We touch your electricity everyday!

WiNtrip

C&S electric

Final Distribution Products

C&S Electric Ltd. is amongst the leading suppliers of electrical equipment in India and is India's largest exporter of industrial switchgear. It's wide range of electrical and electronic products find application in power generation, distribution, control, protection and final consumption.

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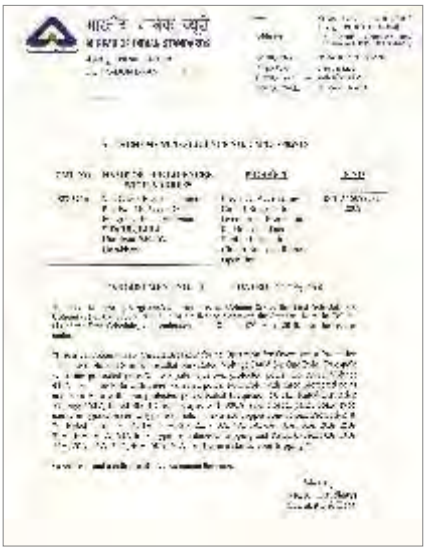
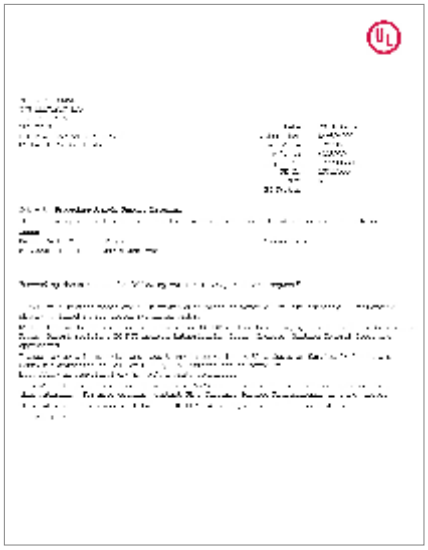




WiNtrip

Miniature Circuit Breaker

As power distribution needs play a pivotal role in all the significant sectors namely Commercial, Industrial and Residential, improved Breaker performance through better electrical safety, higher operational endurance, continued service and reduced cost have become of paramount importance. C&S WiNtrip MCBs have been engineered to constantly fulfill the above requirements. With these features C&S is setting new standards for user friendly and superlative electrical circuit protection.

The C&S WiNtrip MCB is a high performing Thermal Magnetic current limiting device with the ability to disconnect short circuits up to 10kA. The range is available in tripping characteristics types B, C and D for 1P, 1P+N, 2P, 3P, 3P+N & 4P configurations in 0.5 - 125A current ratings.

All metal components for operating mechanism of WiNtrip circuit breaker are specially treated for high self lubrication leading to repeat accuracy during service life. The MCBs conform to Standards: IEC 60898-1995 and IS/IEC 60898-1:2002 and stand guaranteed for best quality for optimum performance.

Also includes
- Auxiliary Contacts & Shunt Trip
- RCCB and
- Distribution Boards

IS/IEC60898-1-2002
CM / L-8885716

RoHS Compliant

Highlights - MCB

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 125A 1P, 1P+N, 2P, 3P, 3P+N & 4P configurations B, C & D 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.

Features - Construction

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
63A	100A

Legend Plate

Easy identification of circuits irrespective of position on the Distribution Board. Very useful during maintenance. A unique feature.

Watt Loss

Rating (Amp)	As per IS/IEC60898-1:2002 Maximum watt loss	Maximum watt loss in SP
6	3.0W	0.76W
10	3.0W	1.83W
16	3.5W	2.44W
20	4.5W	3.07W
25	4.5W	2.80W
32	6.0W	3.92W
40	7.5W	3.96W
63	13.0W	6.06W

Technical Data - Characteristics

MCB-AC	WiNtrip MCB			WiNtrip Isolator
Standard Conformity	IS/IEC60898-1-2002			IS/IEC60947-3
Type	B	C	D	
Rated Current (In)	6-63A	0.5-125A	0.5-63A	25-125A
Rated Voltage AC (Ue)	240/415V			240/415V
Utilization Category				AC22A
Rated Frequency Hz	50/60Hz			50Hz
No. of Poles (Execution)	1P, 1P+N, 2P, 3P, 3P+N & 4P			1P, 2P, 3P & 4P
Rated Short Circuit Breaking Capacity	10kA	10kA	10kA	
Rated Insulation Voltage (Ui)	660V			660V
Magnetic Release Setting	(3-5)In	(5-10)In	(10-20)In	
Rated Impulse Voltage (Uimp)	4kV			6kV
Electrical/Mechanical Life <32A >32A	 30,000 10,000			 30,000 10,000
Ambient Temperature	-5°C to +55°C			-5°C to +55°C
Energy Limiting Class	ELC 3			
Mounting	Clip on Din rail (35 mm x 7.5 mm)			
Line Terminal Capacity	35 mm^2			35 mm^2
Degree of Protection	IP 20			IP 20
Resistance to Shock	40mm free fall			40mm free fall
Ambient reference temperature	30°C			
Installation Position	Vertical/Horizontal			Vertical/Horizontal

MCB-DC

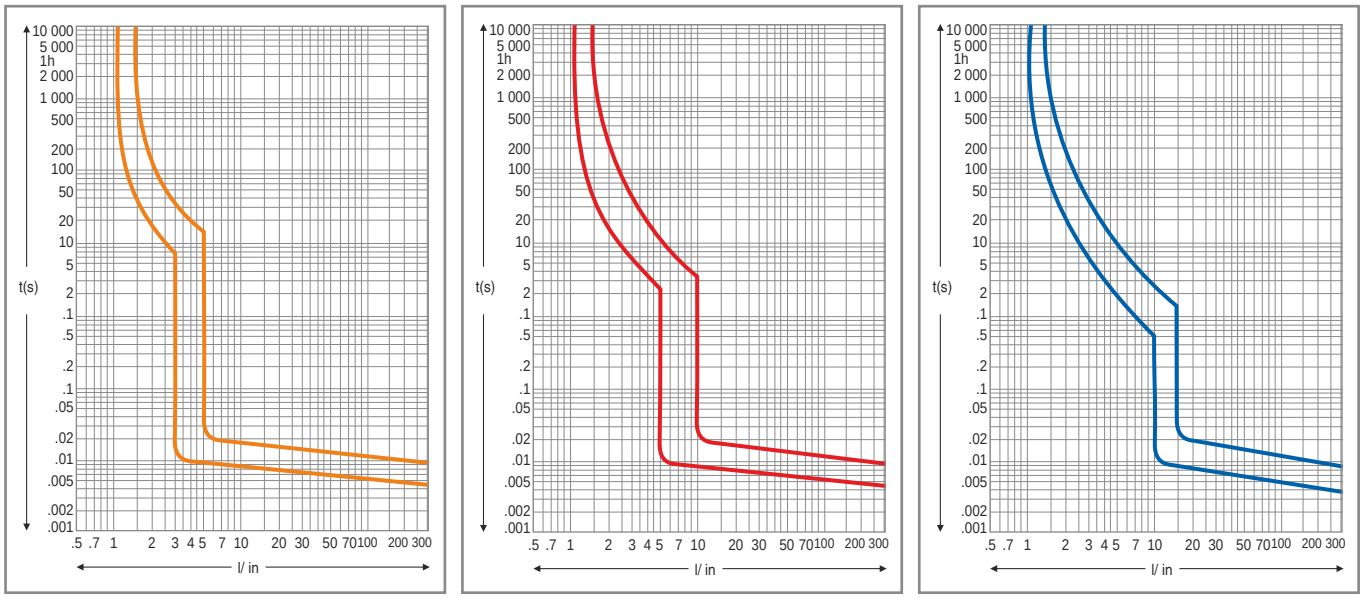
Circuit Breakers for DC application are engineered to fulfill tough arc quenching conditions. DC MCB incorporates built in magnet to direct the arc into the arc quenching chamber.

