

# SURGE SAFE™

Socket (SK) Series  
Surge Protection Device (SPD)



**GLOBAL POWER PRODUCTS**



**Installation, Operation  
and Maintenance Manual**

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# INTRODUCTION

Surge Safe™ SK Series Surge Protective Device is a high quality, high energy surge current diverting system designed to protect sensitive equipment from damaging transient voltage surges resulting from load switching, lightning strikes, and other sources.

Installer should perform the following instructions carefully to ensure a quality installation. Please read all instructions before starting the installation of this product. These instructions do not replace national or local electrical codes. Please check applicable electrical codes to ensure compliance.

# GENERAL SPECIFICATION

Part Number	100-SK3W	300-SK4W	310-SK4W
Applied Voltage	120/240VAC	120/208VAC	277/480VAC
Phase	Single Phase	Three/Wye	Three/Wye
Wiring	2 Wire + Neutral	3 Wire + Neutral	3 Wire + Neutral
Operating Frequency	47-60Hz		
Nominal Discharge Current (In)	20kA		
Maximum Surge Current Capacity (8 x 20µs)	50kA		
Short Circuit Current Rating (SCCR) <sup>1</sup>	200kA		
Voltage Protection Rating (VPR)	100-SK3W, 300-SK4W @ L-N 700V L-L 1200V 310-SK4W @ L-N 1200V L-L 2000V		
Enclosure Size (in)	Ekstrom EK Extender Adapter		
Operation Temperature	-40°C to +85° C		
UL Location Type	Type 1 Surface Entrance SPD		

<sup>1</sup>Suitable for Use on a Circuit capable of delivery not more than 200kA rms symmetrical Amperes.

# SAFETY

## **WARNING**

- **ONLY QUALIFIED PERSONNEL/ELECTRICIAN SHOULD INSTALL OR SERVICE SURGE SAFE™ DEVICES.**
- **ELECTRICAL SAFETY PRE-CAUTIONS MUST BE FOLLOWED WHEN INSTALLING OR SERVICING THIS EQUIPMENT.**
- **TO PREVENT RISK OF FIRE, ELECTRICAL SHOCK, OR DEATH; ALL POWER SOURCES TO THE UNIT MUST BE TURN OFF AND LOCK OUT BEFORE MAKING ELECTRICAL CONNECTIONS OR SERVICING.**
- **SURGE SAFE™ DEVICES ARE NOT TO BE USED WITH A HI-LEG DELTA VOLTAGE CONFIGURATION.**
- **THIS SPD MAY NOT SURVIVE SUSTAINED OVERVOLTAGES.**

**Caution** – *Ungrounded power systems are inherently unstable and can produce excessively high line to ground voltages during certain fault conditions. During these fault conditions any electrical equipment, including an SPD, may be subjected to voltages which exceed their designated ratings. This information is being provided to the user so that an informed decision can be made installing any electrical equipment on an ungrounded power system.*

Verify the system voltage and wiring configuration is the same as the enclosed Surge Safe™ by checking it against the product label.

**USE SUPPLY WIRE SUITABLE FOR 90°C  
EMPLOYER DES FILS D'ALIMENTATION POUR 90°C**

## **General Information**

- **Green LED ON indicates surge protection is present.**
- **Red LED ON indicates protection failed.**
- **Standard polycarbonate SPD is inserted with LEDs facing down.**
- **“TOP” label is located inside the SPD meter adapter.**

# INSTALLING

1. **MEASURE VOLTAGE** at the installation location between each Line and Neutral. System voltage must not exceed the specified maximum continuous RMS voltage listed on the SPD label.
2. **TURN OFF POWER** at the installation location (usually by removing services to meter or disconnection of service supply by utility).

**Note: DO NOT** install on service which exceeds 200A continuous current.

3. Switch all distribution panel circuit breakers to OFF position to reduce possibly of accidental voltage on the circuit.
  4. Remove existing watt-meter. The SPD is located between the watt-meter and the meter base enclosure. **See Figure 1.**
  5. **FORM 2S:** Connect the white neutral wire with to the neutral bus in the service panel before plugging in the SPD.  
**FORM 12S & 16S:** Continue to step 6.
  6. Install the SPD with all indicator LEDs facing down with the wiring connections (terminals and neutral wire) facing the service wiring. The "TOP" label is located inside the SPD meter base adapter.
  7. Insert Surge Safe™ Socket By carefully aligning with the jaws of the meter can and pushing the blades firmly into the jaws
  8. Close the cover, insert watt-meter, and secure the locking rings.
  9. Restore power to the SPD and switch circuit breakers to "ON" position to reconnect load. Verify that the Green LED is illuminated. **INSTALLATION COMPLETE**
- If Green LED is not lit, remove power, re-check installation, repeat Step 2, and test again. .
  - If Red LED is lit and the buzzer sounds, contact the manufacturer and replace the unit immediately.

# INSTALLATION

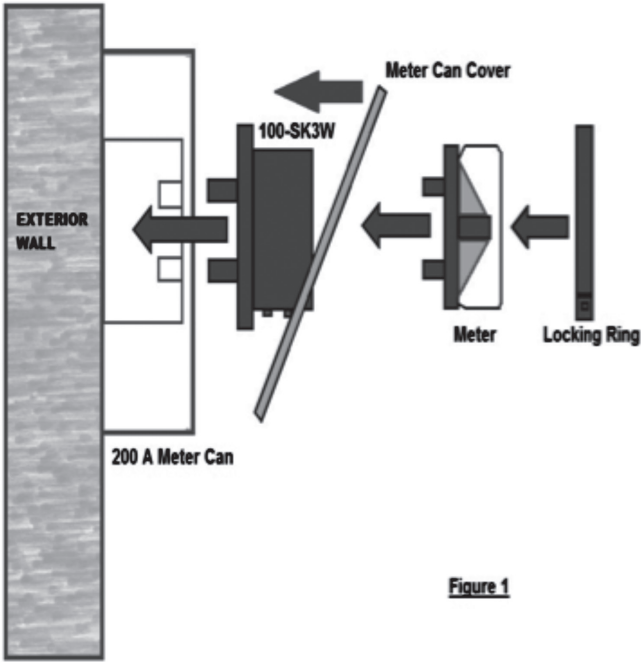
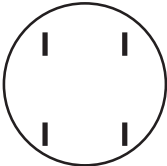


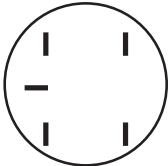
Figure 1

## Meter Form Factors

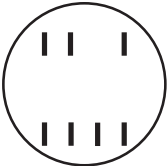
Form 2S



Form 12S



Form 16S



## **ENVIRONMENT**

The unit is designed for indoor or outdoor use in ambient temperature of -40C to +85C with a relative humidity of 0% to 95%. The unit is provided in an industrial enclosure, which should not be installed in areas with excessive dust, corrosive vapors, flammable materials or explosive atmospheres.

## **WARRANTY**

See separate warranty attachment or contact Global Power Products for further warranty information at 1.800.886.3837.

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