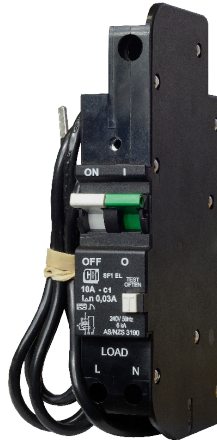


SF1EL - Series Earth Leakages

The SF1EL is a 26 mm wide, Surface, Rail and Front mounted earth leakage circuit breaker with a switched neutral and an additional 50 cm neutral cable attached. It is applied in commercial and industrial applications.



SF1EL
Surface Mount

Features

- Hydraulic-magnetic technology
- 100% rating capability, independent of ambient temperature
- AS/NZS 3190 compliant
- Compact width 26 mm
- Operating voltage 240 Vac single pole
- Immune to pulsating DC load current
- Ratings 6 A to 40 A
- Earth leakage sensitivity 10 mA or 30 mA, **Type A**
- Single pole plus switched neutral earth leakage protection
- Additional neutral wire
- Precision tripping characteristics
- Trip indication with mid-trip position
- Can be switched on immediately after tripping
- Suitable to use for electrical isolation
- Shell design permits easier installation onto busbar

Applications

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

Approvals

AS/NZS 3190

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

SF1EL - Series Earth Leakages

Technical Data

Product Type	SF1EL
Approvals	AS/NZS 3190
Number of Poles	1+N
Standard Ampere Ratings	6, 10, 16, 20, 25, 32, 40 A
Sensitivity	10 mA / 30 mA
Rated Voltage	240 Vac
Rated Interrupting	6 kA

Product Type	SF1EL
Operating Temperature Range	-40 °C to +85 °C
Mounting Options	Surface mount
Time Delay Curves	1, 2, 3
Endurance	1500 electrical operations (AS/NZS 3190)
Dielectric Strength	1480 V (single pole), 50 Hz for one minute after testing
Weight	400 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Flammability	I3 - Ignition does not persist at 850 °C after glow wire is withdrawn with an oxygen index of ≥ 28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 mm ² (IEC)	Torque (IEC)	Comments
Main Terminals	0.75 - 35 mm ²	2.5 Nm	Pozidriv #2 Combi head + Flat

SF1EL - Series Earth Leakages

Long Code

Example Code: SF1EL-2-40-A---30mA-240V--

Group	1	2	3	4	5	6	7	8	9	10
Requirement	S Frame	Type F	1 pole + N	Overload	No auxiliary	Medium delay curve 2	Current rating 40 A	Sensitivity 30 mA	Voltage 240 Vac	No special termination
Long Code	S	F	1	EL	-	2	40A	30mA	240V	-

