



# REFLECT™

## Technical Specification:

REFLECT™ is the innovative low power radar level measurement device from Pulsar Measurement, it automatically optimizes performance from install through to decommissioning.



### GENERAL SPECIFICATIONS

**Target Market:** Water and Wastewater  
Environmental

**Measurement Parameters:** Level  
Volume

### PHYSICAL SPECIFICATIONS

**Dimensions:** Nominal 135 mm (H) x 102 mm (D) (5.3 in x 4.0 in)

**Weight:** Nominal 1.5 kg (3.3 lbs)

**Frequency:** V-band (63GHz)

**Sensor Body Material:** Valox

**Mounting Connection:** Rear 1-inch BSP / NPT  
Front 1.5-inch BSP / NPT

**Mounting Options:** ANSI or DIN flange  
Front Threat Adapter (PVDF)

**Enclosure Protection:** IP68 / NEMA 6P

**Vibration Protection:** Fully Potted

**Cable Lengths:** Standard: 5 m, 10 m, 20 m, or 30 m (16.4 ft, 32.8 ft, 65.5 ft, or 98.4 ft)  
Optional: 50 m or 100 m (164 ft or 328 ft)

### PERFORMANCE

**Measurement Range:** 8 m or 20 m (26.2 ft or 65.6 ft)

**Technology:** FMCW

**Beam Angle:** 6°

**Resolution:** 1 mm (0.039 in)

**Accuracy:** 2 mm (0.079 in)

**Repeatability:** 1 mm (0.039 in)

**Near Blanking:** 75 mm (2.95 in) from drip shield

**First Stable Measurement:** Cold Boot = 10 seconds  
Warm Boot = 5 seconds

**Max Start-up Current:** 20 mA

**Current Consumption:** 3.8-22mA, resolution 1uA

**Input Voltage Range:** 12 - 28 V DC

### ENVIRONMENTAL

**Ambient Operating Temperature:** -40 °C to +80 °C (-40 °F to +176 °F)

<b>Humidity:</b>	0 to 99% (non-condensing)
<b>Process Connection Temperature:</b>	-40 °C to +80 °C (-40 °F to +176 °F)
<b>Process Pressure:</b>	-1 to +3 bar

## OUTPUT / COMMUNICATION

<b>Connection:</b>	2-wire loop powered
<b>Analog Output:</b>	4-20mA
<b>Local Wireless Communication:</b>	Encrypted Bluetooth with mobile interface (can be disabled)
<b>Digital Communication:</b>	HART with DTM
<b>Wireless Range:</b>	4 m - 40 m (13.1 ft - 31.2 ft) User Configurable
<b>User Indicator:</b>	Quad-color lights with tilt sensor

## APPROVALS

<b>Regulatory Approvals:</b>	FCC, RED, CE, UKCA, IECEx, ATEX, UKEx
<b>Explosive Atmosphere:</b>	Zones 0, 1, 2: Ex II 1G Exia IIC T4 Ga, Tamb.= -40°C to +80°C. Zones 20, 21, 22 : Ex II 1D Exia IIIC T100°C Da, Tamb.= -40°C to +80°C. FM: Pending
<b>WEEE and ROHS:</b>	Compliant

## ACCESSORIES

<b>BReez™ Adapter:</b>	Greatly increases ease of use
<b>Front Thread Adapter (PVDF):</b>	Optional addition to standard list price For compatibility with chemical applications



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