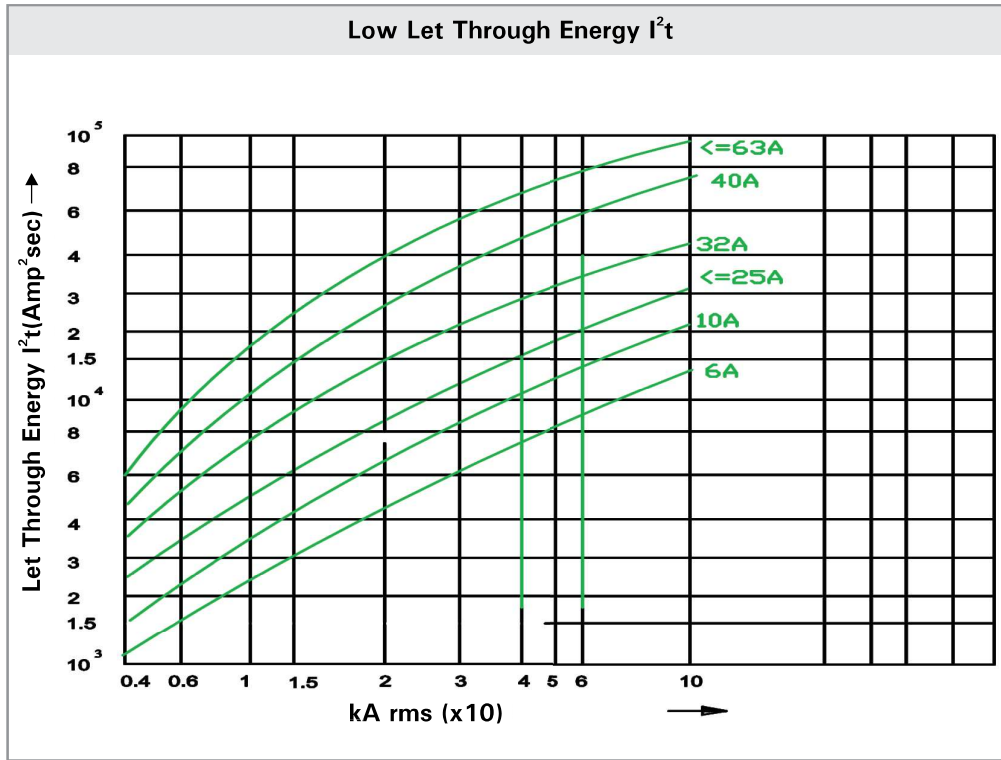
The short-circuit protection is achieved through a solenoid designed on the principle of electromagnetic induction. In case of high fault current, magnetic force induced in the solenoid causes plunger to strike on the latch which ensures immediate release of tripping mechanism causing contacts to open. The opening of contact arc (column of ionised gases) is generated at the point of contact matching. The components are designed so that the arc moves into the arc chutes and is quenched inside the arc chute under the principle of the arc splitting.

Tripping Characteristics Curve: B, C & D

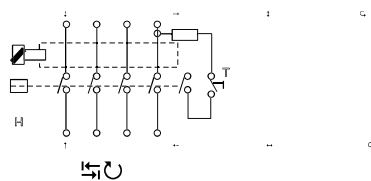
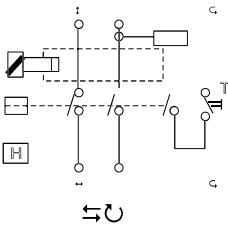
Curve	Thermal Tripping			Magnetic Tripping		
	Non-Tripping Current	Tripping Current	MCB Tripping Time	Hold Current	Trip Current	MCB Tripping Time
B	1.13 I _n		Above 1 hr	3 I _n		Above 0.1s
		1.45 I _n	Within 1 hr		5 I _n	Within 0.1s
C	1.13 I _n		Above 1 hr	5 I _n		Above 0.1s
		1.45 I _n	Within 1 hr		10 I _n	Within 0.1s
D	1.13 I _n		Above 1 hr	10 I _n		Above 0.1s
		1.45 I _n	Within 1 hr		20 I _n	Within 0.1s

Power Loss in Watt Per Pole at Rated Current														
I _n (A)	0.5	1	2	3	4	6	10	16	20	25	32	40	50	63
IS/IEC 60898-1	3	3	3	3	3	3	3	3.5	4.5	4.5	6	7.5	9	13
Gold Plus	1.1	1.6	1.7	1.5	1.8	0.8	1.9	1.7	2.6	2.4	4.4	4.5	6.2	7







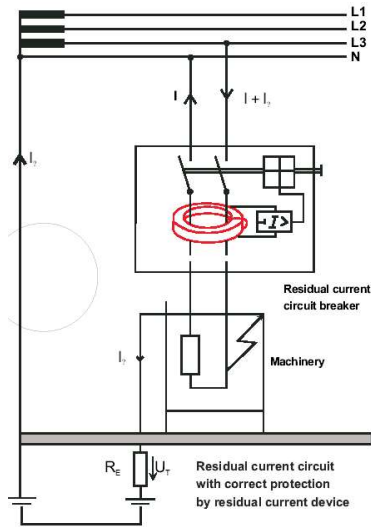


Salient Features

- In case of current leakage in circuit, RCCB trips which enables a quick solution to the faulty line
- Provides protection against earth fault/leakage current and function of isolation
- High short-circuit current withstand capacity with backup protection fuse
- Equipped with finger protected connection terminals
- Fire resistant plastic parts endure abnormal heating and strong impact
- Automatically disconnects the circuit when earth fault/leakage current occurs and exceeds the rated sensitivity
- Independent of power supply and line voltage, and free from external interference/voltage fluctuation
- Test button 'T' is provided for periodic check-up

