


Installation, Operation & Maintenance Manual

Tranquell™ Surge Protective Device (SPD) UL Recognized DIN Rail Mount

DANGER

Hazard of Electric Shock, Burn or Explosion




- This equipment must be installed and serviced only by qualified electrical personnel in accordance with national and local electrical codes.
- Turn off all power supplying this equipment before working on equipment.
- Always use a properly rated voltage-sensing device to confirm power is off.
- Replace all devices, doors and covers before restoring power to this equipment.
- Do not apply petroleum-based products to nonmetallic parts.

Improper installation or misapplication of these devices may result in serious injury to the installer and/or damage to electrical system or related equipment. Protective eye wear and clothing should be worn whenever working around hazardous voltages.

Failure to follow these instructions could result in serious injury or death.

CAUTION



- Do not attempt to open or tamper the Tranquell™ device in any way as this may compromise performance and will void the warranty.
- Megger and hi-potential tests may damage the device. Disconnect all power supplying the equipment and isolate the Tranquell™ device before testing.
- Install for point-of-use Tranquell™ DIN Rail, tested for Type 2 applications
- Prior to installation, confirm that the Tranquell™ SPD is rated for the correct voltage, current and frequency equivalent to the application.
- Tranquell™ DIN Rail must be installed within an enclosure or control cabinet.
- Operating and storage temperature of this device must be within -13°F to 140°F (-25°C and +60°C).

1. MOUNTING

Tranquell™ SPD DIN Rail is designed to mount onto a 35mm DIN rail or top-hat rail (standard EN 50022, BS 5584) set in the horizontal position. To install, first hook the line side over a 35mm DIN rail and then push in the load side until the spring loaded mounting clip "clicks" onto the rail (See Figure 1).

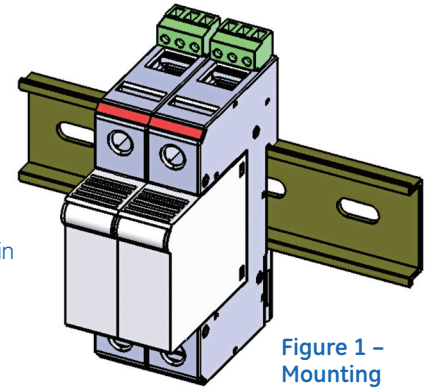


Figure 1 – Mounting

2. REPLACEMENT/REMOVAL

Replace the module if the RED indicator tab (See Figure 2) is visible on any of the multiple pole units. To remove: (1) verify that you have the correct replacement module; (2) disconnect power; (3) pull the pluggable module from the base; (4) push a new pluggable module into the base. You will hear a "click", indicating that the module is set in place (See Figure 1). An insertion "key" built into the unit will help ensure that the module has been correctly selected. CAUTION: Use of excessive force, during insertion, can result in damage to the module or the base.

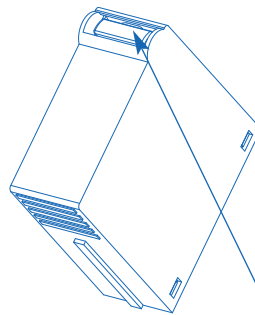
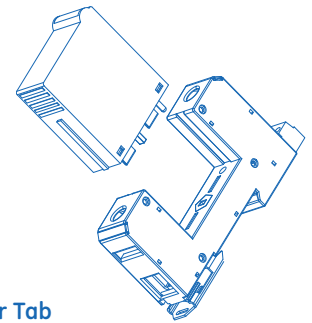


Figure 2 – Visual Indicator Tab



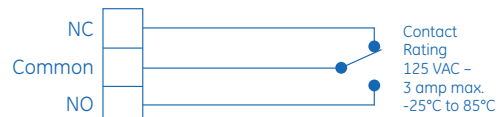
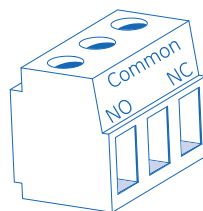
3. AUXILIARY MICROSWITCH INSTALLATION

Remote signaling is available on Tranquell™ SPD DIN Rail products. #30 AWG to #16 AWG (.051 mm² - 1.31 mm²) signal wire may be used. Maximum torque rating for the terminal screw is 1.8 in.-lb. (0.113 N-m). The maximum continuous current rating for the microswitch contact is 3 amps. If applicable, install signal wiring as shown in Figure 3.

NOTE:
 ✓ Shown with no power applied
 ✓ Field wiring by others

Contact between Common + NO
 = Product Offline, Not-Protected

Contact between Common + NC
 = Product Online, Protected



Signal Wire Range: #30 AWG to #16 AWG (.051 mm² - 1.31 mm²)
 Terminal Torque: 1.8 in.-lb. (0.113 N-m)

Figure 3 – Microswitch



4. WIRE INSTALLATION

#14 AWG to #6 AWG (2.08 mm² - 13.3 mm²), 60/75°C Copper wire shall be used on phase and Neutral/PE terminals. Maximum torque to be applied to terminal screws is 14.75 in.-lb. (2.0 N-m). Strip back wire insulation 1/4" (6 mm).

