

## **I/A Series® Remote Terminal Unit (RTU)**

### **RTU 20 – 2 Counter Input Module**



The 2 Counter Input module is a half-size electronic board in the I/A Series RTU 20 designed to read and store 2 digital counters through 2 independent opto-isolated input channels.

Up to two stand-alone counters, 15-bits each, or 1 cascade counter, 30-bits in total, can be buffered on each module.

Counter contacts are grounded as negative or positive and can be powered by the RTU or by the pulse generator at 24 V dc, with a maximum load current of 1.5 mA per channel.

The module input-side section provides high circuit isolation from field signals (up to 1500 Vrms).

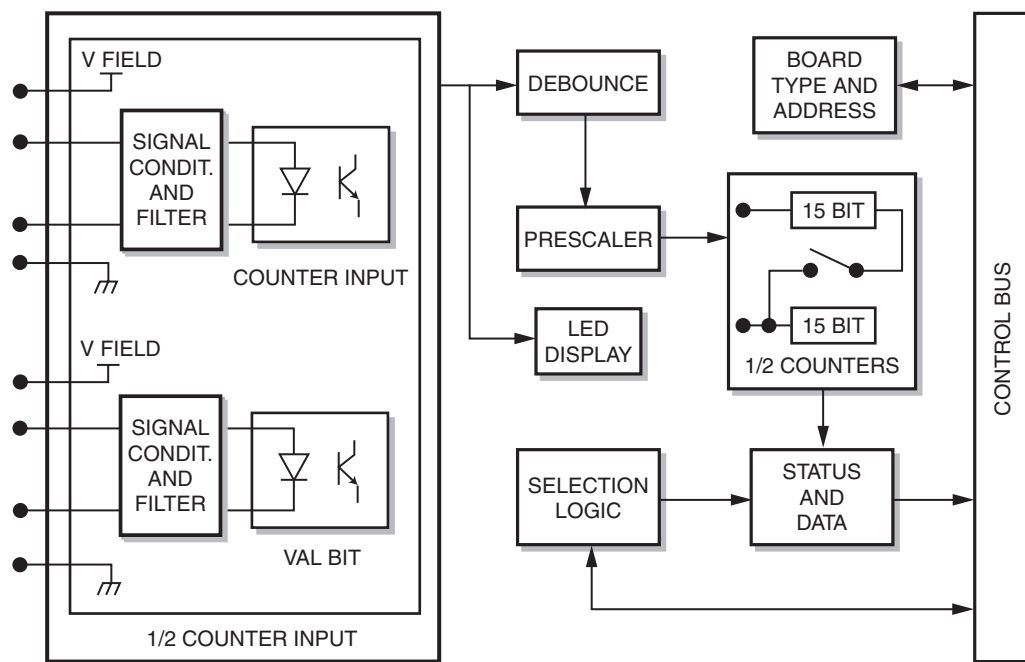
Each counter input is provided with an opto-isolated diagnostic validity bit that can be used by the application software (at the RTU and/or SCADA control center level) to enable or disable the management of the relevant counter.

The following options can be implemented by means of wired jumpers located on the module:

- Counter inputs prescaled by 10 (on each independent channel)
- One 30-bit cascade counter or two 15-bit stand-alone counters
- Input pulse cut-frequency programmable from 10 to 5000 Hz.

Several LEDs, located on the module's front edge, provide local fault indication and counter input status (one LED for each input and relevant validity bit), while an optional alphanumeric LCD display (mounted on the RTU cabinet) can monitor the counters' cumulated value and their status, on request.

## 2 COUNTER INPUT MODULE – BLOCK DIAGRAM



## SPECIFICATIONS

**Inputs**

4 opto-isolated inputs (2 for counting and 2 for counters' diagnostic)

**Maximum Power Requirements**

+5 V dc, 7 mA

**Counters Powered by RTU****CONTACT POWER REQUIREMENTS**

+24 V dc (maximum 6 mA)

**CLOSED CONTACT LOAD**

1.5 mA per contact (counter or validity bit)

**COUNTER CONTACT IMPEDANCE**

Closed contact < 5 KOhm

Open contact > 100 KOhm

**Counters Powered by Pulse Generator****COUNTER INPUT VOLTAGE**

State 0 (contact open): 0 to 4 V dc

**COUNTER INPUT VOLTAGE**

State 1 (contact closed): 8 to 24 V dc

**Counter Number**

2 singles or 1 cascaded

**Resolution**

15-bit (single counter) or 30-bit (cascaded counter)

**Prescaled**

Input pulse count divided by 10

**Cut Input Frequencies**

Programmable from 10 to 5000 Hz

**Isolation**

1500 Vrms

**Operating Temperature**

-25°C to +70°C

**Field Cable Connection**

Removable screw-terminal blocks on module's front edge

**Diagnostics and Status**

LED indicators on module's front edge



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