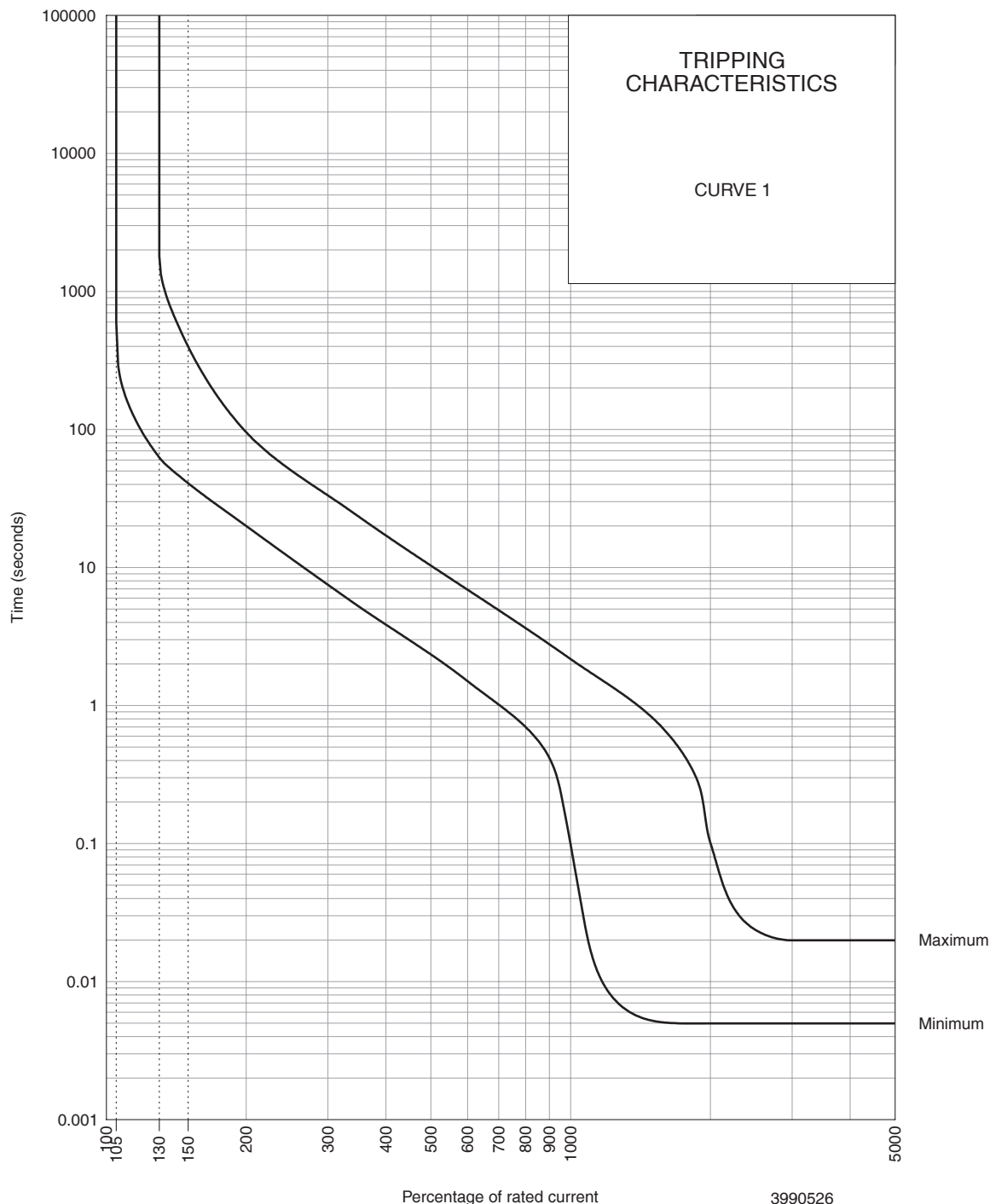
Ordering Information

Group 1: Frame Type	Code	Description	Comments
	S	26 mm wide earth leakage	
Group 2: Product Type	Code	Description	Comments
	F	240 Vac, 6 kA	
Group 3: No of Poles	Code	Description	Comments
	1	Single pole plus switched neutral (1+N)	SF1EL
Group 4: E-L Type	Code	Description	Comments
	EL	Overload	White and green handle
Group 5: Auxiliary / Additional Pole	Code	Description	Comments
	-	Not applicable	
	A	Auxiliary switch	
Group 6: Time Delays	Code	Description	Comments
	1	Long time delay	
	2	Medium time delay	
Group 7: Current Ratings	Code / Description		Comments
	6, 10, 16, 20, 25, 32, 40 A		SF1EL Ratings available vary depending on certification * Other ratings are available as special orders. Check availability.
Group 8: Sensitivity	Code	Description	Comments
	10mA	10 mA	
	30mA	30 mA	
Group 9: Voltage	Code	Description	Comments
	240 V	240 Vac	
Group 10: Special Termination	Code	Description	Comments
	-	No special termination	

