Features

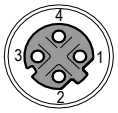
- The R50C-POE-24Q is a compact Power over Ethernet (PoE) splitter device that inputs a PoE signal and outputs power (24 V DC) and data (Ethernet) into two separate ports to connect any Ethernet-based device to a PoE switch
- Steps down power from 45 V DC - 54 V DC, to 24 V DC to power any standard DC voltage device in areas where only PoE is available
- Connect Ethernet-based Banner products, such as Ethernet radios, the DXM line, and SNAP SIGNAL® products, to PoE

Models

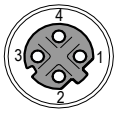
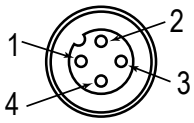
Model	Function	Type	Voltage Out	Connector
R50C-POE-24Q	Converter	Power over Ethernet	24 V DC	Integral 4-pin M12 female quick-disconnect connector

Wiring

Input

Diagram	Pin Number	Description
Integral 4-pin D-Code M12 female quick-disconnect connector 	Pin 1	Tx+ / DC-
	Pin 2	Rx+ / DC+
	Pin 3	Tx- / DC-
	Pin 4	Rx- / DC+

Outputs

Diagram	Pin Number	Description
Integral 4-pin D-Code M12 female quick-disconnect connector 	Pin 1	Tx+
	Pin 2	Rx+
	Pin 3	Tx-
	Pin 4	Rx-
Integral 4-pin M12 female quick-disconnect connector 	Pin 1	24 V DC
	Pin 2	NC
	Pin 3	DC common
	Pin 4	NC

Status Indicators

Power LED Indicator (Green)

- Solid Green = Power On
- Off = Power Off

Specifications

Input Characteristics

Voltage: 42.5 V DC to 57 V DC

Current: 30 mA independent of powered device

PoE (Class 0 - 802.3af, 802.3at Type 1)

Output Characteristics

Voltage: 24 V DC ±10%

Current: 450 mA average

Power: 12.95 W

Limited energy power supply evaluated to IEC, UL, and CSA 61010-2-201 that can be used to power devices that require a Class 2 or SELV power supply

Original Instructions
20-Jun-25

235182
p/n: 235182 Rev. C

Supply Protection Circuitry

Protected against reverse polarity and transient voltages

Data Rate

10/100 Mbps

Construction

Coupling material: Nickel-plated brass

Connector body: PVC translucent black

Connections

(2) Integral 4-pin D-code M12 female quick-disconnect connectors

(1) Integral 4-pin M12 female quick-disconnect connector

Environmental Rating

IP65, IP67, IP68

UL Type 1

Operating Conditions

Temperature: –40 °C to +50 °C (–40 °F to +122 °F)

90% at +60 °C maximum relative humidity (non-condensing)

Storage Temperature: –40 °C to +80 °C (–40 °F to +176 °F)

Vibration and Mechanical Shock

Meets IEC 60068-2-6 requirements (Vibration: 10 Hz to 55 Hz, 0.5 mm amplitude, 5 minutes sweep, 30 minutes dwell)

Meets IEC 60068-2-27 requirements (Shock: 15G 11 ms duration, half sine wave)

Product Identification

SNAP SIGNAL®

Certifications

Banner Engineering BV
Park Lane, Culliganlaan 2F bus 3
1831 Diegem, BELGIUM

Turck Banner LTD Blenheim House
Blenheim Court
Wickford, Essex SS11 8YT
GREAT BRITAIN

Required Overcurrent Protection

WARNING: Electrical connections must be made by qualified personnel in accordance with local and national electrical codes and regulations.

Overcurrent protection is required to be provided by end product application per the supplied table.

Overcurrent protection may be provided with external fusing or via Current Limiting, Class 2 Power Supply.

Supply wiring leads < 24 AWG shall not be spliced.

For additional product support, go to www.bannerengineering.com.

