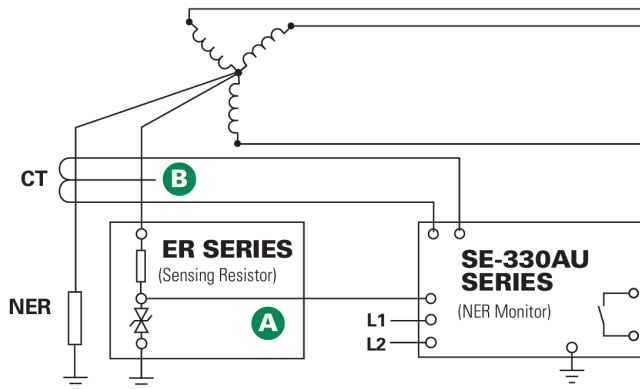




### Neutral-Earthing-Resistor Monitor



### Simplified Circuit Diagram



### Description

The SE-330AU is an advanced earth-fault and earthing-resistor monitoring relay for low- and medium-voltage transformers and generators, compliant to AS/NZS 2081.6:2011 and AS/NZS 2081.8:2011. It monitors neutral current, neutral-to-earth voltage, and neutral-to-earth resistance. It provides continuous monitoring of the neutral-to-earth path to verify that the neutral-earthing resistor (NER) is intact. This is of utmost importance—an open NER renders current-sensing earth-fault protection inoperative and could result in a false belief that the system is functioning properly. Outputs include four relay outputs, and an analog output. A mini USB port is included to view measured values, configure settings, and check event records. An on-board micro SD card can be used for long-term data logging. Network communications options are available. For non-AS/NZS 2081 applications, see the SE-330 or SE-330HV.

### Resistor Monitoring

The SE-330AU combines the measured values of resistance, current, and voltage to continuously determine that the NER is intact. It is able to detect a resistor failure with or without an earth fault present. Sensing resistors are matched to the system voltage and are used to monitor NGRs on systems up to 35 kV.

### Earth-Fault Monitoring

The SE-330AU uses a 5- or 30-A-primary current transformer to provide a pickup-setting range of 0.125 to 5 A or 0.75 to 30 A. DFT filtering ensures that false trips due to harmonic noise from adjustable-speed drives do not occur. Open-CT detection is provided.

### Specifications

<b>Input Voltage</b>	See ordering information
<b>Dimensions</b>	<b>H</b> 213 mm (8.4"), <b>W</b> 98 mm (3.9"), <b>D</b> 132 mm (5.2")
<b>GF Trip-Level Settings</b>	0.125 to 30 A
<b>GF Trip-Time Settings</b>	0.1 to 0.5 s
<b>Vn Trip-Level Settings</b>	20-2,000 Vac ( $\leq 5$ kV systems) 100-10,000 Vac ( $> 5$ kV systems)
<b>Output Contacts</b>	Two Form A, Two Form C
<b>Operating Mode</b>	Fail-Safe
<b>Harmonic Filtering</b>	Standard feature
<b>Reset</b>	Front panel push button and remote input
<b>Approvals</b>	RCM (Australian), CE
<b>Communications</b>	Mini USB (standard); DeviceNet (optional), IEC 61850 (optional), Modbus TCP and EtherNet/IP (optional)
<b>Analog Output</b>	4-20 mA, self or loop powered
<b>Conformal Coating</b>	Standard feature
<b>Warranty</b>	5 years
<b>Mounting</b>	Panel, Surface (optional)

# Protection Relays & Controls

## SE-330AU SERIES

### Ordering Information

ORDERING NUMBER	POWER SUPPLY	COMM			K4 UNIT HEALTHY CONTACT	
SE-330AU	-	X	X	-	0	X
SE-330AU for all apps. 35 kV or less	0=120/240 Vac/Vdc 2=48 Vdc	0=USB Only				
		1=DeviceNet				
		3=EtherNet (Dual RJ45)				
		4=EtherNet (SC Fiber & RJ45)				
		5=EtherNet (Dual SC Fiber)				
SE-330HV for 72 kV apps.		6=IEC61850 (Dual RJ45)				0=Normally Open 1=Normally Closed
		7=IEC61850 (SC Fiber & RJ45)				
		8=IEC61850 (Dual SC Fiber)				

### Accessories

A



#### ER Series Sensing Resistor

Required interface between the power system and the SE-330AU. Eliminates hazardous voltage levels at the relay.

B



#### EFCT Series Earth-Fault Current Transformer

Sensitive earth-fault current detection (5 A primary).



#### SE-CS30 Series Earth-Fault Current Transformer

Sensitive earth-fault current detection (30 A primary).

ACCESSORIES	REQUIREMENT
ER Series Sensing Resistor	Required
Current Transformer	Required
SE-IP65CVR-G	Optional
SE-MRE-600	Optional
RK-332	Optional

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