Specifications

Standard Conformity	IEC 60898-2
Current Rating	0.5-63A
No. of Poles	1P & 2P
Voltage Rating	220V (max.)
Short Circuit Breaking Capacity	10kA

Technical Data - Tripping Curves

‘B’ characteristic	‘C’ characteristic	‘D’ characteristic



Type	Application	Thermal Test Current		Tripping Time In≤63A	Electro Magnetic Test Current		Tripping Time (t)
		Low	High				
B	Lighting & Distribution with no surge Current	1.13xIn		>1hour	3xIn		≥0.1s
			1.45xIn	<1hour		5xIn	<0.1s
C	Inductive Load with surge Current	1.13xIn		>1hour	5xIn		≥0.1s
			1.45xIn	<1hour		10xIn	<0.1s
D	High Inductive Load & High Inrush Current	1.13xIn		>1hour	10xIn		≥0.1s
			1.45xIn	<1hour		20xIn	<0.1s

Temperature derating

In plant engineering situations, where ambient temperature is higher than the regulatory reference temperature of 30°C, the circuit breakers may be subjected to untimely tripping, i.e. opening when not required, since the increase in temperature is interpreted as a current surge. Ambient temperature, as a matter of fact, affects the initial deformation of the bimetal. 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 in an ambient temperature above 30°C.

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

In(A)	Temperature					
	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
63	64.89	63	61.79	60	58	56.07

Product Reference - MCB

Single Pole

Single Pole + Neutral

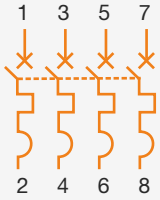
Double Pole

Description	In(A)	Reference		
		'B' Curve	'C' Curve	'D' Curve
Single Pole 	0.5		CSMB1C0.5	CSMB1D0.5
	1		CSMB1C1	CSMB1D1
	2		CSMB1C2	CSMB1D2
	3		CSMB1C3	CSMB1D3
	4		CSMB1C4	CSMB1D4
	5		CSMB1C5	CSMB1D5
	6	CSMB1B6	CSMB1C6	CSMB1D6
	10	CSMB1B10	CSMB1C10	CSMB1D10
	16	CSMB1B16	CSMB1C16	CSMB1D16
	20	CSMB1B20	CSMB1C20	CSMB1D20
	25	CSMB1B25	CSMB1C25	CSMB1D25
	32	CSMB1B32	CSMB1C32	CSMB1D32
	40	CSMB1B40	CSMB1C40	CSMB1D40
	50	CSMB1B50	CSMB1C50	CSMB1D50
	63	CSMB1B63	CSMB1C63	CSMB1D63
	80		CSMB1C80	
	100		CSMB1C100	
	125		CSMB1C125	
Single Pole + Neutral 	0.5		CSMB1C0.5N	CSMB1D0.5N
	1		CSMB1C1N	CSMB1D1N
	2		CSMB1C2N	CSMB1D2N
	3		CSMB1C3N	CSMB1D3N
	4		CSMB1C4N	CSMB1D4N
	5		CSMB1C5N	CSMB1D5N
	6	CSMB1B6N	CSMB1C6N	CSMB1D6N
	10	CSMB1B10N	CSMB1C10N	CSMB1D10N
	16	CSMB1B16N	CSMB1C16N	CSMB1D16N
	20	CSMB1B20N	CSMB1C20N	CSMB1D20N
	25	CSMB1B25N	CSMB1C25N	CSMB1D25N
	32	CSMB1B32N	CSMB1C32N	CSMB1D32N
	40	CSMB1B40N	CSMB1C40N	CSMB1D40N
	50	CSMB1B50N	CSMB1C50N	CSMB1D50N
	63	CSMB1B63N	CSMB1C63N	CSMB1D63N
Double Pole 	0.5		CSMB2C0.5	CSMB2D0.5
	1		CSMB2C1	CSMB2D1
	2		CSMB2C2	CSMB2D2
	3		CSMB2C3	CSMB2D3
	4		CSMB2C4	CSMB2D4
	5		CSMB2C5	CSMB2D5
	6	CSMB2B6	CSMB2C6	CSMB2D6
	10	CSMB2B10	CSMB2C10	CSMB2D10
	16	CSMB2B16	CSMB2C16	CSMB2D16
	20	CSMB2B20	CSMB2C20	CSMB2D20
	25	CSMB2B25	CSMB2C25	CSMB2D25
	32	CSMB2B32	CSMB2C32	CSMB2D32
	40	CSMB2B40	CSMB2C40	CSMB2D40
	50	CSMB2B50	CSMB2C50	CSMB2D50
	63	CSMB2B63	CSMB2C63	CSMB2D63
	80		CSMB2C80	
	100		CSMB2C100	
	125		CSMB2C125	

Three Pole

Three Pole + Neutral

Four Pole

Description	In(A)	Reference		
		'B' Curve	'C' Curve	'D' Curve
Three Pole 	0.5		CSMB3C0.5	CSMB3D0.5
	1		CSMB3C1	CSMB3D1
	2		CSMB3C2	CSMB3D2
	3		CSMB3C3	CSMB3D3
	4		CSMB3C4	CSMB3D4
	5		CSMB3C5	CSMB3D5
	6	CSMB3B6	CSMB3C6	CSMB3D6
	10	CSMB3B10	CSMB3C10	CSMB3D10
	16	CSMB3B16	CSMB3C16	CSMB3D16
	20	CSMB3B20	CSMB3C20	CSMB3D20
	25	CSMB3B25	CSMB3C25	CSMB3D25
	32	CSMB3B32	CSMB3C32	CSMB3D32
	40	CSMB3B40	CSMB3C40	CSMB3D40
	50	CSMB3B50	CSMB3C50	CSMB3D50
	63	CSMB3B63	CSMB3C63	CSMB3D63
	80		CSMB3C80	
	100		CSMB3C100	
	125		CSMB3C125	
Three Pole + Neutral 	0.5		CSMB3C0.5N	CSMB3D0.5N
	1		CSMB3C1N	CSMB3D1N
	2		CSMB3C2N	CSMB3D2N
	3		CSMB3C3N	CSMB3D3N
	4		CSMB3C4N	CSMB3D4N
	5		CSMB3C5N	CSMB3D5N
	6	CSMB3B6N	CSMB3C6N	CSMB3D6N
	10	CSMB3B10N	CSMB3C10N	CSMB3D10N
	16	CSMB3B16N	CSMB3C16N	CSMB3D16N
	20	CSMB3B20N	CSMB3C20N	CSMB3D20N
	25	CSMB3B25N	CSMB3C25N	CSMB3D25N
	32	CSMB3B32N	CSMB3C32N	CSMB3D32N
	40	CSMB3B40N	CSMB3C40N	CSMB3D40N
	50	CSMB3B50N	CSMB3C50N	CSMB3D50N
	63	CSMB3B63N	CSMB3C63N	CSMB3D63N
	80		CSMB3C80N	
	100		CSMB3C100N	
	125		CSMB3C125N	
Four Pole 	0.5		CSMB4C0.5	CSMB4D0.5
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	2		CSMB4C2	CSMB4D2
	3		CSMB4C3	CSMB4D3
	4		CSMB4C4	CSMB4D4
	5		CSMB4C5	CSMB4D5
	6	CSMB4B6	CSMB4C6	CSMB4D6
	10	CSMB4B10	CSMB4C10	CSMB4D10
	16	CSMB4B16	CSMB4C16	CSMB4D16
	20	CSMB4B20	CSMB4C20	CSMB4D20
	25	CSMB4B25	CSMB4C25	CSMB4D25
	32	CSMB4B32	CSMB4C32	CSMB4D32
	40	CSMB4B40	CSMB4C40	CSMB4D40
	50	CSMB4B50	CSMB4C50	CSMB4D50
	63	CSMB4B63	CSMB4C63	CSMB4D63
	80		CSMB4C80	
	100		CSMB4C100	
	125		CSMB4C125	

