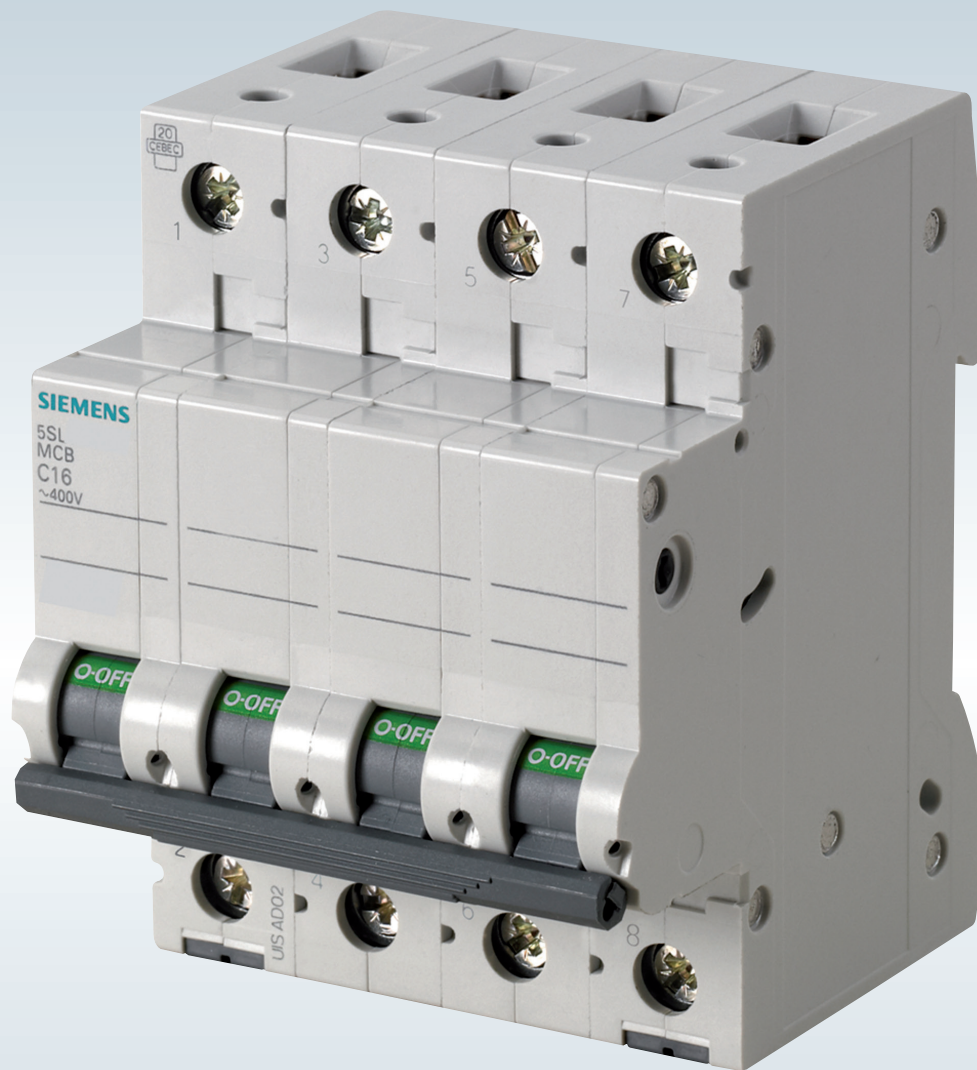


SIEMENS

Ingenuity for life



Betagard Miniature Circuit Breakers

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Betagard Miniature Circuit Breakers

Betagard Miniature Circuit Breakers Type 5SL7

Overview

As a culture Siemens has always endeavoured to introduce innovative products worldwide. The Electrical Installation R&D team has now raised the bar with the introduction of Betagard 5SL Miniature Circuit Breaker. Manufactured and designed at the Siemens Aurangabad facility, Betagard 5SL – *Inspiring Safety*, sets a new benchmark for protection.

Loaded with numerous features, Betagard 5SL is the only patented MCB with a unique **SLR** (Slide Latch-Release)

feature for tool free removal of MCB from DIN rail. It also allows single MCB removal from a bus mounted assembly of MCBs. Betagard 5SL MCB is ergonomically designed and allows user-friendly switching. ON-OFF Status is easily recognizable thanks to the color coded switching position indicator on its attractive grey lever. With highly effective touch protection against accidental contact, Betagard 5SL7 range is available in current rating upto 63A in C and D characteristics.

