

## SF1EL - Series Earth Leakages

The SF1EL is a 26 mm wide, surface 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 3111 and AS/NZS 3190 compliant
- Compact width 26 mm
- Operating voltage 240V AC single pole
- Immune to pulsating DC load current
- Ratings 6 to 40 A
- Earth leakage sensitivity 10 mA or 30 mA
- Single pole plus switched neutral earth leakage protection
- Additional neutral wire
- Precision tripping characteristics
- Trip indication with mid-trip position
- Reset immediately after overload
- 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
- Telecom / datacom equipment
- Lighting control
- UPS equipment
- Alternative energy equipment
- Mobile power generation equipment
- Railway signalling and infrastructure

### Approvals



## SF1EL - Series Earth Leakages

### Technical Data

Product Type	SF1EL
Approvals	AS/NZS 3111,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	240V
Operating Voltage	240V AC
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 3111,AS/NZS 3190)
Dielectric Strength	1480V (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 600068-2-27)
Vibration	2 G (IEC 600068-2-27) (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Flammability	I3 - Ignition does not persist at 850 °C after glow wire is withdrawn with an oxygen index of ≥ 28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
1+N	0.75 - 35 mm <sup>2</sup>	2.5 Nm	Pozidriv #2 Combi head + Flat

## SF1EL - Series Earth Leakages

### Ordering Information

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

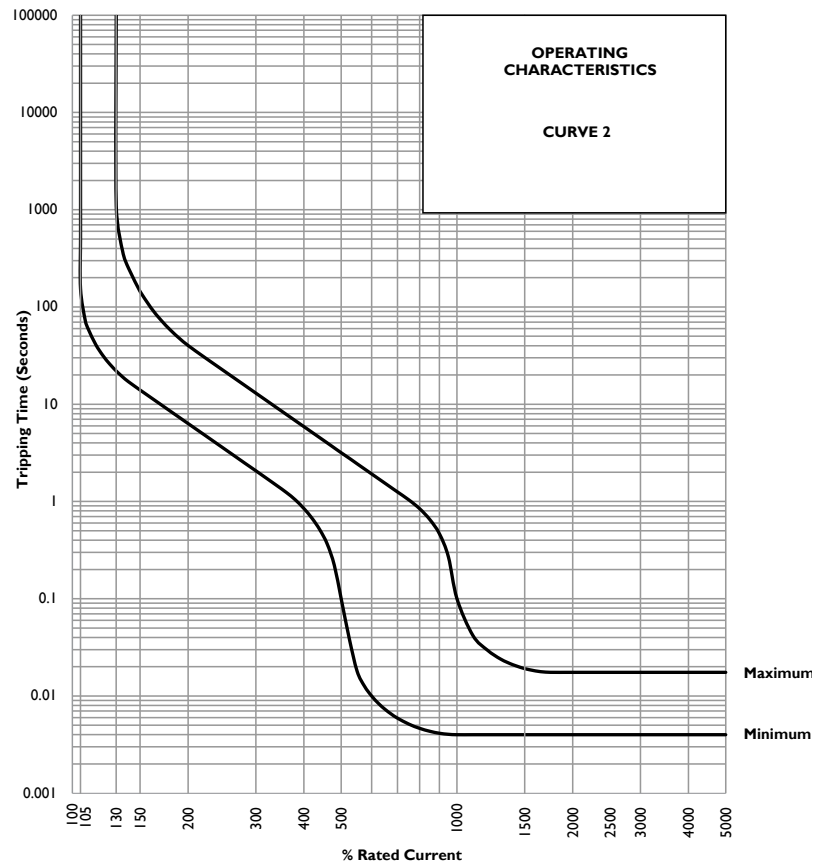
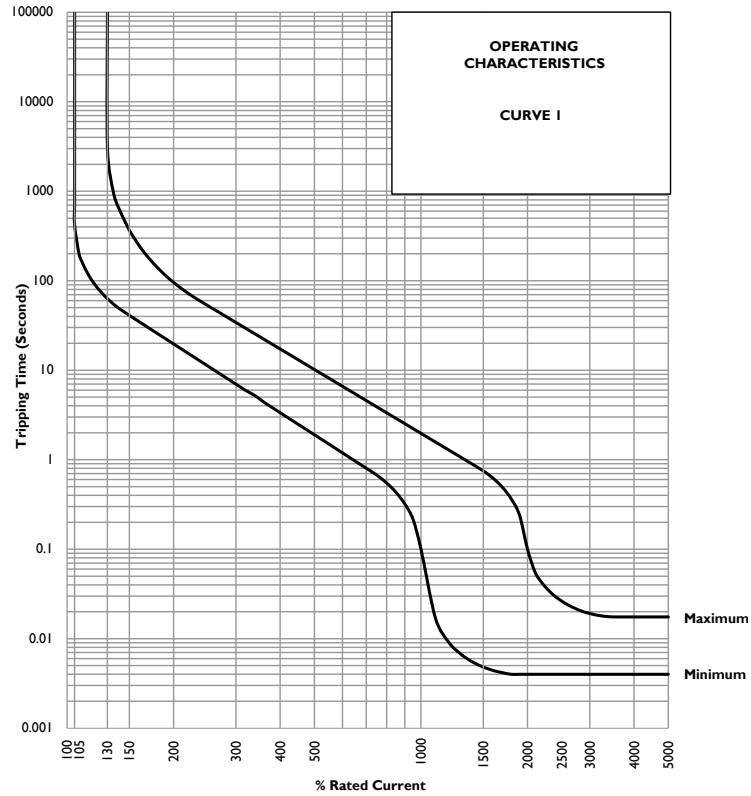
Group	1	2	3	4	5	6	7	8	9	10
Requirement	S Frame	Type F	1 pole + N	Overload	No auxiliary	Medium delay curve 2	Current rating 40 A	Sensitivity 30 mA	Voltage 240 V AC	No special termination
Long Code	S	F	1	EL	-	2	40A	30mA	240V	-

