



RoHS
Compliant

Miniature Circuit Breaker



**SHAMROCK
CONTROLS**

Features & Benefits

Safe | Convenient | Energy Saving | Wide range

IP 20 Degree Protection	Terminals are finger touch proof. Prevents electrical shock by accidental touch.	
Trip Free Mechanism	MCB trips even if held in ON position.	
Padlocking Facility	Dolly can be padlocked in - OFF position for personal safety during maintenance - ON positing for extremely critical loads	
Current Limiting Design - Class 3	Minimum let through energy under fault condition due to ultra fast contact separation and rapid quenching of the arc. This reduces stress on connected loads and cables.	
High Terminal Capacity with Deep Serrations	Ensures proper termination and firm connection to accommodate 35 sq mm cable.	
Bi-connect Termination Possible	Choice to use Busbar and/or cable in the same terminal, provides reliable termination	
Din Rail Mounting	Two stage snapping device for simple effortless and firm seating on 35 mm Din Rail, easy & efficient mounting.	
Combination Head Captive Screws	Safe and provides the flexibility of both +/- Head screw driver.	
Low Power Consumption	Cost effective and energy saving. The Watt loss of WiNtrip MCBs is extremely low providing valuable energy savings over its entire life cycle.	
Legend Plate	Ensures circuit identification and enhanced safety	
Wide range	0.5 to 40A 1P, 2P, 3P & 4P configurations C Tripping Characteristic	
Air circulation	When two poles are placed adjacent to each other, these channels form a tunnel resulting in effective air circulation around individual poles.	
2 Position dolly	Clear indication of the operational status of device.	

Constructional

Housing

WINtrip MCBs are made up of engineered thermo plastic for self lubrication and critical performance. The housing and other moulded components are fire retardant having high melting point, low water absorption and high dielectric strength therefore enabling it to withstand high temperature.

Operating Mechanism

WINtrip Circuit Breakers are based on Thermal Magnetic technology. The protection is ensured by combining a temperature receptive mechanism (bimetal) and a current sensitive electro-magnetic device. The thermal operation provides protection from normal overload and the electro-magnetic device against large overloads and short circuits.

Superior Contact Mechanism

The mechanism comprises of fixed and moving contacts made up of silver graphite for surety, extended life span and anti-weld properties. These contacts have low contact resistance resulting in reduced voltage drop and low watt loss commensurating to energy savings.

High Tech Arc Blower

Protects from hazards of overloads and short-circuits. The arc under the influence of magnetic field is moved into the arc chute where it is quickly extinguished and quenched.

Maximum Backup Protection

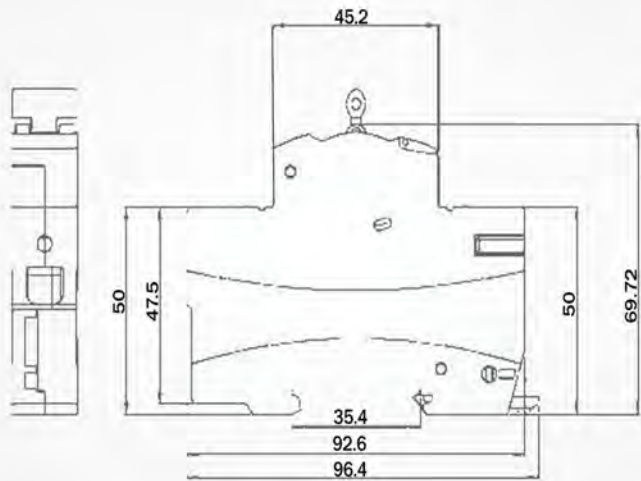
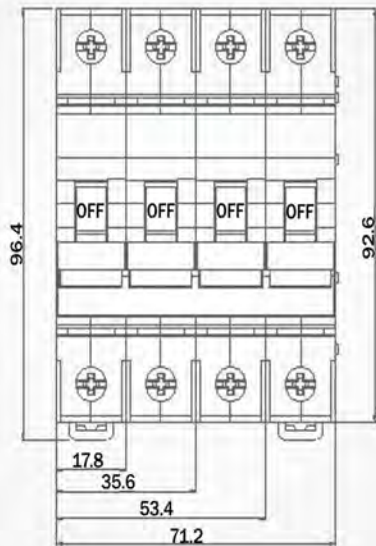
To protect the WINtrip circuit breakers against higher short circuit current, fuses should be installed at the incoming side. The current rating of these fuse links should not be more than the values stated in the table.

MCB Rating	Back-up Fuse Rating
1A	25A
4A	50A
6A	80A
10A	100A

Integrated label channel holders

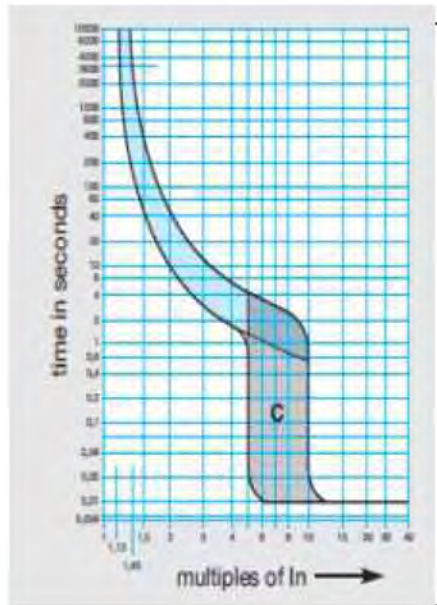
Easy identification of circuits irrespective of position on the Distribution Board. Enhanced safety during maintenance.