Technical Parameters

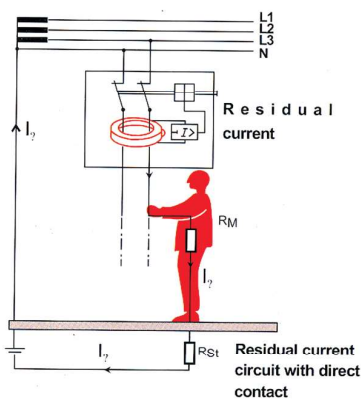
- Conforms to IS: 12640-1 & IEC: 61008-1
- Degree of Protection: IP 20
- Residual Current Characteristics: AC
- Number of Poles: DP/FP
- Rated Current (A): 25A/40A/63A
- Rated Voltage:
 - DP: 240V AC
 - FP: 415V AC
- Rated Frequency: 50/60Hz
- Rated Residual Operating Current (mA): 30mA/100mA/300mA
- Rated Residual Non-Operating Current: $0.5 I_{\Delta N}$
- Rated Conditional Short-Circuit Current (I_{cn}): 10kA
- Tripping Duration: ≤ 0.04 sec
- Mechanical Life: $\geq 5,000$ cycles
- Electrical Life: $\geq 5,000$ cycles
- Connection Capacity: Rigid conductor 25 mm^2
- Connection Terminal: Screw Terminal
- Fastening Torque: 2.0Nm
- Installation: On Symmetrical Din Channel of 35 mm
- Vibration Capacity: 5g, Duration ≥ 30 min
- Position of Use: Any Encapsulated Device; Vertical
- Short-Circuit Protection: 10kA with 63A fuse as SCPD



Operating Principle:

RCCB works on the principle that in electrical circuits the incoming current is same as outgoing current, as shown in the diagram. RCCB incorporates a core balance transformer (CBT) having primary and secondary windings with sensitive relay for instantaneous detection of fault signal. The primary winding lies in series with supply mains and load. Secondary windings are connected to a very sensitive relay. In faultless condition, the magnetising effects of current carrying conductors cancel each other. There is no residual magnetic field that could induce a voltage in the secondary. During the flow of leakage current in the circuit, an imbalance is created in the circuit which gives rise to leakage flux in core. This leakage flux generates an electrical signal that is sensed by relay and it trips the mechanism, thereby disconnecting supply.

When Test button 'T' is pressed during load conditions, a fault is simulated via the test resistance and RCCB trips.



Protection Against Direct and Indirect Current:

Direct protection in the event of direct contact (unearthed) live parts, extremely sensitive RCCB with rated residual operating current of 30 mA or less are used instead of more conventional RCCB with higher residual operating fault currents.

Protection is necessary if:

- a) The insulation of totally insulated device or their loads are damaged
- b) The earth wire is interrupted
- c) The earth wire and live wire are transposed
- d) A component which is live in normal operations is touched during repair work
- e) Indirect current:- When a person makes contact with a metal part which accidentally has been powered-up following an insulation fault

RCCB	Application
30mA	Personal protection/ Domestic installation
100mA	Limited personal protection
300mA	Building/Fire

Sensitivity Application Selection Criteria of RCCB:

Fire Protection

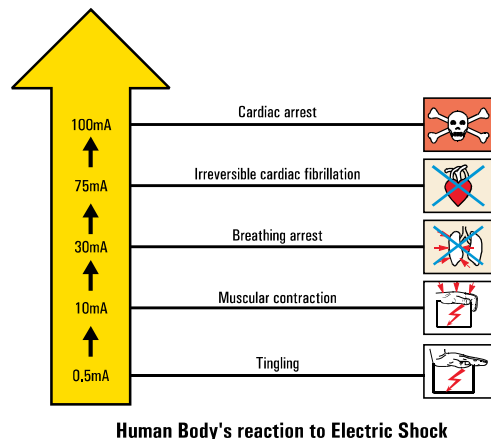
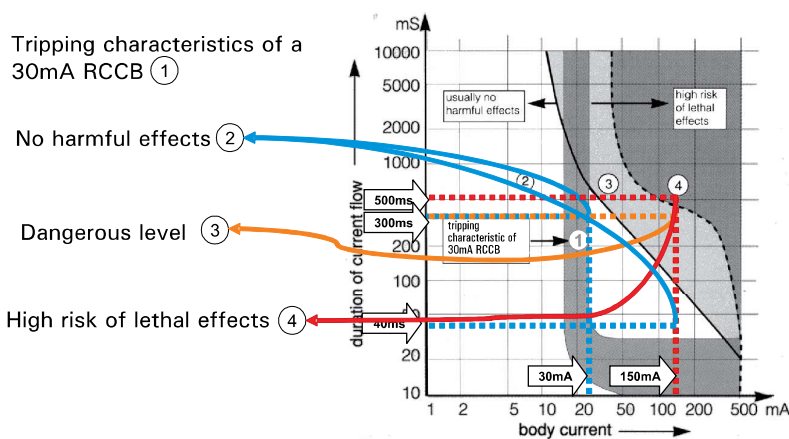
Even relatively insensitive RCCBs ($I_n = 300\text{mA}$) can be used to provide effective protection against fire caused by earth leakage faults. With residual currents = 300mA, the electrical energy released at the location of the earth fault is not sufficient to ignite normal building materials. With larger residual currents, the RCCB switches off the circuit in less than 200 milliseconds, thus limiting the amount of energy released to a harmless level.

