

True Echo™ Explosion Proof Pulse Radar Level Transmitter Series: PRX

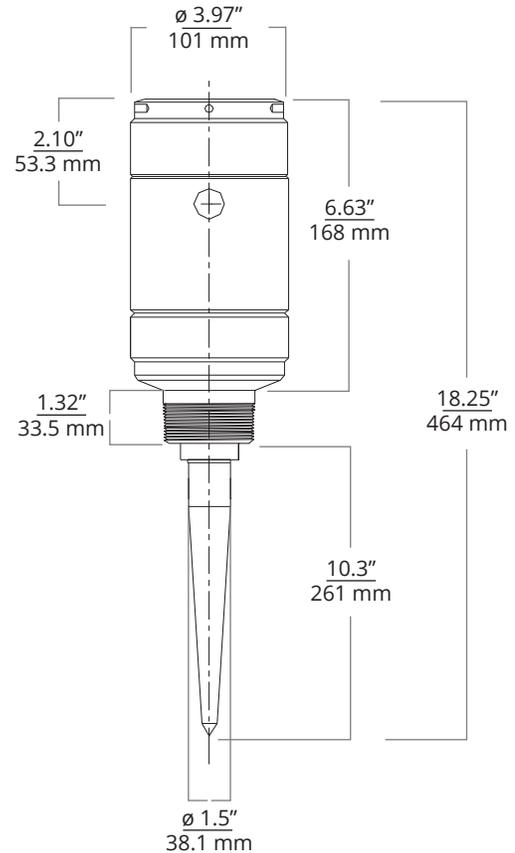
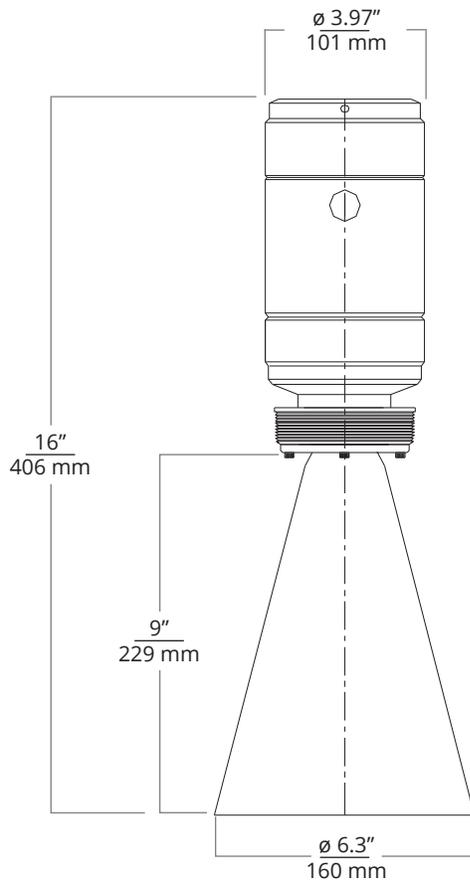


The True Echo™ PRX Explosion Proof Pulse Radar Level Transmitter brings the unassailable level readings of radar sensors to Class I, II, and III hazardous locations. The True Echo™ PRX automatically adjusts signal power for optimal accuracy and clarity, with echo masking and damping factors programmable via software. With a low dielectric requirement for target materials, and radar's reliable accuracy in environments with foam, vapors, and dust, the easy to install True Echo™ PRX makes getting dependable level readings in hazardous areas simple.

FEATURES

- Ranges to 17, 50, or 100 feet
- $\pm 0.25\%$ of measured range accuracy
- 6.1 μA output resolution
- Field configurable 4-20 mA/20-4 mA Output
- RS-232, RS-485, or HART communications
- PC calibration, diagnostic and data logging software
- PLC compatible (Modbus RTU)
- Nema 6 / IP68 enclosure rating
- FM Approval: Class I, Div 1; Class II/III, Div 1 ratings
- Simple installation and setup
- Automatic adjustments for most tank conditions
- Very low material dielectric constant requirement
- Optional Fast Firmware for quickly changing levels

True Echo™ Series PRX Specifications



Performance

- Operating Range:
 - PRX-017: 1 - 17 ft. (0.3 - 5 m)
 - PRX-050: 1 - 50 ft. (0.3 - 15 m)
 - PRX-100: 1 - 100 ft. (0.3 - 30 m)
- Frequency: 6.3 GHz
- Accuracy: $\pm 0.25\%$ of measured range
- 4-20 mA Resolution: 6.1 μA (approx. 2622 digital counts across range)
- Target Dielectric Constant $\epsilon_r > 2$