Features and Benefits



BIS approval for ISI marking as per latest IS/IEC 60898:2002 for assured quality and protection



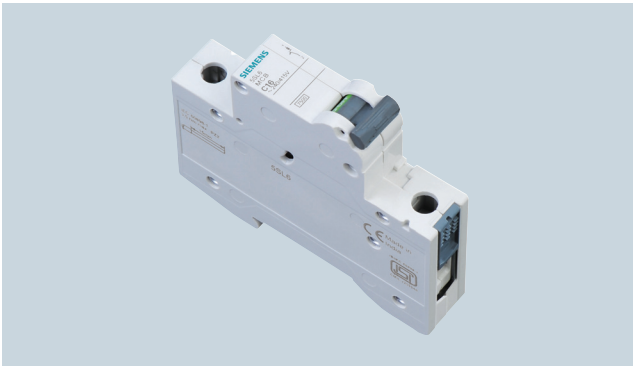
Green product – Recyclable, low watt loss, free from hazardous material like CFC and silicon (ROHS)



MCB with patented unique **SLR** (Slide Latch-Release) feature for tool free removal from DIN rail. It also allows individual MCBs to be removed from bus mounted assembly

Betagard Miniature Circuit Breakers

Betagard Miniature Circuit Breakers Type 5SL7



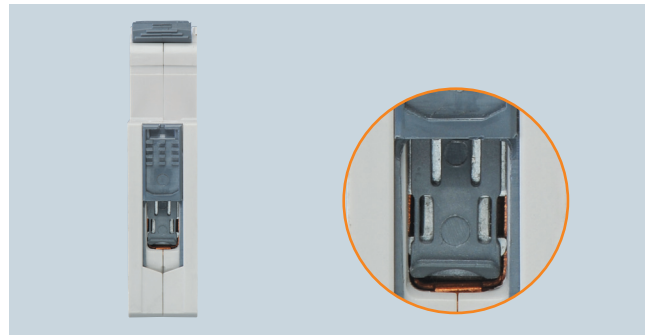
Ergonomically designed, with a user friendly lever for effortless switching



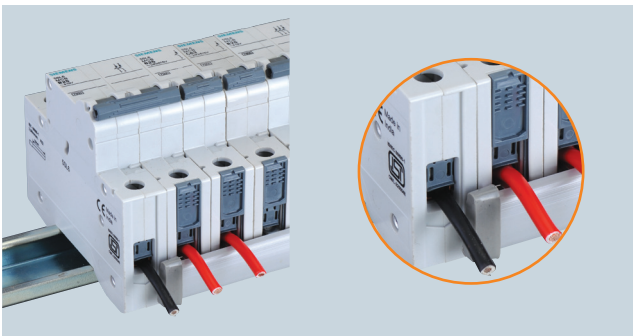
To highlight exact switching position, easily recognizable color coded ON-OFF is embedded on the attractive grey lever



Uniquely designed square terminal to accommodate wire up to 25 Sqmm



Highly effective touch protection against accidental contact



Enables firm mounting of Bus bar together with wire and front access of wires for safer installation



Terminals can accommodate 2 wires of same cross section (Solid up to 2 X 10 mm² and finely stranded with end sleeve up to 2 X 4 mm²) without twisting wire strands facilitates easier and safe wiring



Side mounting accessories like auxiliary switches and fault signaling contacts available for special applications



Lever locking device with maximum 6 mm shackle

Betagard Miniature Circuit Breakers

Betagard Miniature Circuit Breakers Type 5SL7

Application

'C' Characteristics

'C' characteristics MCBs are used for protection of electrical circuits in general and are most widely used because of its suitability for practically all electrical circuits, cable and line protection. They are capable of protecting the majority of inductive and capacitive loads including most motor and fluorescent lighting loads.

