HIGH ACCURACY

measurement instruments

PRODUCT DATASHEET

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Product Data Sheet
September 2017
214-35-5XX, Rev F

Paine™ 214-35-500 Series Pressure Transmitter

4-20 mA, Rugged, Submersible, +110 °C, 0-20,000 PSIA (1,378 BAR)

The Paine 214-35-500 Subsea Pressure Transmitter is a pressure measurement device engineered for remote subsea environments. For application flexibility, this transmitter is designed with a 3-wire or SEA CON® Subsea Bulkhead Connector options. This submersible transmitter is all-welded and highly corrosion resistant to withstand extreme depths, and is engineered with a rugged external enclosure to provide maintenance-free performance.

EMERSON

Solutions

- 3-wire connection or SEA CON Subsea Bulkhead
- All-welded, sealed construction
- Harsh/extreme environment ready
- Extreme depths and pressure

Potential applications

- Offshore oil and gas subsea production systems
- Remote/extreme pressure monitoring
- Corrosive environment pressure monitoring
- Submersible subsea applications
- ROV's and AUV's
- Wave energy hydraulic monitoring

Features

- **Static error band:** Includes the effects of non-linearity, hysteresis, and repeatability. The static error band shall not exceed ±0.50% of the Full Scale (F.S.).
- **Thermal zero shift:** 0.01% of F.S. per °F maximum across the compensated temp range
- **Output:** 4–20 mA
- **Operating temperature:** –65 to +230 °F (–53 to +110 °C)
- **Pressure range:** 0–1,000 to 0–20,000 psia (68 to 1,378 bar)
- **Operating media:** Compatible with 17-4 PH and 15-5 CRES
- **Pressure fitting:** 1/4-18 NPT internal thread

Specifications

Calibration: Calibration certificates are supplied with each unit and available on-line.

Performance

Static error band: Includes the effects of non-linearity, hysteresis, and repeatability. The static error band shall not exceed ±0.50% of the F.S.

Thermal zero shift: 0.01% of F.S. per °F maximum across the compensated temperature range.

Thermal sensitivity shift: 0.01% of F.S. per °F maximum across the compensated temperature range.

Zero pressure output: 4.00 ± 0.16 mA

Output at F.S. pressure: 20.00 ± 0.16 mA

Environmental

Operating temperature range:
214-35-520-XX: –65 to +230 °F (–53 to +110 °C),
214-35-530-XX: –65 to +185 °F (–53 to +85° C)

Compensated temperature range:
214-35-520-XX: –25 to +185 °F (–31 to +85 °C),
214-35-530-XX: –25 to +160 °F (–31 to +71 °C)

Operating media: Any compatible with 17-4 PH and 15-5 CRES

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Mechanical

Pressure range: Lower and higher temperature ranges are available.

Table 1. Pressure Table

Standard part number	Pressure range PSIA (BAR)	Proof pressure PSIA (BAR)	Burst pressure PSIA (BAR)	External case pressure	Total error band (%F.S.)
211-37-520-01	0–1,000 (0–68)	1,500 (103)	2,000 (137)	6,500 PSI (448)	±0.50%
214-35-520-02	0–1,500 (0–103)	2,250 (155)	3,000 (206)	6,500 PSI (448)	±0.50%
214-35-520-03	0–2,000 (0–137)	3,000 (206)	4,000 (275)	6,500 PSI (448)	±0.50%
214-35-520-04	0–2,500 (0–172)	3,750 (258)	5,000 (344)	6,500 PSI (448)	±0.50%
214-35-520-05 **214-35-530-01**	0–3,000 (0–206)	4,500 (310)	6,000 (413)	6,500 PSI (448) 10,000 PSI (689)	±0.50%
214-35-520-06 **214-35-530-02**	0–5,000 (0–344)	7,500 (517)	10,000 (689)	6,500 PSI (448) 10,000 PSI (689)	±0.50%
214-35-520-07 **214-35-530-03**	0–7,500 (0–517)	11,250 (775)	15,000 (1,034)	6,500 PSI (448) 10,000 PSI (689)	±0.50%

Pressure fitting: 1/4-18 NPT internal thread

Installation and maintenance: Torque to 150 in-lb using sealant compatible with pressure media. Transmitter does not contain user serviceable components.

