



Gold Plus 

MCBs/RCCBs/DBs

The Power of Gold

INDOASIAN TM
MAKES SENSE



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 1mm²
- 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.



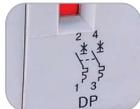
Large Terminals

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.



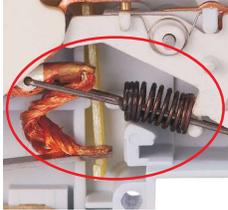
Energy Limiting Class: 3

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.

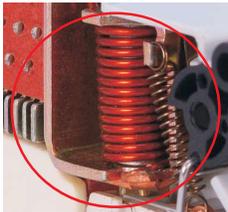
Thermal Tripping: Overload Protection



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

