

INSTRUCTION MANUAL



HUB-SDM8

1/08



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HUB-SDM8

1. Introduction

The HUB-SDM8 is an 8-channel hub for SDM peripherals and power connectors, and is used to daisy-chain multiple sets of SDM (Synchronous Device for Measurement) devices to a single Campbell Scientific, Inc. datalogger, as well as run multiple power connectors using a 16 AWG wire. The HUB-SDM8 is comprised of an environmental enclosure with eight compression fittings (two larger for 16 AWG power wires) and eight terminal strips. The HUB-SDM8 can also be used as a generic junction box, or as a HUB-SDM5.

2. HUB-SDM8 Specifications

Terminal Strips:

Three spring-loaded “guillotine” connections per terminal; two terminals in common through a jumper creates eight banks

Operating Temperature:

-55°C to +85°C

Operating Humidity:

Noncondensing 0% – 95%

Dimensions:

Length: 17.8 cm (7.0")
Width: 19.7 cm (7.75")
Depth: 13.3 cm (5.25")

Weight:

0.88 kg (1.95 lbs)

3. General

Inside the HUB-SDM8 enclosure are eight pairs of spring-loaded "guillotine" terminal strips, which provide connection points for individual wires. A small screwdriver is included to open the guillotines for wire entry. These terminal strips are mounted on a DIN-rail and an orange end cap separates each pair. Each pair of terminal strips is connected to each other by means of a jumper, and is used to connect up to six wires to each other.

4. Installation and Wiring

A U-bolt is used to mount the HUB-SDM8 to a 1.25 inch NPT pipe.

The spring-loaded guillotines are opened with a small flat blade (2.5 x 50 mm) screwdriver (p/n 8125). Orient the screwdriver blade so that the blade edge is perpendicular to the orange separators. Gently insert the small flat blade screwdriver into the square slot located next to the circular wire port until it bottoms out. For the cluster of four wire ports located on the left hand side of the HUB-SDM8, the guillotine release slot is located to the right of the wire port. For the wire ports on the right hand side of the HUB-SDM8, the guillotine release slot is located to the left of the wire port. Once the screwdriver has been completely inserted and has bottomed out, firmly press the screwdriver down until the guillotine snaps open. Insert and hold the wire as the screwdriver is removed.

4.1 Wiring SDM Devices and Power Wires for Daisy-Chain

Before connecting the cable to the terminals, strip the wire insulation back to expose 1/4 inch of bare wire. Feed the cable through the bulkhead fitting. Neatly separate the wires, and connect them, using the technique described in section 4 above. The figures below show how two SDM devices (CSAT3 and LI-7500) and their power wires are connected within a daisy-chain network.