Electrical

Input voltage: 214-35-520-XX: +10 to + 24 VDC.
214-35-530-XX: +15 VDC minimum at zero series resistance varying to +40 VDC at 1300 Ω series resistance. +40 VDC maximum, all loads. Reverse polarity protected.

Signal current: 4–20 mA

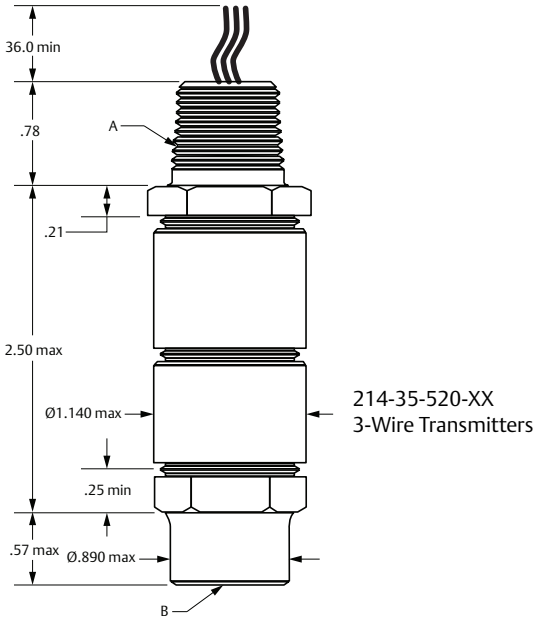
Electrical connections: 214-35-520-XX: Insulated wires, 18 AWG minimum
214-35-530-XX: SEA CON XSEE-3-BCR Bulkhead receptacle

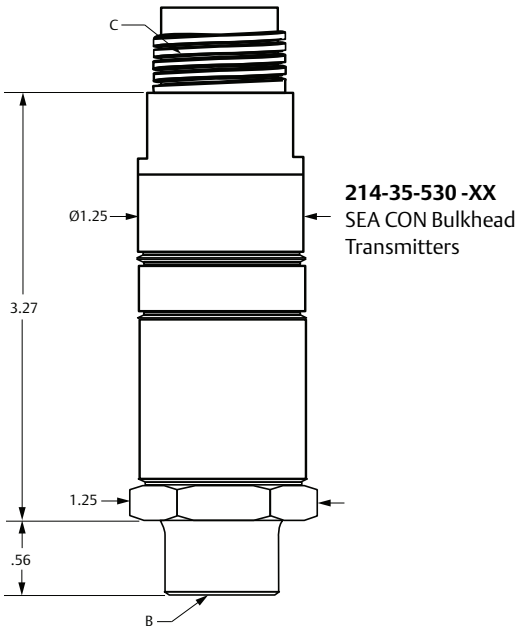
Weight: 214-35-520-XX: 10 ounces maximum (0.28 kg)
214-35-530-XX: 15 ounces maximum (0.42 kg)

Insulation resistance: 214-35-520-XX: Black and White leads to case: 100 m Ω minimum at 100 VDC
214-35-530-XX: Pin A and Pin B leads to case: 100 m Ω minimum at 500 VDC at 75 °F. Line transients are suppressed to 100 VDC.

Dimensional Drawings

Figure 1. Paine 214-35-500 - Wire Transmitters





WIRE/PIN	214-35-520	214-35-530
BLACK/A	+ INPUT	+ INPUT
WHITE/B	INPUT RETURN	INPUT RETURN
GREEN/C	CASE GROUND	CASE GROUND

A. 1/2-14 NPT thread
B. 1/4-18 NPT thread (Internal)
C. SEA CON XSEE-3-BCR Bulkhead Connector receptacle
Dimensions are shown in inches.

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Our offering:

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	Temperature Measurement		Flow Measurement
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