## Protection Relays & Controls

Trailing Cable Protection–Ground-Fault Ground-Check Monitoring

# Expertise Applied Answers Delivered

## SE-134C, SE-135 SERIES

## Ground-Fault Ground-Check Monitor





## **Simplified Circuit Diagram**



## **Ordering Information**

ORDERING NUMBER	OPTION	POWER SUPPLY	COMM
SE-134C	Blank or XGC	0=120/240 Vac/Vdc	0=None
		1=24/48 Vdc (1)	
SE-135	Blank or XGC	0=120/240 Vac/Vdc	0=None
		1=24/48 Vdc (1) (2)	3=Ethernet (1)
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/C-Tick 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 resistancegrounded 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
Adjustable pickup (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
Adjustable time delay (0.1-2.5 s)	Adjustable trip delay for quick protection and system coordination
Output contacts	Separate annunciation of ground-fault and ground- check faults
Ground-check LED indication	Indication of open or short ground-check wire makes it easier to find faults
CT-loop monitoring	Alarms when CT is not connected
High-induced-ac rejection	Makes unit suitable for applications with high voltages and long cables
DFT (Harmonic) filter	Prevents false operation
Zener-characteristic termination assembly	Provides reliable ground-check loop verification
Fail-safe circuits	Ensures ground-check and ground-fault circuits remain safe even in the event of equipment failure
Conformal coating	Additional coating protects circuit boards against harsh environment
XGC option	Increases maximum cable length for ground-check monitoring (10 km typical)

**Current Transformer** 

detects ground-fault current.

#### Accessories SE-CS10 or SE-CS40 Series Ground-Fault

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

Required zero-sequence current transformer

## **Specifications**

IEEE Device Numbers

Input Voltage Dimensions Trip Level Settings Trip Time Settings Contact Operating Mode Harmonic Filtering Test Button Reset Button Output Contacts Approvals Conformally Coated Warranty Mounting

**GC Trip Resistance** 

Checking or Interlocking Relay (3GC), Ground fault (50G/N, 51G/N) 65-265 Vac; 85-275 Vdc; 18-72 Vdc **H** 213 mm (8.4"); **W** 99 mm (3.9"); **D** 132 mm (5.2"); 0.5 - 12.5 A for SE-CS10, 2 - 50 A for SE-CS40 0.1-2.5 s Selectable fail-safe or non-fail-safe Standard feature Standard feature Standard feature Isolated Form A and Form B, Two Form C CSA certified, UL Listed (E340889), C-Tick (Australia)(3), CE(3) Standard feature 5 years Panel, Surface 28Ω (Standard), 45Ω (XGC Option)

> Rev: 4-D-102214 SE-134C Based on Manual Rev: 7-C-100114 SE-135 Based on Manual Rev: 3-C-100314