This characteristic allows applying loads having high peak currents without requiring the MCB to be oversized. In fact, thanks to this characteristic, it is possible to apply loads with peak currents up to 5 times I_n , (rated current) and can hence be used to best advantage for handling higher inrush currents e.g. lamps, motors, etc. Under 'C' characteristics, the magnetic operating limits (for short-circuit operations) are between 5 and 10 times the rated current (I_n) of MCB. For example the instantaneous mechanism of a 10A MCB will operate between 50A and 100A in an overcurrent situation. The thermal operating limits (for overload operation) are between 1.13 and 1.45 of the rated current (I_n) of the MCB.

'D' Characteristics

D characteristics MCBs are used for protection of electrical circuits involving significant inrush currents like solenoid valves, capacitor banks, transformers, etc.

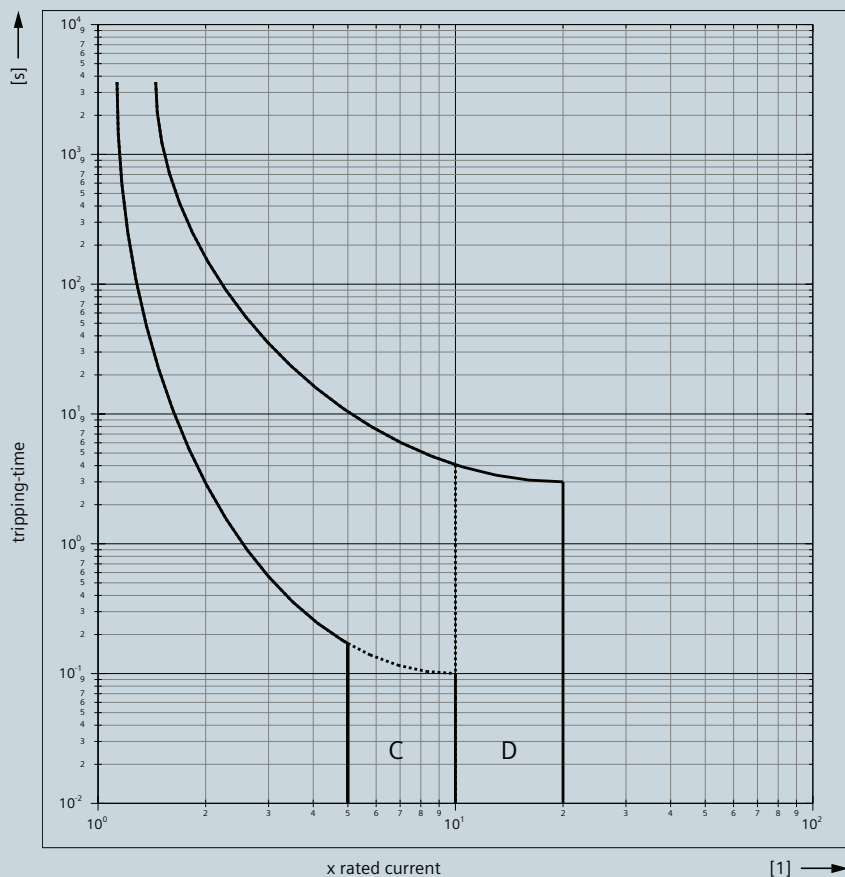
The main use of D characteristics MCBs is to ensure correct sizing of the device wherein high inrush currents are prevailing.

The magnetic operating limits (for short circuit operations) are between 10 to 20 times the rated current of MCB.

For example the instantaneous mechanism of 10A MCB will operate between 100A and 200A in an over current situation.

Characteristic curves

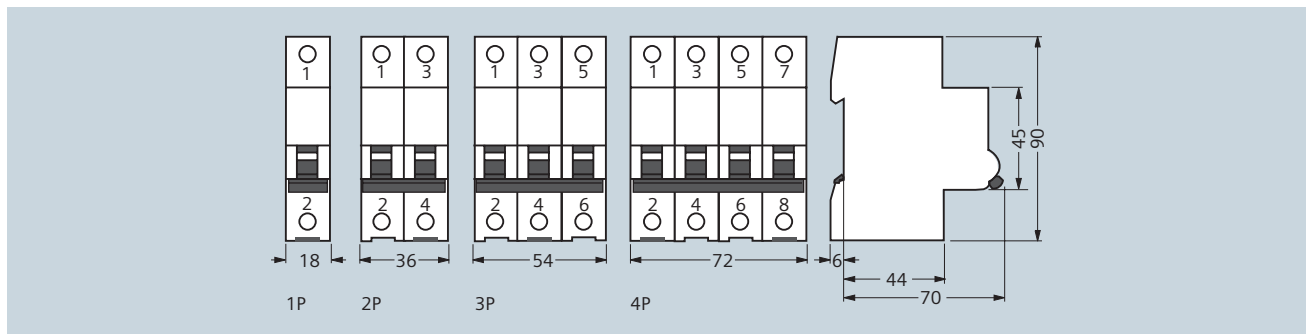
Tripping Characteristics as per IS/IEC 60898-1:2002