For options not listed, please contact CBI

SF1EL - Series Earth Leakages

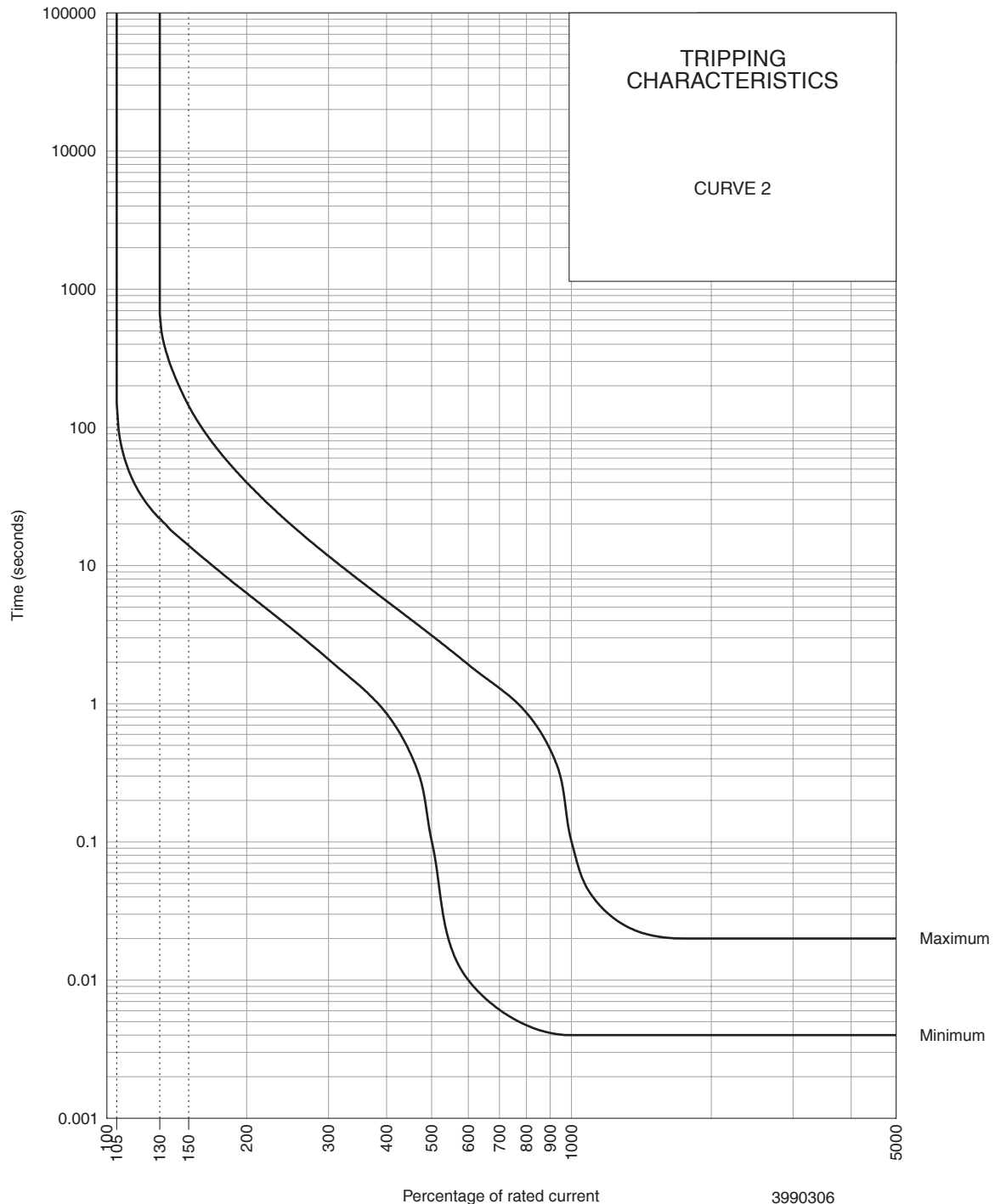
Time Delay Curves



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	63	45	41	20	7.5	3.8	2.3	1.5	1.01	0.7	0.42	0.1	0.005
MAXIMUM TRIP TIME IN SECONDS	NO TRIP	1800	503	400	96	34	17	10.3	6.8	4.9	3.6	2.8	2.2	0.1

