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SE-325

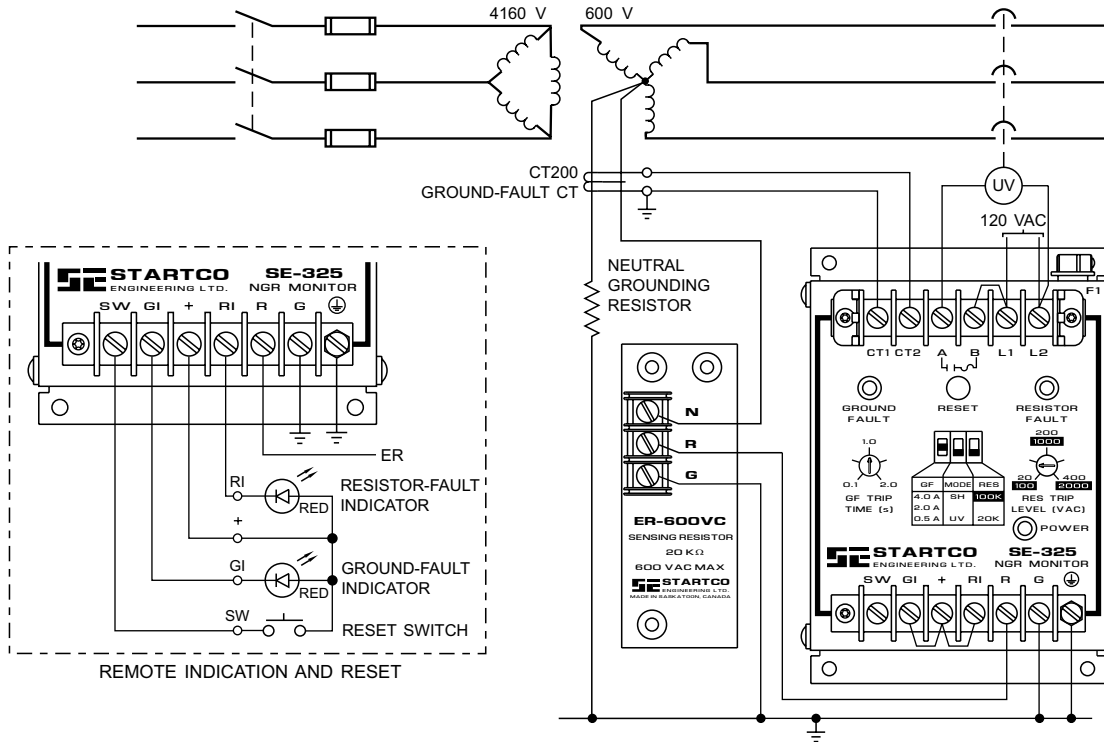
NEUTRAL-GROUNDING-RESISTOR MONITOR

The SE-325 is a neutral-grounding-resistor (NGR) monitor for resistance-grounded systems up to 25 kVac. It measures current in a transformer or generator neutral, neutral-to-ground voltage, and continuity of the NGR. The SE-325 coordinates these three measurements to detect a failed NGR or a ground fault and provides one output contact for shunt or undervoltage operation in a main-breaker trip circuit. Trips are latched and indicated by LED's.

Ground-fault current is sensed by a CT200 window-type current transformer. Either CT input can be grounded to meet electrical codes. A trip level of 0.5, 2.0, or 4.0 A is switch selectable for use with a 5-, 15-, or 25-A grounding resistor. Trip time is adjustable from 0.1 to 2.0 seconds.

Neutral-to-ground voltage and continuity of the NGR are continuously measured through an ER-series external sensing resistor connected to the neutral. A resistor fault will be detected if ground-fault current is not detected and neutral-to-ground voltage exceeds the trip-level setting, or if NGR resistance exceeds the trip resistance. A resistor-fault hold-off circuit prevents nuisance trips in alarm-only systems.

