

## SF36 - Series Earth Leakages

The SF36 is a three 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 mA.



**SF36A**  
Mini Rail Mount  
Surface Mount



**SF36C**  
Mini Rail Mount  
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
- Ratings 10 A to 80 A
- Earth Leakage sensitivity 30 mA, **Type A**
- Three pole plus switched neutral earth leakage protection
- Switches all active and neutral poles
- Precision tripping characteristics
- Can be switched on immediately after tripping
- Suitable to use for electrical isolation
- Surface mount & Mini Rail mount
- 55 mm front escutcheon

### 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*

## SF36 - Series Earth Leakages

### Technical Data

Product Type	SF36A	SF36C
Approvals	VC 8035	
Number of Poles	3+N	3+N
Standard Ampere Ratings	10 A to 80 A	80 A
Sensitivity	30 mA	30 mA
Rated Voltage	415 Vac	415 Vac
Ultimate S/C Breaking Capacity (Icu)	5 kA	-
Rated S/C Withstand Capacity (Icw)	-	5 kA / 40 mS

Product Type	SF36AE	SF36CE
Approvals	AS/NZS 3190	
Number of Poles	3+N	3+N
Standard Ampere Ratings	10 A to 80 A	80 A
Sensitivity	30 mA	30 mA
Rated Voltage	415 Vac	415 Vac
Ultimate S/C Breaking Capacity (Icu)	6 kA	-
Rated S/C Withstand Capacity (Icw)	-	6 kA

Product Type	SF36
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	960 g (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Flammability	I3 - Ignition does not persist at 850 °C after glow wire is withdrawn with an oxygen index of ≥ 28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 mm <sup>2</sup> (IEC)	Torque (IEC)	Comments
Main Terminals	0.75 - 35 mm <sup>2</sup>	2.5 Nm	Pozidriv #2 Combi head

## SF36 - Series Earth Leakages

### Long Code

Example Code: S-F-36-AE--2--80A-30mA-415V----

Group	1	2	3	4	5	6	7	8	9	10
Requirement	S Frame	Type F	3 pole + N	Overload	No auxiliary	Medium delay curve 2	Current rating 80 A	Sensitivity 30 mA	Voltage 415 Vac	No special termination
Long Code	S	F	36	AE	-	2	80A	30 mA	415 V	-

