

SM15 - Series Earth Leakages

The SM15 is a single phase heavy duty industrial earth leakage circuit breaker available as a surface mount and CBI Mini rail mount device. This earth leakage circuit breaker is available with earth leakage sensitivity of 30, 100, 250, 500 and 1000 mA.



SM15A
Mini Rail & Surface Mount

Features

- Hydraulic-magnetic technology
- 100% rating capability, independent of ambient temperature
- VC 8035 compliant
- AS/NZS 3190 compliant
- Immune to pulsating DC load current
- Operating Voltage 110 and 240 Vac
- Ratings 10 to 100 A
- Earth Leakage sensitivity 30 mA, 100 mA, 250 mA, 500 mA, 1000 mA, **Type A**
- Single pole plus switched neutral earth leakage protection
- Precision tripping characteristics
- Can be switched on immediately after tripping
- Suitable to use for electrical isolation

Applications

- Mining, heavy industrial and commercial applications requiring high sensitivity earth leakage protection from electrical shock and fire hazards

Approvals

VC 8035

AS/NZS 3190

Hydraulic-Magnetic Circuit Breakers 100% rated, unaffected by ambient temperature

SM15 - Series Earth Leakages

Technical Data

Product Type	SM15
Approvals	VC 8035
Number of Poles	1+N
Standard Ampere Ratings	10 to 100 A
Sensitivity	30 mA
Rated Voltage	110 Vac and 240 Vac
Ultimate S/C Breaking Capacity (Icu)	5 kA
Time Delay Curves	2

Product Type	SM15
Approvals	AS/NZS 3190
Number of Poles	1+N
Standard Ampere Ratings	10 to 100 A
Sensitivity	100 mA, 250 mA, 500 mA, 1000 mA
Rated Voltage	240 Vac
Ultimate S/C Breaking Capacity (Icu)	6 kA
Time Delay Curves	2

Product Type	SM15
Operating Temperature Range	-40 °C to +85 °C
Mounting Options	CBI Mini rail, surface mount
Time Delay Curves	2
Endurance	1500 electrical operations (AS/NZS 3190)
Dielectric Strength	1480 V (single pole) / 1830 V (multi pole), 50 Hz for one minute after testing
Weight	500 g per pole (unpacked)
Humidity	35 to 85% relative
Altitude	Certification tests done at altitude ~ 2000 metres. Will operate at higher altitudes.
Shock	16 G (IEC 60068-2-27)
Vibration	2 G (IEC 60068-2-6) (sinusoidal wave)
Flammability	I3 - Ignition does not persist at 850 °C after glow wire is withdrawn with an oxygen index of ≥ 28
Toxicity	F1 - Smoke index of ≤ 20 which determines the fume class
Pollution Degree	PD2 - Normally only non-conductive pollution occurs. Temporary conductivity caused by condensation is to be expected.

Earth Leakage	Wire Size (IEC)	Torque (IEC)	Comments
1+N	0.75 mm ² - 35 mm ²	2.5 Nm	Pozidriv #2 Combi head

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Long Code

Example Code: SM-15-A--2-100A-100mA-240V

Group	1	2	3	4	5	6	7	8	9	10
Requirement	S Frame	Type M	1 pole + N	Overload	No auxiliary	Medium delay curve 2	Current rat- ing 100 A	Sensitivity 100 mA	Voltage 240 Vac	No special termination
Long Code	S	M	15	A	-	2	100A	100mA	240V	-