TYPICAL APPLICATION



TECHNICAL SPECIFICATIONS

Supply:
 ac 120 or 240 Vac (+10, -50%), 50/60 Hz, 10 VA
 ac/dc 120 Vdc (+40, -8%), 5 W or
 120 Vac (+10, -29%), 47 to 440 Hz, 5 VA

Ground-Fault Circuit:
 CT Ratio 200:5
 CT Input Burden 0.02 Ω
 Trip Level* 0.5, 2.0, or 4.0 A
 Frequency Response 25 to 400 HZ, 25 to 110 Hz with Option H
 Trip Time 0.1 to 2.0 s, 0.1 to 5.0 s with Option T
 Thermal Withstand* 200 A Continuous, 2,500 A for 2 s
 Trip-Level Accuracy +10, -20%
 Trip-Time Accuracy 10%
 Operating Mode Latching, Non-Latching with Option N

* Currents referred to primary of CT200 for prospective ground-fault currents less than 4,000 A.

Resistor-Fault Circuit:
 Neutral-To-Ground
 Trip Voltage (V_N) 20 to 2,000 Vac Adjustable
 Trip Resistance, V_N = 0
 ER-600VC or ER-5KV 2 kΩ
 ER-15KV or ER-25KV 6 kΩ, 50 kΩ with Option S
 Trip-Resistance Accuracy +5, -2% of Sensing Resistor Resistance
 Trip Time 5 ± 0.5 s, 20 ± 3 s with Option S
 Operating Mode Latching, Non-Latching with Option N

Output Relay:
 CSA/UL Contact Rating 1mA to 4 A Resistive, 240 Vac or 28 Vdc
 Supplemental Contact ratings:
 Make/carry 0.2 s 10 A
 Carry continuous 4 A
 Break:
 dc 20 W resistive, 10 W inductive (L/R = 0.04 s)
 ac 960 VA resistive, 700 VA inductive (PF = 0.4)
 Subject to maximums of 4.0 A and 240 V (ac or dc)
 Contact Configuration N.O. (Form A)
 Fuse Rating (F1) 4.0 A, 250 Vac, Time Delay
 Fuse Part Number Bussman MSL-4 or Littelfuse 313.004
 Operating Mode UV (Fail-Safe) or SH (Non-Fail-Safe)

Remote Indication:
 + 12 Vdc
 GI/RI Current Sink, 560 Ω Internal

Specifications are subject to change without notice. Startco Engineering Ltd. is not liable for contingent or consequential damages, or for expenses sustained as a result of incorrect application, incorrect adjustment, or a malfunction.

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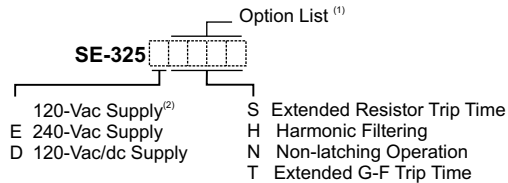
Dimensions
 Height 150 mm (5.9")
 Width 109 mm (4.3")
 Depth 100 mm (4.0")

Shipping Weight 1 kg (2.2 lbs)

Environment:
 Operating Temperature -40 to 60°C
 Storage Temperature -55 to 80°C
 Humidity 85% Non-Condensing

PWB Conformal Coating MIL-1-46058 qualified, UL QMJU2 recognized

ORDERING INFORMATION



(1) List options required in order shown above.

(2) Standard, leave blank.

Ground-Fault CT:
 CT200 56 mm (2.2") Window

Continuously Rated Sensing Resistors:
 ER-600VC (20 kΩ) For system voltages up to 1 kVac
 ER-5KV (20 kΩ) For system voltages up to 5 kVac
 One-Minute-Rated Sensing Resistors:
 ER-15KV (100 kΩ) For system voltages up to 15 kVac
 ER-25KV (100 kΩ) For system voltages up to 25 kVac

Remote Indication and Reset:*
 RK-302 22-mm Component Kit
 RK-325 Indication-and-Reset Assembly
 RK-325I Indication Assembly
 RK-13 Relay Interface Module

* Use only Startco remote-indication components.



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