Physiological Effects:

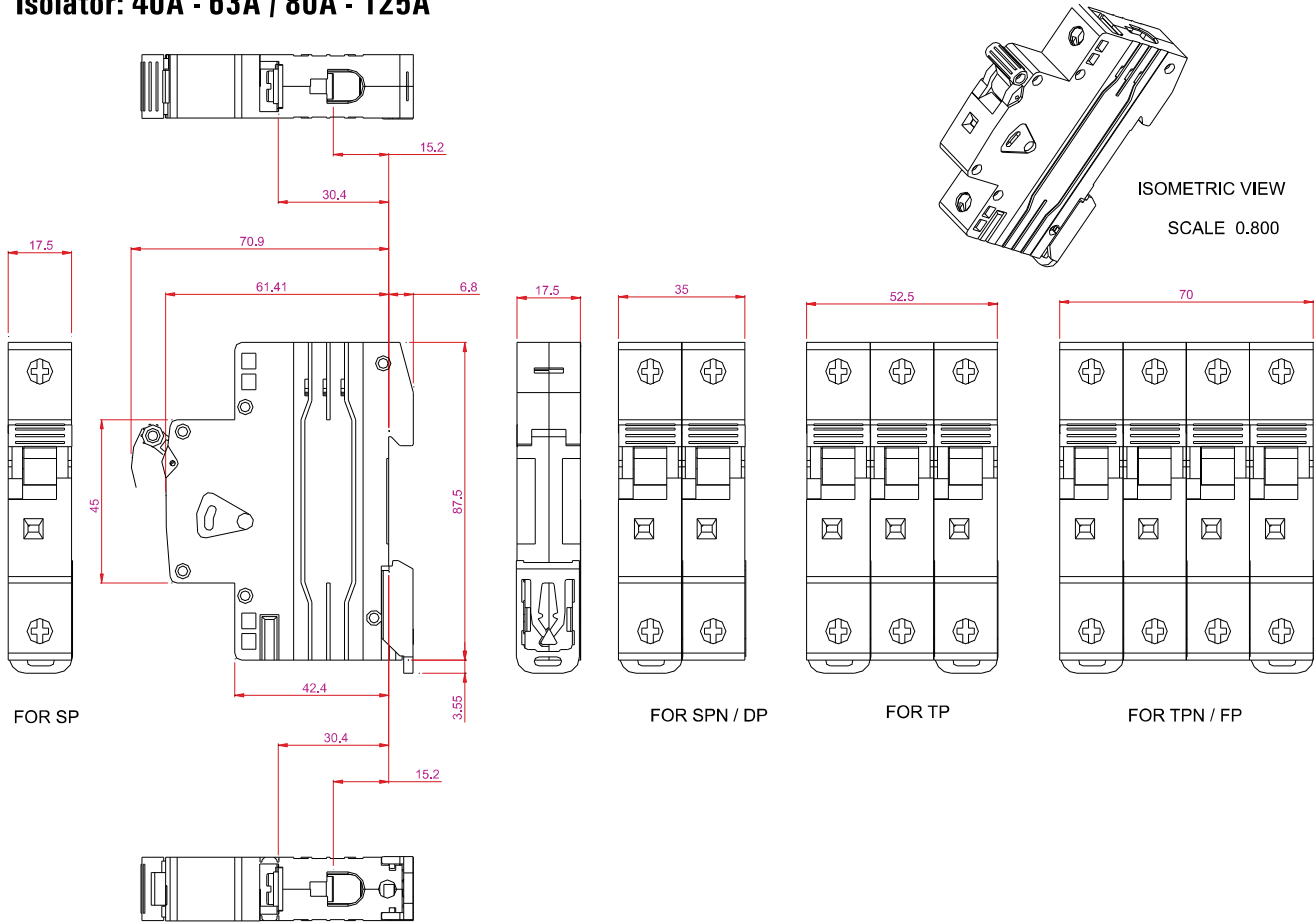
- Zone 1 : Usually no reaction effects
- Zone 2 : Usually no harmful physiological effects
- Zone 3 : Muscular contraction and can cause difficulty in breathing, reversible disturbances of formation and conduction of impulse in the heart and transient cardiac arrest
- Zone 4 : In addition to the effects of zone 3, with increase in magnitude and time, pathy physiological effects such as cardiac arrest, breathing arrest and heavy burns may occur

Fault Detection when RCCB Trips:

