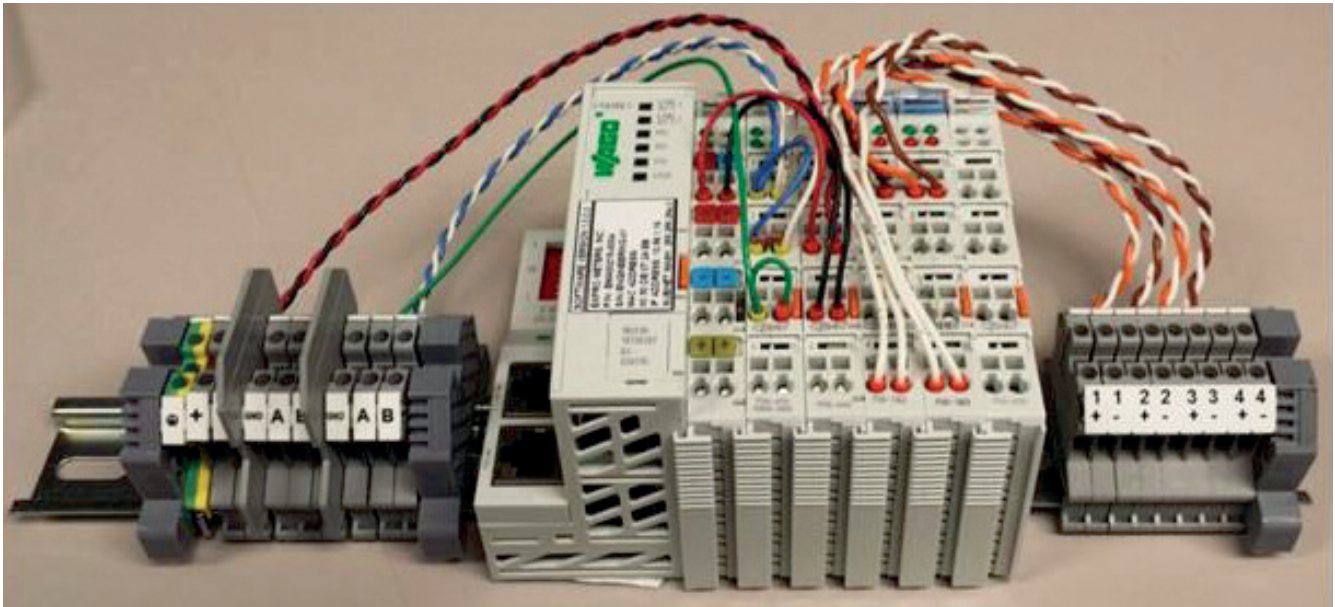


Modbus to 4-20mA Converter for ActiveSONAR™ Flow Meter



For ActiveSONAR Flow Meter applications requiring a 4-20mA current loop interface, Expro Meters can provide a Modbus to 4-20mA Converter Module.

This is a DIN rail mounted module that is installed in the customer's equipment cabinet or control room. The unit communicates to from 1 to 16 ActiveSONAR Flow Meters, and provides a dedicated 4-20mA current output for each meter. To use the converter module, all ActiveSONAR meters would be wired in a daisy-chain multidrop topology on a single RS-485 bus. This bus is connected to the Modbus serial communications port on the module. The module polls each meter sequentially, at a one second scan interval per meter and output the current measurement reading to the appropriate 4-20mA analog current output. Each meter's 4-20mA current loop would be wired to the customer's DCS/Scada system for data acquisition, display and logging. The 4-20mA outputs can be scaled to represent whatever flow range is appropriate for the application.

Standard configuration features

- Standard DIN rail mounted module – mounts in customer equipment cabinet
- One module can handle 1 to 16 ActiveSONAR™ Flow Meters
- Independent 4-20mA current output for each flow meter
- ActiveSONAR meters connected to converter via single daisy-chain RS-485 serial bus
- 4-20mA outputs power the current loop – customer input should be passive (unpowered)
- 4-20mA signals scalable to match application flow rates
- Ethernet port for module configuration (Modbus setup, 4-20mA scaling, etc)
- Requires 12 VDC power for operation

Customization (discuss with Expro Meters)

- Base unit is 2 flow meters/2 output channels – expandable to 16 flow meters/16 output channels in increments of 2 channels

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Technical specifications:		
Parameter	Specifications	Comments
Input Voltage Range/Power	+24VDC +/-10% / 6W (250mA) Typical	Power Consumption Shown for 4-Channel Model
Storage Temperature	-25°C to +85°C	
Operating Temperature	0°C to +55°C	
Humidity	0% to 95% RH, non-condensing	
IP Rating	IP20	Requires Enclosure
4-20mA Analog Outputs	2 to 16	Increments of 2
RS-485 Modbus Serial Ports	1x Multidrop	For ActiveSONAR Meter Communications
Ethernet Ports	1x	For Configuration Only
Dimensions (h x w x d)	100 mm x 305 mm x 72 mm (3.9" x 12.0" x 2.8") 100 mm x 400 mm x 72 mm (3.9" x 15.8" x 2.8") 100 mm x 476 mm x 72 mm (3.9" x 18.8" x 2.8")	2/4-Channel Models 6/8/10-Channel Models 12/14/16-Channel Models
Mounting	DIN Rail	Mounts Inside Customer Equipment Cabinet
4-20mA Analog Outputs Range Maximum Load Impedance Resolution Accuracy	4-20mA 500 Ohms 16 bits +/-0.05% of Full Scale (at 25C)	
Modbus RS-485 Serial RS-485 Port Type Modbus Type Termination Max Baud Rate Format	2-wire, half-duplex Master 110 ohm shunt 38,400 RTU	
Safety Certifications	UL508, CE	When mounted in appropriate enclosure
Hazardous Area Certifications	US: Class I Div 2, Group ABCD, T4 ATEX: II 3 GD Ex nA nL IIC T4	When Mounted in Appropriate Enclosure and Wired per Hazardous Area Standards