

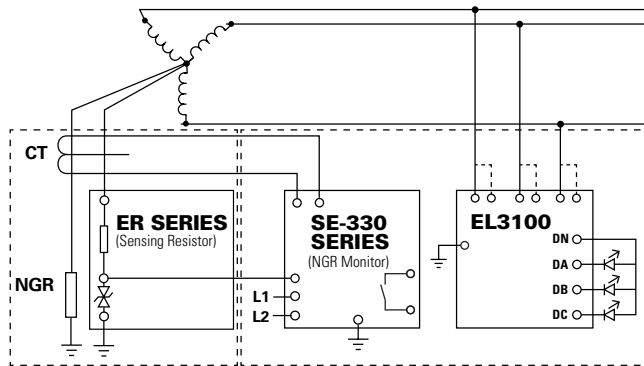
# Protection Relays

## NEUTRAL-GROUNDING-RESISTOR MONITORING

### NGRM-ENC SERIES



### Simplified Circuit Diagram



**NGR Assembly**  
(ordered separately)

**NGRM-ENC**  
(SE-330 with voltage indication shown)

### Description

The NGRM-ENC Enclosed Neutral-Grounding-Resistor (NGR) Monitor series is a Type 4X enclosure housing a Littelfuse Startco SE-325 or SE-330 Neutral-Grounding-Resistor Monitor and optional accessories that include a 480/600-V control power transformer (CPT), faulted-phase indication (FPI); implemented with an EL3100 Ground-Fault & Phase-Voltage Indicator), earth-leakage panel meter, pulse-enable control, and mounting options. Appropriate fusing is included and field wiring is to terminal blocks.

### Options



#### SE-325 Neutral-Grounding-Resistor Monitor

Measures current and voltage in a transformer or generator neutral-to-ground connection and continuity of the neutral-grounding resistor. For applications in Canada use the SE-330 to meet 2018 CEC 22.1 requirements.



#### SE-330 Neutral-Grounding-Resistor Monitor

Advanced ground-fault and neutral-grounding resistor monitoring relay that measures neutral current, neutral-to-ground voltage, and neutral-to-ground resistance.



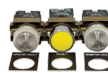
#### EL3100 Ground-Fault & Phase-Voltage Indicator

Three panel-mounted LEDs indicate the ground-faulted phase.



#### Panel Meter

Panel-mounted meter displays earth leakage current as a percentage of the ground-fault-CT-primary rating.



#### RK-332/RK-302 Remote Indication and Reset

Panel-mounted remote indication and reset assemblies are included with SE-325 and surface-mounted SE-330 configurations.

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## NEUTRAL-GROUNDING-RESISTOR MONITORING

### Ordering Information

The following options are available with a faster delivery time and are commonly stock items:

ORDERING NUMBER	PROTECTION RELAY OPTION	NGR MONITOR MOUNTING OPTION	AMMETER & PULSE CONTROL OPTION	COMMS	CONTROL-POWER TRANSFORMER OPTION
NGRM-ENC-000-00	SE-325	Surface Mount	None	None	None
NGRM-ENC-200-00	SE-330 (N.O. K4)	Surface Mount	None	None	None

The following options are built to order:

ORDERING NUMBER	PROTECTION RELAY OPTION	NGR MONITOR MOUNTING OPTION	AMMETER & PULSE CONTROL OPTION	COMMS	CONTROL-POWER TRANSFORMER OPTION
NGRM-ENC-000-01	SE-325	Surface Mount	None	None	CPT
NGRM-ENC-200-01	SE-330 (N.O. K4)	Surface Mount	None	None	CPT
NGRM-ENC-200-10	SE-330 (N.O. K4)	Surface Mount	Earth leakage Panel Meter	None	None
NGRM-ENC-200-20	SE-330 (N.O. K4)	Surface Mount	Earth leakage Panel Meter & Pulse Enable Switch	None	None
NGRM-ENC-201-00	SE-330 (N.O. K4)	Panel Mount	None	None	None
NGRM-ENC-201-10	SE-330 (N.O. K4)	Panel Mount	Earth leakage Panel Meter	None	None
NGRM-ENC-201-20	SE-330 (N.O. K4)	Panel Mount	Earth leakage Panel Meter & Pulse Enable Switch	None	None
NGRM-ENC-201-21	SE-330 (N.O. K4)	Panel Mount	Earth leakage Panel Meter & Pulse Enable Switch	None	CPT
NGRM-ENC-230-00	SE-330 (N.O. K4)	Surface Mount	None	Ethernet, dual RJ45	None
NGRM-ENC-231-01	SE-330 (N.O. K4)	Panel Mount	None	Ethernet, dual RJ45	CPT
NGRM-ENC-241-00	SE-330 (N.O. K4)	Panel Mount	None	Ethernet, 1 RJ45 & 1 Fiber	None
NGRM-ENC-331-01	SE-330 (N.O. K4) & Voltage Indication	Panel Mount	None	Ethernet, dual RJ45	CPT
NGRM-ENC-401-00	SE-330 (N.C. K4)	Panel Mount	None	None	None
NGRM-ENC-401-20	SE-330 (N.C. K4)	Panel Mount	Earth leakage Panel Meter & Pulse Enable Switch	None	None
NGRM-ENC-430-00	SE-330 (N.C. K4)	Surface Mount	None	Ethernet, dual RJ45	None
NGRM-ENC-431-21	SE-330 (N.C. K4)	Panel Mount	Earth leakage Panel Meter & Pulse Enable Switch	Ethernet, dual RJ45	CPT
NGRM-ENC-530-11	SE-330 (N.C. K4) & Voltage Indication	Surface Mount	Earth leakage Panel Meter	Ethernet, dual RJ45	CPT
NGRM-ENC-540-00	SE-330 (N.C. K4) & Voltage Indication	Surface Mount	None	Ethernet, 1 RJ45 & 1 Fiber	None
NGRM-ENC-540-10	SE-330 (N.C. K4) & Voltage Indication	Surface Mount	Earth leakage Panel Meter	Ethernet, 1 RJ45 & 1 Fiber	None

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