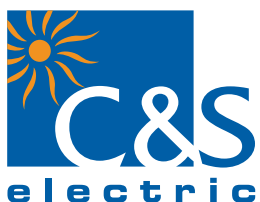


We touch your **electricity** everyday!

WiNtrip



**Final Distribution
Products**

WiNtrip 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.



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	30,000			30,000
>32A	10,000			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

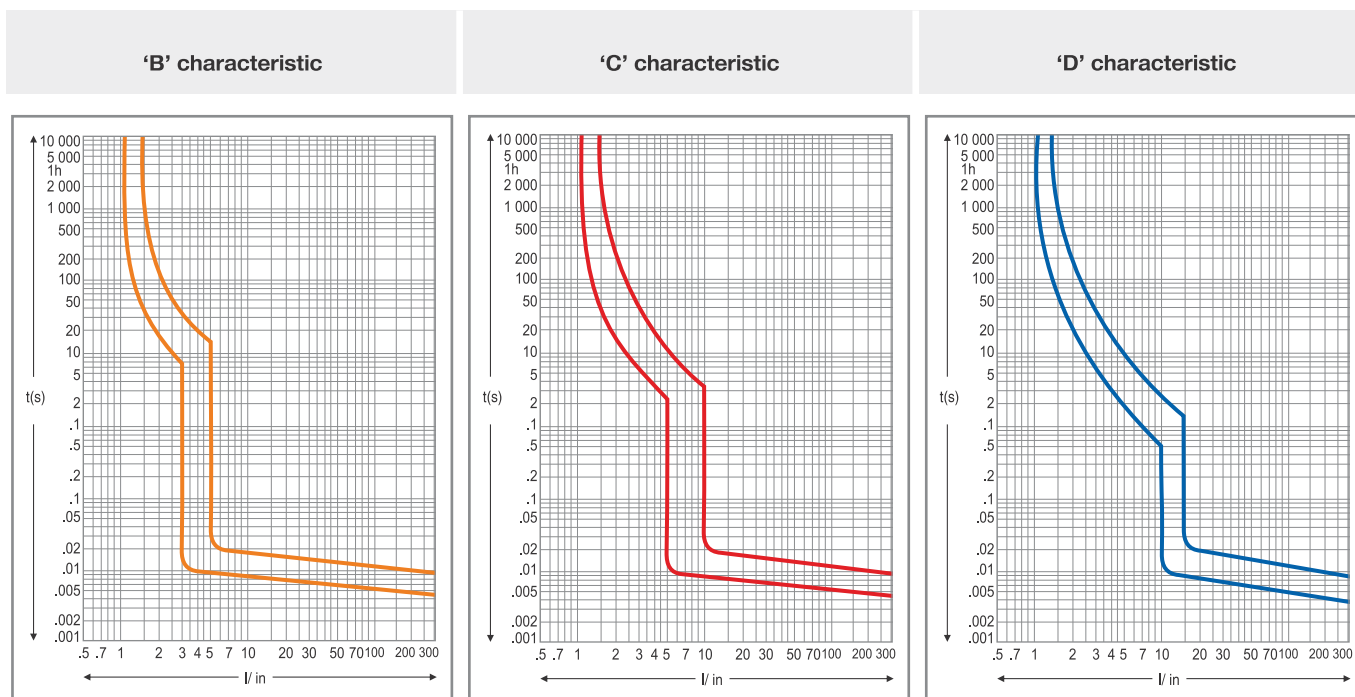
MCB-DC

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



Type	Application	Thermal Test Current		Tripping Time $I_{n} \leq 63A$	Electro Magnetic Test Current		Tripping Time (t)
		Low	High				
B	Lighting & Distribution with no surge Current	1.13xIn		>1hour	3xIn		$\geq 0.1s$
			1.45xIn	<1hour		5xIn	<0.1s
C	Inductive Load with surge Current	1.13xIn		>1hour	5xIn		$\geq 0.1s$
			1.45xIn	<1hour		10xIn	<0.1s
D	High Inductive Load & High Inrush Current	1.13xIn		>1hour	10xIn		$\geq 0.1s$
			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

WiNtrip 2

Miniature Circuit Breaker

Technical Data

MCB-AC

Specifications	WiNtrip2 MCB			WiNtrip2 Isolator
	'B'	'C'	'D'	
Type				
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			-
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

Product Reference & Dimensions



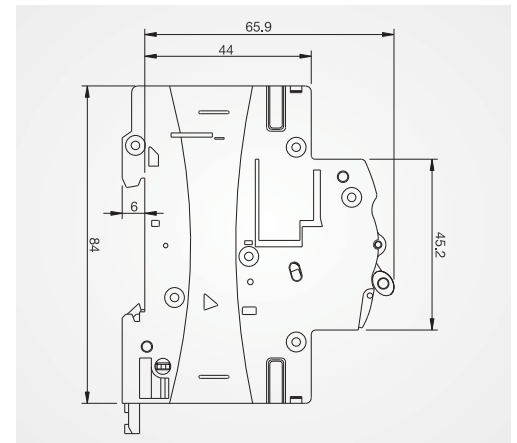
Isolator

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

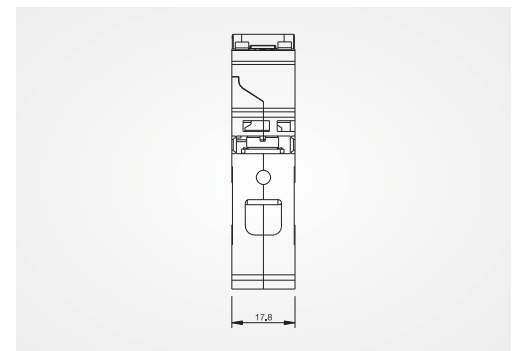
Miniature Circuit Breaker - DC

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



Final Distribution Products

RCCB
Protects from
SHOCK



MCB
Protects from
SHORT CIRCUIT
AND OVERLOAD



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