Group	Code	Description	Comments
<b>Group 1: Frame Type</b>	S	26 mm wide earth leakage	
<b>Group 2: Product Type</b>	F	240 V AC, 6 kA	
<b>Group 3: No of Poles</b>	1	Single pole plus switched neutral (1+N)	SF1EL
<b>Group 4: E-L Type</b>	EL	Overload (auto tripping)	White and green handle C / Orange
<b>Group 5: Auxiliary / Additional Pole</b>	-	Not applicable	Use this code if no auxiliary used
	A	Auxiliary switch	
<b>Group 6: Time Delays</b>	1	Long time delay	
	2	Medium time delay	
	3	Short time delay	
<b>Group 7: Current Ratings</b>	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.
<b>Group 8: Sensitivity</b>	Code	Description	Comments
	10mA	10 mA	
	30mA	30 mA	
<b>Group 9: Voltage</b>	Code	Description	Comments
	240V	240 V AC	
<b>Group 10: Special Termination</b>	Code	Description	Comments
	-	No special termination	

*For options not listed, please contact CBI*

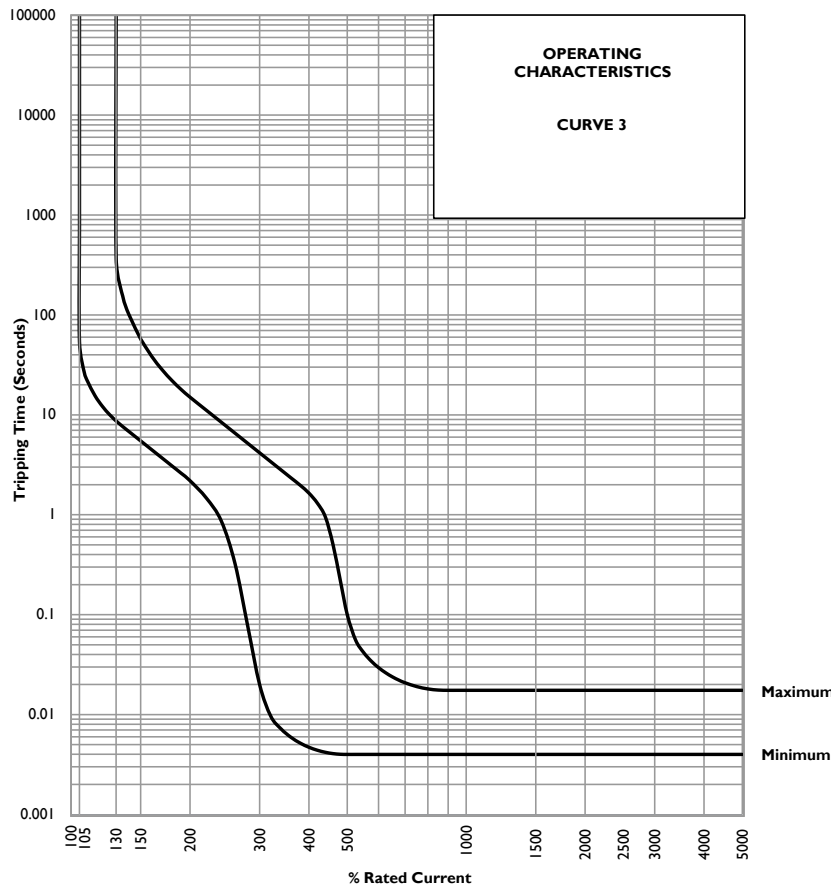
# SFIEL - Series Earth Leakages

## Time Delay Curves



## SFIEL - Series Earth Leakages

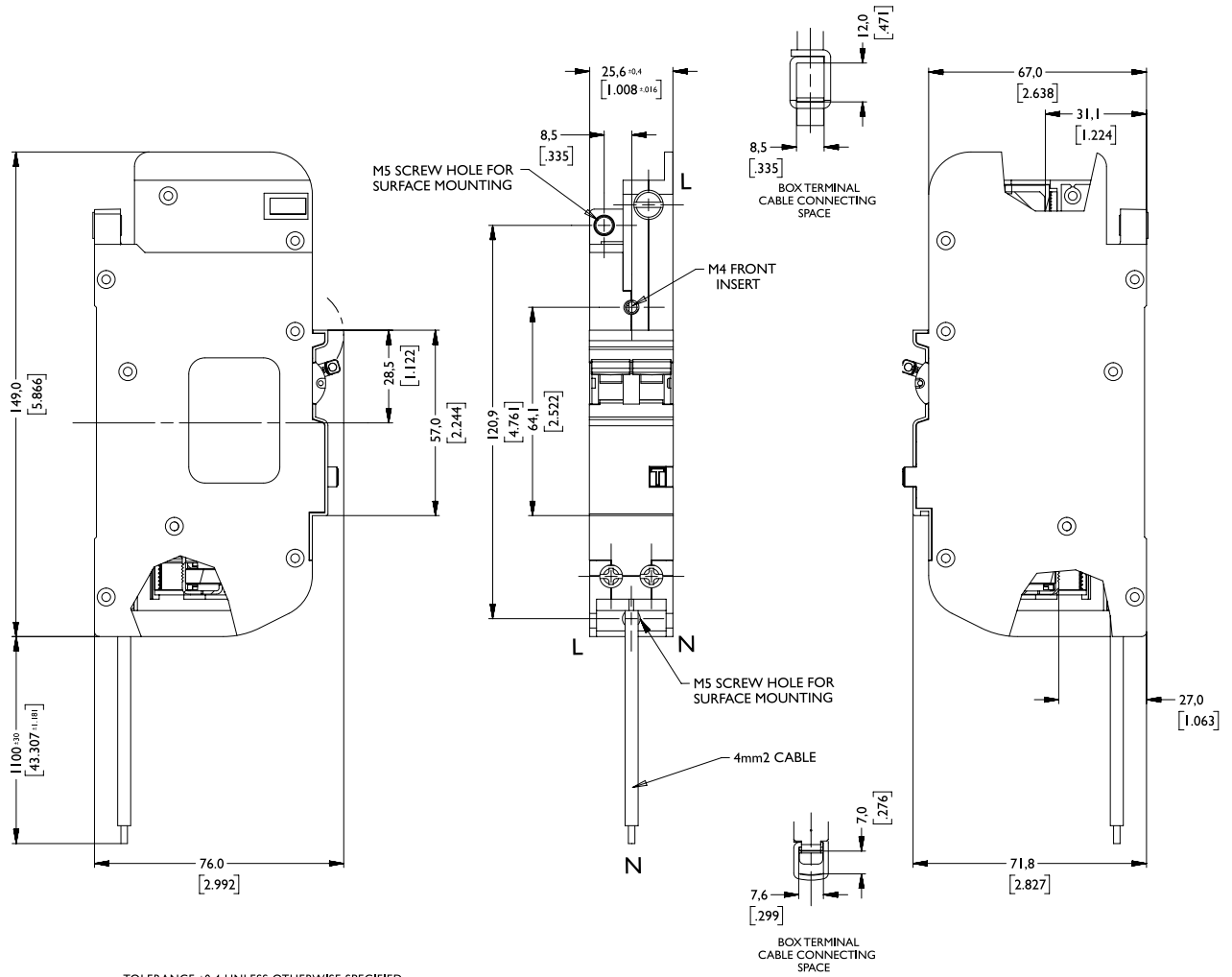
### Time Delay Curves



\* 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.

## QF36 - Series Earth Leakages

### Outline Dimensions: Surface Mount



TOLERANCE  $\pm 0.4$  UNLESS OTHERWISE SPECIFIED  
(DIMENSION IN BRACKETS ARE IN INCH)

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