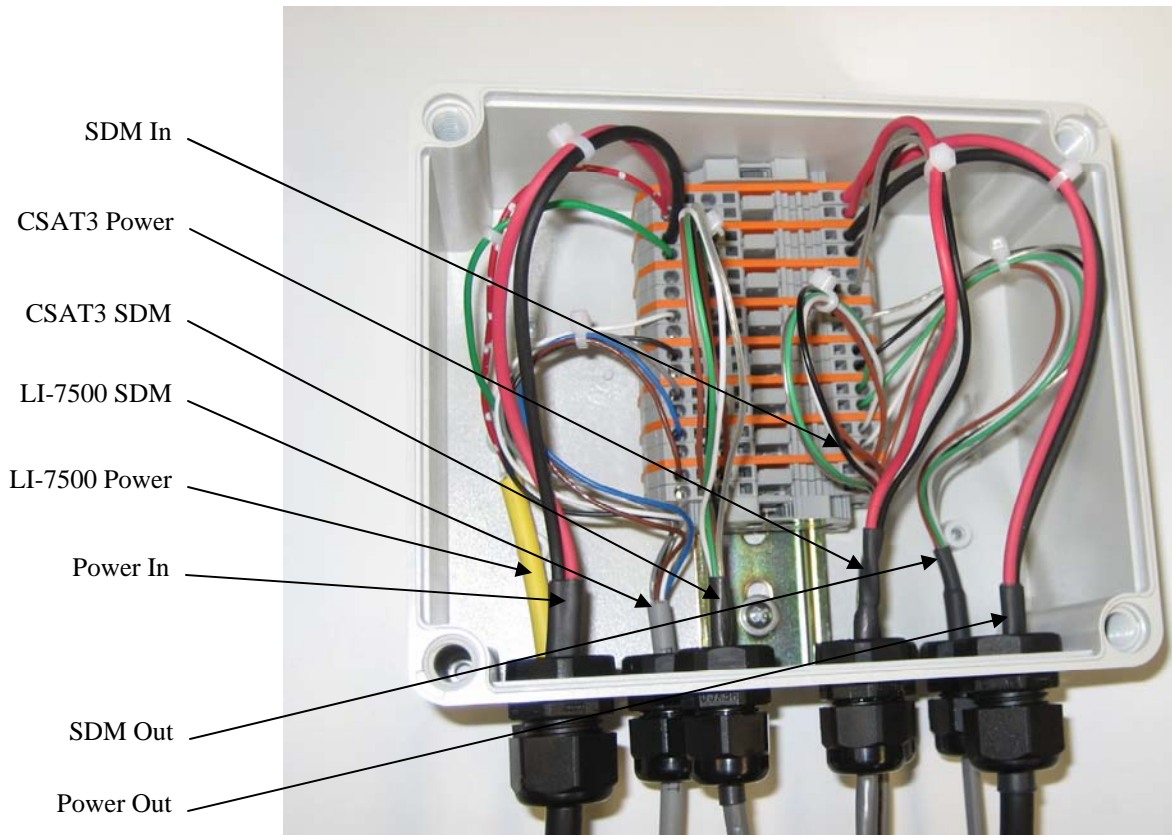


FIGURE 1. HUB-SDM8 in a Daisy-Chain Network

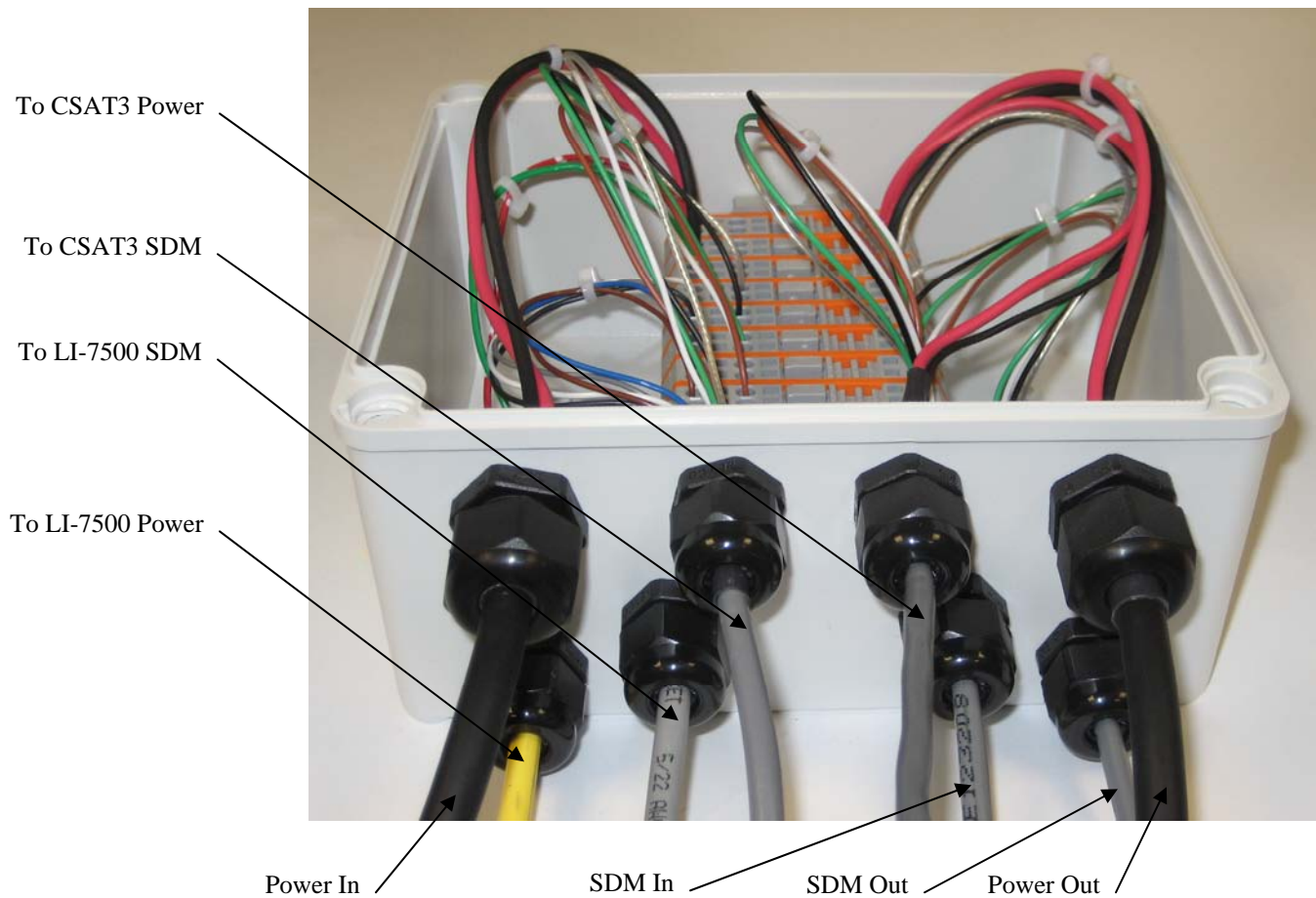


FIGURE 2. HUB-SDM8 in a Daisy-Chain Network — Bottom View

5. HUB-SDM5

The HUB-SDM8 can provide the same function as the HUB-SDM5, which is a 5-channel hub for SDM peripherals. Use the supplied plugs to seal the unused bulkhead fittings to use the HUB-SDM8 to connect multiple SDM devices to a single Campbell Scientific, Inc. datalogger. Please refer to the HUB-SDM5 manual for connecting multiple SDM devices to a datalogger, using the HUB-SDM8.

6. Generic Junction Box

The HUB-SDM8 can be used as a generic junction box. In its default configuration, six eight-conductor cables can be connected to each other. Three sixteen-conductor cables can be connected to each other by removing the jumper between the terminal strips. Use a small screwdriver to pry the jumper out.

7. Maintenance

There are no user-serviceable parts in the HUB-SDM8. Make sure that all unused bulkhead fittings are sealed with a plug and that the lid is tightly fastened.

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