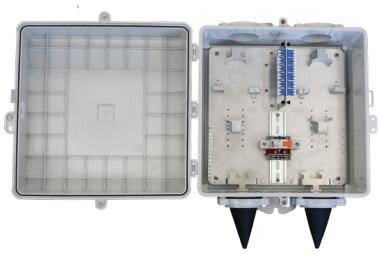
Hybrid Fiber/Power UCS Terminal

Installation Instructions

A BELDEN BRAND

Overview

The PPC Hybrid Fiber/Power UCS Terminal is designed for wireless and other DC powered equipment applications with fiber connectivity. The ruggedized enclosure is designed to perform in harsh environments. The fiber bulkhead in LGX format provides end users flexibility for the fiber connections. Multiple circuit configurations are available, with optional overvoltage protection via circuit breakers. For most configurations, the terminal blocks are bridgeable, allowing for distribution of large gauge power wire to smaller gauge power wires.

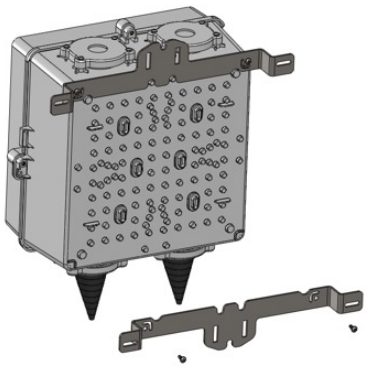


Configurations

PPC Part Number	# of Fibers	# of Circuits	Power Distribution Capable	Overvoltage Protection
UCS-HS12D01A1W0	12 (6 DLC)	1	N/A	10 A Breaker
UCS-HS12D02A0W0	12 (6 DLC)	2	Yes	No
UCS-HS12D03A0W0	12 (6 DLC)	3	Yes	No
UCS-HS12D03A1W0	12 (6 DLC)	3	Yes	10 A Breaker (3)
UCS-HS24D04A0W0	24 (12 DLC)	4	Yes	No
UCS-HS24D06A2W0	24 (12 DLC)	6 (6 AWG max)	No (pass-through only)	No

Installation

Bracket Attachment



1. Before mounting, attach the brackets with the four provided screws.
2. Orient the brackets, as shown.
3. Ensure the raised plastic features fit into the slots and the bracket is against the body.
4. Use screw type #10-14 x 0.5” with a self-threading pan head.
5. Use a #12 Phillips bit to drive the screws.
6. Ensure the screw head bottoms on the bracket – do not over-tighten.

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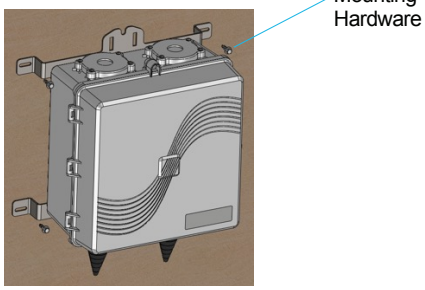
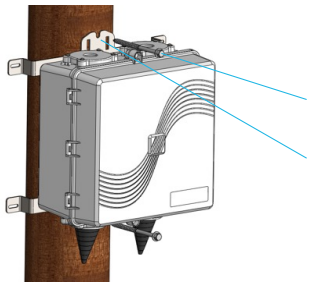
Enclosure Mounting

Wall Mount



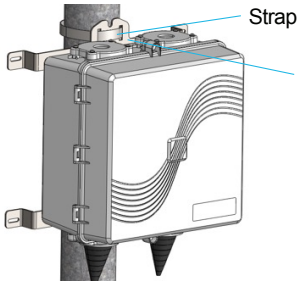
1. Use the suggested fastener size: 1/4” or M6 (not provided).
2. Mark the wall for four pilot holes with spacing as follows:
   Horizontal: 14.5 in (368.3 mm) MIN / 16.0 in (406.4 mm) MAX
   Vertical: 12.0 in (304.8 mm)
3. Verify the pilot holes align with the bracket slots, and adjust if needed.
4. Drill the pilot holes.
5. Loosely install one top screw.
6. Level the enclosure horizontally and vertically.
7. Tighten the top screws securely.
8. Install the bottom screws and tighten securely.

Pole Mount with Lag Screw



1. Use the suggested fastener size: 3/8” or M8 (not provided).
2. Mark the pole for two pilot holes with spacing as follows:
   Vertical: 15.65 in (397.5 mm)
3. Verify the pilot holes align with the bracket slots, and adjust if needed.
4. Drill the pilot holes.
5. Loosely install the bottom screw, leaving a gap for the bracket.
6. Install the enclosure and level it horizontally and vertically.
7. Tighten the bottom screw securely.
8. Install the top screw and tighten it securely.

Pole Mount with Straps



1. The maximum recommended band width (bands not provided) is: 1.0 in (25.4 mm)
2. Loosely install the top and bottom bands through the bracket slots and around the pole.
3. Tighten the top band securely.
4. Level the enclosure horizontally and vertically.
5. Tighten the bottom band securely.