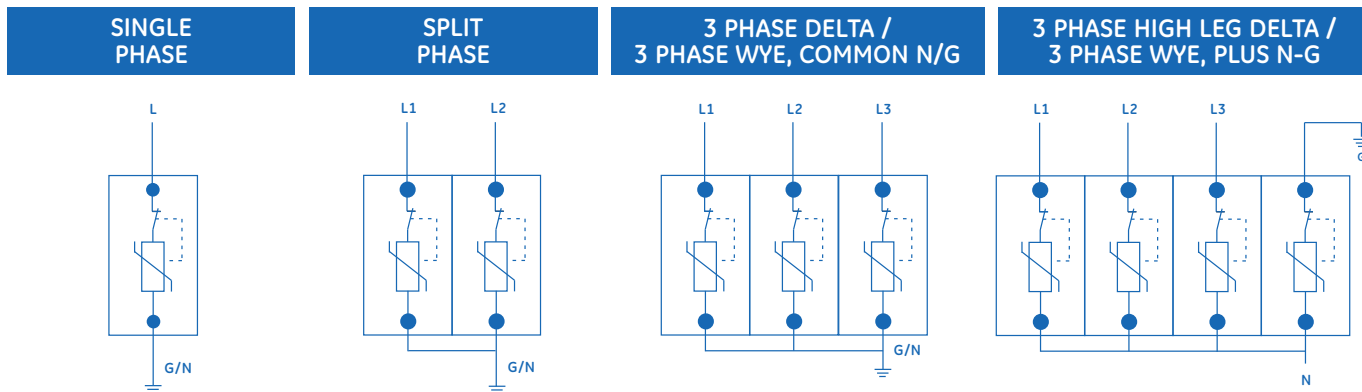
Interconnecting wire should be kept at minimum length. Wire bending radius should be >4" (100 mm). Do not loop or twist interconnecting wire. Failure to meet these requirements may result in higher let-through voltages.

Tranquell™ SPD is normally installed in parallel with the load or the electrical system wiring.

Determine electrical voltage configuration and proper modes of protection and install wiring as shown in Figure 4.

NOTE: The Tranquell™ DIN Rail SPD has been tested for safe operation without any additional overcurrent protection, when correctly matched to the power system parameters. A gG 160 Amp NH Fuse may be chosen to meet other requirements in an IEC application. Consult local codes and standards for appropriate fuse sizing.

Figure 4 – Wiring Configuration Diagram (NOTE: Shown with no power applied)



Part Numbers & Specifications

Assembly System Part Number	Wiring Configuration	L-N/G Pluggable Module		N - G Pluggable Module		Hi-Leg Pluggable Module		No. of Poles	No. of Wires
		Part Number	Qty	Part Number	Qty	Part Number	Qty		
TD120V4025RMN	3 Phase Wye, plug N-G	RU-180-25	3	RU-180-25	1	-	-	4	5
TD120V4050RMN		RU-180-50		RU-180-50					
TD277V4025RMN		RU-320-25		RU-180-25					
TD277V4050RMN		RU-320-50		RU-180-50					
TD347V4025RMN		RU-420-25		RU-275-25					
TD347V4050RMN		RU-420-50		RU-275-50					
TD240H4025RMN	3 Phase High Leg Delta	RU-180-25	2	RU-180-25	-	RU-275-25	1	-	-
TD240H4050RMN		RU-180-50		RU-180-50					
TD480H4025RMN		RU-275-25		RU-180-25					
TD480H4050RMN		RU-275-50		RU-180-50					
TD120Y3025RMP	3 Phase Wye common N/G	RU-180-25	3	-	-	-	-	3	4
TD120Y3050RMP		RU-180-50							
TD277Y3025RMP		RU-320-25							
TD277Y3050RMP		RU-320-50							
TD347Y3025RMP		RU-420-25							
TD347Y3050RMP		RU-420-50							
TD240D3025RMP	3 Phase Delta	RU-275-25	-	-	-	-	-	-	-
TD240D3050RMP		RU-275-50							
TD480D3025RMP		RU-550-25							
TD480D3050RMP	RU-550-50								
TD120S2025RMP	Split Phase	RU-180-25	2	-	-	-	-	2	3
TD120S2050RMP		RU-180-50							
TD240S2025RMP		RU-275-25							
TD240S2050RMP		RU-275-50							
TD120S1025RMP	Single Phase	RU-180-25	1	-	-	-	-	1	2
TD120S1050RMP		RU-180-50							
TD240S1025RMP		RU-275-25							
TD240S1050RMP		RU-275-50							
TD277S1025RMP		RU-320-25							
TD277S1050RMP		RU-320-50							
TD347S1025RMP		RU-420-25							
TD347S1050RMP		RU-420-50							



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