

# R95C 8-Port Analog In to ModBus® Hub Quick Start Guide



## Features

This guide is designed to help you set up and install the R95C 8-Port Analog In to ModBus® 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 part number 233568 to view the Instruction Manual. Use of this document assumes familiarity with pertinent industry standards and practices.

## Overview

When an analog input value is received by the R95C-8UI-MQ hub, the numerical representational value is represented via ModBus registers.

### Analog Ranges

Voltage = 0 mV to 11,000 mV

Current = 0  $\mu$ A to 24,000  $\mu$ A

## 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.



**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 Analog In to ModBus® Hub has matching amber LED indicators on both sides for each analog in 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 ModBus communication.

Power Indicator Green LED	
Indication	Status
Off	Power off
Solid Green	Power on

  

Modbus Communication Amber LED	
Indication	Status
Off	Modbus communications are not present
Flashing Amber (4 Hz)	Modbus communications are active
Solid Amber for 2 Seconds, Then to Off	Modbus communications are lost after connection
Solid Amber for 2 Seconds, Then to Flashing Amber (4 Hz)	Modbus communications momentarily lost, but then communication was reestablished

  

Analog In Amber LED	
Indication	Status
Off	Analog current value is less than setpoint SP1 OR analog value is greater than setpoint SP2
Solid Amber	Analog current value is between setpoint SP1 AND setpoint SP2
Default Current Values: <ul style="list-style-type: none"><li>• SP1 = 0.004 A</li><li>• SP2 = 0.02 A</li></ul>	Default Voltage Values: <ul style="list-style-type: none"><li>• SP1 = 0 V</li><li>• SP2 = 10 V</li></ul>

## Specifications

### Supply Voltage

12 V DC to 30 V DC at 400 mA maximum

### Power Pass-Through Current

500 mA per port maximum

### Analog Input Impedance

Current version: Approximately 250 ohms

Voltage version: Approximately 14.3K ohms

**Supply Protection Circuitry**

Protected against reverse polarity and transient voltages

**Leakage Current Immunity**

400 µA

**Indicators**

Green: Power

Amber: ModBus communications

Amber: Analog In status

**Connections**

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

(1) Integral 5-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)

**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

**Product Identification****Environmental Rating**

IP65, IP67, IP68

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

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Document title: R95C 8-Port Analog In to ModBus® Hub Quick Start Guide

Part number: 233567

Revision: A

Original Instructions

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