

BENLO®

A PRODUCT OF **BENITEC** INDIA LTD.

REDEFINING SAFETY IN
ELECTRICAL DISTRIBUTION

JWEL MCB



Heavy-duty terminals in an JWEL MCB are robust and durable connectors designed to securely and reliably connect electrical conductors, ensuring safe and efficient current flow in high-demand applications.



JWEL MCB is a design feature that helps dissipate heat generated during operation, preventing overheating and ensuring the breaker's efficient performance.



A ribbed knob provides a better grip due to its textured surface, enhancing control and usability.



The terminal design that allows for two wires to be connected to the same terminal. This design offers flexibility when wiring electrical circuits, allowing for multiple connections at a single terminal point. It can help simplify installation and accommodate various wiring configurations.

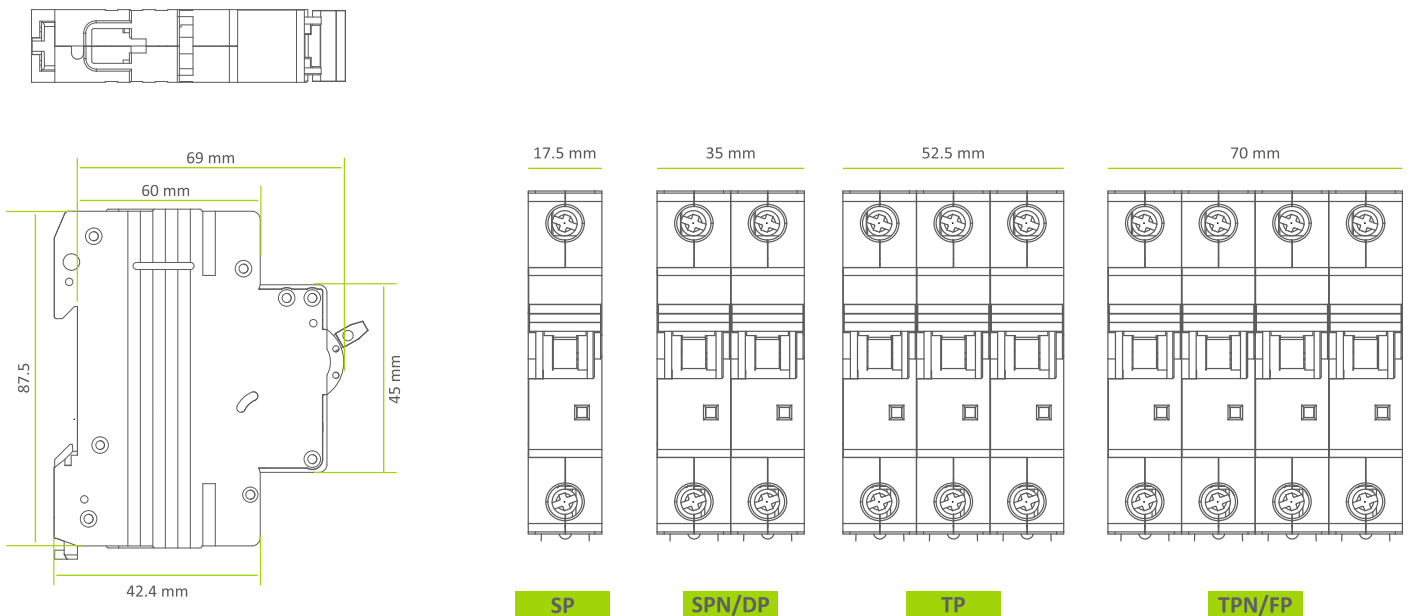


Finger-proof terminals with combined screws offer enhanced safety by preventing accidental contact with live electrical components while also simplifying the wiring process, making them a practical choice for secure and user-friendly electrical connections.