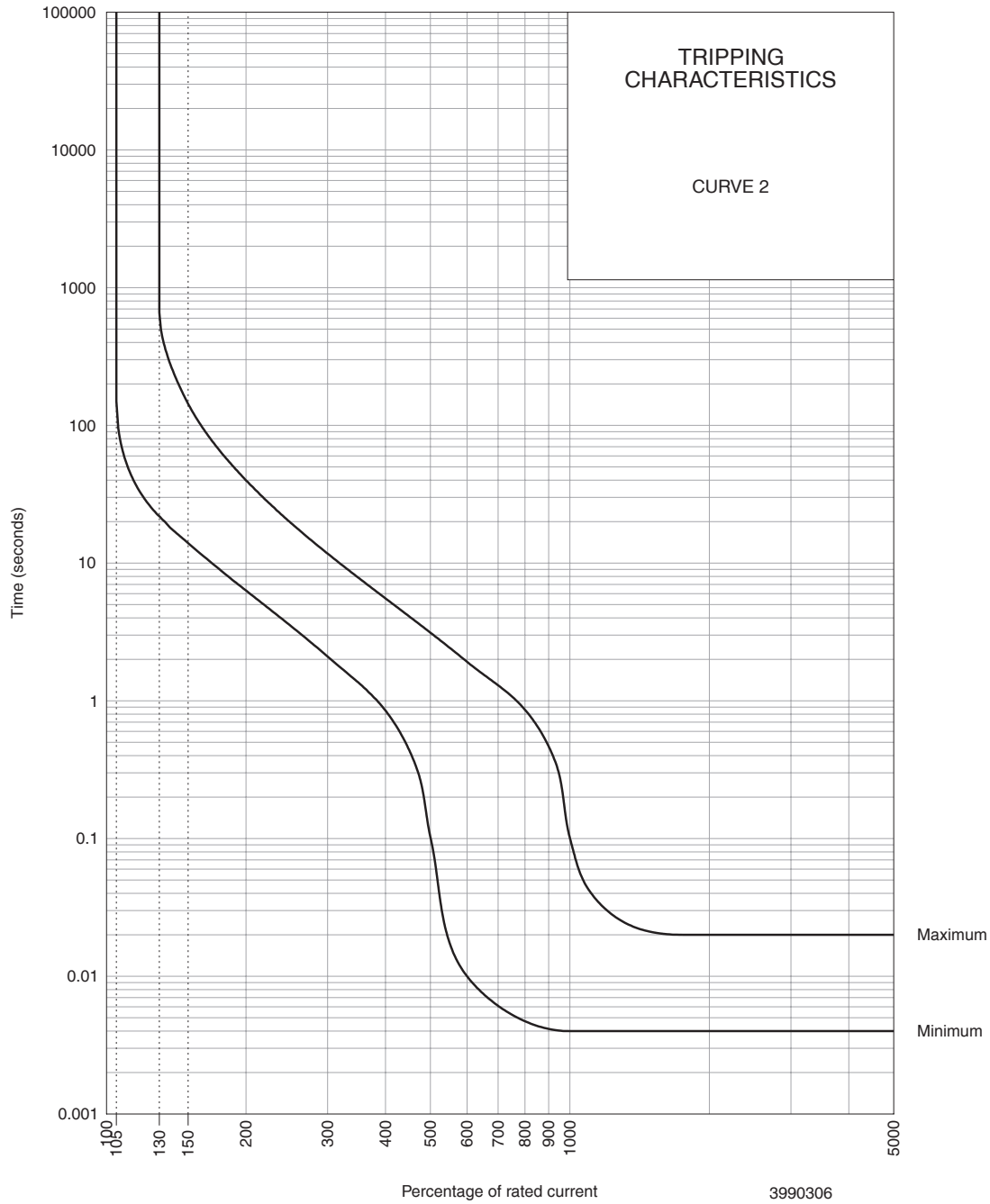
Ordering Information

Group 1: Frame Type	Code	Description	Comments
	S	65 mm wide earth leakage	
Group 2: Product Type	Code	Description	Comments
	N	110 Vac, 5 kA	
	M	240 Vac, 6 kA	
Group 3: No of Poles	Code	Description	Comments
	15	Single pole plus switched neutral (1+N)	SM15
Group 4: E-L Type	Code	Description	Comments
	A	Overload	White and green handle
Group 5: Auxiliary / Additional Pole	Code	Description	Comments
	-	Not applicable	
Group 6: Time Delays	Code	Description	Comments
	2	Medium time delay	
Group 7: Current Ratings	Code / Description		Comments
	10, 15, 16, 20, 30, 40, 45, 50, 60, 80, 100 A		SM15 Ratings available vary depending on certification * Other ratings are available as special orders. Check availability.
Group 8: Sensitivity	Code	Description	Comments
	K	30 mA	Standard
	M	100 mA	Standard
	N	250 mA	Standard
	O	500 mA	Standard
	R	1000 mA	Standard
Group 9: Voltage	Code	Description	Comments
	110 V	110 Vac	
	240 V	240 Vac	
Group 10: Special Termination	Code	Description	Comments
	-	No special termination	

