



# PRS

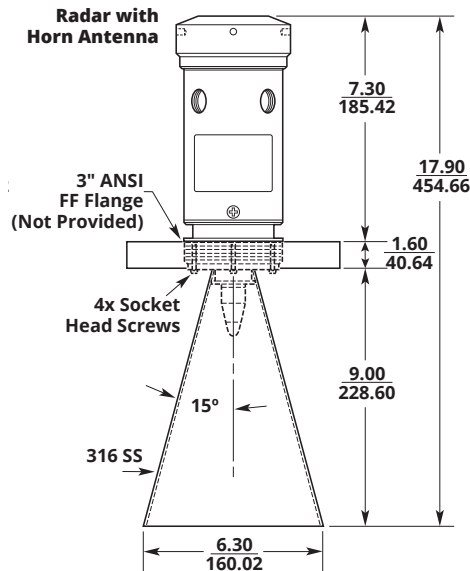
## True Echo® Dual Frequency Pulse Radar Level Transmitter For Solids

The True Echo® PRS Dual Frequency Pulse Radar Level Transmitter For Solids brings the unassailably accurate level readings of radar sensors to difficult to measure solids. Whether powders or pellets, grains or granules, the True Echo PRS's dual frequencies to allow it to quickly and accurately read the complex reflections from piled solids. The True Echo also automatically adjusts signal power for optimal accuracy and clarity. With echo masking and damping factors programmable via software, getting dependable level readings from difficult materials is simple.

### FEATURES

- Ranges: 17, 50, or 100 feet
- $\pm 0.25\%$  of measured range accuracy
- 6.1  $\mu\text{A}$  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
- 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 PRS SPECIFICATIONS



## PERFORMANCE

- **Operating Range:**
  - PRS-017: 1 - 17 ft. (0.3 - 5 m)
  - PRS-050: 1 - 50 ft. (0.3 - 15 m)
  - PRS-100: 1 - 100 ft. (0.3 - 30 m)
- **Frequency:** 6.3 GHz and 26 GHz
- **Accuracy:**  $\pm 0.25\%$  of maximum range
- **4-20 mA Resolution:** 6.1  $\mu\text{A}$  (approx. 2622 digital counts across range)
- **Target Dielectric Constant:**  $\epsilon_r > 2$

## CONNECTIVITY

- **Output:** 4-20 mA (shared common or isolated); HART

## 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: 5 bar (72.5 psi)
  - High/Extreme Temps: 2 bar (29.0 psi)
- **Enclosure:**
  - NEMA 6: Aluminum or 316L Stainless Steel, IP68 Sealing

## PHYSICAL

- **Antenna**
  - Horn: 316L Stainless Steel,  $\varnothing 6.3"$  (160 mm)
  - Beam spread: 3° from center

## ELECTRICAL

- **Loop Resistance:**
  - $R_L = (V_S - 6) / 24 \text{ mA}$
- **Input Voltage:**
  - 12-30 VDC; 20-35 VDC (HART);
  - 115 VAC (60 Hz); 230 VAC (50 Hz)
- **Power Consumption:**
  - 0.07 A max, 1.68 W @ 24 VDC
  - 1.7 VA for 115/230 VAC

## PROGRAMMING

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

## CERTIFICATION

- **FCC**
  - Part 15 for low power communications class II install

# COMMON MODEL CONFIGURATIONS

6.3 & 26 GHz, 3" NPT mount, 316L SS 6" Ø Horn, 4-20 mA output

Model Number	Model Description
PRS-050-V024-C4-AL-S6-T3-S	50' range, 12-30 VDC supply, Aluminum Body, RS-485 communication
PRS-050-V024-C4-SS-S6-T3-S	50' range, 12-30 VDC supply, 316L Stainless Steel Body, RS-485 communication
PRS-050-V115-C4-AL-S6-T3-S	50' range, 115 VAC supply, Aluminum Body, RS-485 communication
PRS-050-V115-C4-SS-S6-T3-S	50' range, 115 VAC supply, 316L Stainless Steel Body, RS-485 communication
PRS-100-V024-C4-AL-S6-T3-S	100' range, 12-30 VDC supply, Aluminum Body, RS-485 communication
PRS-100-V024-C4-SS-S6-T3-S	100' range, 12-30 VDC supply, 316L Stainless Steel Body, RS-485 communication
PRS-100-V115-C4-AL-S6-T3-S	100' range, 115 VAC supply, Aluminum Body, RS-485 communication
PRS-100-V115-C4-SS-S6-T3-S	100' range, 115 VAC supply, 316L Stainless Steel Body, RS-485 communication

## PRS 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: PRS -      -      -      -      -      -      -       
                                  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

- V115 115 VAC (60 Hz) - 4-wire, Isolated 4-20 mA
- V230 230 VAC (50 Hz) - 4-wire, Isolated 4-20 mA
- 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

## E. Antenna Material

- S6\* 316L Stainless Steel 6" Ø Horn
- HS High Temp. Radar, 316L SS 6 in. Ø Horn

## F. Mounting

- T3\* 3 in. NPT
- BF 13 in. Ø 316L SS Bottom Flange
- A3 8 in. Ø Swivel Aimer

## G. Firmware

- S\* Standard
- F Fast Firmware

\*Note: This option is standard

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