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SX2200 Series

INSTALLATION INSTRUCTIONS

IMPORTANT SAFETY INSTRUCTIONS



WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

WARNING: CONNECT ONLY TO MAINS SOCKET WITH PROTECTIVE EARTHING CONNECTION.



The lightning flash with arrowhead symbol, within an equilateral triangle is intended to alert the user to the presence of uninsulated dangerous voltage within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

CAUTION

1. Please read and retain these safety instructions.
2. Heed all warnings in the operating instructions and on the appliance.
3. Do not use this appliance near water or moisture.
4. Clean only with a dry cloth.
5. Install in a good quality 19" equipment rack
6. Do not install near sources of heat such as radiators, heat registers, stoves or other apparatus that produce heat (such as amplifiers).
7. Refer all servicing to authorised personnel.
8. Servicing is required when the appliance has been damaged in any way including: Impact damage, power cord/ supply damage, liquid spillages, small objects falling into the unit or exposure to moisture. In addition please refer to authorised service personnel if the appliance is not operating normally.
9. To completely disconnect this equipment from the AC mains disconnect the power plug from the AC receptacle.
10. To prevent fire never place the appliance near any naked flame such as a candle.
11. This is a CLASS 1 device and shall be connected to a mains socket with a protective earth connection.
12. Do not defeat the purpose of the polarized or grounding type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are there for your safety. If the plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.



Management of WEEE (Waste Electrical and Electronic Equipment) Applicable in member states of the European Union and other European countries with individual nation policies on the management of WEEE) The symbol on the product or its packaging indicates that this product may not be treated as regular household waste. It should be returned to the retailer where the product was purchased or local collection systems should be used to ensure environmentally safe recycling.



SX2200 Series

Installation Instructions:

Caution:

SurgeX® 2200 series products permit a maximum 16A (SX2216 models), 15A (SX2215 models), 13A (SX2213 models) or 10A (SX2210 models) total output load, each outlet is capable of providing the maximum load individually. Make sure that the total does not exceed the current limit of your mains receptacle.

For safety please plug your SurgeX® unit into a fused receptacle (T20AL 250V fuse recommended).

SurgeX® Series Mode® Protection is Live-Neutral only, if the polarity indicator is illuminated when connected to the mains please replace the plug observing correct polarity.

Mounting

The SurgeX® SX2200 series are designed to be installed in a 19 inch equipment rack and require two units (2-U) of rack space. Remove the product from its packaging and slide it into place in the rack, being careful to feed the power cord into the rack first. Guide the power cord and plug so that they do not get caught or jammed as the product is installed.

240 Volt Connections

Connect power to the unit by plugging the cord into a 240V mains receptacle. The SX2200 series must be plugged into the appropriate properly polarized receptacle.

Model	Standard	Total Load	Receptacle
SX2210	AS3112	10A	Australian style receptacle
SX2213	BS1363	13A	British style receptacle
SX2215	BS546	15A	South African / Indian style receptacle
SX2216	CEE7/7	16A	European style receptacle

The SX2200 series have a total of six rear AC outlets: five switched and one always on. The SX2200 series also feature a front panel courtesy outlet, which is always on (excluding RL models). Plug the equipment into the always-on and switched AC outlets as needed to power the equipment.

The always-on and courtesy receptacles (where fitted) provide power as long as it is supplied to the SurgeX®. The five switched rear receptacles provide power only when the front panel switch is on and, in the case of RT products, when the remote control input is also activated.

Indicator Lights

The SX2200 series have two, three or four indicator lights on the front panel depending on the model. All models feature a polarity indicator lamp on the rear panel:

Amber polarity light (Rear panel, all products): When illuminated indicates that live and neutral are reversed and your SurgeX product will not work as intended. If you are using an SX2216 (European CEE7/7 connectivity) simply reverse the connection. If you are using an SX2210, SX2213 or SX2215 consult an electrician to correctly wire your receptacle and establish proper polarity.

Red Power Light (All products): indicates that power is supplied to the unit and the power switch is turned on.

Green Self-Test Light (All products): indicates that power is supplied to the unit and the internal surge protection circuitry is fully functional.

Orange Over/Under Voltage Protection Light (RT & RL products): indicates that the mains voltage is below 190 volts or above 280 volts.

Yellow Remote Light (RT products): indicates that the remote control is active and the rear switched receptacles are on. (The power switch must also be on).