Supply Wiring (AWG)	Required Overcurrent Protection (A)	Supply Wiring (AWG)	Required Overcurrent Protection (A)
20	5.0	26	1.0
22	3.0	28	0.8
24	1.0	30	0.5

FCC Part 15 Class B for Unintentional Radiators

(Part 15.105(b)) This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

(Part 15.21) Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

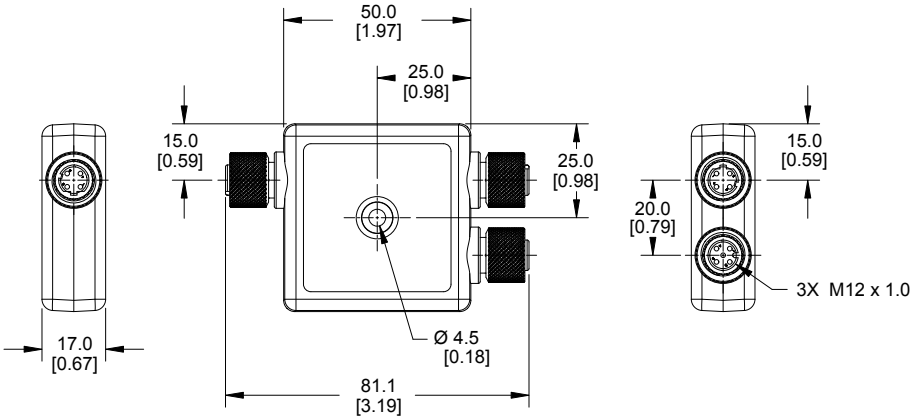
Industry Canada ICES-003(B)

This device complies with CAN ICES-3 (B)/NMB-3(B). Operation is subject to the following two conditions: 1) This device may not cause harmful interference; and 2) This device must accept any interference received, including interference that may cause undesired operation.

Cet appareil est conforme à la norme NMB-3(B). Le fonctionnement est soumis aux deux conditions suivantes : (1) ce dispositif ne peut pas occasionner d'interférences, et (2) il doit tolérer toute interférence, y compris celles susceptibles de provoquer un fonctionnement non souhaité du dispositif.

Dimensions

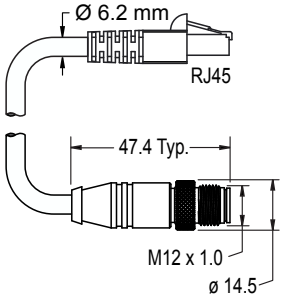
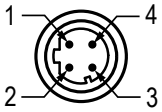
All measurements are listed in millimeters [inches], unless noted otherwise. The measurements provided are subject to change.



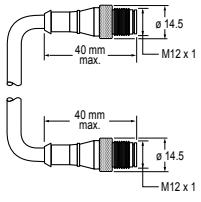
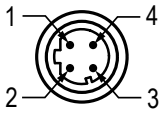
Accessories

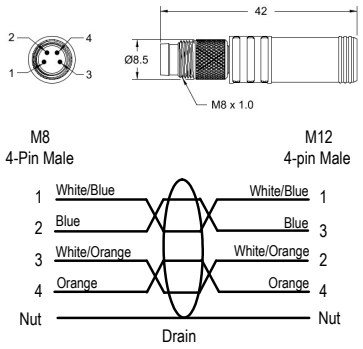
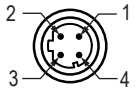
Cordsets

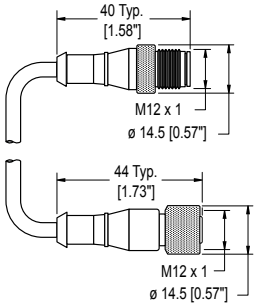
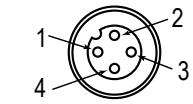
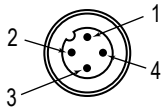
Input

