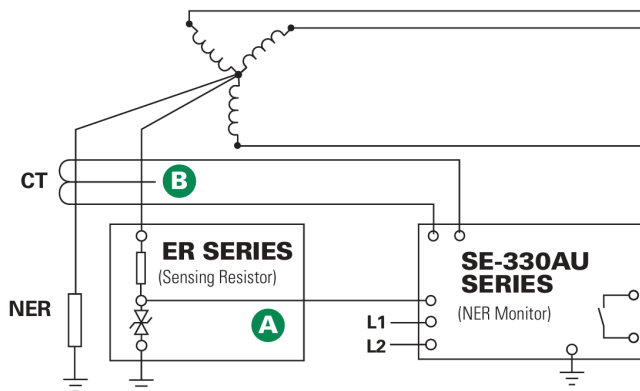




Neutral-Earthing-Resistor Monitor



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

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