Product Reference - Isolator & Accessories

Single Pole

Double Pole

Three Pole

Four Pole

Description		In(A)	Reference
Single Pole		25	CSMB1ISO25
		40	CSMB1ISO40
		63	CSMB1ISO63
		80	CSMB1ISO80
		100	CSMB1ISO100
		125	CSMB1ISO125
Double Pole		25	CSMB2ISO25
		40	CSMB2ISO40
		63	CSMB2ISO63
		80	CSMB2ISO80
		100	CSMB2ISO100
		125	CSMB2ISO125
Three Pole		25	CSMB3ISO25
		40	CSMB3ISO40
		63	CSMB3ISO63
		80	CSMB3ISO80
		100	CSMB3ISO100
		125	CSMB3ISO125
Four Pole		25	CSMB4ISO25
		40	CSMB4ISO40
		63	CSMB4ISO63
		80	CSMB4ISO80
		100	CSMB4ISO100
		125	CSMB4ISO125

Accessories

Auxiliary Contact

Attachment fitted with MCB (left side) used for interlocking, signaling and indication. The auxiliary switch is switched on or off along with the MCB through internal linkage.

Specifications

Standard Conformity	IEC 60947-1
Current Rating	6A
Voltage Rating	240V AC
Contact Configuration	1NO + 1NC
Protection	IP 20
Electrical Endurance (nos)	10000
Fitment	Factory/Site Fitted

Shunt Trip

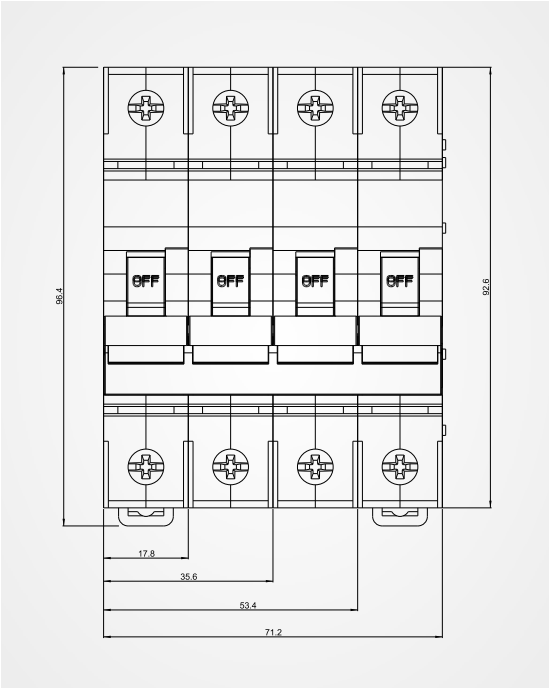
Controls the remote tripping of the MCB to which it is attached (Right Side).

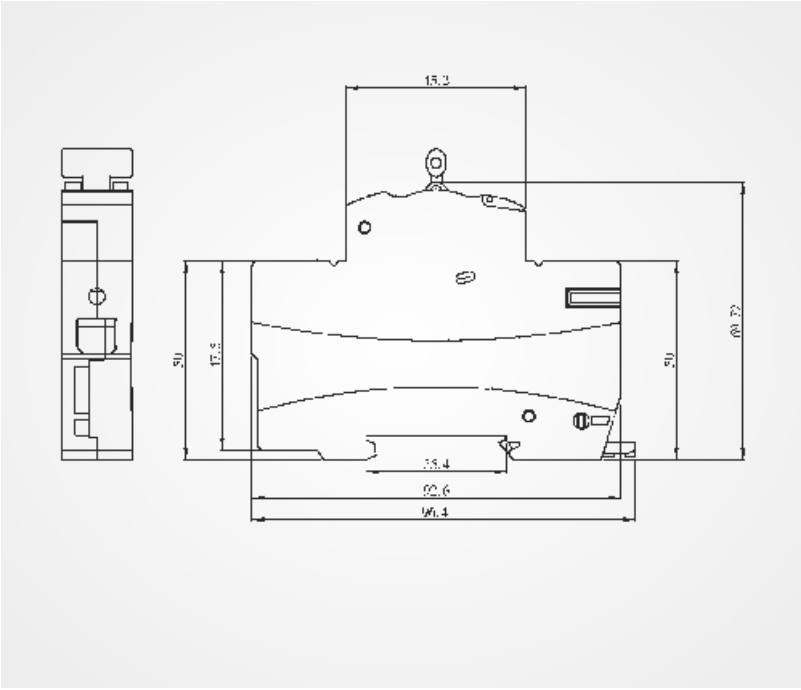
Specifications

Standard Conformity	IEC 60947-1
Rated Voltage AC	110V, 220V
DC	12V, 24V, 48V
Operating Voltage	70-110% of Rated Voltage
Protection	IP 20
Electrical Endurance (nos)	10000
Fitment	Factory/Site Fitted

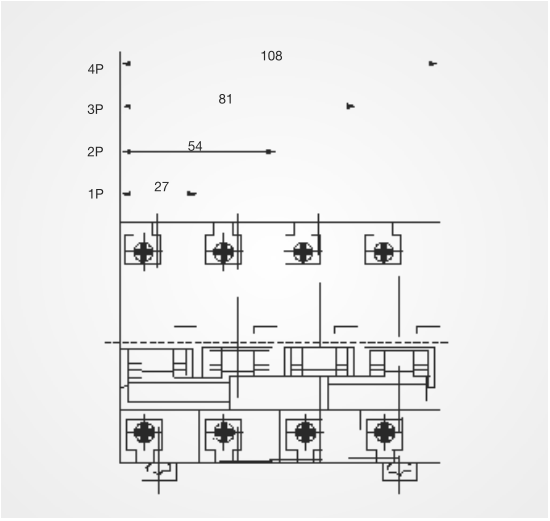
Dimensions

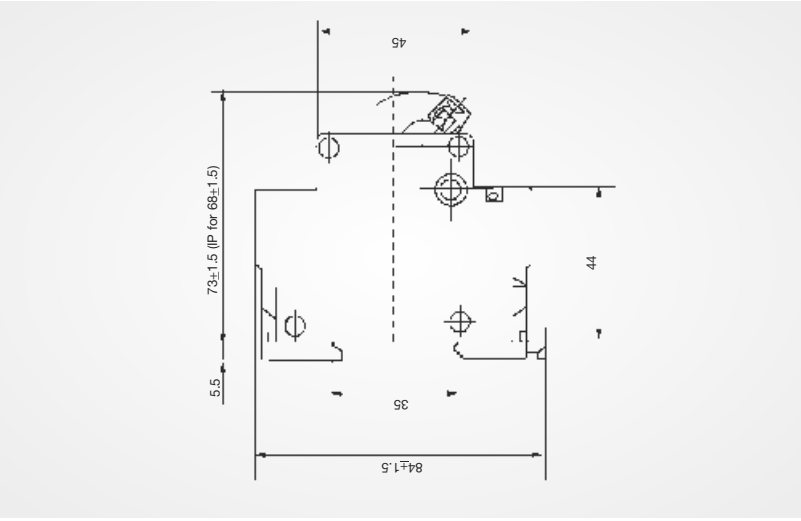
Installation Dimensions - MCB (.05 to 63A) / Isolator (25 to 63A)