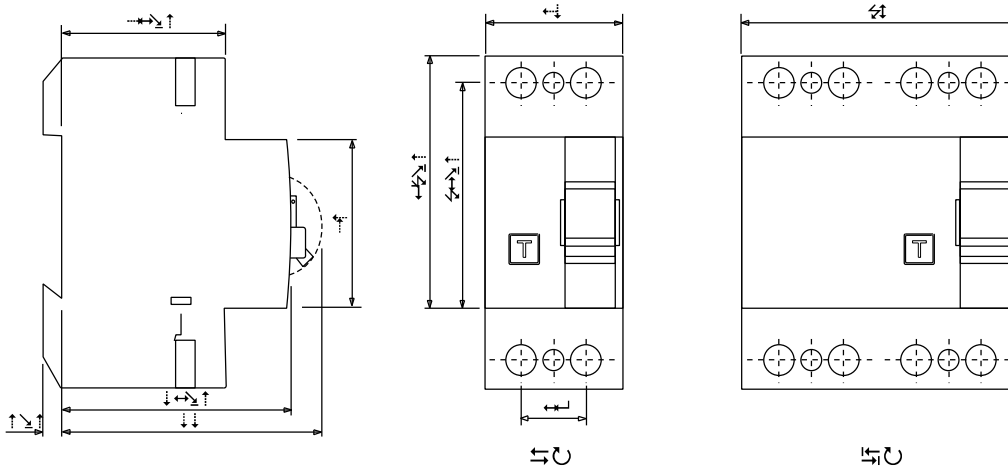
Switch off all the switches/MCBs connected in circuit downstream with the RCCB. Switch 'on' RCCB and simultaneously switch 'on' the switches one by one. Then you find during switching 'on' of a particular appliance/switch that RCCB trips again and again. Which shows that this is a faulty circuit/appliance. Isolate the faulty circuit, rectify the fault and switch 'on' the RCCB.



Miniature Circuit Breaker: 0.5A - 63A
Isolator: 40A - 63A / 80A - 125A



Residual Current Circuit Breaker





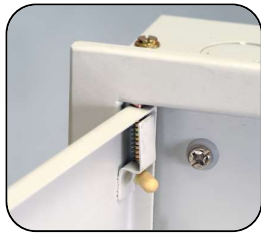
Gold Plus range of Distribution Boards comes in an aesthetically pleasing matt finish, fine powder coated with RAL7047 and best fabricated CRCA sheet to suit every interior.

Salient Features



Internal Sliding Knob/Latch

Aesthetically pleasing curved two pieces grey colour auto locking latch.



Removable Front Door

Front doors are provided with spring load hinges for easy removal.



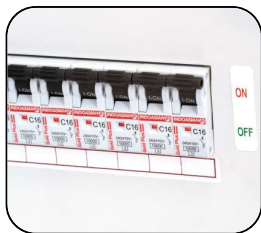
Detachable Gland Plates with Bigger Knockouts

Gland plates at the top and bottom are removable for ease of use in entry and termination of cables.



IP 43 Protection

Special due care is provided in distribution board for safety of installation without touching live connections.



Identification

Identification labels are provided for circuits.





Door Earthing

All DBs come with spot welded copper coated earth stud in front plate and door which makes it shock proof.



Front Plate Studs

Front plate studs are provided for easy lifting of front plate.



Embossed Earthing Identification

Clear earthing marking for ease of installation.



Vertical Distribution Boards

Vertical Distribution Boards are provided with space to use insulated plug and sockets for cable entry with easy termination and safety.



Salient Features



Insulated Busbars

Distribution Boards are supplied with insulated pin type copper busbars for quick & easy installation for Rating:

- 100/125A for insulated busbar
- 160/200A shrouded busbar for VTPN FP MCCB incomer



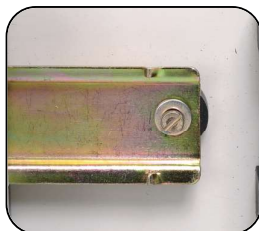
Removable Front Plate

For easy maintenance and wiring.



Double Mounting Key Holes

Each Distribution Board is provided with double mounted key holes for easy positioning and mounting.



Side Locking DIN Bar

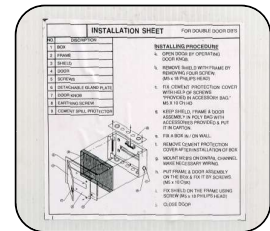
Stoppers are provided at the corner of the DIN bar to avoid the slippage of devices.





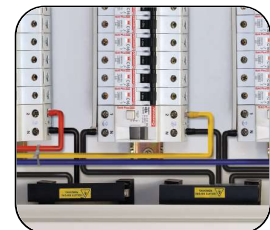
Cement Spill Protector with Instruction Sheet

Cement Spill Protectors are provided to restrict the entry of plaster or any foreign particles before installation of Distribution Boards at construction stage.



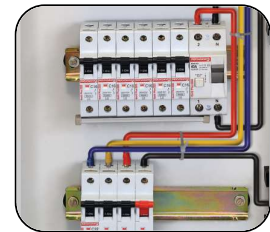
Identified (RYB) Wire Sets

All distribution boards are equipped with wire sets, neutral bar, busbars, cable ties and dummy plugs for better wiring/device management.



Optimised Dimension

Enough wiring space is provided for easy cabling and maintenance.



Shrouded Neutral Bar

All distribution boards are supplied with shrouded neutral bar making safe use/installation with live parts for safety of human life.



