Using the Click 223 0528

The Click 223 dual-485 surge protector device is designed to prevent electrical surges from damaging connected equipment. It protects one DC power and two RS-485 serial connections from these incoming surges, which are usually caused by lightning strikes and carried along underground cables. The Click 223 can be used with a number of devices, including the SmartSensor Advance.

Physical Features
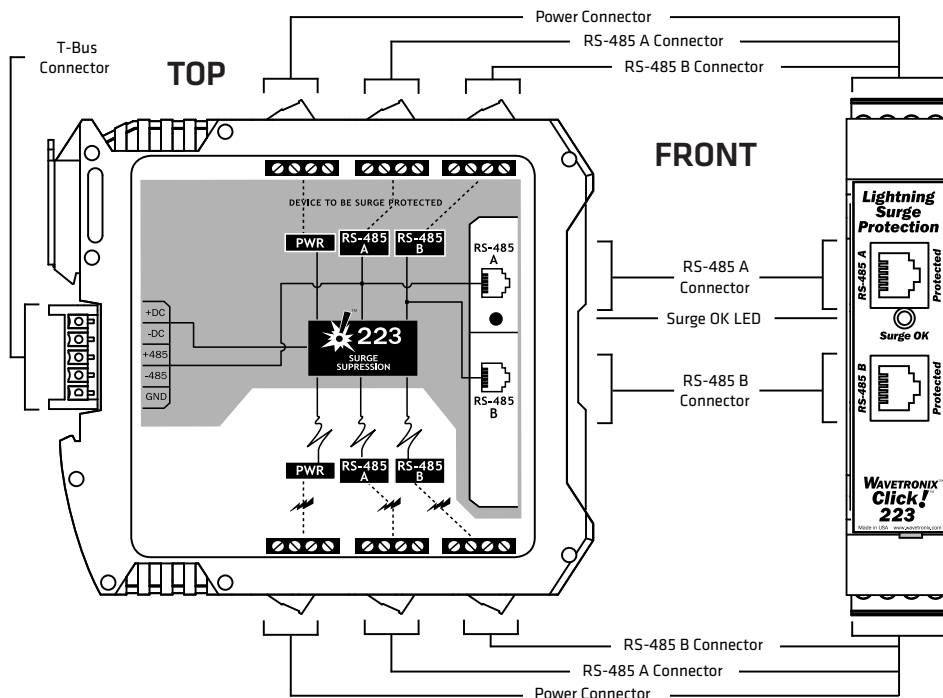
The faceplate of the Click 223 has two RJ-11 jacks, which provide two independent serial connections:

- **RS-485A (upper jack) –** passes RS-485 between the jack, the 485A screw terminals on the top and bottom of the device, and the T-bus 5-position connector.

- **RS-485B (lower jack) –** passes RS-485 between the jack and the 485B screw terminals on the top and bottom of the device.

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As mentioned above, the back of the Click 223 features a 5-position connector that plugs into a T-bus connector and passes power and communication from the Click 223 to the rest of the T-bus and vice versa. This connector is only connected to the RS-485A bus; any data on the RS-485B bus will not be transmitted on the T-bus.

The top and bottom of the Click 223 each have three pluggable screw terminal blocks with four terminals each, for a total of twelve connections. These terminals are used for wiring in the cable from the SmartSensor Advance or other external device. Each set of twelve terminals is made up of the following:

- +DC and -DC for power

- Four ground terminals for drains

- Two PE (protective earth) terminals for earth ground

- Two RS-485 connections, each consisting of one -485 and one +485 terminal

The front of the Click 223 has an LED that lights up to indicate the device has power and the surge protection is working properly. If the LED is not lit, either the device has no power or the surge protection is not working.

Installation

The Click 223 is designed for use with the SmartSensor 6-conductor cable and a Wavetronix sensor that uses this cable, such as the SmartSensor Advance. The steps that follow in this section are specific to this application. If you do not plan on using the 6-conductor cable, you can skip the steps below and simply wire your power and communications by following the labels on the screw terminals.