Technical Specifications

Betagard 5SL7			
Standards			IS/IEC 60898-1
Rated voltage U_n		V AC	240/415
Tripping characteristics			C, D
Rated current I_n		A	16A to 63A
Operational voltage According to IEC60898-1	Min Max Max	VAC/DC/pole VDC/pole VAC	24 60 250/440
Breaking capacity			
I_{cn} according to IEC60898-1		kA AC	15*
Insulation coordination		VAC	264/457
Overvoltage category			III
Pollution degree			2
Touch protection	According to IEC50274		Yes
Main switch characteristics	According to EN60204		Yes
Handle end position, sealable			Yes
Degree of protection	According to EN60529	Directly installed Put into distribution box	IP20 IP40
Conductor cross section	Solid and stranded Finely stranded, with end sleeve	mm ² mm ²	0.75...35 0.75...25
Installation			
Mains connection AC DC			Any Any
Mounting position			Any
Mechanical service life			20000
Electrical service life			10000
Storage temperature		°C	-40...+75
Ambient temperature		°C	-25...+55, max 95% humidity
Shock	IS/IEC60068-2-27	m/s ²	150 at 10ms half-sine
Resistance to vibration	IS/IEC60068-2-6	m/s ²	50, when 25...150Hz

Dimensional drawings



*5SL7 breaking capacity according to different ratings

D16-32A	15kA
D40-63A	10kA
C16-50A	15kA
C63A	10kA

Betagard Miniature Circuit Breakers

Betagard Miniature Circuit Breakers Type 5SL7

Selection and ordering data	Rated current I_n (A)	MW (1 MW=18 mm)	Reference No C characteristic	Reference No D characteristic	Std. Pkg. (Nos)
1P, 240/415V AC	16 20 25 32 40 50 63	1	5SL71167RC 5SL71207RC 5SL71257RC 5SL71327RC 5SL71407RC 5SL71507RC 5SL71637RC	5SL71168RC 5SL71208RC 5SL71258RC 5SL71328RC 5SL71408RC 5SL71508RC 5SL71638RC	1/12 1/12 1/12 1/12 1/12 1/12 1/12
2P, 415V AC	16 20 25 32 40 50 63	2	5SL72167RC 5SL72207RC 5SL72257RC 5SL72327RC 5SL72407RC 5SL72507RC 5SL72637RC	5SL72168RC 5SL72208RC 5SL72258RC 5SL72328RC 5SL72408RC 5SL72508RC 5SL72638RC	1/6 1/6 1/6 1/6 1/6 1/6 1/6
3P, 415V AC	16 20 25 32 40 50 63	3	5SL73167RC 5SL73207RC 5SL73257RC 5SL73327RC 5SL73407RC 5SL73507RC 5SL73637RC	5SL73168RC 5SL73208RC 5SL73258RC 5SL73328RC 5SL73408RC 5SL73508RC 5SL73638RC	1/4 1/4 1/4 1/4 1/4 1/4 1/4
4P, 415V AC	16 20 25 32 40 50 63	4	5SL74167RC 5SL74207RC 5SL74257RC 5SL74327RC 5SL74407RC 5SL74507RC 5SL74637RC	5SL74168RC 5SL74208RC 5SL74258RC 5SL74328RC 5SL74408RC 5SL74508RC 5SL74638RC	1/3 1/3 1/3 1/3 1/3 1/3 1/3