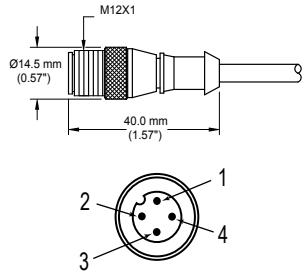
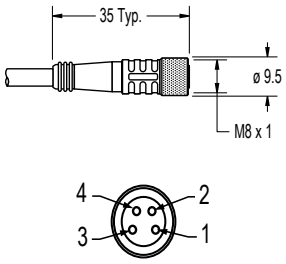
Double-Ended 4-pin M12 Male D-code to 8-Pin RJ45 Male Shielded Ethernet Cordsets				
Model	**Length**	**Dimensions**	**RJ45 Pinout (Male)**	**M12 Pinout (Male)**
STP-M12D-403	0.9 m (2.95 ft)		 1 = White/Orange 2 = Orange 3 = White/Blue 6 = Blue	 1 = White/Orange 2 = White/Blue 3 = Orange 4 = Blue
STP-M12D-406	1.83 m (6 ft)			
STP-M12D-415	4.57 m (15 ft)			
STP-M12D-430	9.14 m (30 ft)			

Output

4-Pin D-Code Double-Ended M12 Male Ethernet Cordsets				
Model	**Length**	**Style**	**Dimensions**	**Pinout (Male)**
BCD-M12DM-M12DM-0.3M	0.3 m (13 in)	Straight		 1 = White/Orange 2 = White/Green 3 = Orange 4 = Green
BCD-M12DM-M12DM-1M	1 m (39 in)			

4-pin M8 Male to 4-pin M12 Male D-Code Ethernet				
Model	**Length**	**Dimensions and Wiring**	**Pinout (M8 Male)**	**Pinout (M12 Male)**
STP-M8M-M12DM-0.2M	0.2.m (0.6 ft)		 1 = White/Blue 2 = Blue 3 = White/Orange 4 = Orange Nut = Shield	 1 = White/Blue 2 = White/Orange 3 = Blue 4 = Orange Nut = Shield
STP-M8M-M12DM-0.5M	0.5 m (1.6 ft)			
STP-M8M-M12DM-5M	5 m (16.4 ft)			

4-Pin Double-Ended M12 Female to M12 Male Cordsets				
Model	**Length**	**Style**	**Dimensions**	**Pinout**
MQDEC-401SS	0.31 m (1 ft)	Male Straight/Female Straight		Female  Male  1 = Brown 2 = White 3 = Blue 4 = Black
MQDEC-403SS	0.91 m (2.99 ft)			
MQDEC-406SS	1.83 m (6 ft)			
MQDEC-412SS	3.66 m (12 ft)			
MQDEC-415SS	4.58 m (15 ft)			
MQDEC-420SS	6.10 m (20 ft)			
MQDEC-430SS	9.14 m (30.2 ft)			
MQDEC-450SS	15.2 m (49.9 ft)			

4-pin M12 Male to 4-pin M8 Female Connector				
Model	**Length**	**M12 Male**	**M8 Female**	**Pinout Key**
BC-M12M4-M8F4-26-0.16M	0.16 m (0.50 ft)			1 = Brown 2 = White 3 = Blue 4 = Black
BC-M12M4-M8F4-26-1M	1 m (3 ft)			
BC-M12M4-M8F4-26-2.5M	2.5 m (8.2 ft)			

Product Support and Maintenance

Clean with Mild Detergent and Warm Water

Wipe down the device with a soft cloth dampened with a mild detergent and warm water solution. Do not use any other chemicals for cleaning.

Repairs

Contact Banner Engineering for troubleshooting of this device. **Do not attempt any repairs to this Banner device; it contains no field-replaceable parts or components.** If the device, device part, or device component is determined to be defective by a Banner Applications Engineer, they will advise you of Banner's RMA (Return Merchandise Authorization) procedure.

IMPORTANT: If instructed to return the device, pack it with care. Damage that occurs in return shipping is not covered by warranty.

Contact Us

Banner Engineering Corp. headquarters is located at: 9714 Tenth Avenue North | Plymouth, MN 55441, USA | Phone: + 1 888 373 6767

For worldwide locations and local representatives, visit www.bannerengineering.com.

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