Installation Dimensions MCB (0.5 to 40A)



Tripping Characteristics

Type 'C'



MCB Selection based on Application - Tripping Characteristics

Type	Application	Thermal Test Current		Tripping Time $I_n \geq 63A$	Electro Magnetic Test Current	Tripping Time (t)
		Low	High			
'C'	Inductive Load with surge Current	1.13xI _n		>1hour	5xI _n	≥0.1s
			1.45xI _n	<1hour	10xI _n	<0.1s

Temperature deration

MCBs are calibrated at an ambient temperature of 30°C. In an industrial environment where ambient temperature is higher than the regulatory reference temperature of 30°C, the circuit breakers may be subjected to untimely tripping (nuisance tripping). At a temperature above 30°C the thermal release trips faster, behaving like a relay with a lower nominal current. It is therefore imperative to take into account nominal current derating if the circuit breaker is installed at a higher ambient.

The table gives the max. operating current referring to the different temperatures.

Temperature

I _n (A)	25°C	30°C	35°C	40°C	45°C	50°C
2	2.04	2	1.96	1.9	1.86	1.82
6	6.24	6	5.82	5.52	5.28	4.98
10	10.40	10	9.7	9.2	8.8	8.3
16	16.5	16	15.5	15	14.4	14.1
20	20.6	20	19.4	18.8	18	17.6
25	25.8	25	24.3	23.5	22.5	22
32	33	32	31.04	30.1	28.8	28.2
40	41.2	40	38.8	37.6	36	35.2



MCB-AC

Specifications

Type	'C'	
Standard Conformity	IEC60898-1-2002 UL1077/CE	
Rated Current (In)	0.5-40A	
Rated Voltage AC (Ue)	277/480V	
Rated Frequency Hz	60Hz	
No. of Poles (Execution)	1P, 2P, 3P & 4P	
Rated Short Circuit Breaking Capacity	10kA	
Rated Insulation Voltage (Ui)	660V	
Magnetic Release Setting	(5-10)In	
Rated Impulse Voltage (Uimp)	6kV	
Electrical/Mechanical Life <32A	20,000	
>32A	10,000	
Energy Limiting Class	ELC 3	
Mounting	Clip on Din rail (35x7.5 mm)	
Line Terminal Capacity	35 mm ²	
Load Terminal Capacity	25 mm ²	
Degree of Protection	IP 20	
Resistance to Shock	40mm free fall	



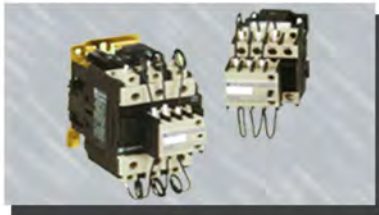
MCB

Description	Type 'C'
Single Pole	0.5/1/2/3/4/5 6/10/16/20/25/32/40
Double Pole	0.5/1/2/3/4/5 6/10/16/20/25/32/40
Three Pole	0.5/1/2/3/4/5 6/10/16/20/25/32/40
Four Pole	0.5/1/2/3/4/5 6/10/16/20/25/32/40

SHAMROCK MINIATURE CIRCUIT BREAKERS

RATED CURRENT AMPS	SINGLE POLE	DOUBLE POLE	THREE POLE	FOUR POLE
0.5	CSMB1C0.5UL	CSMB2C0.5UL	CSMB3C0.5UL	CSMB4C0.5UL
1	CSMB1C1UL	CSMB2C1UL	CSMB3C1UL	CSMB4C1UL
2	CSMB1C2UL	CSMB2C2UL	CSMB3C2UL	CSMB4C2UL
3	CSMB1C3UL	CSMB2C3UL	CSMB3C3UL	CSMB4C3UL
4	CSMB1C4UL	CSMB2C4UL	CSMB3C4UL	CSMB4C4UL
5	CSMB1C5UL	CSMB2C5UL	CSMB3C4UL	CSMB4C5UL
6	CSMB1C6UL	CSMB2C6UL	CSMB3C6UL	CSMB4C6UL
10	CSMB1C10UL	CSMB2C10UL	CSMB3C10UL	CSMB4C10UL
16	CSMB1C16UL	CSMB2C16UL	CSMB3C16UL	CSMB4C16UL
20	CSMB1C20UL	CSMB2C20UL	CSMB3C20UL	CSMB4C20UL
25	CSMB1C25UL	CSMB2C25UL	CSMB3C25UL	CSMB4C25UL
32	CSMB1C32UL	CSMB2C32UL	CSMB3C32UL	CSMB4C32UL
40	CSMB1C40UL	CSMB2C40UL	CSMB3C40UL	CSMB4C40UL





Local Distributor



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