SURGENCY™

RE Series

Surge Protective Device (SPD)

Qualified Person

For the purpose of this instruction leaflet, a qualified person:

1. is familiar with the subject equipment and the hazards involved with their application, use, administration and maintenance.
2. is trained and authorized to de-energize, clear, ground, and tag circuits and equipment in accordance with established safety practices.
3. is trained in the proper care and use of personal protective equipment such as rubber gloves, hard hat, safety glasses or face shields, arc-flash clothing, etc., in accordance with established safety practices.
4. is trained to render first aid.
5. has received safety training to recognize and avoid the hazards involved.
6. has the skills and knowledge pertaining to the construction and operation of this equipment and its installation.

⚠ DANGER

Hazardous Voltage
Will cause severe injury or death.
Working on or near energized circuits poses a serious risk of electrical shock. De-energize and confirm all circuits before installing or servicing this equipment and follow all prescribed safety procedures.

Important

The contents of this information sheet are not part of, nor do they modify, any prior or existing agreement, commitment or relationship. The Surgency terms and conditions of sale constitute the entire obligation of ILSCO. The warranty is posted at www.ilsco.com/warranty. Any statements in this document do not create new warranties or modify any existing warranty.

Table 1

Surgency General Specifications		
Short-Circuit Current Rating (SCCR)	200 kA	
Nominal Discharge Current (8x20 µs) I_n	20 kA	
Voltage Frequency	50 / 60 Hz	
Conductor Gauge / Type	Stranded 12 AWG / 4 mm^2 (1R1X)	Stranded 10 AWG / 6 mm^2 (Y3WX)
Enclosure	NEMA 1, 2, 3, 3R, 3X, 4, 4X	
Degree of Protection (Installed State with liquid tight connections)	IP65	
SPD Install Location	Indoor or Outdoor	
Operating Temperature	-40˚C to +65˚C -40˚F to +150˚F	
Warranty	5 yr	
Recommended Circuit Breaker	20 Amp (1R1X) 30 Amp (Y3WX)	
Maximum Continuous Operating Voltage (MCOV)	L - G L - L	150 V 300 V

For technical support call 1.800.776.9775 or visit www.ilsco.com.

Installation Instructions

IMPORTANT: Read these instructions carefully to assure proper installation and assembly. Ensure all fasteners and connections are properly tightened. Installation in a manner inconsistent with these instructions will void warranty.

To ensure integrity of the finished installation, do NOT install the Surgency SPD if it has been dropped or abused during the installation process.

The Surgency SPD contains no user serviceable parts and cannot be repaired. Performing the following will compromise the unit's performance and will void the warranty. Do NOT:

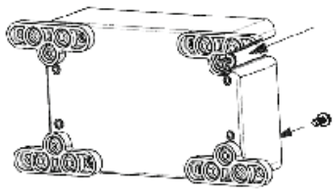
- Megger or IR (Insulation Resistance) test the system with the SPD installed
- Install in a system that has a voltage greater than the unit's rated voltage

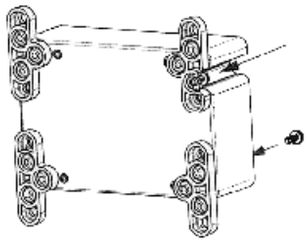
Safety Concerns

This instruction sheet is not comprehensive. It is assumed the Surgency installer will follow trade and NEC 70E established safety precautions for working in an electrical environment.

Mounting Foot Installation Diagram

1R1X only





⚠ CAUTION

Required Additional Materials: To maintain outdoor and liquid-tight ratings, the Myers hub (conduit fitting) installed on the SPD should be utilized in conjunction with the sealing washer and chase nipple provided. The sealing washer is placed between the Myers hub and wall of the panelboard or enclosure to which the SPD is to be installed. Further, it is recommended that thread seal tape (aka "Teflon tape") be used to wrap the threads of the chase nipple before installation in addition to using the sealing washer. If other conduit connections are used in place of the provided hardware, follow the manufacturer's instructions on maintaining a liquid tight seal on the connections.