Standard Distribution Boards

Single Phase & Neutral

- Degree of Protection: IP 43
- Number of Ways: 4/6/8/12/16 ways
- Supplied with wire kits fitted with lugs, earth link, blanking plate, cable ties & circuit identification labels
- Side Locking Din Channel
- Cement Spill Protector
- Shrouded Neutral link and Insulated Copper Busbar for extra safety
- Suitable for surface and flush mounting
- Top and bottom removable gland plates with bigger knockouts
- Suitable for MCB/Isolator as incomer and MCBs as outgoing



Three Phase & Neutral

- Degree of Protection: IP 43
- Number of Ways: 4/6/8/12/16 ways
- Supplied with wire kits fitted with lugs, earth link, blanking plate, cable ties & circuit identification labels
- Cement Spill Protector
- Top and bottom removable gland plates with bigger knockouts
- Side Locking Din Channel
- Shrouded Neutral link and Insulated Copper Busbar for extra safety
- Suitable for surface and flush mounting
- Two piece internal sliding Knob/Latch
- 12 & 16 ways DBs have two partitioned front door opening for easy access
- Suitable for MCB/RCCB/Isolator as incomer and MCBs as outgoing



Vertical Three Phase & Neutral

- Degree of Protection: IP 43
- Number of Ways: 4/6/8/12 ways
- Description: MCB & MCCB incomer
- Suitable for MCCB/MCB/RCCB/Isolator as incomer and MCBs as outgoing
- Supplied with wire kits fitted with lugs, earth link, blanking plate, cable ties & circuit identification labels
- 125A/160A/200A Busbar in TP/FP MCCB incomer to suit different installation requirements
- Shrouded Neutral link Insulated Copper Busbar for extra safety
- Identification of RYB Phases from top in MCB/MCCB incomer
- Cement Spill Protector
- Suitable for surface and flush mounting
- Top and bottom removable gland plates with bigger knockouts
- Side Locking Din Channel
- Two-piece internal sliding Knob/Latch





Application Oriented Distribution Boards

Per Phase Isolation

- Degree of Protection: IP 43
- Number of ways in four quadrant: 4 + 2/6 + 2/8 + 2 ways
- Number of ways in tier: 6 + 2/8 + 2/12 + 2 ways
- Supplied with wire kits fitted with lugs, earth link, blanking plate, cable ties & circuit identification labels
- Cement Spill Protector
- Shrouded Neutral link and Insulated Copper Busbar for extra safety
- Suitable for surface and flush mounting
- Sideways removable gland plates with bigger knockouts
- Provision for FP/TPN MCB/Isolator as incomer and DP RCCB as sub-incomer in each phase and MCBs as outgoing
- Side Locking Din Channel

Phase Segregator/Seven Compartment

- Degree of Protection: IP 43
- Number of ways: 4/6/8/12 ways
- Supplied with wire kits fitted with lugs, earth link, blanking plate, cable ties & circuit identification labels
- Suitable for FP/TPN incoming, DP as sub-incomer and MCBs as outgoing
- Cement Spill Protector
- Seven compartment for mounting incomer, sub-incomer and as outgoing
- Shrouded Neutral link and Insulated Copper Busbar for extra safety



Phase Selector

- Degree of Protection: IP 43
- Number of ways: 4/6/8/12 ways
- Supplied with wire kits fitted with lugs, earth link, blanking plate, cable ties & circuit identification labels
- Suitable for surface and flush mounting
- Cement Spill Protector
- Shrouded Neutral link and Insulated Copper Busbar for extra safety
- World-class selector switches for life long operations

Flexy Tier

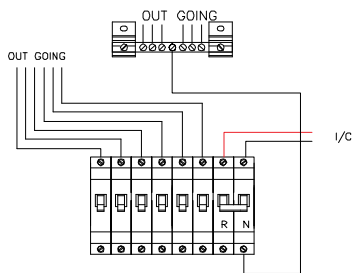
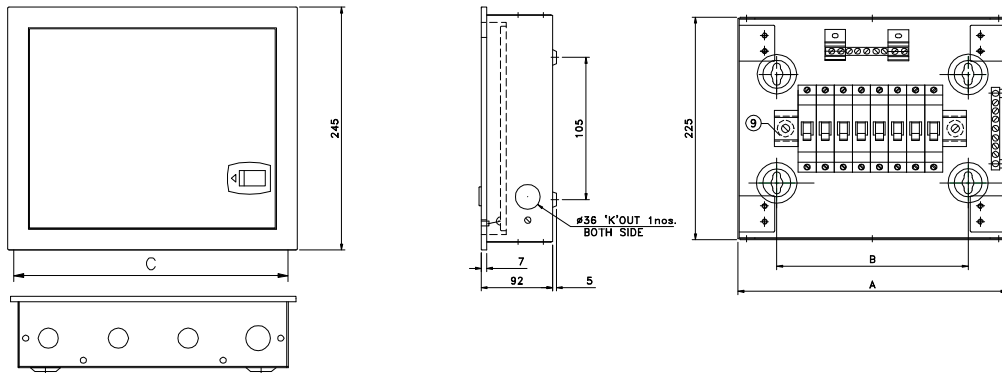
- Degree of Protection: IP 43
- Number of rows: 2/3/4 with 14 modules each
- Customer oriented Distribution Boards configured as per requirements/needs
- Sideways removable gland plates with knockouts
- Cement Spill Protector



