

10-Motor Power Supply with Ethernet to Cresnet® Bridge and Cresnet Hub

- > Support for up to 10 Crestron® roller shade motors, 10 drapery system motors, or a combination of the two up to a total of 10
- > Built-in 5-segment Cresnet® hub
- > Ethernet to Cresnet bridge
- > Ability to remotely cycle power to each shade motor to assist in troubleshooting
- > Individual per-motor overcurrent protection
- > Local shade and drapery master controls
- > Clear diagnostic LED indicators
- > Convection cooled for silent operation
- > Surface-mountable or mountable in a CAEN enclosure

The CSA-PWS10S-HUB-ENET Power Supply powers up to 10 Crestron® Quiet Motor Technology™ roller shade or drapery system motors and features an Ethernet to Cresnet® bridge and a built-in, 5-segment Cresnet® hub. The embedded Ethernet to Cresnet bridge provides the flexibility necessary for a multitude of installation configurations with the added benefit of high-speed communications. Any hub set to Ethernet becomes a Cresnet hub master for any daisy-chained hubs that are set to Cresnet and connected to the hub.^[1,2] A local control interface with LED feedback indicators allows roller shade or drapery systems to be tested without a control system connection. In addition to network diagnostics capabilities, the CSA-PWS10S-HUB-ENET is convection cooled for silent operation and can be surface-mounted or mounted in a CAEN or CAEN-MLO enclosure.

The Cresnet Bus

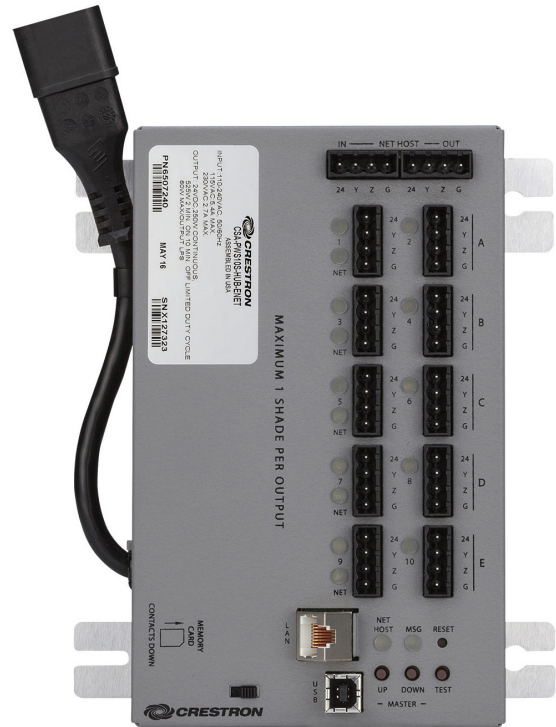
Cresnet is the communications backbone for many Crestron keypads, lighting controls, shade motors, thermostats, occupancy sensors, and other devices that don't require the higher speed of Ethernet. It provides a dependable and flexible wiring solution, allowing multiple devices to be wired together in parallel using both home-run and daisy-chain topologies.^[2] The Cresnet bus distributes bidirectional data communication and 24VDC power to each device over a single 4-conductor cable.

Ethernet to Cresnet Bridge

Adding one or more CSA-PWS10S-HUB-ENETs to a Crestron Shading Solutions System enables the distribution of Cresnet over high-speed Ethernet.^[1] The increased bandwidth afforded by Ethernet reduces latency for overall improved speed and performance. By leveraging existing LAN infrastructure in any facility, wiring distances can be extended easily while potentially reducing the overall wiring requirements. Multiple hubs can communicate solely over Ethernet as long as they are each directly connected to an Ethernet source.

Quick Troubleshooting

The built-in diagnostics featured on the CSA-PWS10S-HUB-ENET enable the user to automatically shut down any branch with a fault, to identify the exact problem (e.g., Y shorted to Z, Z shorted to GND, overload, etc.) without a multimeter, and then to trigger program events based on problems detected by the power supply (e.g., display notices on touch screens and send emails to the service department). For easy troubleshooting, the hub supports the ability to remotely cycle power to each shade or drapery motor that is connected to it.



CAEN Enclosure Mounting

The CSA-PWS10S-HUB-ENET occupies a single module space in any CAEN or CAEN-MLO automation enclosure. Ethernet to Cresnet Bridge and Cresnet Hub modules are controlled by the DIN-AP3 and other 3-Series® control systems via the Cresnet network or via a control system with Ethernet communications.

