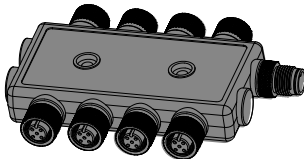


# R95C 8-Port 2-Channel Discrete IO-Link Hub Quick Start Guide

## Features

This guide is designed to help you set up and install the R95C 8-Port 2-Channel Discrete Bimodal IO-Link Hub. For complete information on programming, performance, troubleshooting, dimensions, and accessories, please refer to the Instruction Manual at [www.bannerengineering.com](http://www.bannerengineering.com). Search for p/n 233582 to view the Instruction Manual. Use of this document assumes familiarity with pertinent industry standards and practices.



- Compact bimodal to IO-Link device converter that connects discrete inputs and sends the value to the IO-Link Master
- Outputs a discrete value as received from IO-Link Master Process Data Out
- Enabled Delay Modes: ON/OFF Delay, ON/OFF One-shot, ON/OFF/Retriggerable One-shot, ON/OFF Pulse-stretcher and Totalizer
- Measurement Metrics: Count, Events Per Minute (EPM), and Duration
- Discrete Mirroring: Discrete signals (In/Out) from all eight ports can be mirrored to any of the eight ports, Discrete Out, or the host white wire output
- Discrete input/output can be independently configured as NPN or PNP
- Rugged overmolded design meets IP65, IP67, and IP68
- Connects directly to a sensor or anywhere in-line for ease of use
- R95C IO-Link hubs are a quick, easy, and economical way to integrate non-IO-Link devices into an IO-Link system



## Overview

The R95C-8B22-KQ hub connects two discrete Input/Output channels to each of the eight unique ports, providing access to monitoring and configuring those ports with an IO-Link master. Host mirroring is available where a selected port input/output discrete signal can be routed to Pin 2 (male) on the PLC/Host connection.

## IO-Link®

IO-Link® is a point-to-point communication link between a master device and a sensor and/or light. It can be used to automatically parameterize sensors or lights and to transmit process data. For the latest IO-Link protocol and specifications, please visit [www.io-link.com](http://www.io-link.com).

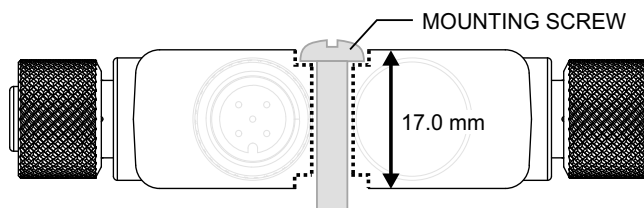
For the latest IODD files, please refer to the Banner Engineering Corp website at: [www.bannerengineering.com](http://www.bannerengineering.com).

## Resources

For more information, see P/N 233583 *R95C-8B22-KQ IO-Link Data Reference Guide* and P/N 233584 *R95C-8B22-KQ IODD Files*.

## Mechanical Installation

Install the R95C to allow access for functional checks, maintenance, and service or replacement. Do not install the R95C in such a way to allow for intentional defeat. Fasteners must be of sufficient strength to guard against breakage. The use of permanent fasteners or locking hardware is recommended to prevent the loosening or displacement of the device. The mounting hole (4.5 mm) in the R95C accepts M4 (#8) hardware. See the figure below to help in determining the minimum screw length.



**CAUTION:** Do not overtighten the R95C's mounting screw during installation. Overtightening can affect the performance of the R95C.

## Status Indicators

The R95C 8-Port 2-Channel Discrete Bimodal IO-Link Hub has two matching amber LED indicators, one for each channel, on both sides for each discrete device port to allow for installation needs and still provide adequate indication visibility. There is also an additional amber LED indicator on both sides of the converter, which is specific to the IO-Link communication.

| LED                             | Indication                             | Status                                 |
|---------------------------------|--|--|
| Discrete Device Amber LEDs      | Off                                    | Discrete In and Out are inactive       |
|                                 | Solid Amber                            | Discrete In or Out is active           |
| IO-Link Communication Amber LED | Off                                    | IO-Link communications are not present |
|                                 | Flashing Amber (900 ms On, 100 ms Off) | IO-Link communications are active      |
| Power Indicator Green LED       | Off                                    | Power off                              |
|                                 | Solid Green                            | Power on                               |

## Specifications

### Supply Voltage

18 V DC to 30 V DC at 400 mA maximum (exclusive of load)

### Power Pass-Through Current

500 mA per port maximum

### Discrete Output Load Rating

200 mA

### Supply Protection Circuitry

Protected against reverse polarity and transient voltages

### Leakage Current Immunity

400  $\mu$ A

### Indicators

Green: Power  
Amber: IO-Link communications  
Amber: 2x Discrete IN/OUT status

### Connections

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

### Construction

Coupling Material: Nickel-plated brass  
Connector Body: PVC translucent black

### 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)

### Environmental Rating

IP65, IP67, IP68  
NEMA/UL Type 1

### Operating Conditions

**Temperature:** -40 °C to +70 °C (-40 °F to +158 °F)  
90% at +70 °C maximum relative humidity (non-condensing)  
**Storage Temperature:** -40 °C to +80 °C (-40 °F to +176 °F)

### 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](http://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                                 |

### Certifications



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## FCC Part 15 Class 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.

## Industry Canada

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.

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Original Instructions

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