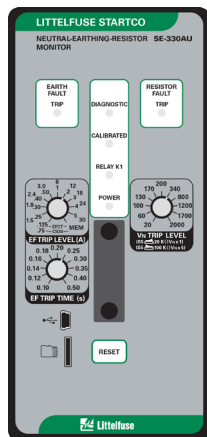
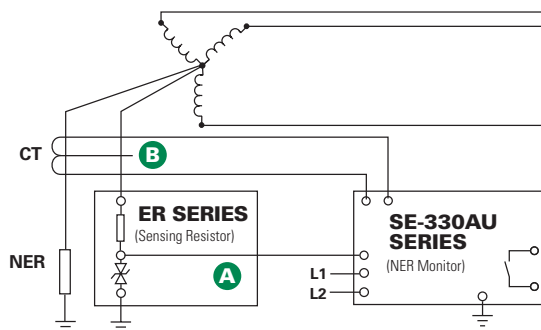


# SE-330AU SERIES

## Neutral-Earthing-Resistor Monitor - New Revision



### Simplified Circuit Diagram



### Ordering Information

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

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

### Description

The SE-330AU is an advanced earth-fault and earthing-resistor monitoring relay for low- and medium-voltage transformers and generators. 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. The SE-330AU earth-fault function complies with AS/NZS 2081.3:2002. 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 to comply with AS/NZS 2081.3:2002. DFT filtering ensures that false trips due to harmonic noise from adjustable-speed drives do not occur. Open-CT detection is provided.

### 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).

### 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 (≤5 kV systems)<br>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>              | C-Tick (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)  |