Data Sheet

FPM

Flotation PulpMaster

For more information, please visit >
www.hawkmeasurement.com

Principle of Operation

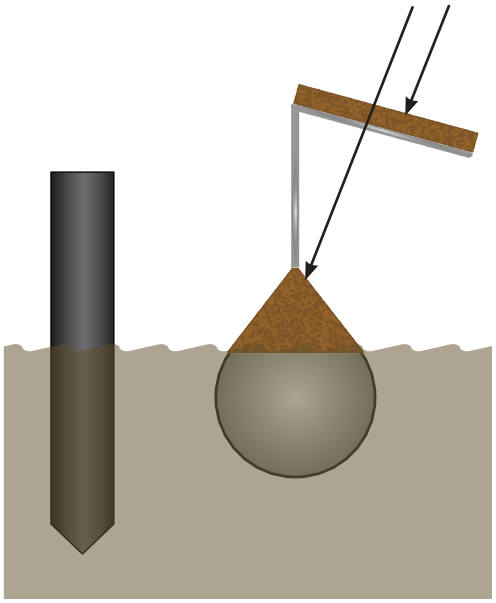
The HAWK FPM is the continuous level measurement system that has gone one up on the competition with its custom designed pulse guided RF float level technology. Due to the low coefficient of friction to build up and low profile lightweight HDPE float, the HAWK FPM is proven to be low maintenance while accurately tracking float cell pulp/liquid levels. There is no need to worry about regularly cleaning the float and wondering if the level is being measured correctly. The float will not jam causing pulp overspill or froth undercarriage.

Features

- Built-in water jet cleaner
- Responds to pulp/liquid level and not affected by froth level
- Low maintenance - not susceptible to build up
- Fast response time with (mm) accuracy
- Analogue/HART/Modbus communication options
- Pulse Guided RF requires only basic setup
- Sensing element entirely encapsulated and protected from the environment
- Minimal surface area, best stability
- Measures the pulp interface up to 1m below the launder.

Water Jet Cleaner

Traditional Float prone to build up and jamming



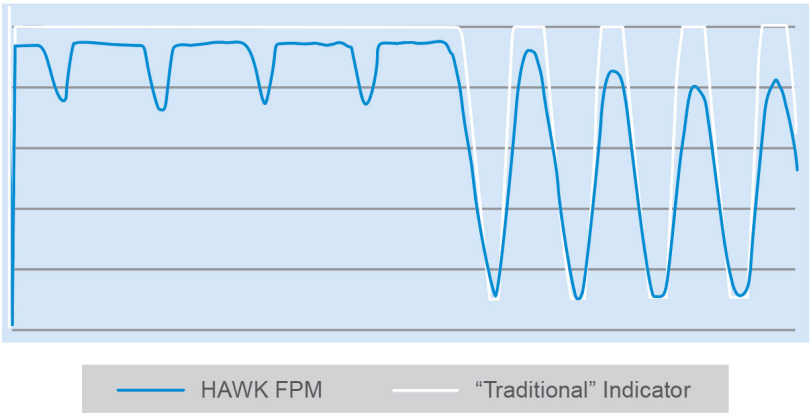
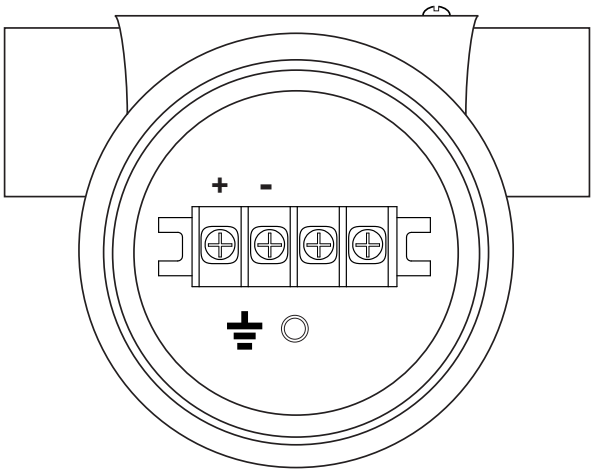


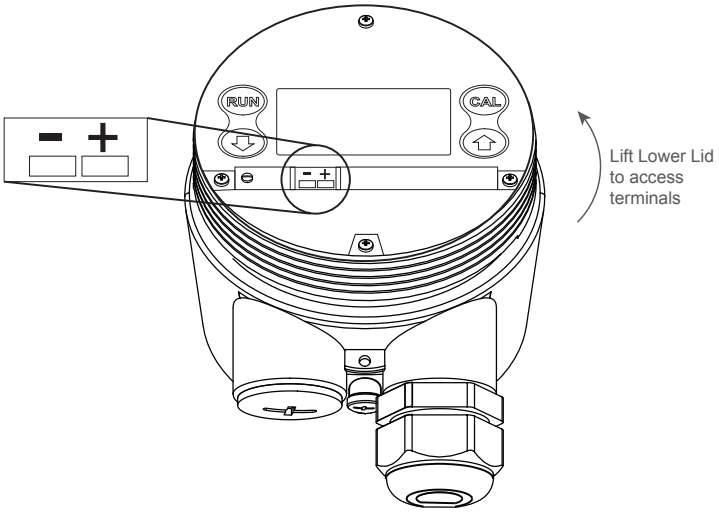
Image 1: HAWK FPM vs well known "traditional" level indicator