Installation Dimensions MCB (80 to 125A)





Two way centre OFF Changeover Switch

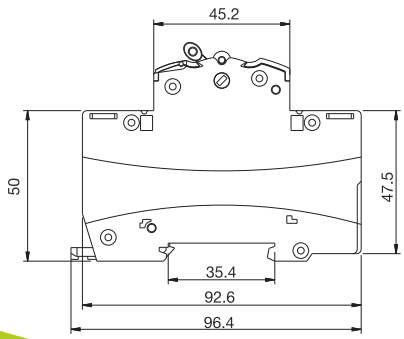
Proven & trusted product from C&S WiNtrip

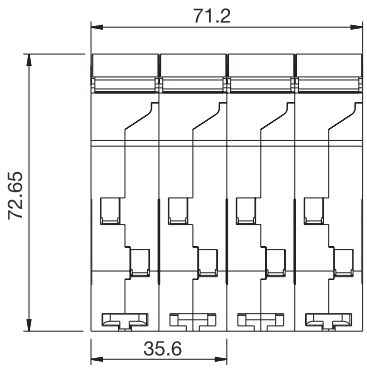
Feature

- Compact Design
- Double Break Contacts
- Shrouded Terminal
- Can be Mounted with other products like MCB, RCCB, Isolator in Distribution Board
- Front Operation with three positions I-O-II Mid position OFF

Technical Data

Standard: IS/IEC60947-3:1999
No. of Pole: 2P & 4P
Rated operational voltage: 240 / 415V
Rated current: 25A& 40A
Rated frequency: 50Hz
Rated insulation voltage: 660V
Dielectric Strength: 2.5KV
Rated impluse Voltage: 4KV
Utillzation Categories: AC 22A
Working Temperature: -5°C to +55°C
Mechanical Life: 15000
Electrical Life: 10000
Mounting: Clip on din rail
Mounting Position: Vertical / Horizontal
Terminal capacity: 16mm^2





Technical Data

MCB-AC

Specifications	WiNtrip2 MCB			WiNtrip2 Isolator
Type	'B'	'C'	'D'	
Standard Conformity	IS/IEC60898-1-2002			IEC60947-3
Rated Current (In)	6-63A	0.5-63A	0.5-63A	25-63A
Rated Voltage AC (Ue)	240/415V			240/415V
Utilization Category	–			AC22A
Rated Frequency Hz	50/60Hz			50/60Hz
No. of Poles (Execution)	1P, 1P+N, 2P, 3P, 3P+N & 4P			1P, 2P, 3P & 4P
Rated Short Circuit Breaking Capacity	10kA, 6kA			–
Rated Insulation Voltage (Ui)	660V			660V
Magnetic Release Setting	(3-5)In	(5-10)In	(10-20)In	
Rated Impulse Voltage (Uimp)	4kV			6kV
Electrical/Mechanical Life <32A	30,000			30,000
>32A	10,000			10,000
Energy Limiting Class	ELC 3			
Mounting	Clip on Din rail (35x7.5 mm)			Clip on Din rail (35x7.5 mm)
Line Terminal Capacity	35 mm^2			35 mm^2
Load Terminal Capacity	35 mm^2			35 mm^2
Degree of Protection	IP 20			IP 20
Resistance to Shock	40mm free fall			40mm free fall
Ambient working temperature	- 5°C to 55°C			
Ambient reference temperature	30°C			
Installation Position	Vertical/Horizontal			Vertical/Horizontal
Bi-connect terminal	Both side			Both side

Operational voltage (Un): 240/415V, 50/60Hz can be used in systems upto 60V DC in SP and 110V DC in 2P
Breaking Capacity: 10KA as per IS/IEC 60898-1

MCB-DC

Circuit Breakers for DC application are engineered to fulfill tough arc quenching conditions. DC MCB incorporates built in magnet to direct the arc into the arc quenching chamber.

Specifications	WiNtrip2 MCB
Standard Conformity	IS/IEC60898-2-2003
Current Rating	0.5-63A
No. of Poles	1P & 2P
Voltage Rating	220V (max.)
Short Circuit Breaking Capacity	10kA

Product Reference - MCB

Rating (A)	'B' Curve	'C' Curve	'D' Curve
	Reference	Reference	Reference
1 Pole			
0.5	-	CSMBS1C0.5	CSMBS1D0.5
01	-	CSMBS1C1	CSMBS1D1
02	-	CSMBS1C2	CSMBS1D2
03	-	CSMBS1C3	CSMBS1D3
04	-	CSMBS1C4	CSMBS1D4
05	-	CSMBS1C5	CSMBS1D5
06	CSMBS1B6	CSMBS1C6	CSMBS1D6
10	CSMBS1B10	CSMBS1C10	CSMBS1D10
16	CSMBS1B16	CSMBS1C16	CSMBS1D16
20	CSMBS1B20	CSMBS1C20	CSMBS1D20
25	CSMBS1B25	CSMBS1C25	CSMBS1D25
32	CSMBS1B32	CSMBS1C32	CSMBS1D32
40	CSMBS1B40	CSMBS1C40	CSMBS1D40
50	CSMBS1B50	CSMBS1C50	CSMBS1D50
63	CSMBS1B63	CSMBS1C63	CSMBS1D63
2 Pole			
0.5	-	CSMBS2C0.5	CSMBS2D0.5
01	-	CSMBS2C1	CSMBS2D1
02	-	CSMBS2C2	CSMBS2D2
03	-	CSMBS2C3	CSMBS2D3
04	-	CSMBS2C4	CSMBS2D4
05	-	CSMBS2C5	CSMBS2D5
06	CSMBS2B6	CSMBS2C6	CSMBS2D6
10	CSMBS2B10	CSMBS2C10	CSMBS2D10
16	CSMBS2B16	CSMBS2C16	CSMBS2D16
20	CSMBS2B20	CSMBS2C20	CSMBS2D20
25	CSMBS2B25	CSMBS2C25	CSMBS2D25
32	CSMBS2B32	CSMBS2C32	CSMBS2D32
40	CSMBS2B40	CSMBS2C40	CSMBS2D40
50	CSMBS2B50	CSMBS2C50	CSMBS2D50
63	CSMBS2B63	CSMBS2C63	CSMBS2D63
3 Pole			
0.5	-	CSMBS3C0.5	CSMBS3D0.5
01	-	CSMBS3C1	CSMBS3D1
02	-	CSMBS3C2	CSMBS3D2
03	-	CSMBS3C3	CSMBS3D3
04	-	CSMBS3C4	CSMBS3D4
05	-	CSMBS3C5	CSMBS3D5
06	CSMBS3B6	CSMBS3C6	CSMBS3D6
10	CSMBS3B10	CSMBS3C10	CSMBS3D10
16	CSMBS3B16	CSMBS3C16	CSMBS3D16
20	CSMBS3B20	CSMBS3C20	CSMBS3D20
25	CSMBS3B25	CSMBS3C25	CSMBS3D25
32	CSMBS3B32	CSMBS3C32	CSMBS3D32
40	CSMBS3B40	CSMBS3C40	CSMBS3D40
50	CSMBS3B50	CSMBS3C50	CSMBS3D50
63	CSMBS3B63	CSMBS3C63	CSMBS3D63