Plug & Socket Boards

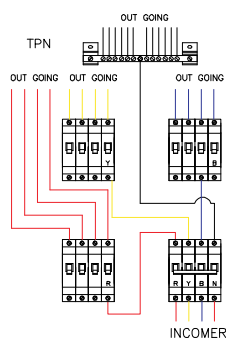
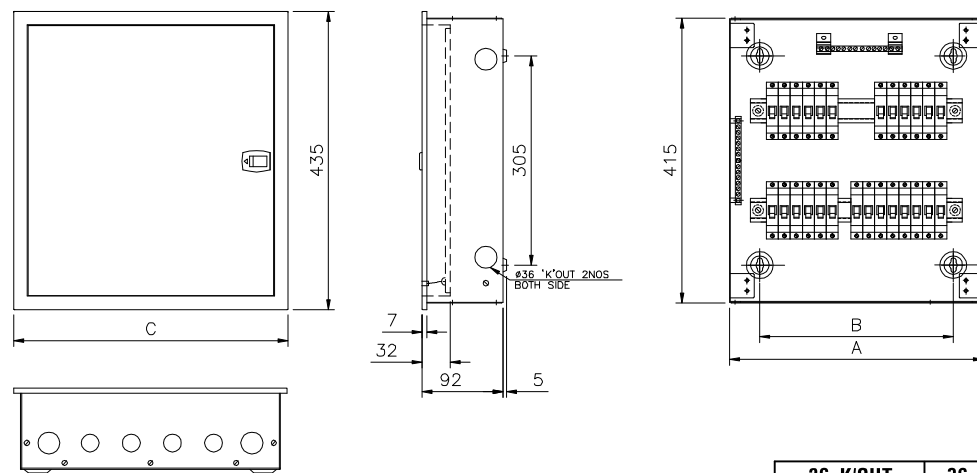
- Provision to mount angled Plug and Sockets
- Suitable for commercial and industrial applications
- 3/5 Pin can accommodate 4/6 modules
- Non-corrosive Plug and Sockets
- Supplied with interconnecting wires

SPN DB



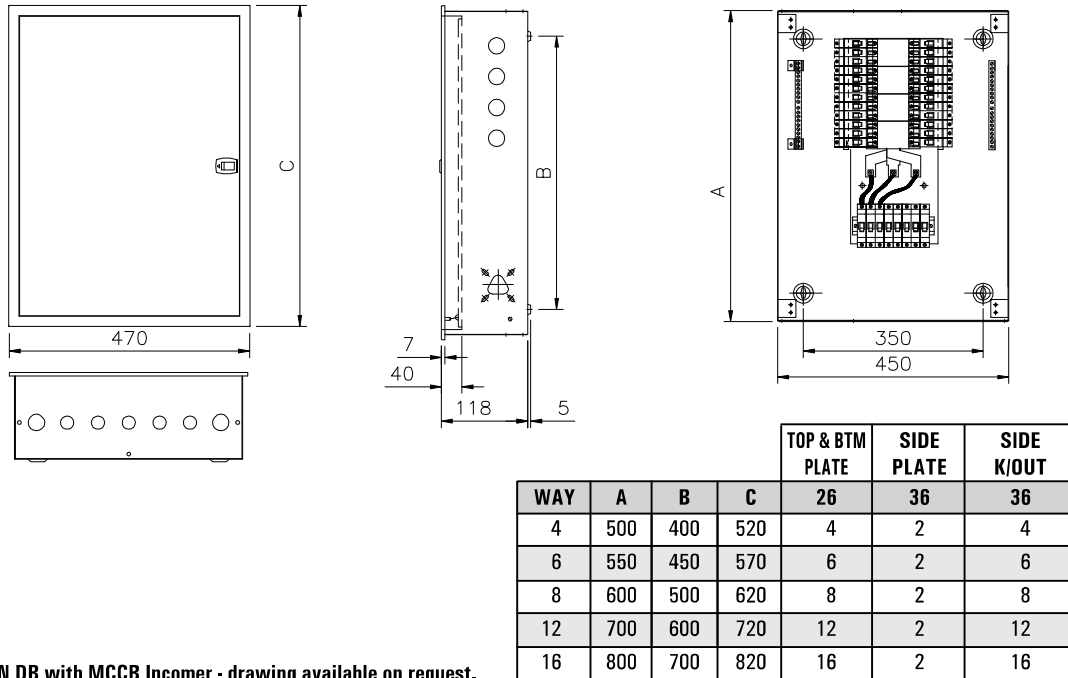
WAY	A	B	C	26, K/OUT	36, K/OUT
				TOP & BTM	TOP & BTM
4	145	70	165	1 NO.	1 NO.
6	170	95	190	1 NO.	1 NO.
8	205	130	225	2 NOS	1 NO.
12	280	205	300	3 NOS	1 NO.
16	360	285	380	4 NOS	1 NO.

