

SCADA Sense Transmitters and Gas Flow Computers

	4012	4032	4102*	4203-DR	4203-DS
Description	Modbus Pressure Transmitter	Modbus Pressure Transmitter	Modbus Multivariable Transmitter	Gas Flow Computer with integrated Modbus Multivariable Transmitter	Gas Flow Computer with integrated Modbus Multivariable Transmitter
Sensor Types	Absolute or Gauge Pressure	Differential Pressure	Process Pressure, Differential Pressure and Temperature	Gas Flow plus Process Pressure, Differential Pressure and Temperature	Gas Flow plus Process Pressure, Differential Pressure and Temperature
Internal PLC	No	No	No	Yes	Yes
Accuracy and Stability					
Pressure Accuracy	+/- 0.20% of span	+/- 0.05% of span, typical	+/- 0.05% of span	+/- 0.05% of span	+/- 0.05% of span
Process Temperature Accuracy	n/a	n/a	+/- 0.5°F (0.28°C)	+/- 0.5°F (0.28°C)	+/- 0.5°F (0.28°C)
Stability	<+/- 0.05% of URL per year over 5 years	<+/- 0.05% of URL per year over 5 years	<+/- 0.05% of URL over 5 years [For spans between 10% and 90% of URL]	<+/- 0.05% of URL over 5 years [For spans between 10% and 90% of URL]	<+/- 0.05% of URL over 5 years [For spans between 10% and 90% of URL]
Static Pressure Effect	n/a	Spec exists (Span dependent)	For 1000psi (7 MPa), +/- 0.05% of URL and +/- 0.1% of reading	For 1000psi (7 MPa), +/- 0.05% of URL and +/- 0.1% of reading	For 1000psi (7 MPa), +/- 0.05% of URL and +/- 0.1% of reading
Ambient Temperature Effect	For 50°F (28°C) change, +/- (0.08% + 0.1% Span) for Span codes C, D, E and F	For 50°F (28°C) change, Spec exists (Span dependent)	For 50°F (28°C) change, AP & DP: Digital Output +/- (0.0625% URL + 0.125% Reading)	For 50°F (28°C) change, AP & DP: Digital Output +/- (0.0625% URL + 0.125% Reading)	For 50°F (28°C) change, AP & DP: Digital Output +/- (0.0625% URL + 0.125% Reading)
Features					
Analog Inputs (AI)	n/a	n/a	n/a	One internal (supply voltage)	One internal (supply voltage) Two external (0 - 5V) inputs
Analog Output (AO)	Optional. 0 - 20mA, 12bit, sinking. For use with PID control or as general analog output.	Optional. 0 - 20mA, 12bit, sinking. For use with PID control or as general analog output.	Optional. 0 - 20mA, 12bit, sinking. For use with PID control or as general analog output.	One 0 - 20mA current sink, 12bit sinking. For use with PID control or as general analog output.	n/a
Turbine Meter Counter Input (TI)	n/a	n/a	n/a	One	One (point shared with DI/DO)
Counter Input (CTRI)	n/a	n/a	n/a	One (point shared with DI/DO)	One (point shared with DI/DO)
Digital Input (DI)	n/a	n/a	n/a	One (point shared with CTRI/DO)	Two (points shared with DO/TI & CTRI/DO)
Digital Output (DO)	n/a	n/a	n/a	One (point shared with CTRI/DI)	Two (points shared with DI/TI & DI/CTRI)
PID Control	PID control of analog output fully configurable with 4000 Series Configurator or writing to Modbus registers.	PID control of analog output fully configurable with 4000 Series Configurator or writing to Modbus registers.	PID control of analog output fully configurable with 4000 Series Configurator or writing to Modbus registers.	Integral PLC-based control and remote control via serial port protocol.	Integral PLC-based control and remote control via serial port protocol.
Communications					
Serial Port	RS232/485 configurable, 1200 to 38400 baud	RS232/485 configurable, 1200 to 38400 baud	RS232/485 configurable, 1200 to 38400 baud	Two RS232/485 configurable: 300-38400 / 1200-115200 baud	Two RS232/485 configurable: 300-38400 / 1200-115200 baud
Serial Protocol	Modbus RTU	Modbus RTU	Modbus RTU	Modbus RTU/ASCII, DNP 3.0, Optional DFI	Modbus RTU/ASCII, DNP 3.0, Optional DFI
Ethernet Port	10BaseT, terminal block connection	10BaseT, terminal block connection	10BaseT, terminal block connection	Not available as integrated port. Optional with external Lantronix UDS1100-IAP serial to Ethernet converter module. Requires use of one serial port.	Not available as integrated port. Optional with external Lantronix UDS1100-IAP serial to Ethernet converter module. Requires use of one serial port.
Ethernet Protocols	Modbus/UDP; Modbus RTU in UDP	Modbus/UDP; Modbus RTU in UDP	Modbus/UDP; Modbus RTU in UDP	Modbus/TCP with external Lantronix UDS100-IAP module	Modbus/TCP with external Lantronix UDS100-IAP module
Physical Specifications					
Power	9 to 30VDC, 250mW with LAN (60mW with RS232, 70mW with RS485 @ 12VDC)	9 to 30VDC, 250mW with LAN (60mW with RS232, 70mW with RS485 @ 12VDC)	9 to 30VDC, 250mW with LAN (60mW with Serial)	9 to 30VDC, 330 mW typical at 12VDC	9 to 30VDC, 330 mW typical at 12VDC
Weight	3.25lb (1.47kg) without process connectors	7.8lb (3.5kg) without process connectors	7.8lb (3.5kg) without process connectors	7.8lb (3.5kg) without process connectors	7.8lb (3.5kg) without process connectors
Functional					
Gas Flow Calculations	n/a	n/a	n/a	AGA-3 (1992/2000) orifice plate, V-Cone and AGA-7 turbine meter	AGA-3 (1992/2000) orifice plate, V-Cone and AGA-7 turbine meter
Gas Compressibility Calculations	n/a	n/a	n/a	AGA-8 (1992) and NX-19	AGA-8 (1992) and NX-19
Event/Alarm/History Logs	n/a	n/a	n/a	35 days hourly history, 35 days daily history, 700 events and 300 alarms (as per API 21.1)	35 days hourly history, 35 days daily history, 700 events and 300 alarms (as per API 21.1)

Approvals: CSA Explosion Proof, Class 1, Div 1 and Class 1 Div 2 groups A, B, C and D, Hazardous Area Approved.

* Industry Canada Approval - Available on 300PSI & 1500PSI standard sensors only.

IECEX to Exd IIC T6 and ATEX to EEx d IIC T6 (except SCADA Sense 4012)

Single Seal Compliance Certification under ANSI/ISA - 12.27.01, for process sealing between electrical systems and flammable or combustible fluids with maximum working pressures up to 21MPa (3000 PSI)

Specifications subject to change • Accuracy stated includes the effects of Linearity, Hysteresis and Repeatability. API 21.1 certified.

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