Rating (A)	'B' Curve	'C' Curve	'D' Curve
	Reference	Reference	Reference
4 Pole			
0.5	-	CSMBS4C0.5	CSMBS4D0.5
01	-	CSMBS4C1	CSMBS4D1
02	-	CSMBS4C2	CSMBS4D2
03	-	CSMBS4C3	CSMBS4D3
04	-	CSMBS4C4	CSMBS4D4
05	-	CSMBS4C5	CSMBS4D5
06	CSMBS4B6	CSMBS4C6	CSMBS4D6
10	CSMBS4B10	CSMBS4C10	CSMBS4D10
16	CSMBS4B16	CSMBS4C16	CSMBS4D16
20	CSMBS4B20	CSMBS4C20	CSMBS4D20
25	CSMBS4B25	CSMBS4C25	CSMBS4D25
32	CSMBS4B32	CSMBS4C32	CSMBS4D32
40	CSMBS4B40	CSMBS4C40	CSMBS4D40
50	CSMBS4B50	CSMBS4C50	CSMBS4D50
63	CSMBS4B63	CSMBS4C63	CSMBS4D63
1Pole + Neutral			
0.5	-	CSMBS1C0.5N	CSMBS1D0.5N
01	-	CSMBS1C1N	CSMBS1D1N
02	-	CSMBS1C2N	CSMBS1D2N
03	-	CSMBS1C3N	CSMBS1D3N
04	-	CSMBS1C4N	CSMBS1D4N
05	-	CSMBS1C5N	CSMBS1D5N
06	CSMBS1B6N	CSMBS1C6N	CSMBS1D6N
10	CSMBS1B10N	CSMBS1C10N	CSMBS1D10N
16	CSMBS1B16N	CSMBS1C16N	CSMBS1D16N
20	CSMBS1B20N	CSMBS1C20N	CSMBS1D20N
25	CSMBS1B25N	CSMBS1C25N	CSMBS1D25N
32	CSMBS1B32N	CSMBS1C32N	CSMBS1D32N
40	CSMBS1B40N	CSMBS1C40N	CSMBS1D40N
50	CSMBS1B50N	CSMBS1C50N	CSMBS1D50N
63	CSMBS1B63N	CSMBS1C63N	CSMBS1D63N
3 Pole + Neutral			
0.5	-	CSMBS3C0.5N	CSMBS3D0.5N
01	-	CSMBS3C1N	CSMBS3D1N
02	-	CSMBS3C2N	CSMBS3D2N
03	-	CSMBS3C3N	CSMBS3D3N
04	-	CSMBS3C4N	CSMBS3D4N
05	-	CSMBS3C5N	CSMBS3D5N
06	CSMBS3B6N	CSMBS3C6N	CSMBS3D6N
10	CSMBS3B10N	CSMBS3C10N	CSMBS3D10N
16	CSMBS3B16N	CSMBS3C16N	CSMBS3D16N
20	CSMBS3B20N	CSMBS3C20N	CSMBS3D20N
25	CSMBS3B25N	CSMBS3C25N	CSMBS3D25N
32	CSMBS3B32N	CSMBS3C32N	CSMBS3D32N
40	CSMBS3B40N	CSMBS3C40N	CSMBS3D40N
50	CSMBS3B50N	CSMBS3C50N	CSMBS3D50N
63	CSMBS3B63N	CSMBS3C63N	CSMBS3D63N

ProductReference-MCB 6kA

Rating (A)	'B' Curve	'C' Curve	'D' Curve
	Reference	Reference	Reference
1 Pole			
0.5	-	CSMBS1C0.5X	CSMBS1D0.5X
01	-	CSMBS1C1X	CSMBS1D1X
02	-	CSMBS1C2X	CSMBS1D2X
03	-	CSMBS1C3X	CSMBS1D3X
04	-	CSMBS1C4X	CSMBS1D4X
05	-	CSMBS1C5X	CSMBS1D5X
06	CSMBS1B6X	CSMBS1C6X	CSMBS1D6X
10	CSMBS1B10X	CSMBS1C10X	CSMBS1D10X
16	CSMBS1B16X	CSMBS1C16X	CSMBS1D16X
20	CSMBS1B20X	CSMBS1C20X	CSMBS1D20X
25	CSMBS1B25X	CSMBS1C25X	CSMBS1D25X
32	CSMBS1B32X	CSMBS1C32X	CSMBS1D32X
40	CSMBS1B40X	CSMBS1C40X	CSMBS1D40X
50	CSMBS1B50X	CSMBS1C50X	CSMBS1D50X
63	CSMBS1B63X	CSMBS1C63X	CSMBS1D63X
2 Pole			
0.5	-	CSMBS2C0.5X	CSMBS2D0.5X
01	-	CSMBS2C1X	CSMBS2D1X
02	-	CSMBS2C2X	CSMBS2D2X
03	-	CSMBS2C3X	CSMBS2D3X
04	-	CSMBS2C4X	CSMBS2D4X
05	-	CSMBS2C5X	CSMBS2D5X
06	CSMBS2B6X	CSMBS2C6X	CSMBS2D6X
10	CSMBS2B10X	CSMBS2C10X	CSMBS2D10X
16	CSMBS2B16X	CSMBS2C16X	CSMBS2D16X
20	CSMBS2B20X	CSMBS2C20X	CSMBS2D20X
25	CSMBS2B25X	CSMBS2C25X	CSMBS2D25X
32	CSMBS2B32X	CSMBS2C32X	CSMBS2D32X
40	CSMBS2B40X	CSMBS2C40X	CSMBS2D40X
50	CSMBS2B50X	CSMBS2C50X	CSMBS2D50X
63	CSMBS2B63X	CSMBS2C63X	CSMBS2D63X
3 Pole			
0.5	-	CSMBS3C0.5	CSMBS3D0.5X
01	-	CSMBS3C1	CSMBS3D1X
02	-	CSMBS3C2	CSMBS3D2X
03	-	CSMBS3C3	CSMBS3D3X
04	-	CSMBS3C4	CSMBS3D4X
05	-	CSMBS3C5	CSMBS3D5X
06	CSMBS3B6	CSMBS3C6	CSMBS3D6X
10	CSMBS3B10	CSMBS3C10	CSMBS3D10X
16	CSMBS3B16	CSMBS3C16	CSMBS3D16X
20	CSMBS3B20	CSMBS3C20	CSMBS3D20X
25	CSMBS3B25	CSMBS3C25	CSMBS3D25X
32	CSMBS3B32	CSMBS3C32	CSMBS3D32X
40	CSMBS3B40	CSMBS3C40	CSMBS3D40X
50	CSMBS3B50	CSMBS3C50	CSMBS3D50X
63	CSMBS3B63	CSMBS3C63	CSMBS3D63X