TECHNICAL SPECIFICATIONS

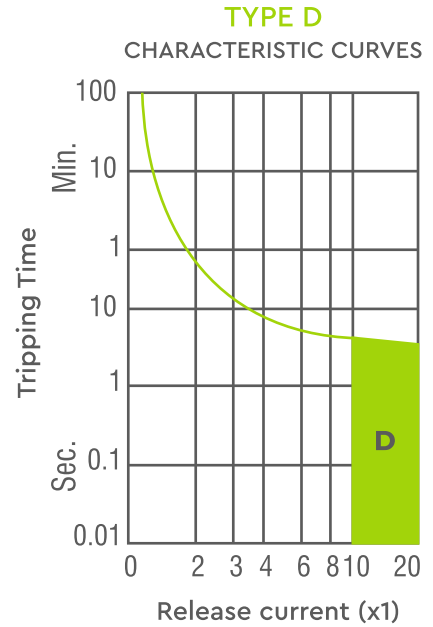
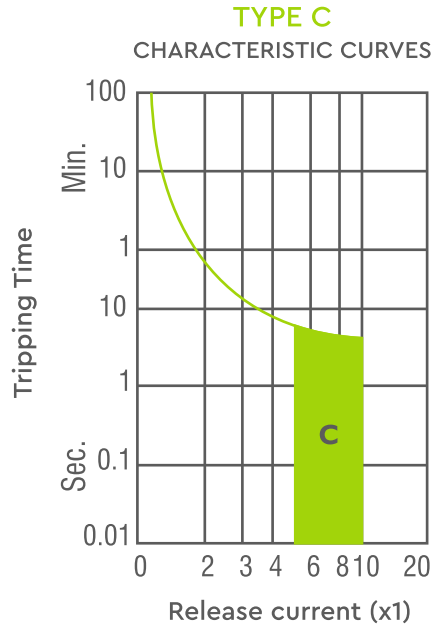
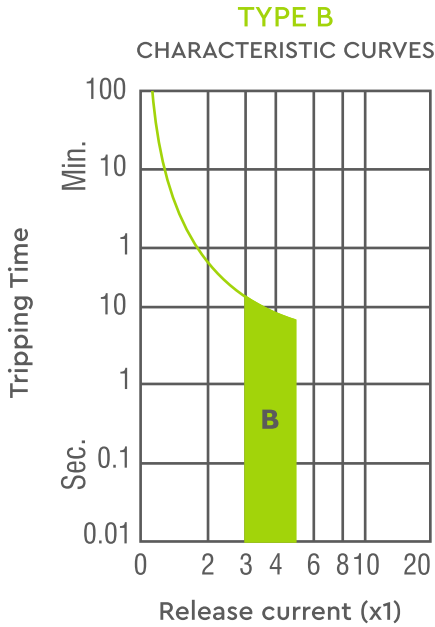
Numbers of Poles	SP	SPN	DP	TP	TPN	FP
Rated Voltages	For SP & SPN			240 V AC		
	For DP, TP, TPN, FP			415 V AC		
Standard	IS / IEC : 60898 (Part 1) : 2015					
Rated Current	0.5 A to 63 A					
Rated Frequency	50 Hz					
Rated Short Circuit Capacity (I_{cn})	10000 A					
Rated Service Short Circuit Capacity (I_{cs})	7500 A					
Tripping Curve	B ,C & D - Type					
Impulse withstand voltage (U_{imp})	4.7/5.8 k VP					
Electro mechanical Endurance	> 4000 cycle					
Terminals	Screw Type					
Terminal Capacity	Up to 35 mm ²					
Installation	On symmetrical 35 mm DIN rail					
Fastening torque	2.0 Nm					

ISOMETRIC VIEW OF MCB



MCB CHARACTERISTICS CURVE

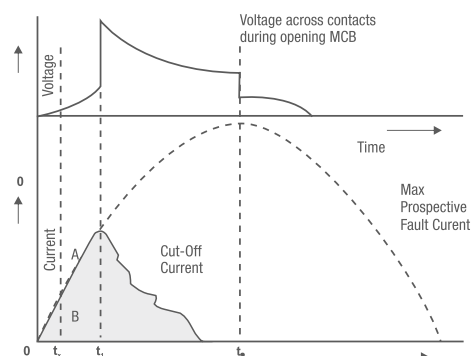
The essential distinction between Type B, C or D devices is based on their ability to handle surge currents without tripping. These are, typically, inrush currents associated with fluorescent and other forms of discharge lighting, induction motors, battery charging equipment etc.



