



# 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 1.2 kg (2.6 lbs) per 5 m (16.4 ft) cable length

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

**Sensor Body Material:** Valox

**Mounting Connection:** Rear: ATEX/IECEx approved sensors only: 1-inch BSP with BReez™ adapter; cFMus approved sensors only: 1-inch stainless steel NPT with BReez™ adapter  
Front: Optional, 1.5-inch BSP or 1.5-inch NPT

**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 6° 3° 1 mm (0.039 in) 2

**Beam Angle:** mm (0.079 in) 1 mm (0.039 in)

**Effective Beam Angle (using DATEM)** 75 mm (2.95 in) from drip shield

**Resolution:** Cold Boot = 10 seconds

**Accuracy:** Warm Boot = 5 seconds

**Repeatability:** 20 mA

**Near Blanking:** 3.8-22mA, resolution 1uA

**First Stable Measurement:** 12 - 28 V DC

**Max Start-up Current:**

**Current Consumption:**

**Input Voltage Range:**

### ENVIRONMENTAL

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

**Humidity:** 0 to 99% (non-condensing)

Process Connection Temperature:	-40 °C to +80 °C (-40 °F to +176 °F)
Process Pressure:	-1 to +3 bar

## OUTPUT / COMMUNICATION

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

## APPROVALS

Regulatory Approvals:	FCC, RED, CE, UKCA, IECEx, ATEX, UKEx, cFMus, Giteki
Explosive Atmosphere:	ATEX/IECEx/UKEx: 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 T100oC Da, Tamb.= -40°C to +80°C. cFMus: Intrinsically safe for Class I, Div 1, Groups A,B,C,D, T4; Class II, Div 1, Groups E,F,G, T4; Class III, T4
WEEE and ROHS:	Compliant

## ACCESSORIES

BReez™ Adapter:	Greatly increases ease of use 1 supplied as standard, additional quantities sold separately
Front Thread Adapter:	Optional addition to standard list price Available in PVDF or PEEK For compatibility with chemical applications