Rating (A)	'B' Curve	'C' Curve	'D' Curve
	Reference	Reference	Reference
4 Pole			
0.5	-	CSMBS4C0.5X	CSMBS4D0.5X
01	-	CSMBS4C1X	CSMBS4D1X
02	-	CSMBS4C2X	CSMBS4D2X
03	-	CSMBS4C3X	CSMBS4D3X
04	-	CSMBS4C4X	CSMBS4D4X
05	-	CSMBS4C5X	CSMBS4D5X
06	CSMBS4B6X	CSMBS4C6X	CSMBS4D6X
10	CSMBS4B10X	CSMBS4C10X	CSMBS4D10X
16	CSMBS4B16X	CSMBS4C16X	CSMBS4D16X
20	CSMBS4B20X	CSMBS4C20X	CSMBS4D20X
25	CSMBS4B25X	CSMBS4C25X	CSMBS4D25X
32	CSMBS4B32X	CSMBS4C32X	CSMBS4D32X
40	CSMBS4B40X	CSMBS4C40X	CSMBS4D40X
50	CSMBS4B50X	CSMBS4C50X	CSMBS4D50X
63	CSMBS4B63X	CSMBS4C63X	CSMBS4D63X
1Pole + Neutral			
0.5	-	CSMBS1C0.5NX	CSMBS1D0.5NX
01	-	CSMBS1C1NX	CSMBS1D1NX
02	-	CSMBS1C2NX	CSMBS1D2NX
03	-	CSMBS1C3NX	CSMBS1D3NX
04	-	CSMBS1C4NX	CSMBS1D4NX
05	-	CSMBS1C5NX	CSMBS1D5NX
06	CSMBS1B6NX	CSMBS1C6NX	CSMBS1D6NX
10	CSMBS1B10NX	CSMBS1C10NX	CSMBS1D10NX
16	CSMBS1B16NX	CSMBS1C16NX	CSMBS1D16NX
20	CSMBS1B20NX	CSMBS1C20NX	CSMBS1D20NX
25	CSMBS1B25NX	CSMBS1C25NX	CSMBS1D25NX
32	CSMBS1B32NX	CSMBS1C32NX	CSMBS1D32NX
40	CSMBS1B40NX	CSMBS1C40NX	CSMBS1D40NX
50	CSMBS1B50NX	CSMBS1C50NX	CSMBS1D50NX
63	CSMBS1B63NX	CSMBS1C63NX	CSMBS1D63NX
3 Pole + Neutral			
0.5	-	CSMBS3C0.5NX	CSMBS3D0.5NX
01	-	CSMBS3C1NX	CSMBS3D1NX
02	-	CSMBS3C2NX	CSMBS3D2NX
03	-	CSMBS3C3NX	CSMBS3D3NX
04	-	CSMBS3C4NX	CSMBS3D4NX
05	-	CSMBS3C5NX	CSMBS3D5NX
06	CSMBS3B6NX	CSMBS3C6NX	CSMBS3D6NX
10	CSMBS3B10NX	CSMBS3C10NX	CSMBS3D10NX
16	CSMBS3B16NX	CSMBS3C16NX	CSMBS3D16NX
20	CSMBS3B20NX	CSMBS3C20NX	CSMBS3D20NX
25	CSMBS3B25NX	CSMBS3C25NX	CSMBS3D25NX
32	CSMBS3B32NX	CSMBS3C32NX	CSMBS3D32NX
40	CSMBS3B40NX	CSMBS3C40NX	CSMBS3D40NX
50	CSMBS3B50NX	CSMBS3C50NX	CSMBS3D50NX
63	CSMBS3B63NX	CSMBS3C63NX	CSMBS3D63NX

Product Reference & Dimensions

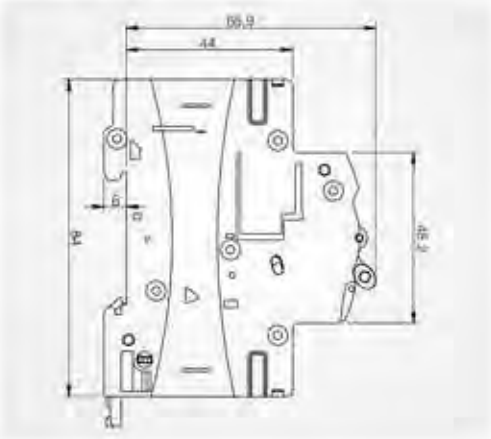
Isolator

Rating (A)	1 Pole	2 Pole	3 Pole	4 Pole
	Reference	Reference	Reference	Reference
25	CSMBS1ISO25	CSMBS2ISO25	CSMBS3ISO25	CSMBS4ISO25
32	CSMBS1ISO32	CSMBS2ISO32	CSMBS3ISO32	CSMBS4ISO32
40	CSMBS1ISO40	CSMBS2ISO40	CSMBS3ISO40	CSMBS4ISO40
63	CSMBS1ISO63	CSMBS2ISO63	CSMBS3ISO63	CSMBS4ISO63
80	CSMBS1ISO80	CSMBS2ISO80	CSMBS3ISO80	CSMBS4ISO80
100	CSMBS1ISO100	CSMBS2ISO100	CSMBS3ISO100	CSMBS4ISO100

Miniature Circuit Breaker - DC

Rating (A)	1 Pole	2 Pole
	Reference	Reference
0.5	CSMBS1DC0.5	CSMBS2DC0.5
01	CSMBS1DC1	CSMBS2DC1
02	CSMBS1DC2	CSMBS2DC2
03	CSMBS1DC3	CSMBS2DC3
04	CSMBS1DC4	CSMBS2DC4
05	CSMBS1DC5	CSMBS2DC5
06	CSMBS1DC6	CSMBS2DC6
10	CSMBS1DC10	CSMBS2DC10
16	CSMBS1DC16	CSMBS2DC16
20	CSMBS1DC20	CSMBS2DC20
25	CSMBS1DC25	CSMBS2DC25
32	CSMBS1DC32	CSMBS2DC32
40	CSMBS1DC40	CSMBS2DC40
50	CSMBS1DC50	CSMBS2DC50
63	CSMBS1DC63	CSMBS2DC63

Installation Dimensions



TERMINAL SIDE

Highlights

A state-of-the art product fit for Industrial, Residential and Commercial applications.

It is one piece residual current circuit breaker which is used both for control and isolation of electrical circuits. It provides total protection to all living beings against direct and indirect contact as well as to installations, big or small, against insulation faults. **Human life is valueless and WiNtrip RCCB is the solution provider for safeguarding it.**

Majority of mishaps occur due to current leakage consequently leading to fire. WiNtrip RCCB of the required rating instantly detects this leakage and terminates the supply reducing the risk of any kind of fire. The range is available in AC Residual Tripping Characteristics in 2 & 4 Pole configurations in 16, 20, 25, 32, 40, 63, 80 & 100Amps in 30, 100 & 300mA sensitivity.

- Provides protection against earth fault/leakage current and also fulfill the function of isolation.
- Automatically measures and disconnect the circuit when earth fault/leakage current occurs and exceeds the rated sensitivity.
- High short-circuit current withstand capacity - 6kA
- Dual termination possible for cable and comb type busbar connection
- Equipped with finger protected connection terminals (Ip20)
- Fire resistant plastic parts to withstand abnormal heating and strong impact
- Independent of power supply and line voltage. Also free from external voltage fluctuation.
- Incorporates a filtering device for prevention of nuisance tripping due to transient voltage
- Easy padlocking facility.