These products may be protected by one or more patents. For further information, please visit: www.ppc-online.com/patents

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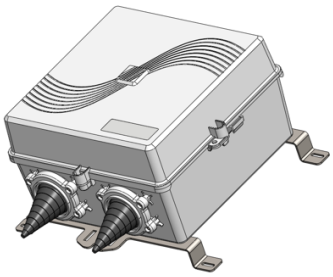
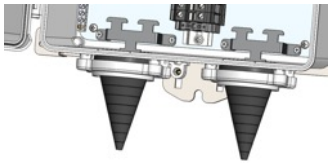
Installation

Cable Installation

Cone Grommets

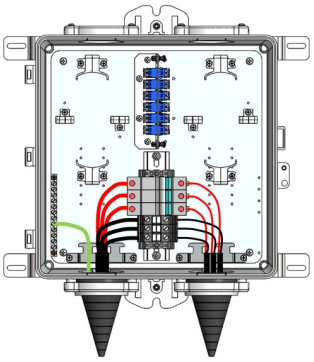




1. Two Rubber cone grommets are provided. – Use one for incoming cables and ground wire, and the second for outgoing cables.
2. The rubber cone grommet sizes range from 0.28 in (7 mm) to 1.73 in (44 mm).
3. Cut across the lines for the desired cable outer diameter (OD). – The first line is for 0.28 in (7 mm), and each adjacent line adds 0.25 in (6 mm) to the diameter.
4. If the OD is between the range of the lines, cut on the smaller side.
5. For multiple cables, cut on the small side of the overall diameter.
6. Route the cables through the grommet and secure them to the internal strain relief brackets (black) with Zip Ties.
7. After all cables have been inserted, secure the rubber cone grommet with a Zip Tie. – Ensure it is tight enough to prevent slipping off.
8. If NEMA 4 performance is required, it is recommended to fill the cone grommet from the inside with a sealant.

Power Connection

Terminal Blocks / Circuit Breakers



1. Wire size:
   - Terminal Blocks: 14 to 4 AWG (1.5 mm^2 to 25 mm^2) except UCS-HS24D06A2W0: 20 to 6 AWG (0.5 mm^2 to 16 mm^2)
   - Circuit Breakers: 18 to 2 AWG (1.0 mm^2 to 35 mm^2)
   - Ground Bar: 14 to 4 AWG (1.5 mm^2 to 25 mm^2)
2. Wire strip length: 0.40 – 0.55 in (10 – 14 mm)
3. Required tool: Flat-head screwdriver or bit, 3/16 in (5 mm) max
4. Screw torque:
   - Terminal Blocks (4-14 AWG): 22 - 27 in-lbs (2.5 - 3.0 N-m)
   - Terminal Blocks (UCS-HS24D06A2W0): 13 - 16 in-lbs (1.5 - 1.8 N-m)
   - Circuit Breakers: 16 - 19 in-lbs (1.8 - 2.2 N-m)
   - Ground Bar: 35 - 45 in-lbs (4.0 - 5.0 N-m)
5. Attach the main ground wire and any supply/radio ground wires to the ground block on the left side. The main ground wire must be adequately sized.
6. Attach the supply wires (typically on the left side) to the terminal blocks/circuit breakers. Attach the supply voltage to the breakers or red terminals, then attach the return (0V) to the black terminal blocks.
7. Attach the radio wires to the opposite side of the terminals. Be sure to maintain supply/return polarity.

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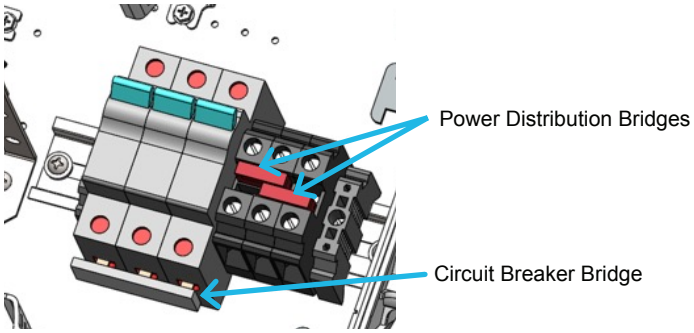
Installation

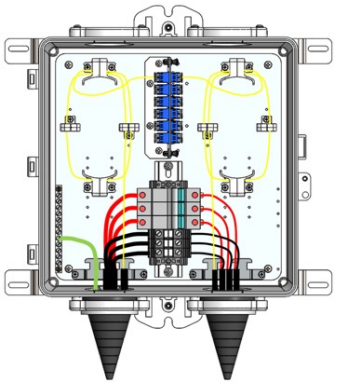
Power Connection (cont.)

Power Distribution Bridges



1. For power distribution (single supply wire, multiple radio wires), install the supplied bridges, as shown.
2. The terminal block bridges are red, but can be used in red or black terminal blocks. Install the bridges between the terminals of the same color only.
3. Circuit breaker bridges should be installed above the supply wire.
4. It is recommended to install the supply wire toward the center of the multiple terminal blocks or breakers.

Fiber Connections



1. Connect any ground or tracer wire to the ground block on the left side.
2. Route the supply side fibers (typically on the left side) as shown and connect them to the fiber bulkhead. Take care to observe the required bend radius limits for the cables.
3. Repeat the last step for the radio fiber cables on the opposite side.
4. Note the fiber numbers on the supplied label.
5. Once all the connections are completed and checked, carefully close the cover and lock the security bolts to protect the components.