Which side of the Click 223 you wire into depends on your installation. If you've got an underground cable run, you'll put a Click 223 on each end and connect the ends of the cable to the UNPROTECTED side of each device. If you're connecting to a sensor as well, the sensor cable should be connected into the side of the device marked PROTECTED.
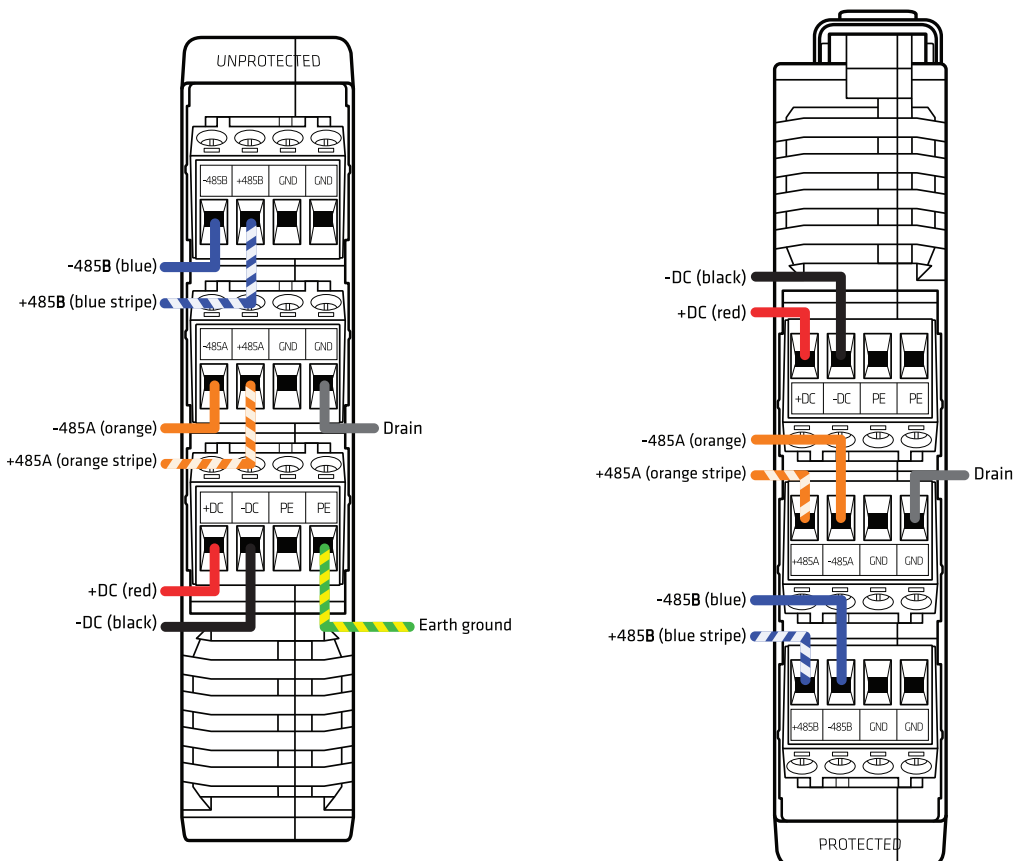
Once you know which side of the device you need to wire into, follow the steps below to do so:

1. Using a rocking motion, mount the Click 223 onto the DIN rail, making sure it's on the T-bus with the devices it's supposed to protect.

2. Wire the cable to the frontmost pluggable screw terminal block: connect the blue wire to the screw terminal marked -485B. Connect the blue and white–striped wire to the screw terminal marked +485B. (For ease, you can remove the terminal block from the device, wire it, then reinsert it.)

3. Wire the middle pluggable screw terminal block: connect the orange wire to the screw terminal marked -485A. Connect the orange and white–striped wire to the screw terminal marked +485A.

4. Wire the backmost pluggable screw terminal block: connect the red wire into the screw terminal marked +DC and the black wire into -DC.

5. Wire the drain into any screw terminal marked GND.

6. Connect a 14 AWG wire between either of the terminals marked PE to a grounded location, such as a grounding lug or an earth ground terminal block (if you are using terminal blocks).

If you need to wire the PROTECTED side of the device as well, do so now. However, since the UNPROTECTED side has already been wired with earth ground, it is not necessary to follow step 6 on the PROTECTED side.

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