LIFE SAVER
ENERGY SAVER

Technical Data - Characteristics

Standards			IS 12640-1:2008
Residual tripping characteristics			AC
Tripping time at Iδn	Instantaneous	ms	<40
	Selective	ms	>150
Rated current		A	16, 20, 25, 32, 40, 63, 80 & 100
Rated residual current IΔn		mA	30, 100, 300
Calibration temperature		°C	30
Number of poles versus modules			1
Rated voltage Un	2P AC	V	240
	4P AC	V	415
Frequency		Hz	50/60
Maximum service voltage Ubmax		V	2P=265 / 4P=455
Minimum service voltage Ubmin		V	2P=100 / 4P=190
Power supply			Top / Bottom
Rated making and breaking capacity (Im)		A	500 (or 10xIn)
Residual making and breaking capacity (IΔm)		A	500 (or 10xIn)
Conditional short-circuit capacity (Inc)		A	6000 Fuse 100A gLgG
Conditional residual short-circuit capacity (IΔc)		A	6000 Fuse 100A gLgG
Grid distance (safety distance between two devices)		mm	35
Isolator application			yes
Insulation degree	Insulation voltage	V (DC)	660
	Shock voltage (1.2/50µs)	kV	6
	Insulation resistance	mΩ	1000
	Dielectric strength	V	2500
Shock resistance (in x, y, z direction) (EN / IEC 60077/16.3)		40g	18 shocks 5 ms
Vibration resistance (in x, y, z direction; EN / IEC 60068-2-6)		1.5g	30 min, 0-80Hz
Endurance	electrical at Un, In		10000
	mechanical at Un, In		20000
Protection degree (outside/inside electrical enclosure) with door			IP20 / IP40
Self extinguish degree (according to UI94)			V2
Tropicalisation (acc. to EN/IEC 60068-2, DIN 40046)		°C/RH	+55 / 95%
Pollution degree (acc. EN/IEC 60947-1)			3
Operating temperature			AC (-5 ~ +60)
Storage temperature		°C	-25~+70
Terminals capacity	Rigid cable min/max (top)	mm^2	1.5/25
	Flexible cable min*/max (top)	mm^2	1.5/25
	Rigid cable min/max (bottom)	mm^2	1.5/25
	Flexible cable min*/max (bottom)	mm^2	1.5/25
	(*Flexible cable 0.75/1/1.5 mm^2 with cable lug)		
Busbars systems	Pin		yes
	Fork		yes
CE marking			yes
Torque	Top / Bottom	Nm	5/5

Test Button

Type AC		
Rated Current setting In	A	16, 20, 25, 32, 40, 63, 80, 100
Residual current IΔn	mA	30, 100, 300
Rated voltage AC Un	V	2P : 240; 4P : 415
Minimum operating voltage U_{min}	V	2P : 100; 4P : 190
Mechanical/electrical endurance		20000 / 10000
Tropicalisation acc.to EN/IEC 60068-2-28/2-30 and DIN 40046		95% RH at 55 °C
Terminal capacity exible/rigid cable	mm^2	25/25
Poles		2, 4
Nuisance tripping resistance		250A 8/20us; 200A 0.5us - 100kHz
Ambient temperature	°C	-5 upto 40
Weight	g	2P- 224.5; 4P-409

Rated current In / IΔn

Short-circuit Capacity	
Acc. to EN/IEC 61008-1	Im = 500A
Making and breaking capacity	IDm > 500A from 16 upto 40A
	IDm = 10In from 63 upto 100A
Short-circuit capacity	Inc = 6000A at 240/415V
	Fuse 80A gG

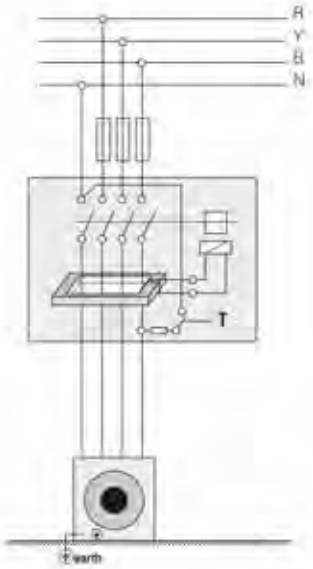
Normal operation and mounting requirement

1. Ambient temperature -5°C – +40°C •Altitude above sea level less than 2000 m.
2. Humidity not exceeding 50% at 40°C and not exceeding 90% at 25°C.
3. Installation class II or III.
4. Pollution degree 3.
5. All equipments used should be properly earthed.
6. For right operation should ensure that the neutral conductor on the load side of the RCCB must not be linked to earth. Otherwise tripping may be impaired or nuisance tripping may occur.
7. Installation method DIN Rail mounting type.
8. Product should be installed vertically at the place where there shall be no severe impact and vibration.
9. The product is switched on when the handle is at upper position.

DIN Rail Mounting

RCCB Tripping Cause Detection & Remedy

1. Switch OFF all the MCBs connected to the circuit downstream the RCCB.
2. Switch ON the RCCB and switch ON the MCBs one by one.
3. During switching ON of a particular circuit RCCB keeps tripping frequently.
4. In this circuit the fault persists.
5. Isolate the faulty circuit, correct the fault. Now the RCCB will not trip.



Working Principle

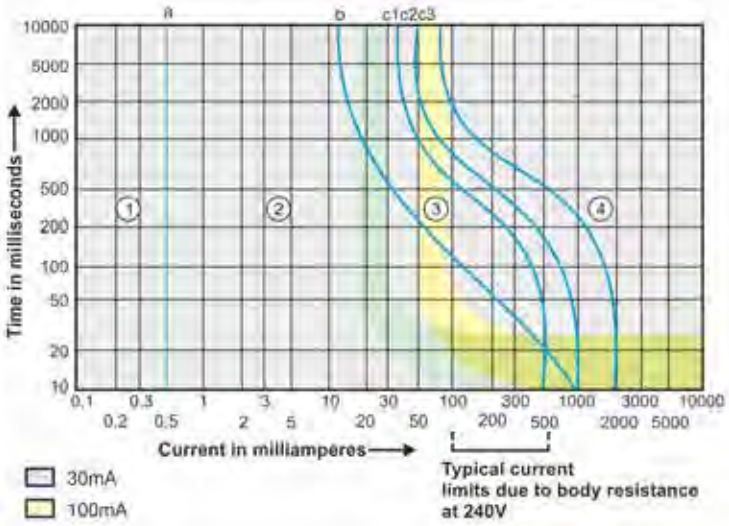
The RCCB works on the current balance principle. The supply conductors are passed through a torroid and form the primary windings of a current transformer. Its secondary winding is connected to a highly sensitive electromagnetic trip relay, which operates the trip mechanism.

In a healthy circuit, sum of the current in phases, is equal to the current in the neutral and the vector sum of all current is equal to zero. If there is any insulation fault in the current and leakage current fows to earth, the current do not balance and their vector sum is not equal to zero. This imbalance is detected by the core balanced current transformer, the RCCB is tripped and supply to load is interrupted.

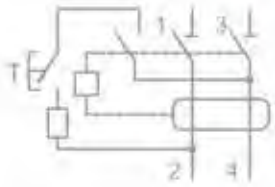
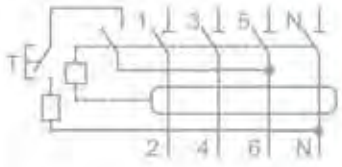
Sensitivity Selection Criteria

Sensitivity	Application
30mA	Designed for additional protection against direct contact. The 30 mA RCCB protects against leakage currents and indirect contact with earth loop impedance up to 1667 Ohms.
100mA	Is suitable for protection against indirect contact and leakage current for larger installations. The 100 mA RCCB's operate within 30 ms, but do not provide the same level of personal protection as the 30 mA units. The 100 mA RCCB protects against leakage currents and indirect contact with earth loop impedance up to 500 ohms.
300mA	A less sensitive protection device suitable for large installations having high levels of leakage current. 300 mA RCCB's protect against leakage current and indirect contact up to 167 ohms earth loop impedance.