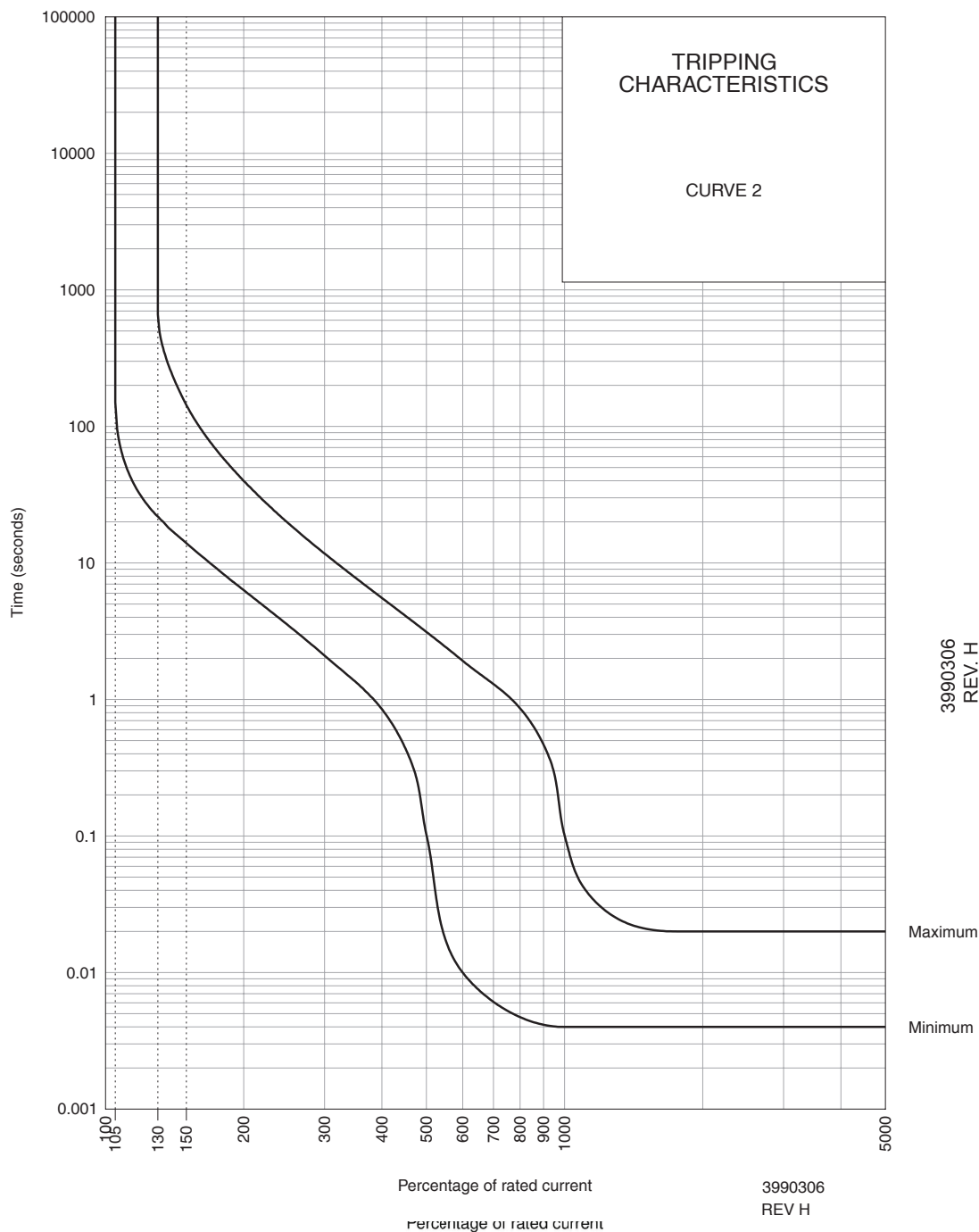
### Ordering Information

Group 1: Frame Type	Code	Description	Comments
	S	117 mm wide earth leakage	
Group 2: Product Type	Code	Description	Comments
	F	415 Vac, 6 kA	
Group 3: No of Poles	Code	Description	Comments
	36	Three pole plus switched neutral (3+N)	SF36
Group 4: E-L Type	Code	Description	Comments
	AE	Overload	White and green handle
	CE	Switch disconnecter	Green handle
Group 5: Auxiliary / Additional Pole	Code	Description	Comments
	-	Not applicable	
	A	Auxiliary switch	
Group 6: Time Delays	Code	Description	Comments
	2	Medium time delay	
Group 7: Current Ratings	Code / Description		Comments
	10, 16, 20, 25, 32, 40, 63, 80 A		SF36A Ratings available vary depending on certification * Other ratings are available as special orders. Check availability.
	80 A		SF36C
Group 8: Sensitivity	Code	Description	Comments
	30mA	30 mA	Standard
Group 9: Voltage	Code	Description	Comments
	415V	415 Vac	
Group 10: Special Termination	Code	Description	Comments
	-	No special termination	

