

SEL Timed-Reset Fault Indicators

SEL-BTRI and SEL-TR



Economical fault indicators for momentary fault and backfeed applications

- Fault indicating is fast (1 ms) and reliable for overhead and underground distribution circuits.
- Timed-reset status indication gives crews time to locate the faulted circuit section, regardless of the circuit condition.
- Trip thresholds from 50 to 1,200 A allow universal application across distribution systems.



Introduction

SEL overhead and underground timed-reset faulted-circuit indicators (FCIs) hold their tripped status indication for a set time, regardless of the presence of current or voltage on the distribution circuit. You can use this functionality for applications where backfeed voltage or current can falsely reset restoration-reset FCIs in the fault path.

The 1 ms trip response time and time-based reset interval make SEL timed-reset FCIs ideal for momentary fault-locating applications. After a line re-energizes following a momentary fault, restoration-reset FCIs in the fault path will reset, making it a challenge to locate the fault. SEL timed-reset FCIs continue to lead crews to the fault location even after power is restored.

Reset Intervals

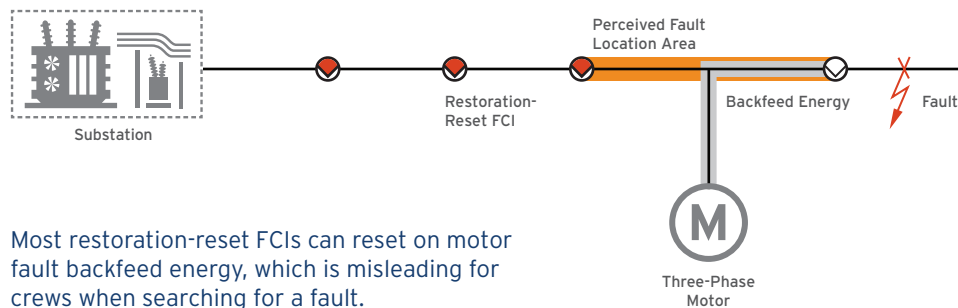
A factory-set 2-, 4-, or 8-hour reset interval will automatically reset the SEL timed-reset FCI. You can also manually reset the units using the CRSRTT magnet tool.

Economical Solution

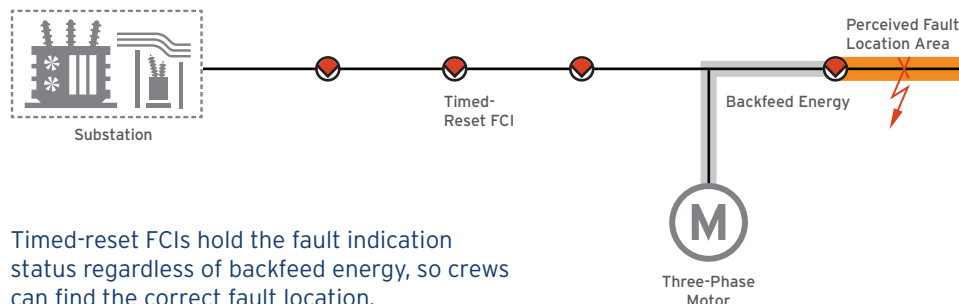
SEL timed-reset FCIs are available with a long-lasting nonreplaceable battery for installations that require zero maintenance.

Industrial Backfeed

Circuits feeding large industrial equipment and rotating machinery can contribute energy into a fault past the FCI's location within the fault path. Sometimes this energy is sufficient to reset a current- or voltage-reset FCI, misleading crews searching for a fault. The timed-reset FCI provides fault indication for the reset period regardless of the duration or magnitude of the backfeed condition.



Most restoration-reset FCIs can reset on motor fault backfeed energy, which is misleading for crews when searching for a fault.



Timed-reset FCIs hold the fault indication status regardless of backfeed energy, so crews can find the correct fault location.

SEL-BTRI Overhead BEACON Timed-Reset Fault Indicator

The SEL-BTRI is ideal for overhead taps, near underground transitions, at overhead midfeeder disconnects, and near unfused taps or riser poles. With its super-bright LED display and simple hot stick installation, the SEL-BTRI is a smart, economical choice for systems that struggle with momentary faults.

Inrush Restraint Coordination

The inrush restraint feature prevents false tripping during recloser operations by not responding to temporary current surges caused by transformer re-energization inrush (circuit re-energization), making it ideal for use with automatic reclosing schemes.



SEL-TR Underground Timed-Reset Fault Indicator

The SEL-TR is ideal for underground systems that do not provide sufficient voltage or current to reset and arm a fault indicator.

Remote Displays That Reduce Fault-Finding Time

Remote display options save time and improve safety by eliminating the need for line crews to open high-voltage enclosures or enter subsurface vaults during fault-finding patrols. The SEL-TR is compatible with a variety of remote display options, including energy-efficient mechanical flag displays and bright BEACON® LED displays.



Large "L"
Display (BEACON
LED optional)



Standard "V"
Display (BEACON
LED optional)



BEACON Bolt®
display



RadioRANGER®
Remote Fault Reader
(SEL-8310 Display)

Specifications

	SEL-BTRI	SEL-TR
Power Source	3.6 V lithium battery with a 20-year shelf life	3.6 V lithium battery with a 20-year shelf life
Replaceable Battery	2.4 Ah cell	2.4 Ah cell
Nonreplaceable Battery	8.5 Ah cell	8.5 Ah cell
Nominal Trip Ratings	50 to 1,200 A	50 to 1,200 A
Trip Tolerance	±10%	±10%
System Voltage Range (L-L)	8,660 V to 38 kV	N/A
Maximum Fault Current	25 kA	25 kA
Reset Time	2, 4, or 8 hours	2, 4, or 8 hours
Trip Response Time	1 ms (optional 24 ms with delayed trip)	1 ms (optional 24 ms with delayed trip)
Display Options	Built-in flashing BEACON LED	Built-in flashing BEACON LED Standard remote Large remote BEACON Bolt LED RadioRANGER Remote Fault Reader
Outer Diameter Clamping Range	0.30" to 1.40"	0.50" to 1.6"
Clamp Material	Stainless-steel clamp with a UV-stabilized rubber sleeve	Stainless-steel clamp with a UV-stabilized rubber sleeve
Nominal Inrush Restraint Response Time	300 ms	N/A
Temperature Range	-40° to +85°C (-40° to +185°F)	-40° to +85°C (-40° to +185°F)
Approximate Weight	400 g (0.88 lb)	400 g (0.88 lb)

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PF00638 • 20190510