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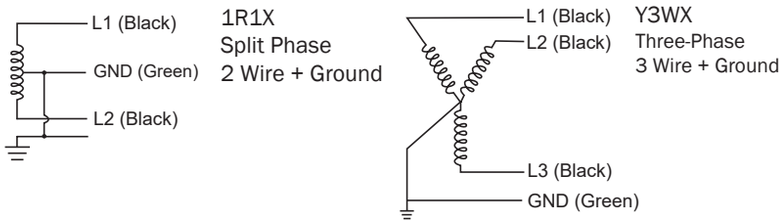
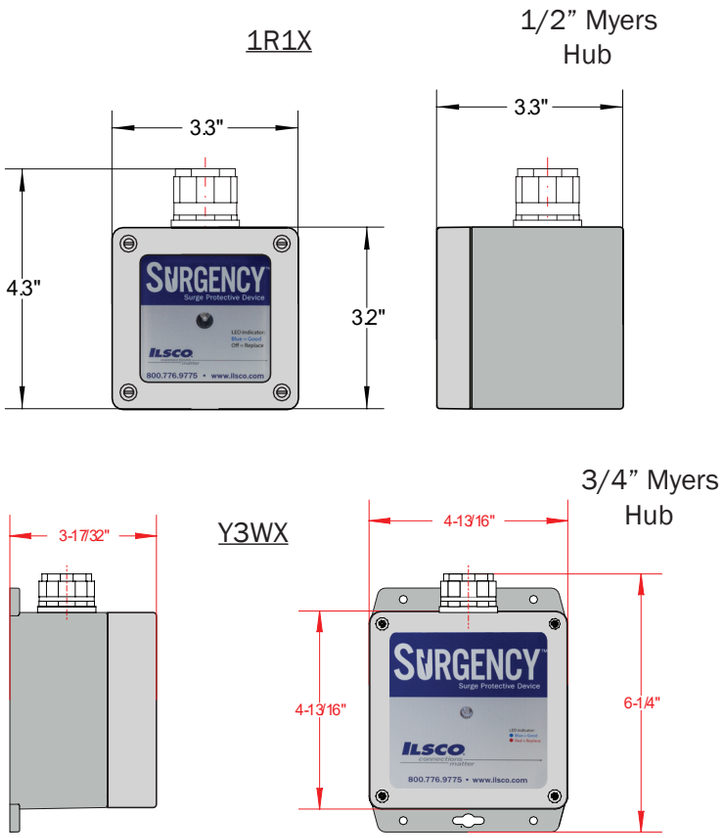
Installation Instructions

1. Inspect the unit to determine if the unit:
   - has the correct nominal system and Maximum Continous Operating Voltage (MCOV) ratings and is the correct configuration for the installation site. (See Table 1 for MCOV specifications), it is required that the power system voltages be verified with the appropriate meter prior to installation and those values confirmed to be lower than the MCOV. Use Table 2 to record your readings and verify the recorded values are lower than those listed in Table 1 for the unit.
   - is NOT damaged, do not attempt to install if it is damaged. Obtain a proper replacement before proceeding with the installation.
2. De-energize the electrical panel or equipment and follow the established lockout / tagout procedures. Confirm the location is de-energized using the appropriate test equipment before proceeding with the SPD installation.
3. Select a location on the panel or equipment that allows the SPD leads to reach their intended connection points or breaker using the shortest possible lead lengths. A dedicated multipole breaker is recommended.
4. Remove a knockout sized for, or make an appropriate sized hole for the conduit hub where the SPD is to be mounted. For an outdoor or liquid-tight installation, follow the instructions provided in the CAUTION on page one.
5. Remove the chase nipple from the Myers hub attached to the SPD. Mount the SPD to the panelboard or enclosure by routing the wires from SPD though the sealing washer (if outdoor or liquid-tight installation is needed) and then open knockout or hole into the panel. On the inside of the panel or enclosure, route the wires though the threaded end of the chase nipple. Thread the chase nipple into the Myers hub and tighten so that the SPD is mechanically attached to the panel or enclosure. Be careful not to damage the insulation of the wires during the mounting process. If the sealing washer is used, be sure it is not damaged or displaced by the Myers hub and it maintains a liquid-tight seal. The mounting feet provided with the SPD can also be used to aid in mechanically mounting the SPD as necessary.
6. Cut the leads to the shortest possible length to reach the connection point (i.e. breaker or grounding bar). Trim the insulation of the leads so that they can be connected appropriately (review manufacturer's instructions for terminating to the breaker or grounding bar as needed). The shorter the SPD leads, the better the SPD will protection against surges.
7. For optimum SPD performance, twist the phase conductors and avoid sharp bends (NEC Art 285.12). Make electrical connections appropriate for the application (see Diagrams). If your electrical system is not represented in the circuit diagrams, contact your ILSCO representative. Tighten the electrical terminals to the terminal manufacturer's specifications.
8. Energize panel or equipment and verify the LED status indicator is ON (Blue).
9. The SPD Lid may be rotated 180° to accommodate visual aesthetics. (Remove power from SPD before rotating lid)

Power System Diagrams Showing SPD Wire Colors



Enclosure Drawings



- Suitable for use on a circuit capable of delivering not more than 200,000 rms symmetrical amperes at the nominal system voltage.
- This device features internal protection that will disconnect the surge protective component at the end of its useful life but will maintain power to the load - now unprotected. If the situation is undesirable for the application, follow the manufacturer's instructions for replacing the device.
- The LED status indicators report the status of the protection circuitry.
- Contains no serviceable parts — Attention: Aucune piece remplacable ou raparable
- Warning - Shock Hazard - Do not open — ATTENTION - RISQUE DE CHOC - NE PAS OUVRIR

BLUE LED = Good
The circuit is energized and protected.

RED LED = Replace SPD
The circuit is energized and unprotected. Please replace the unit. Y3WX only

No LED / LED is Out = Investigate:
- The circuit could be de-energized
- The unit's leads could be disconnected
- The unit could be damaged

Table 2

Installation Voltage Measurement Worksheet	
Measure between	Measurement Value, fill-in
L1 - Gnd	_____ VAC
L2 - Gnd	_____ VAC
L3 - Gnd	_____ VAC
L1 - L2	_____ VAC
L1 - L3	_____ VAC
L2 - L3	_____ VAC

Use Table to verify the system voltages prior to installation.

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