*For options not listed, please contact CBI*

## SF36 - Series Earth Leakages

### Time Delay Curves

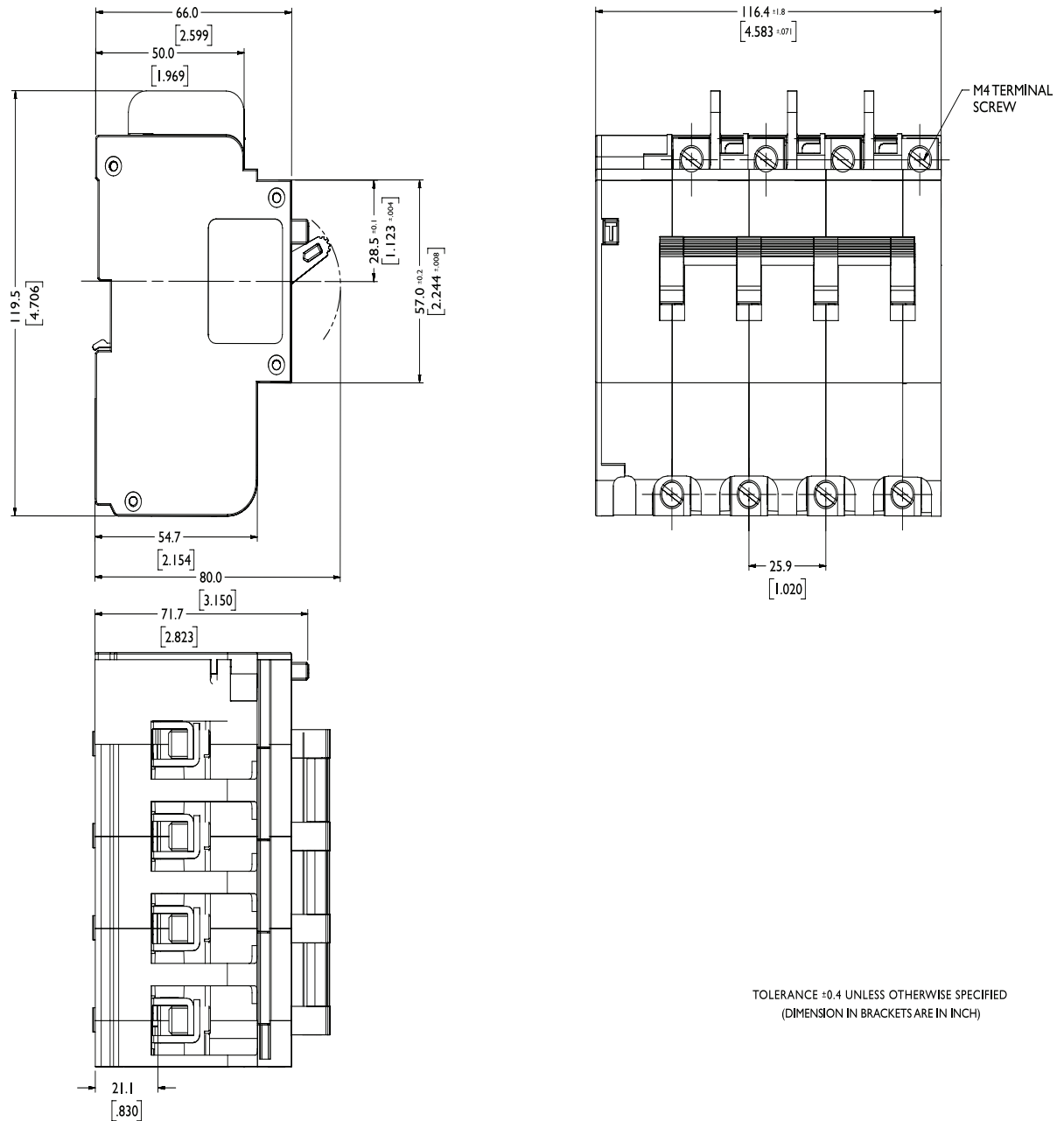


PERCENTAGE OF RATED CURRENT	105%	130%	145%	150%	200%	300%	400%	500%	600%	700%	800%	900%	1000%	2000%
MINIMUM TRIP TIME IN SECONDS	NO TRIP	22	15.4	14	6.3	2.1	0.85	0.1	0.001	0.006	0.005	0.041	0.004	0.004
MAXIMUM TRIP TIME IN SECONDS	NO TRIP	660	180	144	40	12	5.5	3	1.92	1.3	0.86	0.47	0.1	0.02

\* 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.

## SF36 - Series Earth Leakages

### Outline Dimensions: SF36



Please review our Customer Terms and Conditions on [www.cbi-lowvoltage.co.za](http://www.cbi-lowvoltage.co.za)

All rights reserved. Unless otherwise indicated, all materials on these pages are copyrighted by CBI (Pty) Ltd. No part of these pages, either text or image may be used for any purpose other than personal use. Therefore, reproduction, modification, storage in a retrieval system or retransmission, in any form or by any means, electronic, mechanical or otherwise, for reasons other than personal use, is strictly prohibited without prior written permission. CBI (Pty) Ltd reserves the right to alter any details of this document without notice and while every effort is made to ensure the accuracy of the content, no warranty is given as to the accuracy of this document and no responsibility will be accepted for error or misinterpretation and any resulting loss.

#### AUSTRALIA

**CBI-electric: Australia**  
27 Wedgewood Rd, Hallam  
Victoria 3803 Australia  
Tel: +61 3 8752 9300  
Fax: +61 3 9796 5407  
Email: [sales@cbi-electric.com.au](mailto:sales@cbi-electric.com.au)  
Website: [www.cbi-electric.com.au](http://www.cbi-electric.com.au)

#### SOUTH AFRICA

**CBI-electric: low voltage**  
Tripswitch Drive Elandsfontein  
Gauteng South Africa  
Tel: +27 11 928 2000  
Fax: +27 11 392 2354  
Email: [cbi@cbi-electric.com](mailto:cbi@cbi-electric.com)  
[internationalsales@cbi-electric.com](mailto:internationalsales@cbi-electric.com)  
Website: [www.cbi-lowvoltage.com](http://www.cbi-lowvoltage.com)

#### USA

**CBI-electric: North America**  
35 E. Uwchlan Ave Suite 328  
Exton PA 19341 USA  
Tel: +1 610 524 9949  
Fax: +1 610 524 9945  
E-mail: [info@cbibreakers.com](mailto:info@cbibreakers.com)  
Website: [www.cbibreakers.com](http://www.cbibreakers.com)