Task Lamp Connectors (RL Only)

The RL version has provision for two task lamps. Plug the lamps into the two three-pin XLR connectors on the front panel and use the dimmer to set a suitable brightness. Standard or HI brightness lamps can be used. Each connector can supply up to 5 Watts maximum. LED type lamps can be used with the RL but the dimmer must be set fully clockwise.

CAUTION: Do not repeatedly turn an RT / RL product on-off-on-off with a heavy load connected. The *ICE*[®] circuitry absorbs the inrush energy each time the unit is turned on and may overheat if this is done repeatedly in a short period of time. Wait one minute between repeated on/off cycles.

Remote Control (RT Products Only)

Remote control connections are wired to the green 7-pin plug-in Phoenix terminal block on the rear of the unit next to the power cord. The terminal block is shipped with a jumper wire between pins 1 & 2 so that the unit can be used without a remote control connection. If you will be using a remote control you will first need to remove this jumper wire. You can unplug the terminal block to make connections and after you have made the connections to the terminal block, plug it back into the connector on the rear of the unit. Never solder (tin) wires before inserting into a terminal block – solder cold flows and you will eventually have loose connections!

The connections are as follows:

<input type="checkbox"/>	Pin 1 -- Contact Closure
<input type="checkbox"/>	Pin 2 -- Contact Closure / Applied Voltage +
<input type="checkbox"/>	Pin 3 -- Applied Voltage -
<input type="checkbox"/>	Pin 4 -- Remote LED +
<input type="checkbox"/>	Pin 5 -- Remote LED -
<input type="checkbox"/>	Pin 6 -- Aux Relay Contact
<input type="checkbox"/>	Pin 7 -- Aux Relay Contact

Control Connections

Control of the switched receptacles can be accomplished by using a switch (contact closure), another SurgeX[®] RT product, or by an applied voltage (5 to 30 volts DC). When using a switch, choose a switch with gold contacts for the best long term reliability.

Connections are made to terminal block pins 1, 2 & 3 as follows:

- Connect switch contacts, a contact closure, or SurgeX[®] control to pins 1 and 2.
- Or:
- Connect an applied DC voltage to pins 2 and 3. The positive must be connected to pin 2 and the negative must be connected to pin 3.

Remote Indicator LED

Connecting the Remote LED is optional. An LED connected to pins 4 and 5 will indicate when the switched receptacles are on. 10mA of current is available at this output, but you **must use a series resistor** if you are using your own LED. For most LEDs a 1K resistor will provide suitable brightness. If you need less brightness use a larger value of resistor, and if you need more brightness use a smaller value of resistor.

- Connect the LED positive wire to Pin 4
- Connect the LED negative wire to Pin 5

Auxiliary Relay Contacts

The auxiliary relay contacts, pins 6 & 7, provide a way to cascade units or to provide confirmation feedback to a central controller. When the switched receptacles are on, the aux relay contacts are closed. There is a 1 second delay before the aux relay closes which gives time for the SurgeX[®] Inrush Current Elimination (*ICE*[®]) circuit to operate. This short delay in combination with the SurgeX[®] *ICE*[®] makes it unnecessary to sequence the power to several large loads (such as amplifiers) because of inrush current. SurgeX[®] RT products, when cascaded, can turn on a bank of large amplifiers with no inrush current, and therefore no risk of blowing a circuit breaker.

To cascade two or more RT products, connect the aux relay contacts of one unit to the contact closure input of the next unit. To provide confirmation feedback, connect the aux relay contacts to an input on the central controller.

The relay contacts are rated for 1 amp at 30 V DC.



Characteristics:

Protection type	SurgeX® <i>Series Mode</i> ®
Nominal line to neutral voltage U ₀ (V)	240V
Max.Cont. Operating Voltage U _c (V)	260VAC
Voltage protective level U _p (V)	1KV
Max. shorted current. (I _{sc})	3KA
Open circuit voltage (U _{oc})	6KV
TOV characteristic (UT)	TOV withstand , τ _T = 5s, U _T = 335V;
Degree of protection (IP)	IP20
Disconnection Device	Plug
Applicable Power Supply System	TN TT IT
Polarity indicator (near the supply cord)	Illuminated: wrong; Off: correct
Location	Indoor
Number of ports	Two
Voltage regulation	≤ 1%
Operation temperature and humidity:	-40 - +35°C, 30-90%
Importer: XXXX; Address:XXXX.	

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