TPN DB



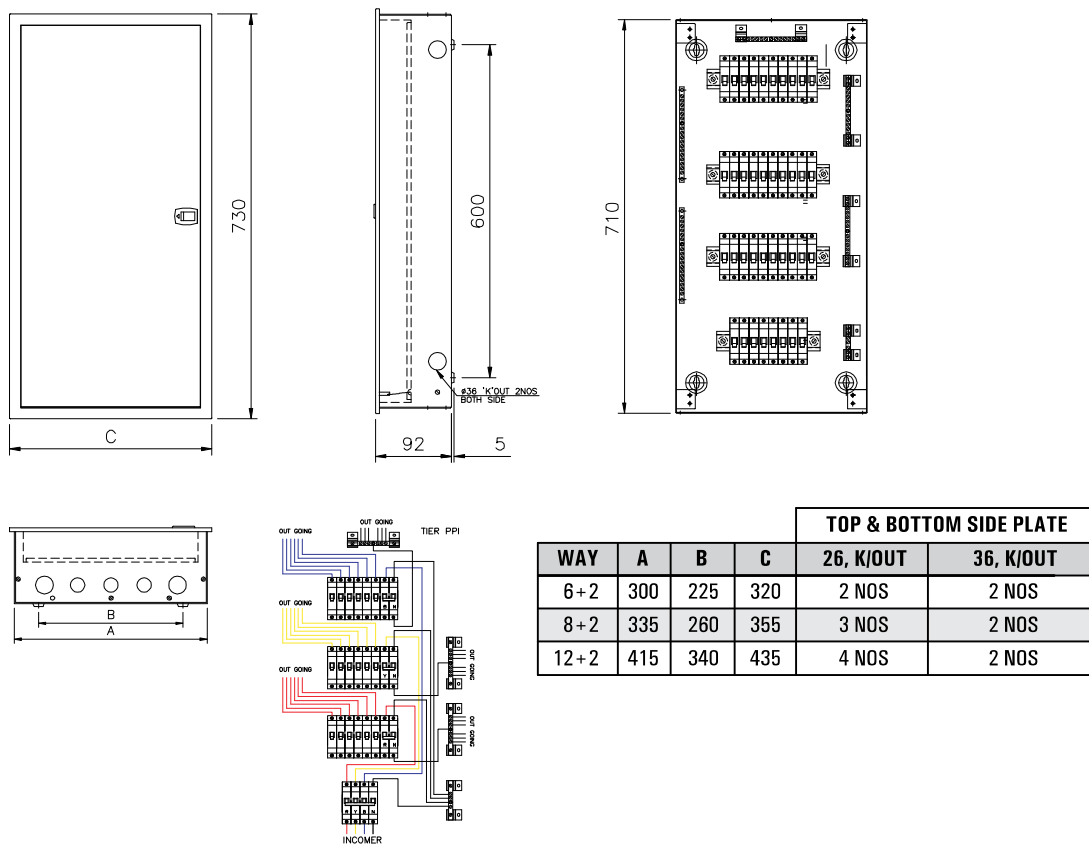
WAY	1/C	A	B	C	26, K/OUT	36, K/OUT
					TOP & BTM	SIDE PLATE
4	8P	325	250	345	3 NOS	2 NOS
6	8P	365	290	385	3 NOS	2 NOS
8	8P	445	360	465	5 NOS	2 NOS
12	8P	620	550	640	7 NOS	2 NOS
16	8P	770	695	790	10 NOS	2 NOS

VTPN DB

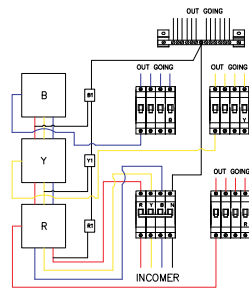
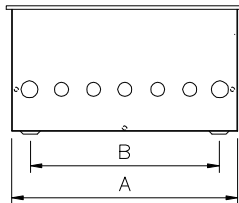
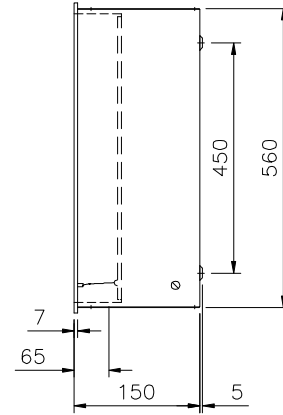
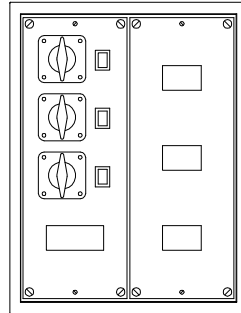
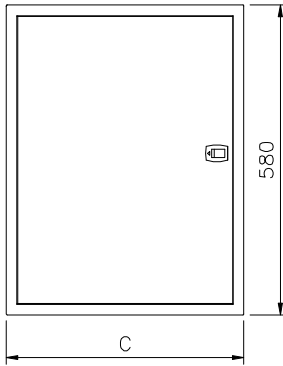


*VTPN DB with MCCB Incomer - drawing available on request.

PPI DB

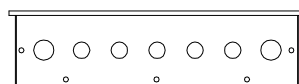
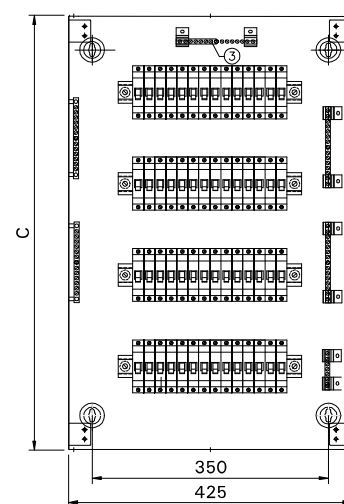
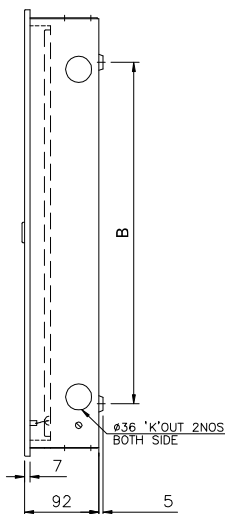
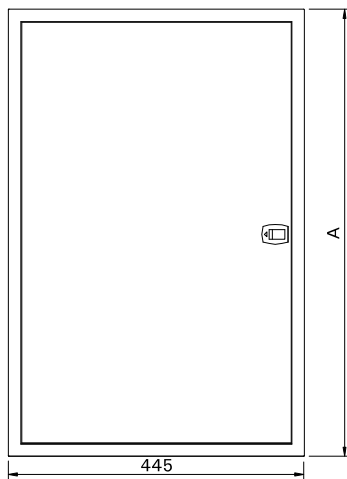


