



# Wireless I/O Expansion Made Simple™

**COOPER** Bussmann

**Easily Connect to Devices & Sensors  
That Monitor Critical Values Important  
to Plant Safety and Productivity**

- Expansion I/O for up to 10 Cooper Bussmann® BU-945U-E, BU-245U-E-A-400, and 245U-E-G-400 Wireless Modems.
- Modbus communication protocol for communicating via RS485 to Cooper Bussmann modems or expanding I/O in non-wireless applications.
- Monitor, configure and confirm communications with user-friendly configuration software.
- Supports operation continuity with internal monitoring of power supply, and overvoltage and reverse power protection.
- Approved for Class I, Div 2 hazardous areas.



## Features

- Selectable communications protocol - Modbus (RTU and ASCII)

### • Three I/O versions available:

BU-115 MODEL	115S-11	115S-12	115S-13
Digital input/outputs	16	8	8
Analog inputs	0	4/8	0
Analog outputs	0	0	8
Pulse inputs	4	0	0
Pulse outputs	8	8	8

- Each model has eight (115S-11 has 16) digital I/O channels – each channel can be used as a volt-free contact input or FET output (30VDC, 0.2A max).
- Each DVO channel can function as a pulse output to a maximum 15Hz with the first four DVO/pulse input channels on the 115S-11 to a maximum pulse rate of 1KHz. Pulse inputs provide both totalized count and pulse rate as separate values.
- Configurable analog inputs - 0-20/4-20mA: 0-10V. Selectable as eight single terminal inputs (commoned) or four dual terminal “floating” inputs (115S-12).
- Analog outputs are commoned with selectable supply/sink connections (115S-13).
- Each analog input has a high/low set point to determine a set-point status.
- Field test and display I/O inputs and/or force outputs, monitor and confirm communications, and configure units with user friendly configuration software.

## General

- LED indication for power supply, processor OK, serial TX and RX digital I/O

### Compliances

- EMC FCC Part 15, AS3548, 89/336/EEC
- CSA Class I, Div 2 hazardous areas (USA/Canada)

### Temperature

-40 to +60 °C (-40 to 140 °F).

### Humidity

0-99% RH

### Housing

High density thermo-plastic

### Size

5.91" x 7.09" x 1.38" (150 X 180 x 35mm)

### Mount

DIN rail mounting

### Terminal blocks

Removable terminals up to 12 gauge (2.5 mm<sup>2</sup>) wires

## Inputs and Outputs

### Digital Inputs:

- Suitable for voltage free contacts or NPN transistor, contact wetting current 5mA, inputs are surge protected:
  - BU-115S-11 up to 16 selectable I/O
  - BU-115S-12 and 115S-13 up to eight selectable I/O

### Digital Outputs:

- FET outputs, 30VDC 200mA
  - BU-115S-11 up to 16 selectable I/O
  - BU-115S-12 and BU-115S-13 up to eight selectable I/O

### Analog Inputs:

- “Floating” differential inputs, common mode voltage 27V, 24VDC for powering external loops provided, digital filtering 1 sec, 0-20mA/0-10V resolution 12 bit, accuracy 0.1%
- 115S-12 – eight input channels, selectable as four dual-terminal floating inputs or eight single-terminal commoned inputs

### Analog Outputs:

- Selectable as current/voltage source or current sink to common, 20 VDC for powering external loops provided, max loop resistance 1000 ohms, 0 – 20mA/0 – 10V, 12 bit, accuracy 0.1%
- 115S-13 eight channels, 160mA maximum total current

### Pulse Inputs:

- Specifications as per digital inputs.
- Max pulse rate 1kHz, pulse width min 0.5ms
- 115S-11 four inputs (DVO1-4)

### Pulse Outputs:

- Specifications as per digital outputs
- Max pulse rate 15.625Hz, pulse width min 32ms
- BU-115S-11, BU-115S-12 and BU-115S-13 eight outputs (DVO1-8)

## Power Supply

- 10.8 - 30 VDC, over-voltage and reverse power protected
- Internal monitoring of supply voltage
- Values may be transmitted to remote modules for monitoring
- Internal DC/DC converter provides 24VDC, 250mA for 115S-12: 20VDC, 160mA for 115S-13) for analog loop supply

## Serial Port

### RS485

serial port configurable up to 115.2Kb/s, 7/8 data bits, n/e/o parity, ½ stopbits

### RS232

configuration port 9pin DB9 female connector, 9.6Kb/s, 8/n/1

### RS485

max cable distance 2000 m terminal connections

### Weight

0.359 grams

*Note: Specifications subject to change without notice*

## APPLICATIONS

- Flow meter monitoring
- Storage tank monitoring
- Pipeline cathodic protection
- Pump stop-start
- Lighting bank control
- Power reticulation relay fault notifications
- Emergency shower notification
- Weather station reporting
- Bearing condition monitoring
- Modbus slave I/O