

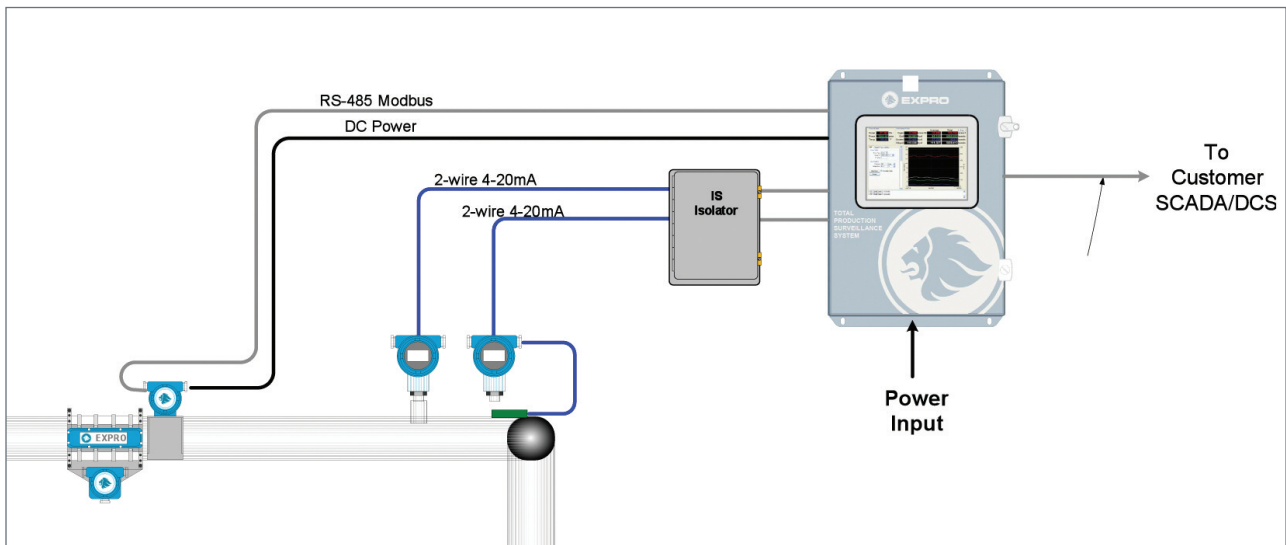
TPS Processing Module (TPM) for multiphase flows

The TPS Processing Module (TPM) is a field-deployable platform providing gas, oil/condensate and water rates based on sonar flow meter, flow line pressure and flow line temperature measurements, combined with customer-supplied compositional/PVT and watercut/WGR information.

The TPM interfaces to either an Expro ActiveSONAR™ or PassiveSONAR™ flow meter and can acquire pressure and temperature from pipe mounted instrumentation or from the customer DCS/SCADA system via Modbus or 4-20mA interfaces. Fluid compositional information is input into the system via the touchscreen user interface.

The unit displays measurement data as well as computed flow rates. Measurement data and results can be transferred to the customer's DCS/SCADA system via Modbus or 4-20mA interfaces.

In addition, all measured values and calculated results are logged to the internal solid state disk and can be retrieved using a USB flash drive via the internal USB port.



TPS applications include real-time production surveillance of:

- Wet gas wells
- Gas condensate wells
- Black oil wells

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Technical Specifications:		
Parameter	Specifications	Comments
Analog inputs	Three 4-20mA inputs	Pressure, temperature, spare Intrinsically safe connection to sensors via optional IS isolator unit
Analog outputs	Six 4-20mA outputs	Gas rate, oil rate, water rate, pressure, temperature, spare
Serial communications	Two 2-wire RS-485 Modbus RTU/ASCII serial ports	One port for SONAR comms One port for customer comms
Computer	Touchscreen panel PC	
Operating system	Windows XP professional	
Supported software	Expro Meters TPS1000	Enquire with Expro Meters for other supported software
Ambient temperature range Operating temperature Storage temperature	-20° to +40°C (-4° to 104°F) -20° to +60°C (-4° to 140°F)	
Power requirements AC model DC model	100 to 240Vac, 120VA 18 to 32.4Vdc, 70W	
Enclosure size (h x w x d)	444.5 x 304.8 x 221.2 mm (17.5 x 12.0 x 8.7 inches)	
Weight	15.1kg (33.3lbs)	
Mounting	Panel or pole mount (optional)	
Ingress protection	IP20	
Hazardous area classification	Ordinary location	US/Canada and CE marked
TPS software multiphase accuracy	± 5% of reading – gas ± 10% of reading – liquid	Typical results when compared to test separator or MPFM Individual phase accuracy dependent on accuracy of composition/PVT definition