SPECIFICATIONS

Load Rating

Total Motors Supported: Provides power for up to (10) Crestron® roller shade motors, (10) drapery system motors, or a combination of the two up to a total of (10) motors with each motor homerun to the power supply; 10 Drapery System solutions carry 145 lbs load each
Output: 24 Volts DC, 60 Watt max/output LPS
 250 Watts Total Continuous Load
 525 Watts 2 minutes ON, 10 minutes OFF Limited Duty Cycle
Load Protection: (10) Self-resetting thermal fuses, (1) per output

Power Requirements

Line Power: 110-240 Volts AC, 50/60 Hz, 5.5 Amps max at 110 Volts AC, 2.7 Amps max at 240 Volts AC



Connections

NET HOST IN, OUT: (2) 4-pin 5 mm detachable terminal blocks; Cresnet® slave ports, paralleled;
 Connect to Cresnet control network in Cresnet mode,^[1] power not supplied to these connections;
 Cresnet power and data pass-through;
 Used to daisy-chain to additional CSA-PSW10S-HUB-ENET modules when in Ethernet mode^[1,2]

A-E, 1-10: (10) 4-pin 5 mm detachable terminal blocks comprising (2) Cresnet ports per each of the (5) hub segments

LAN: (1) 8-pin RJ45, female; 10Base-T/100Base-TX Ethernet port

USB: (1) USB Type B female, USB computer console port

Line Power: (1) Attached input power cable (~10 in long, 254 mm) with inline IEC 60320 C14 main power inlet;
 Connects to AC power source using grounded 3-prong IEC cord (included)

MEMORY CARD: Not used

LED Indicators

PWR 1-10: (10) Green LEDs, indicate 24 Volts present at each corresponding output

NET A-E: (5) Amber LEDs, indicate Cresnet or Ethernet activity on each corresponding hub segment

NET HOST: (1) Amber LED, indicates Cresnet activity with control system

MSG: (1) Red LED, indicates error messages and Test mode

Buttons

MODE: (1) Switch, sets the unit to either Cresnet or Ethernet mode;
CRES: Enables Cresnet communications, unit functions as a slave device;
 All daisy-chained hubs except for the master must be set to CRES^[1]

LAN: Enables Ethernet communications, unit functions as a master device;
 Standalone units set to LAN must be directly connected to a LAN source^[1]

MASTER UP: (1) Pushbutton, press and hold to raise/open all connected shades/drapery

MASTER DOWN: (1) Pushbutton, press and hold to lower/close all connected shades/drapery

TEST: (1) Pushbutton, initiates or terminates diagnostic test

RESET: (1) Recessed pushbutton, forces hardware reset

Housing

Enclosure: Metal, grey

Mounting: Mounts in a CAEN or CAEN-MLO enclosure, 16-gauge galvanized steel enclosure with vented grey steel cover;
 Surface-mountable on a wall (indoor use only)

Environmental

Temperature: 32° to 104° F (0° to 40° C)
Humidity: 10% to 90% RH (non-condensing)

Dimensions

Height: 7.71 in (196 mm)
Width: 6.32 in (162 mm)
Depth: 3.08 in (78 mm)

Weight

3 lbs (1.4 kg)

MODELS & ACCESSORIES

Available Models

CSA-PWS10S-HUB-ENET: 10-Motor Power Supply with Ethernet to Cresnet® Bridge and Cresnet Hub

Available Accessories

- CRESNET-NP-BK-B500:** Cresnet® Control Cable, Non-Plenum, Black, 500 ft (152 m) box
- CRESNET-NP-OR-B500:** Cresnet® Control Cable, Non-Plenum, Orange, 500 ft (152 m) box
- CRESNET-NP-TL-B500:** Cresnet® Control Cable, Non-Plenum, Teal, 500 ft (152 m) box
- CRESNET-NP-TL-SP1000:** Cresnet® Control Cable, Non-Plenum, Teal, 1,000 ft (304 m) spool
- CRESNET-NP-TL-SP500:** Cresnet® Control Cable, Non-Plenum, Teal, 500 ft (152 m) spool
- CRESNET-P-BK-SP500:** Cresnet® Control Cable, Plenum-Rated, Black, 500 ft (152 m) spool
- CRESNET-P-OR-SP500:** Cresnet® Control Cable, Plenum-Rated, Orange, 500 ft (152 m) spool
- CRESNET-P-TL-SP1000:** Cresnet® Control Cable, Plenum-Rated, Teal, 1,000 ft (304 m) spool
- CRESNET-P-TL-SP500:** Cresnet® Control Cable, Plenum-Rated, Teal, 500 ft (152 m) spool

Notes:

1. A CSA-PWS10S-HUB-ENET functions as a master device **only** when it is set to Ethernet. Another hub can be connected to the master hub **only** if that hub is set to Cresnet, thereby becoming the slave unit. Additional daisy-chained hubs must also all be set to Cresnet.
2. Two daisy-chained CSA-PWS10S-HUB-ENET modules per Ethernet connection with up to 20 connected motors is the recommended topology for best performance. At its maximum capabilities, one CSA-PWS10S-HUB-ENET set to Ethernet can support up to six daisy-chained CSA-PWS10S-HUB-ENETs set to Cresnet, controlling up to 70 shade or drapery motors in total.

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CAD DRAWINGS

