



P/N 31197 Revised

**Cable Drawing**  
**18-pin Cable P/N 31197**

This cable is used in a protection switch setup, where it is desired to use an RS-485 monitor and control cable from the protection switch to the user's computer. This cable, part number 31197, is then used to connect the protection switch to an ODU – so two such cables are necessary in a protected setup.

**Pin 1, 3:** These two lines complete a circuit for a down-converter alarm generated by the ODU. The p.s. monitors a C-form relay in the ODU via these two lines. If no alarm the circuit is open.

**Pins 5, 7:** These two lines complete a circuit for an up-converter alarm generated by an ODU. The p.s. monitors a C-form relay in the ODU via these two lines. If no alarm, the circuit is normally closed.

**Pin 7:** A protection switch receives its DC power from the ODUs, pin 7 carries +13VDC to the p.s. from the ODU.

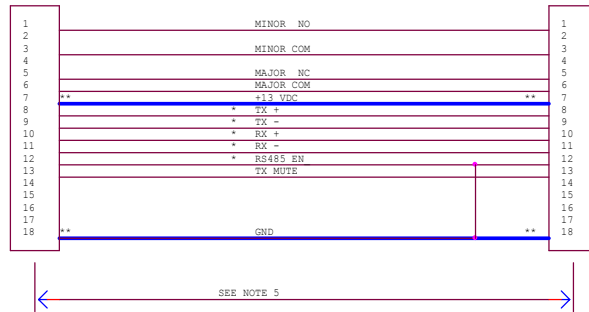
**Pins 8, 9, 10, 11:** The user's computer communicates with the protection switch via RS-485, typically using a cable with a part number of 31199. Cable 31199 contains a Black Box converter that converts the RS-485 signals to RS-232 signals so a normal serial port can be used on the user's computer. In such a setup, the protection switch, and the two ODUs are wired in parallel on the RS-485 lines. This breakout is done inside the protection switch.

**Pin 12:** must be grounded for the 18-pin serial port on an ODU to operate in RS-485 mode instead of RS-232 mode.

**Pin 13:** When the protection switch is operating the TX baseball switch connected to it, it is necessary to mute the transmitters in both ODUs to avoid arcing in the switch. The mute line shown in the drawing below carries the mute request from the p.s. to the ODU.

NOTES :

- 1 CABLE IS 18 WIRES, 22 AWG WITH OVER ALL SHIELD. SHIELD CONNECTED TO PIN 18 AT BOTH ENDS.
- 2 WIRES INDICATED AS: \*\* ARE FOUR (4) PARALLEL COMBINATION
- 3 CONNECTOR TYPE IS CONXALL 13282-18SG-32, BOTH ENDS.
- 4 CABLE ASSEMBLY SHALL BE CONSTRUCTED TO BE WATER TIGHT.
- 5 CABLE TO BE IDENTIFIED BY "RS485", PART NUMBER, DASH CABLE LENGTH (IN FEET) USING UV RESISTANT INK AND MATERIALS.



ANACOM, INC.		
Title CABLE, 18 WIRE: ODU/PROTECTION SWITCH, RS485		
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