Selection and ordering data

	Rated current U_n V	MW (1 MW=18 mm)	Reference No	Std. Pkg. (Nos)
	Auxiliary switches (AS)			
	1 NO + 1 NC	0.5	5ST3 010	1/12
	For low power		5ST3 013	1/12
	2 NO		5ST3 011	1/10
	For low power		5ST3 014	1/10
	2 NC		5ST3 012	1/10
	For low power		5ST3 015	1/10
	Auxiliary switches (AS) with TEST button			
	1 NO + 1 NC	0.5	5ST3 010-2	1/10
	For low power		5ST3 013-2	1/10
	2 NO		5ST3 011-2	1/10
	For low power		5ST3 014-2	1/10
	2 NC		5ST3 012-2	1/10
	For low power		5ST3 015-2	1/10
	Fault signal contacts (FC)			
	1 NO + 1 NC	0.5	5ST3 020	1/10
	2 NO		5ST3 021	1/10
	2 NC		5ST3 021	1/10
	Fault signal contacts (FC) with TEST and ACKNOWLEDGE button			
	1 NO + 1 NC	0.5	5ST3 020-2	1/10
	2 NO		5ST3 021-2	1/10
	2 NC		5ST3 021-2	1/10
	Undervoltage releases (UR)			
	With integrated auxiliary switch			
	230 AC	1	5ST3 040	1/5
	110 DC		5ST3 041	1/5
	24 DC		5ST3 042	1/5
	Without integrated auxiliary switch			
	230 AC	1	5ST3 043	1/5
	110 DC		5ST3 044	1/5
	24 DC		5ST3 045	1/5
	Shunt trips (units)			
	110 ... 415 V AC	1	5ST3 030	1/5
	24 ... 60 V AC/DC	1	5ST3 031	1/5

Betagard Miniature Circuit Breakers

Accessories

Selection and ordering data

	Version	MW (1 MW=18 mm)	Reference No	Std. Pkg. (Nos)
 	Handle locking devices Sealable to prevent undesired mechanical ON/OFF switching For 5SP and 5SL5 miniature circuit breakers For padlock with max. 3 mm shackle		5ST3 801	1/1
	For 5SL miniature circuit breakers For padlock with 3 ... 6 mm shackle		5ST3 806	1/5
	Padlocks For 5ST3 801 and 5ST3 806 handle locking devices		5ST3 802	1/5

Rotary Handle Assembly

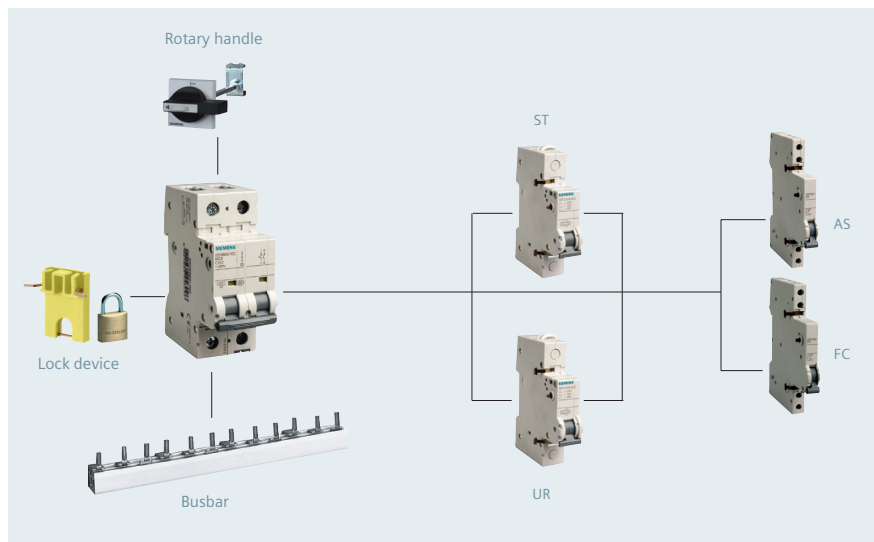
Benefits

- Series of MCBs/ Isolators can be fitted with Betagard Rotary Handle Assembly (ROH) for installation in Switchgear Cubicles and Distribution Panels
- The ROH gives operating uniformity and improves the aesthetics of the panel.
- The ROH can be padlocked in OFF position with the help of suitable padlocks thereby ensuring complete safety to operating personal during maintenance.
- Door interlock and defeat facility is available as a standard feature.

Technical Details:

	Product	Order No	Weight 1 item Kg	Std. Pkg. (Nos)
	Rotary Handle Assembly	5ST38140RC	0.584	1/1

Accessory mounting guide



Your partners

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