SF1EL - Series Earth Leakages

Time Delay Curves

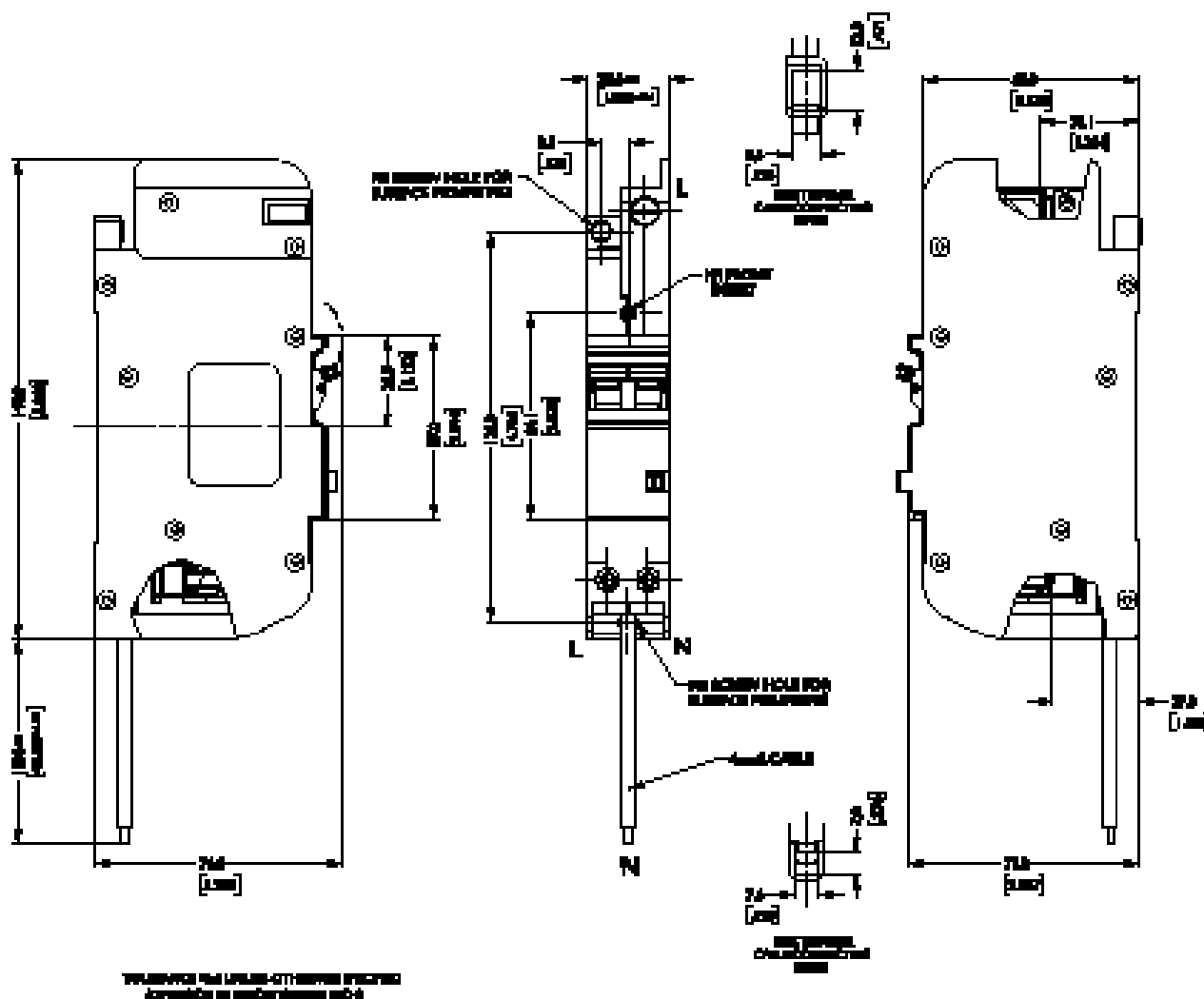


PERCENTAGE OF RATED CURRENT	105%	130%	145%	150%	200%	300%	400%	500%	600%	700%	800%	900%	1000%	2000%
MINIMUM TRIP TIME IN SECONDS	NO TRIP	22	15.4	14	6.3	2.1	0.85	0.1	0.001	0.006	0.005	0.041	0.004	0.004
MAXIMUM TRIP TIME IN SECONDS	NO TRIP	660	180	144	40	12	5.5	3	1.92	1.3	0.86	0.47	0.1	0.02

* 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.

SF1EL - Series Earth Leakages

Outline Dimensions: Surface Mount



TECHNICAL DATA SUBJECT TO CHANGE WITHOUT NOTICE

Please review our Customer Terms and Conditions on 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 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
Website: www.cbi-electric.com.au

INDIA

CBI-electric: Asia
A1, Pushpagiri Residency, 1st Cross
2nd Main, Jyothi Nagar, B.G Road
Bengaluru 560083, India
Tel: +91-9880553153
Email: salesasia@cbi-electric.com
Website: www.cbibreakers.com
Website: www.cbi-lowvoltage.com

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
internationalsales@cbi-electric.com
Website: 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
Website: www.cbibreakers.com