Phase Selector DB



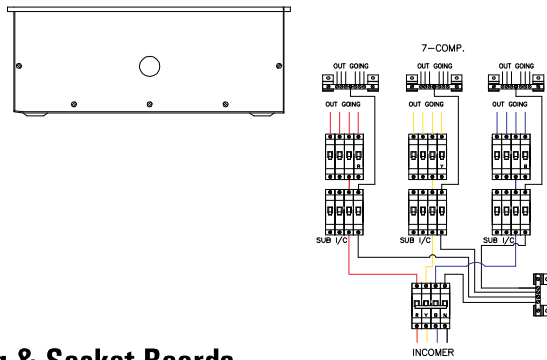
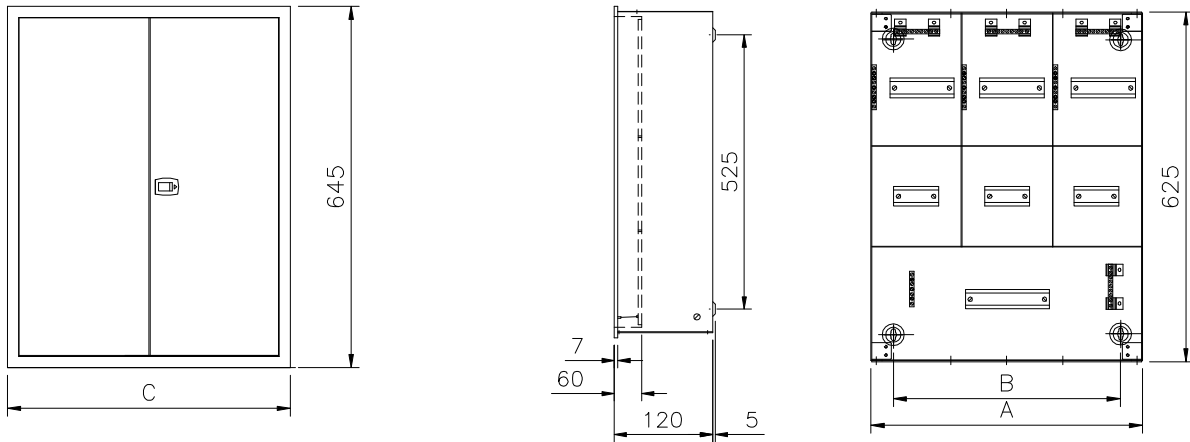
WAY	A	B	C	TOP & BOTTOM SIDE PLATE	
				26 K/OUT	36 K/OUT
4	415	340	435	4 NOS	2 NOS
6	450	375	470	5 NOS	2 NOS
8	485	410	505	5 NOS	2 NOS
12	555	480	575	7 NOS	2 NOS

Flexy Tier DB



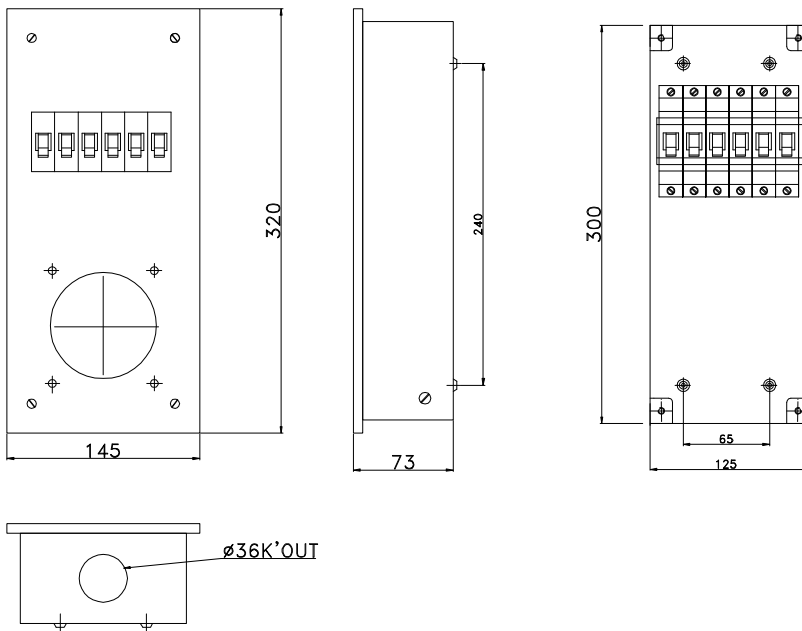
MODULE	A	B	C	TOP & BOTTOM SIDE PLATE	
				26 K/OUT	36 K/OUT
28	420	290	400	4 NOS	2 NOS
42	560	430	540	4 NOS	2 NOS
56	730	600	710	5 NOS	2 NOS

Phase Segregated DB



WAY	A	B	C	26 K/OUT	36 K/OUT
				TOP	BOTTOM
4	404	324	424	6 NOS.	1 NO.
6	514	434	534	6 NOS.	1 NO.
8	624	544	644	9 NOS.	1 NO.
12	839	759	859	12 NOS.	1 NO.

Plug & Socket Boards



AC Box

