

RPM

Hazardous Location, Resistive-Chain Level Sensor with 1.25" 316L SS Stem



This float level transmitter is the ultimate in durability. It's commonly referred to in the oil field as a mud probe, one of the most demanding applications in the industry. It's also well suited for extreme sewage level measurement and has PDA approval for marine applications. Each RPM is manufactured to the user's specifications, making it fit to work precisely according to the application requirements.

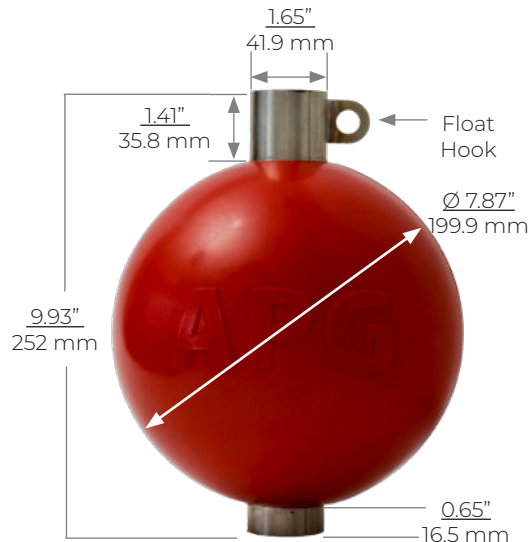
Features

- Continuous level indication
- Rugged 1.25"Ø 316L SS stem
- NEMA 4 & 7 / IP65 cast aluminum housing protects highly reliable electronics
- Anti-stick float design
- Resistive chain or loop-powered 4-20 mA output
- Hazardous location approvals: Explosion Proof, Intrinsically Safe, Non-incendive

RPM DIMENSIONS



Float B - Polyurethane
(0.65 SG)



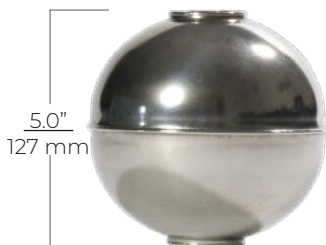
Float F - Polyurethane with 316L Stem
(0.5 SG)



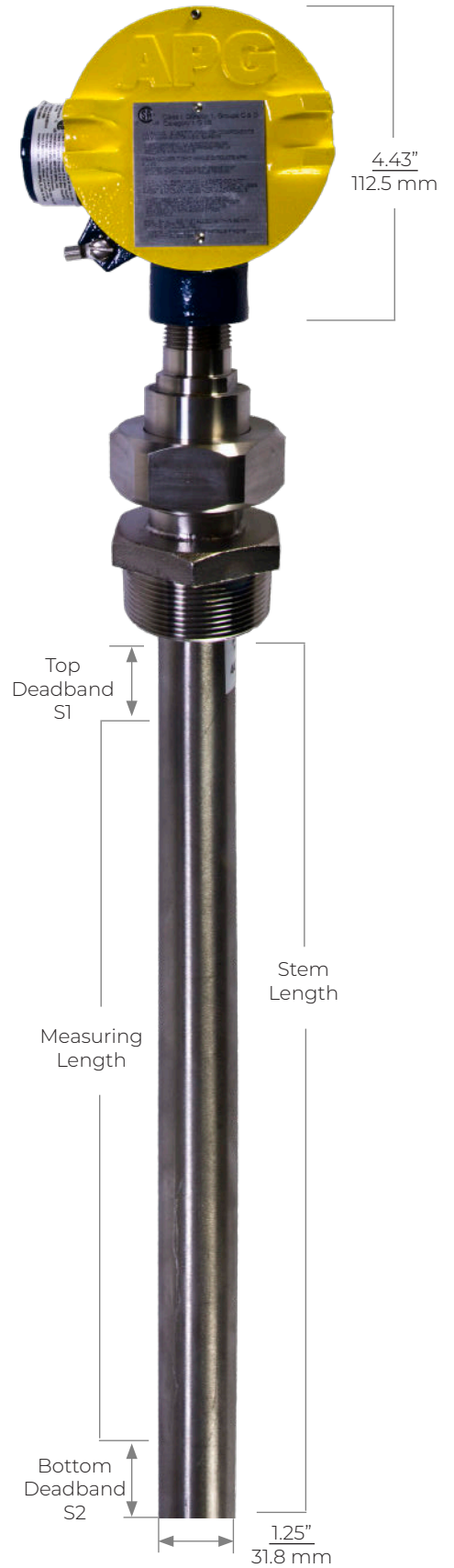
Float Z - ABS/Polyurethane
(0.5 SG)



Float G - Polyurethane
(0.5 SG)



Float S, T- 316L SS
(0.5 SG)



RPM SPECIFICATIONS

Performance

- Resolution:
 - High: 0.25 in. (6.4 mm)
 - Standard: 0.5 in. (12.7 mm)
- Accuracy:
 - ± 0.12 in. (±3 mm)

Connectivity

- Output:
 - 4-20 mA; Resistive Chain Voltage Output
- Internet:
 - Via RST-5003, 4-20 mA only

Environmental

- Maximum Pressure:
 - 72.5 psi (5 bar)
- Enclosure Protection:
 - NEMA 4 & 7, IP65

Electrical

- Typical Connection: (Resistive Chain Voltage Output)
 - High Res: $I = \text{VDC}_{\text{Supply}} / (40\Omega * \text{Probe Length in inches.})$
 - Standard Res: $I = \text{VDC}_{\text{Supply}} / (20\Omega * \text{Probe Length in inches.})$