For options not listed, please contact CBI

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Time Delay Curve

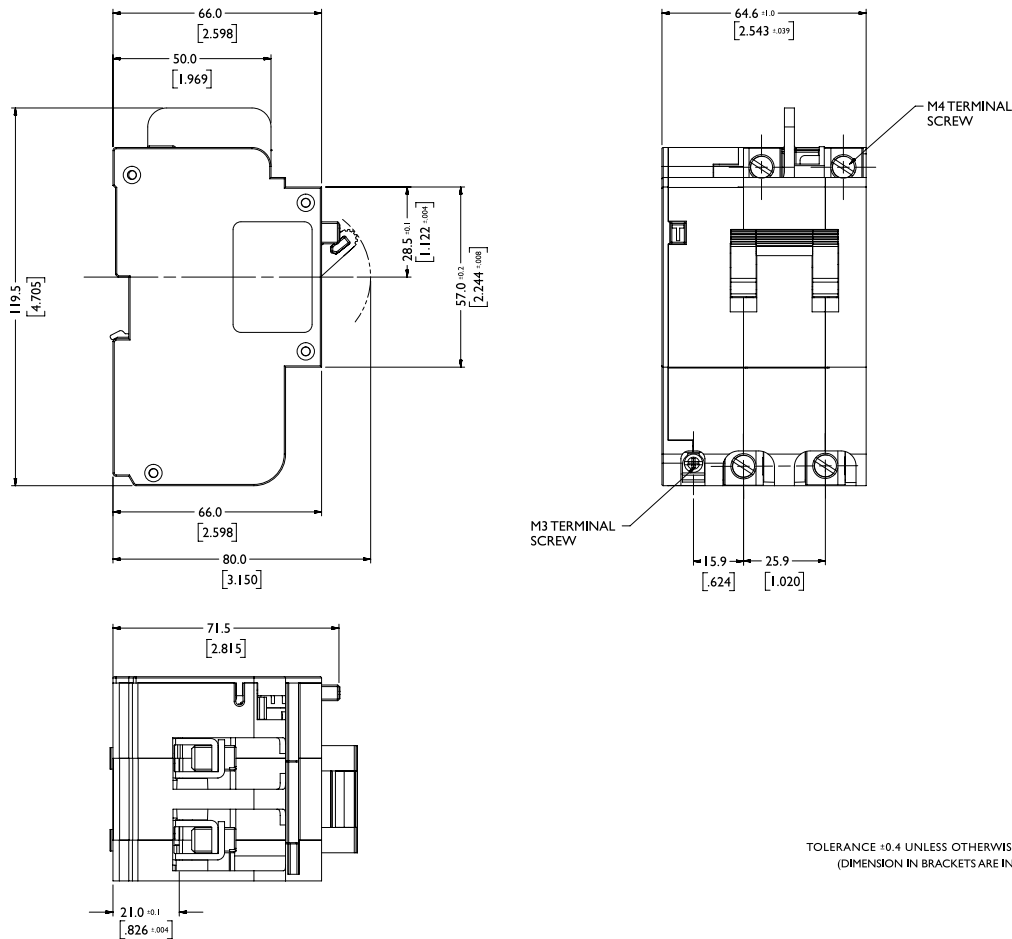


PERCENTAGE OF RATED CURRENT	105%	130%	145%	150%	200%	300%	400%	500%	600%	700%	800%	900%	1000%	2000%
MINIMUM TRIP TIME IN SECONDS	NO TRIP	22	15.4	14	6.3	2.1	0.85	0.1	0.001	0.006	0.005	0.041	0.004	0.004
MAXIMUM TRIP TIME IN SECONDS	NO TRIP	660	180	144	40	12	5.5	3	1.92	1.3	0.86	0.47	0.1	0.02

* The published time delay curves are generated at 30°C ambient temperature with the Circuit Breaker mounted in the up-right position. The “must hold”, “must trip” and “instantaneous trip” current values are not affected by temperature, although delay time for the other operating current values may have to be adjusted using the temperature compensation curve which is available on request.

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Outline Dimensions: Mini rail & Surface mount



TOLERANCE ± 0.4 UNLESS OTHERWISE SPECIFIED
(DIMENSION IN BRACKETS ARE IN INCH)

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