

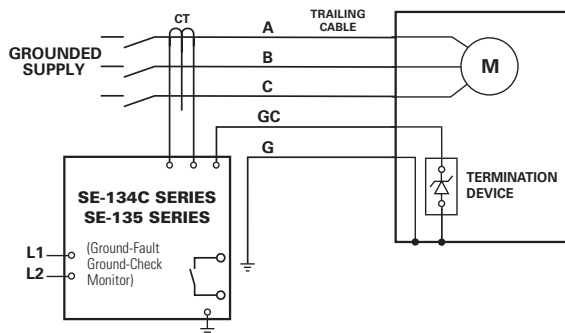
# Protection Relays and Controls

## TRAILING CABLE PROTECTION—GROUND-FAULT GROUND-CHECK MONITORING

### Ground-Fault Ground-Check Monitor



### Simplified Circuit Diagram



### Ordering Information

ORDERING NUMBER	OPTION	POWER SUPPLY	COMM
SE-134C	Blank or XGC	0=120/240 V ac/V dc 1=24/48 V dc <sup>(1)</sup>	0=None
SE-135	Blank or XGC	0=120/240 V ac/V dc 1=24/48 V dc <sup>(1)(2)</sup>	0=None 3=Ethernet <sup>(1)</sup>

ACCESSORIES	REQUIREMENT
SE-CS10 Series	Required
SE-CS40 Series (for SE-135)	Optional
SE-TA6A Series (for SE-134C)	Required
SE-TA12A/SE-TA12B Combination (for SE-134C)	Optional
SE-TA12A Series (for SE-135)	Required
SE-IP65CVR-G	Optional
RK-132	Optional
PPI-600V	Optional

(1) CE/RCM not available.  
 (2) Not available with Ethernet option 3.  
 (3) See ordering information.  
 See Current Transformer Selection Guide and Accessory Information.

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### Description


The SE-134C/SE-135 is a microprocessor-based, combination ground-wire monitor and ground-fault relay for resistance-grounded or solidly grounded systems. It continuously monitors the integrity of the ground conductor to protect portable equipment from hazardous voltages caused by ground faults. The SE-134C/SE-135 is field proven in monitoring trailing cables on large mobile equipment such as drag-lines, mining shovels, shore-to-ship power cables, dock-side cranes, stacker-reclaimers, submersible pumps, and portable conveyors.

### Features & Benefits

FEATURES	BENEFITS
<b>Adjustable pickup</b> (0.5-12.5 A for SE-CS10) (2 - 50 A for SE-CS40)	Unit can be used on a wide variety of trailing cable applications
<b>Adjustable time delay</b> (0.1-2.5 s)	Adjustable trip delay for quick protection and system coordination
<b>Output contacts</b>	Separate annunciation of ground-fault and ground-check faults
<b>Ground-check LED indication</b>	Indication of open or short ground-check wire makes it easier to find faults
<b>CT-loop monitoring</b>	Alarms when CT is not connected
<b>High-induced-ac rejection</b>	Makes unit suitable for applications with high voltages and long cables
<b>DFT (Harmonic) filter</b>	Prevents false operation
<b>Zener-characteristic termination assembly</b>	Provides reliable ground-check loop verification
<b>Fail-safe circuits</b>	Ensures ground-check and ground-fault circuits remain safe even in the event of equipment failure
<b>Conformal coating</b>	Additional coating protects circuit boards against harsh environment
<b>XGC option</b>	Increases maximum cable length for ground-check monitoring (10 km typical)

### Accessories

**A**  **SE-CS10 or SE-CS40 Series Ground-Fault Current Transformer**  
 Required zero-sequence current transformer detects ground-fault current.

**B**  **SE-TA6A Series, SE-TA12A Series Termination Assembly**  
 Required termination assembly; temperature compensated.

### Specifications

<b>IEEE Device Numbers</b>	Checking or Interlocking Relay (3GC), Ground fault (50G/N, 51G/N)
<b>Input Voltage</b>	65-265 V ac; 85-275 V dc; 18-72 V dc
<b>Dimensions</b>	<b>H</b> 213 mm (8.4"); <b>W</b> 99 mm (3.9"); <b>D</b> 132 mm (5.2");
<b>Trip Level Settings</b>	0.5-12.5 A for SE-CS10, 2 - 50 A for SE-CS40
<b>Trip Time Settings</b>	0.1-2.5 s
<b>Contact Operating Mode</b>	Selectable fail-safe or non-fail-safe
<b>Harmonic Filtering</b>	Standard feature
<b>Test Button</b>	Standard feature
<b>Reset Button</b>	Standard feature
<b>Output Contacts</b>	Isolated Form A and Form B, Two Form C
<b>Approvals</b>	CSA certified, UL Listed (E340889), RCM (Australia)(3), CE(3)
<b>Conformally Coated</b>	Standard feature
<b>Warranty</b>	5 years
<b>Mounting</b>	Panel, Surface
<b>GC Trip Resistance</b>	28 Ω (Standard), 45Ω (XGC Option)