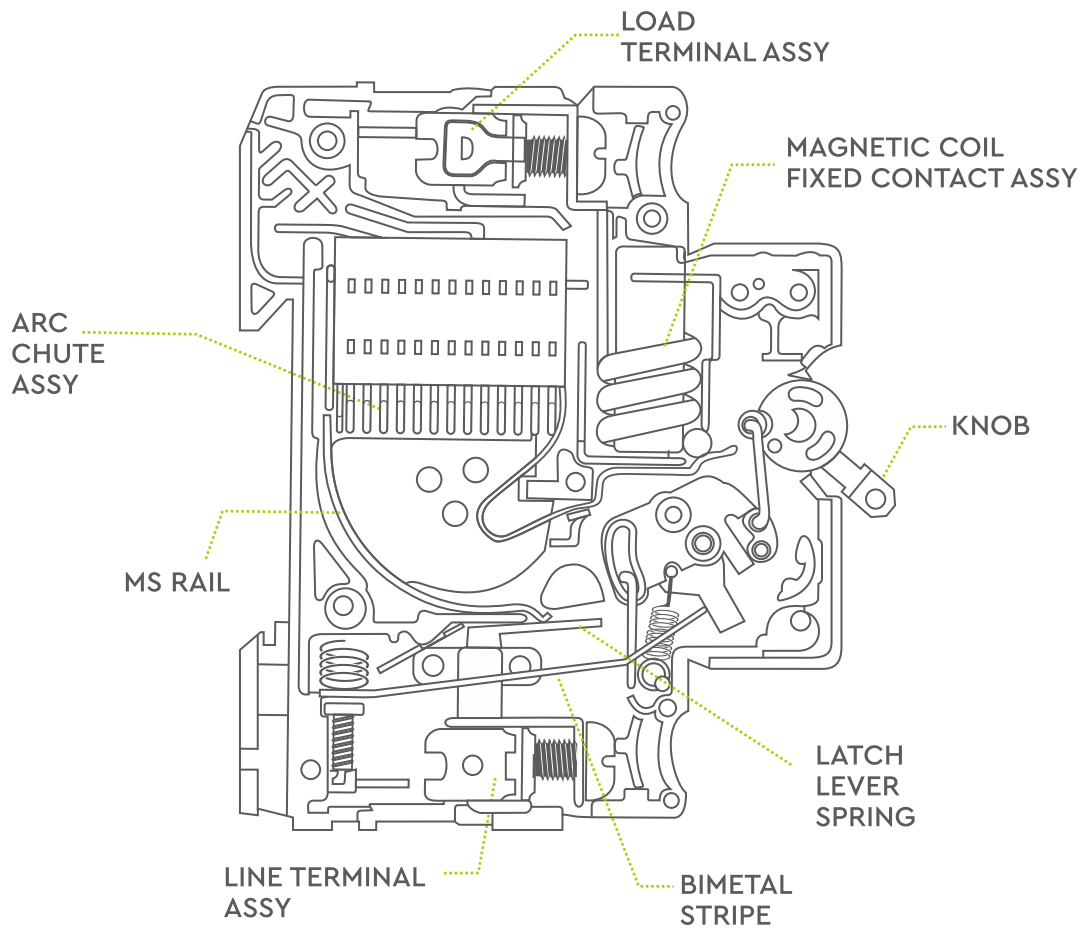
As Per	Thermal Tripping			Magnetic tripping		
	No Tripping	Tripping	Time	Hold	Trip	Time
IS/IEC 60898-1	Current	Current	Limits	Current	Current	Limits
	L1	L2	T	L4	L5	T
B Curve	1.13xIn		≥h	3xIn		≥0.1 s
		1.45xIn	<h		5xIn	<0.1 s
C Curve	1.13xIn		≥h	5xIn		≥0.1 s
		1.45xIn	<h		10xIn	<0.1 s
D Curve	1.13xIn		≥h	10xIn		≥0.1 s
		1.45xIn	<h		20xIn	<0.1 s

