



# Self Adjusting "Smart" Radar 2 Wire Measurement Sensors



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## FEATURES

2 Wire Operation  
Self Adjusting Tracking Radar  
Simple push-button calibration  
Output 4 - 20 mA / 20 - 4mA  
Communication with "HART 7"

## APPLICATIONS

Water / Wastewater  
Chemicals with vapors

## MECHANICAL

Conduit Entry : 1/2" NPT x 2  
Enclosure : Aluminum or S.S. - 94V0  
Ingress Protection : NEMA 6 (IP68)

## ENVIRONMENTAL

Temperature :- 40 to 140°F (- 40 to 60°C)  
Approvals : FCC Part 15 - Low Power  
Communication Device

### FM(USA)

FM3810 (2005) Electrical Electronic Test, Measuring and  
Process Control Equipment

ANSI/NEMA 250 (1991) :Enclosures for Electrical Equipment

### FM(CAN.):

CSA C22.2 No. 1010.1 (2004) Safety Requirements for Electrical  
Equipment for Measurement, Control and Laboratory Use  
- Part 1: General Requirements

CSA C22.2 No. 94 (2011) Special Purpose Enclosures

### Installation Category: Class II

## TECHNICAL SPECIFICATIONS

Radar Range Code	RANGE In Liquids	RESOLUTION	MOUNTING
017	* - 17 ft. * - 5 m	0.08" 2.0 mm	2.0", 1 1/2" NPT **
033	* - 33 ft. * - 10 m	0.15" 3.9 mm	2.0", 1 1/2" NPT **
050	* - 50 ft. * - 15 m	0.22" 5.7 mm	2.0", 1 1/2" NPT **
100	* - 100 ft. * - 30 m	0.44" 11 mm	2.0", 1 1/2" NPT **
140	* - 140 ft. * - 42 m	0.62" 15.7 mm	2.0", 1 1/2" NPT **
240	* - 240 ft. * - 73 m	1.06" 26 mm	2.0", 1 1/2" NPT **

Note - \* Minimum Range starts at the lower tip of the antenna for high dielectric material (water). For low dielectric materials allow longer Minimum Range.

Note -\*\*Only 2" and 3"NPT Mtg. Connection Available on High Temperature Radar.

## OPTIONAL

Antenna Extension : 6" or 8" Lengths.

- Use only with Teflon Rod Antenna !

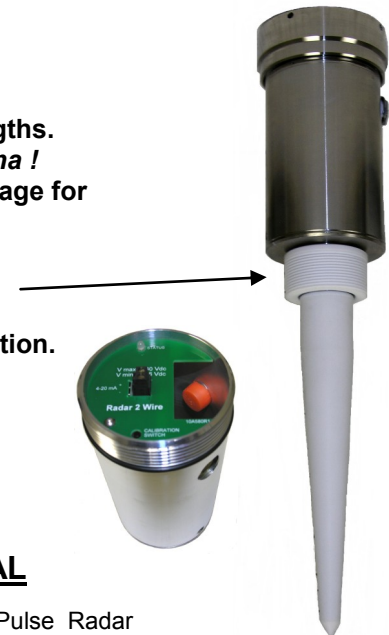
Refer to catalogue numbering Page for ordering info.

High Temperature Unit :

- Teflon De-coupler threads on to

1 1/2" NPT Mtg. Adaptor with a

2" NPT Mtg. Process Connection.



## OPERATIONAL

Operation : Pulse Radar

Accuracy : +/- 0.1% of max. range (in lab using  
4-20mA current output)

: +/-0.25% of max. range (typically in field )

Frequency : 5.8 GHz or 6.3 GHz.

Loss of Echo : 0 min. no loss of echo

: 1 min. to 3 min. loss of echo time

Loss of Echo

Current :Default 22mA , or 3.5 mA

Transmit Power : 50 uW average

Antenna

: Dielectric rod PP, & Optional rod PTFE  
Horn 316 S.S. for very low dielectric  
constant materials and short blanking

## PROCESS

Temperature PP Rod: - 40 to 176°F (- 40 to 80°C)

De-coupler & PTFE Rod - 40 to 350°F (- 40 to 177°C)

Material Dielectric : Er >2

Max. Pressure : 5 bar (without De-coupler)

Catalogue # - On the Web return to Home Page & Refer  
to Catalogue Number Structure for Ordering information.  
In Product Documentation refer to Page 4.

## ELECTRICAL SPECIFICATIONS

Power	
ABM200 DC	20 to 30 VDC , R load max. = (Vs - 14) / 25 mA
Output	4-20 mA Output 6.1 uA resolution Optional Communication with "HART 7"