Environmental

- Enclosure Operating Temperature: -40° to 140°F (-40 to 60°C)
- Process/Probe Temperatures:
 - Standard -40° to 176°F (-40 to 80°C)
 - High Temp -40° to 350°F (-40 to 177°C)
 - Extreme Temp -40° to 572°F (-40 to 300°C)
- Maximum Process Pressures:
 - Standard Temp/Pressure 5 bar (72.5 psi)
 - Standard Temp/High Press 70 bar (1015.3 psi)
 - High/Extreme Temps 2 bar (29.0 psi)
- Enclosure: NEMA 6: Aluminum or 316L Stainless Steel, IP68 Sealing

Electrical

- Loop Resistance: $R_L = (V_s - 6) / 24 \text{ mA}$
- Input Voltage: 12-30 VDC / 20-35 VDC (HART)
- Power Consumption: 0.07 A max, 1.68 W @ 24 VDC

Connectivity

- Output: 4-20 mA (shared common); HART 7

Programming

- RS-485, RS-232, or HART for calibration and diagnostics

Physical

- Antenna
 - Rod: Teflon, 10.3" (261.6 mm)
 - Beam Spread: 6° from center
 - Horn: 316L Stainless Steel, $\phi 6.3''$ (160 mm)
 - Beam spread: 3° from center

Certifications

- FCC
 - Part 15 for low power communications class II install
- FM
 - Class I, Div 1, Groups B, C, D
 - Class II/III, Div 1, Groups E, F, G

Common Model Configurations

6.3 GHz*, 12-30 VDC supply, 4-20 mA output, Explosion Proof

Model Number	Model Description
PRX-050-V024-C4-AL-TE-T2-S	50' range, Aluminum Body, Teflon Antenna, 2" NPT Mount, RS-485 communication
PRX-050-V024-C4-SS-TE-T2-S	50' range, 316L SS Body, Teflon Antenna, 2" NPT Mount, RS-485 communication
PRX-050-V024-C4-AL-S6-T3-S	50' range, Aluminum Body, 316L SS 6" Horn, 3" NPT Mount, RS-485 communication
PRX-050-V024-C4-SS-S6-T3-S	50' range, 316L SS Body, 316L SS 6" Horn, 3" NPT Mount, RS-485 communication
PRX-100-V024-C4-AL-TE-T2-S	100' range, Aluminum Body, Teflon Antenna, 2" NPT Mount, RS-485 communication
PRX-100-V024-C4-SS-TE-T2-S	100' range, 316L SS Body, Teflon Antenna, 2" NPT Mount, RS-485 communication
PRX-100-V024-C4-AL-S6-T3-S	100' range, Aluminum Body, 316L SS 6" Horn, 3" NPT Mount, RS-485 communication
PRX-100-V024-C4-SS-S6-T3-S	100' range, 316L SS Body, 316L SS 6" Horn, 3" NPT Mount, RS-485 communication

*Note: For dual-frequency, explosion proof radar, please contact APG.

PRX Accessories

Please order separately, by part number.

Description	Part Number
USB to RS-232 converter	122971-0104
USB to RS-485 converter	200501



Model Configuration Options



Model Number: PRX - - - - - - -
 A B C D E F G

A. Range

- 017** 17 ft (5m)
- 050** 50 ft (15m)
- 100** 100 ft (30m)

B. Supply Voltage, Signal

- V024**[▲] 12-30 VDC - 3 wire, 4-20 mA w/ shared com
- V20L** 20-35 VDC - 2 wire HART†

C. PC Communications (Calibration & Diagnostics)

- C2** RS-232
- C4**[▲] RS-485
- CH** HART†

D. Housing Material

- AL**[▲] Aluminum
- SS** 316L Stainless Steel

Note: [▲] Indicates this option is standard

Note: † CH HART PC Communications requires V20L 20-35 VDC Supply Voltage

E. Antenna Material

- TE**[▲] Teflon Rod Ant.
- S6** 316L Stainless Steel 6" Ø Horn†
- HS** High Temperature Radar, 316L SS 6" Ø Horn†
- HT** High Temperature Radar, Teflon Rod Ant.
- PT** High Pressure Teflon Ant. (≤ 70 bar) ††

F. Mounting

- T15** 1.5 in. NPT
- T2**[▲] 2 in. NPT
- T3** 3 in. NPT
- BF** 13 in. Ø 316L SS Bottom Flange (S6, HS only)

G. Firmware

- S**[▲] Standard
- F** Fast Firmware

Note: † S6 and HS 316L SS horns require T3 3 in. NPT or BF 13 in. Bottom Flange mount

Note: †† PT High Pressure Teflon Rod requires T2 2 in. NPT mount