Current Limiting Curve



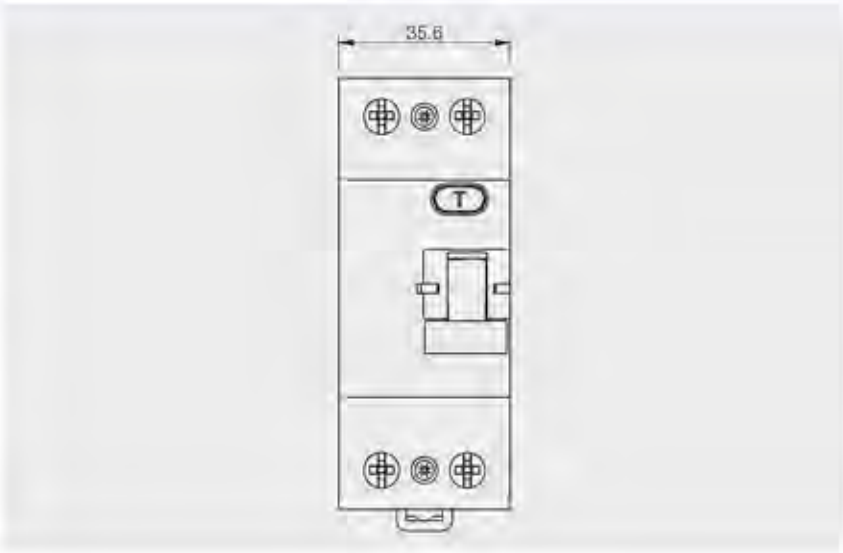
Product Reference - RCCB

Description	Wiring Diagram	Rated Current	Reference	Sensitivity
Double Pole		16	CSRB2P16A30	30
			CSRB2P16A100	100
			CSRB2P16A300	300
		20	CSRB2P20A30	30
			CSRB2P20A100	100
			CSRB2P20A300	300
		25	CSRB2P25A30	30
			CSRB2P25A100	100
			CSRB2P25A300	300
		32	CSRB2P32A30	30
			CSRB2P32A100	100
			CSRB2P32A300	300
		40	CSRB2P40A30	30
			CSRB2P40A100	100
			CSRB2P40A300	300
		63	CSRB2P63A30	30
			CSRB2P63A100	100
			CSRB2P63A300	300
		80	CSRB2P80A30	30
			CSRB2P80A100	100
			CSRB2P80A300	300
		100	CSRB2P100A30	30
			CSRB2P100A100	100
			CSRB2P100A300	300
Four Pole		16	CSRB4P16A30	30
			CSRB4P16A100	100
			CSRB4P16A300	300
		20	CSRB4P20A30	30
			CSRB4P20A100	100
			CSRB4P20A300	300
		25	CSRB4P25A30	30
			CSRB4P25A100	100
			CSRB4P25A300	300
		32	CSRB4P32A30	30
			CSRB4P32A100	100
			CSRB4P32A300	300
		40	CSRB4P40A30	30
			CSRB4P40A100	100
			CSRB4P40A300	300
		63	CSRB4P63A30	30
			CSRB4P63A100	100
			CSRB4P63A300	300
		80	CSRB4P80A30	30
			CSRB4P80A100	100
			CSRB4P80A300	300
		100	CSRB4P100A30	30
			CSRB4P100A100	100
			CSRB4P100A300	300

Dimensions

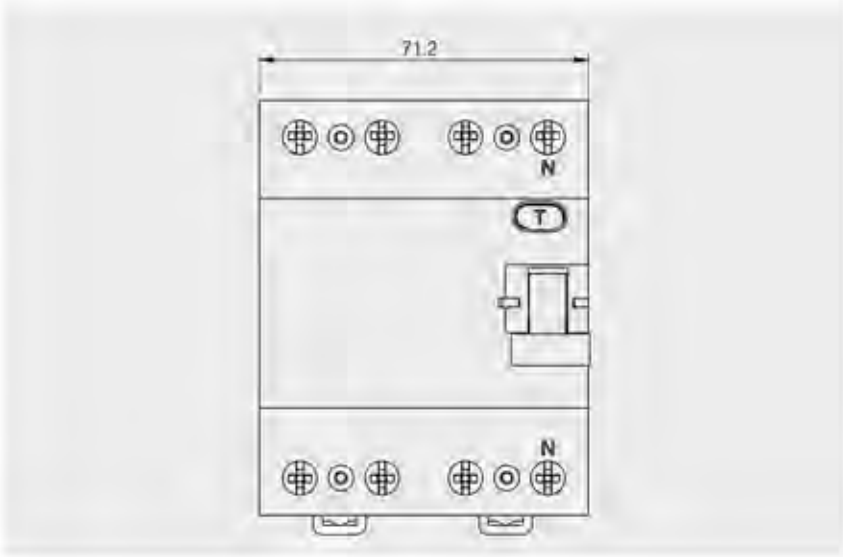
Double Pole

CSRB2P16A30	CSRB2P40A30
CSRB2P16A100	CSRB2P40A100
CSRB2P16A300	CSRB2P40A300
CSRB2P20A30	CSRB2P63A30
CSRB2P20A100	CSRB2P63A100
CSRB2P20A300	CSRB2P63A300
CSRB2P25A30	CSRB2P80A30
CSRB2P25A100	CSRB2P80A100
CSRB2P25A300	CSRB2P80A300
CSRB2P32A30	CSRB2P100A30
CSRB2P32A100	CSRB2P100A100
CSRB2P32A300	CSRB2P100A300

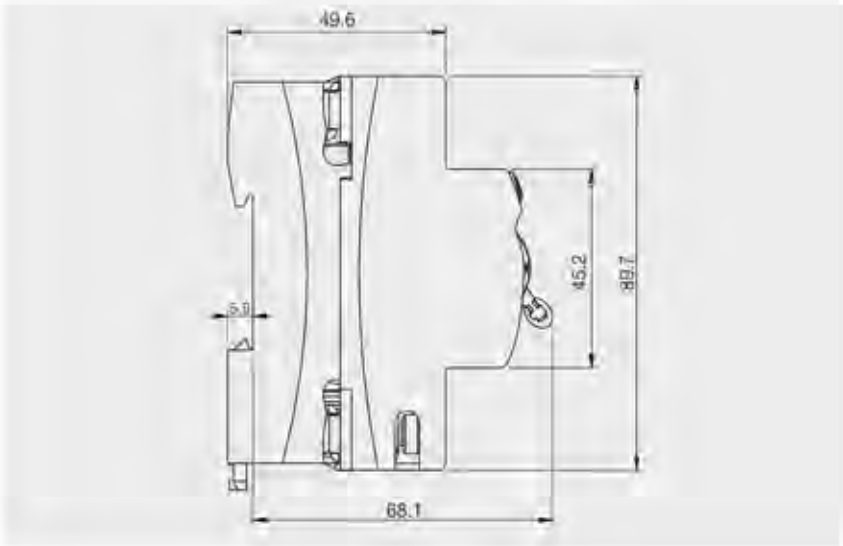


Four Pole

CSRB4P16A30	CSRB4P40A30
CSRB4P16A100	CSRB4P40A100
CSRB4P16A300	CSRB4P40A300
CSRB4P20A30	CSRB4P63A30
CSRB4P20A100	CSRB4P63A100
CSRB4P20A300	CSRB4P63A300
CSRB4P25A30	CSRB4P80A30
CSRB4P25A100	CSRB4P80A100
CSRB4P25A300	CSRB4P80A300
CSRB4P32A30	CSRB4P100A30
CSRB4P32A100	CSRB4P100A100
CSRB4P32A300	CSRB4P100A300



Side view - Double & Four Pole



All dimensions are in mm

Introduction - Distribution Board