Physical

- Housing: Aluminum Die Cast
- Cable Entry: 3/4 in. NPT
- Stem Material: 316L SS
- Stem Length: 48 to 240 in. (1219 to 6096 mm)
- Float Materials:
 - Polyurethane
 - 316L SS
 - ABS

Certification

- Class I, Division 1, Groups C & D T3 (Ta 40°C)
 - Explosion Proof
- Ex d, IIB T3
 - Class I, Zone 1, AEx d, IIB T3 (Ta 40°C)
 - Explosion Proof
- Class I, Division 2, Groups C & D T3 (Ta 85°C)
- Class I, Division 2, Groups C & D T3 (Ta 85°C)
 - Non-incendive
- Class I, Division 1, Groups C & D T3 (Ta 85°C)
 - Intrinsically Safe
- Ex II 1G Ex ia IIB T3 Ga (Ta 85°C)
 - 4-20 mA
 - ATEX/IECEX Intrinsically Safe

RPM Outputs with Temperature and Power Requirements for Hazardous Locations

Output	Intrinsically Safe Class I, Div. 1 Groups C & D T3C	Explosion Proof Class I, Div. 1 Groups C & D T3; Class I, Zone 1 Ex/AEx d, IIB T3	Non-incendive Class I, Div. 2 Groups C & D T3	Class I, Div. 2 Groups C & D, T3.
EX1 - Resistive	—	5-24 VDC Supply, 100 mA max; -40° to 40° C (-40° to 104° F)	5-15 VDC Supply, 100 mA max; Install per dwg 9001415 -40° to 85° C (-40° to 185° F)	5-15 VDC Supply, 100 mA max; -40° to 85° C (-40° to 185° F)
IS - 4-20 mA ISr -20-4 mA	Loop powered 24 VDC; Install per dwg 9001414 -40° to 85° C (-40° to 185° F)	12-24 VDC Supply -40° to 40° C (-40° to 104° F)	12-24 VDC Supply Install per dwg 9001415 -40° to 85° C (-40° to 185° F)	12-24 VDC Supply -40° to 85° C (-40° to 185° F)
AIS - 4-20 mA, ATEX/IECEX approvals	Loop powered 24 VDC; Install per dwg 9001414 -40° to 85° C (-40° to 185° F)	—	—	—



MODEL CONFIGURATION OPTIONS

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

A. Probe Length

- Specify in inches (36 to 360 in.)

B. Housing Logo Designation

- A APG
- N None

C. Float

- N None

1/2" Resolution floats

- B Red cylindrical polyurethane float (0.65 SG, 8.65 in. H, 4 in. OD)
- F Red spherical polyurethane float with designated logo (0.5 SG, 8 in. OD)
- S 316L SS spherical float (0.5 SG, 5 in. OD)

1/4" Resolution floats

- G Blue spherical polyurethane float, no logo (0.5 SG, 8 in. OD)
- Z Blue cylindrical polyurethane/ABS float (0.5 SG, 6 in. H, 8 in. OD)
- T 316L SS spherical float (0.5 SG, 5 in. OD)

D. Output Signal / Hazard Rating

- EX1 0-24 VDC (resistive) with Ex approval only (Class 1, Div. 1)
- IS 4-20 mA with IS and Ex approval (Class 1, Div. 1)
- ISr 20-4 mA with IS and Ex approval (Class 1, Div 1)
- AIS 4-20 mA with ATEX approval, IS approval only (Ex II 1G EX ia IIB T3 Ga and Class 1, Div. 1 ia) CSA, IS, Class 1 Division 1

E. Cable Gland

- 000 None
- 001 T&B 2531 strain relief
- 011 T&B 2531 strain relief and plug

F. Resolution / Deadband S1, S2 Type

- 02 1/2 in. resolution
top deadband (S1) = 8 inches
bottom deadband (S2) = 5 inches
- 03 1/2 in. resolution
top deadband (S1) = 8 inches
bottom deadband (S2) = 4 inches
- 04 1/2 in. resolution
top deadband (S1) = 1/2 float height
bottom deadband (S2) = 1/2 float height
- 12 1/4 in. resolution
top deadband (S1) = 8 inches
bottom deadband (S2) = 5 inches
- 13 1/4 in. resolution
top deadband (S1) = 8 inches
bottom deadband (S2) = 4 inches
- 14 1/4 in. resolution
top deadband (S1) = 1/2 float height
bottom deadband (S2) = 1/2 float height

G. Mounting (Optional)

- 00 None
- 4Tx 316L SS NPT plug mounted outside of tank (specify size in ordering code: x=2" or 3")
- OAx 150# Flat Face Flange, ANSI 2 - ANSI 6
- 1Ax 150# Raised Face Flange, ANSI 2 - ANSI 6



RPM ACCESSORIES

Please order separately by part number.

Part Number	Description
135414	Float stop
135396	Bottom bracket
125603	Right angle bracket pipe clamp
125767	Red cylindrical polyurethane float (0.65 SG, 8.65" H, 4" OD, 1/2" resolution)
125665	Red spherical polyurethane float with designated logo (0.5 SG, 8" OD, 1/2" resolution)
125705	316 SS spherical float (0.5 SG, 5" OD, 1/2" resolution)
125679	Blue spherical polyurethane float, no logo (0.5 SG, 8" OD, 1/4" resolution)
125682	Black and blue cylindrical polyurethane/ABS float (0.5 SG, 6" H, 4.5" OD, 1/4" resolution)
125704	316 SS spherical float (0.5 SG, 5" OD, 1/4" resolution)