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

CURRENT LIMITING DESIGN










COMPONENTS OF MCB



MCB SELECTION CHART FOR HOUSEHOLD APPLICATION

* T - Tonnes | * W - Watts | * A - Amperes

Appliances	Capacity/Watt(Load) (240V AC 1ph)	Current Rating of MCB	Types of MCB
	1.0 T 1.5 T 2.0 T	10 A 16 A 20 A	C Series
	4500 W 1750 W	20 A 10 A	B Series
	7500 W 2000 W 1000 W 2000 W	6 A 10 A 6 A 10 A	B Series B Series
	1000 W 1300 W 1000 W 2000 W	6 A 10 A 6 A 10 A	C Series C Series
	1000 W 2000 W 3000 W 6000 W	6 A 10 A 16 A 32 A	B Series B Series
	750 W 1250 W	6 A 6 A	B Series
	1200 W 1500 W	6 A 10 A	B Series

MCB – Common use case



Miniature Circuit Breakers (MCBs) have several applications in day-to-day life, primarily in electrical circuit protection and safety. Here are some common applications of MCBs:





ISOLATOR

25 A

32 A

40 A

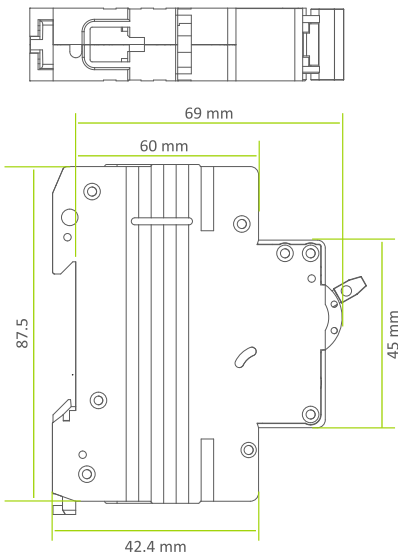
63 A

100 A

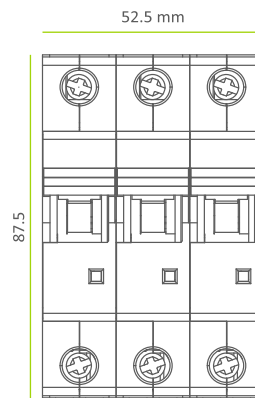
TECHNICAL SPECIFICATION OF JWEL ISOLATOR

Rated operational voltage	240 / 415 V AC
Rated insulated voltage	500 V Ac
Rated Impulse withstand voltage	4 kV
Standard	IS : 60947 (Part 3) : 2020
Short time withstand voltage	12 In, 1 Sec
Short circuit making capacity, Icm	3 kA
Rated Frequency.....	50 / 60 Hz
Electrical Life (Operating Cycles)	1,500 cycles
Mechanical Life (Operating Cycles)	8,500 Cycles
Utilization category	AC - 22 A
Terminal Capacity	35 sq. mm

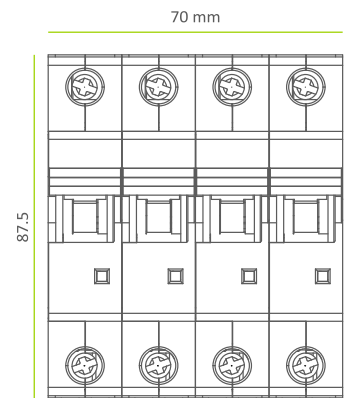
DIMENSION OF JWEL ISOLATOR



DP



TP



FP

JOIN US

In creating safer and more efficient
ELECTRICAL SYSTEMS FOR A BRIGHTER FUTURE



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