HART Units

Dual Chamber

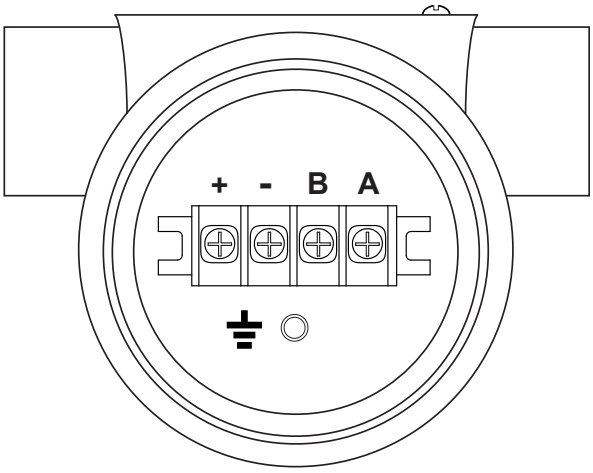


Single Chamber

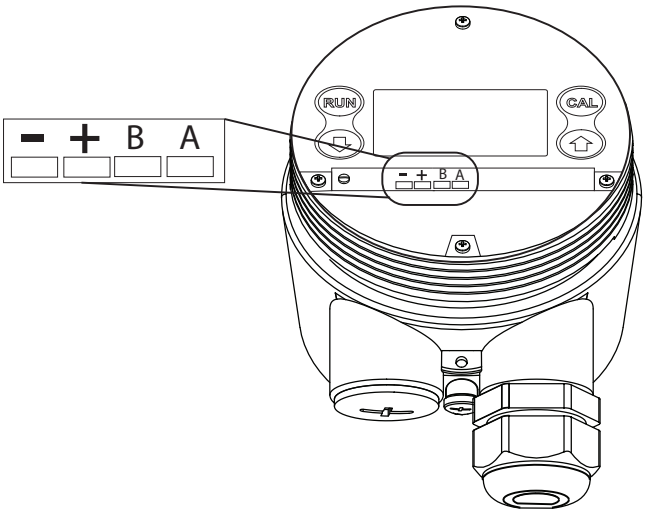


Modbus / Ethernet Units

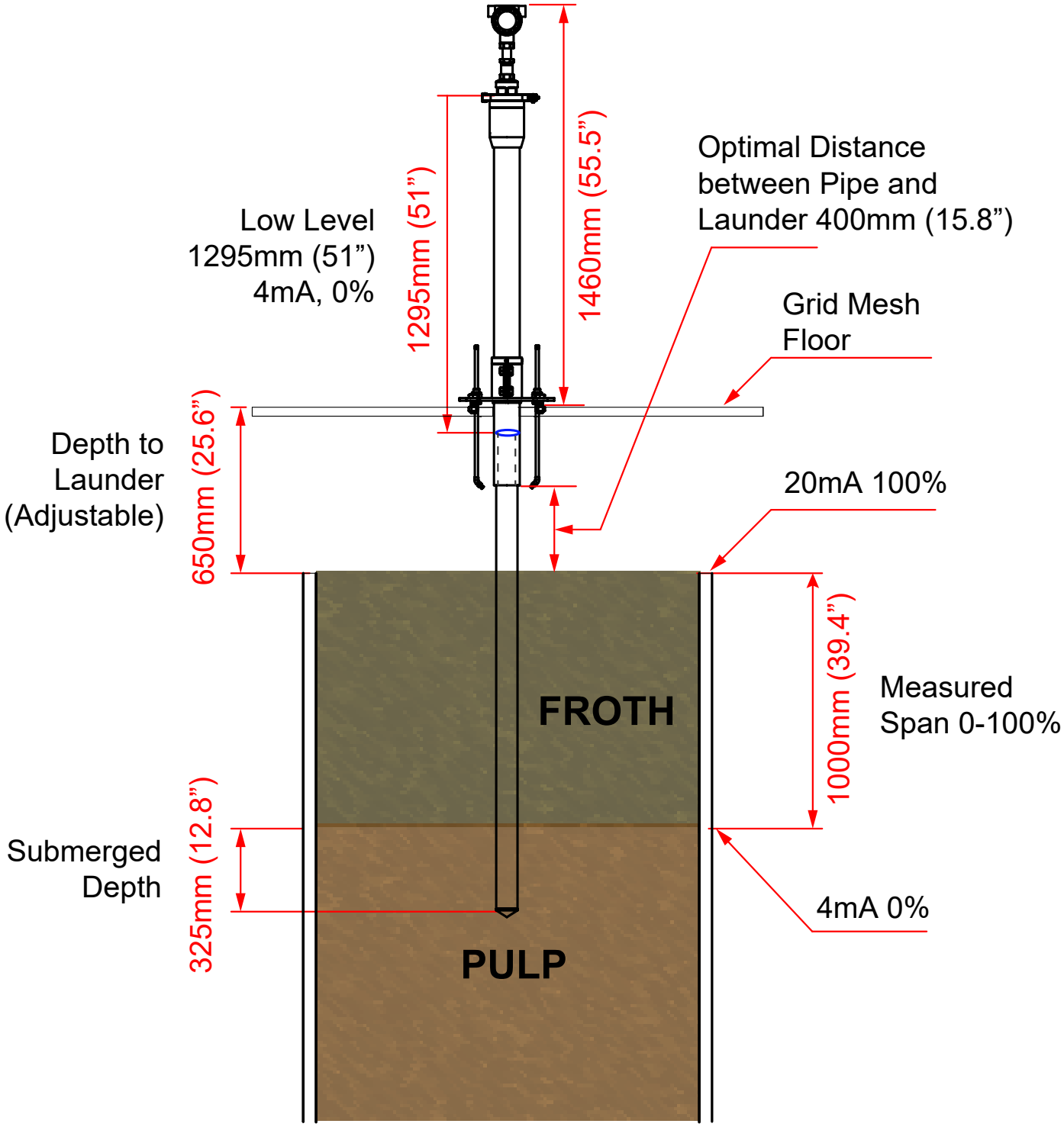
Dual Chamber



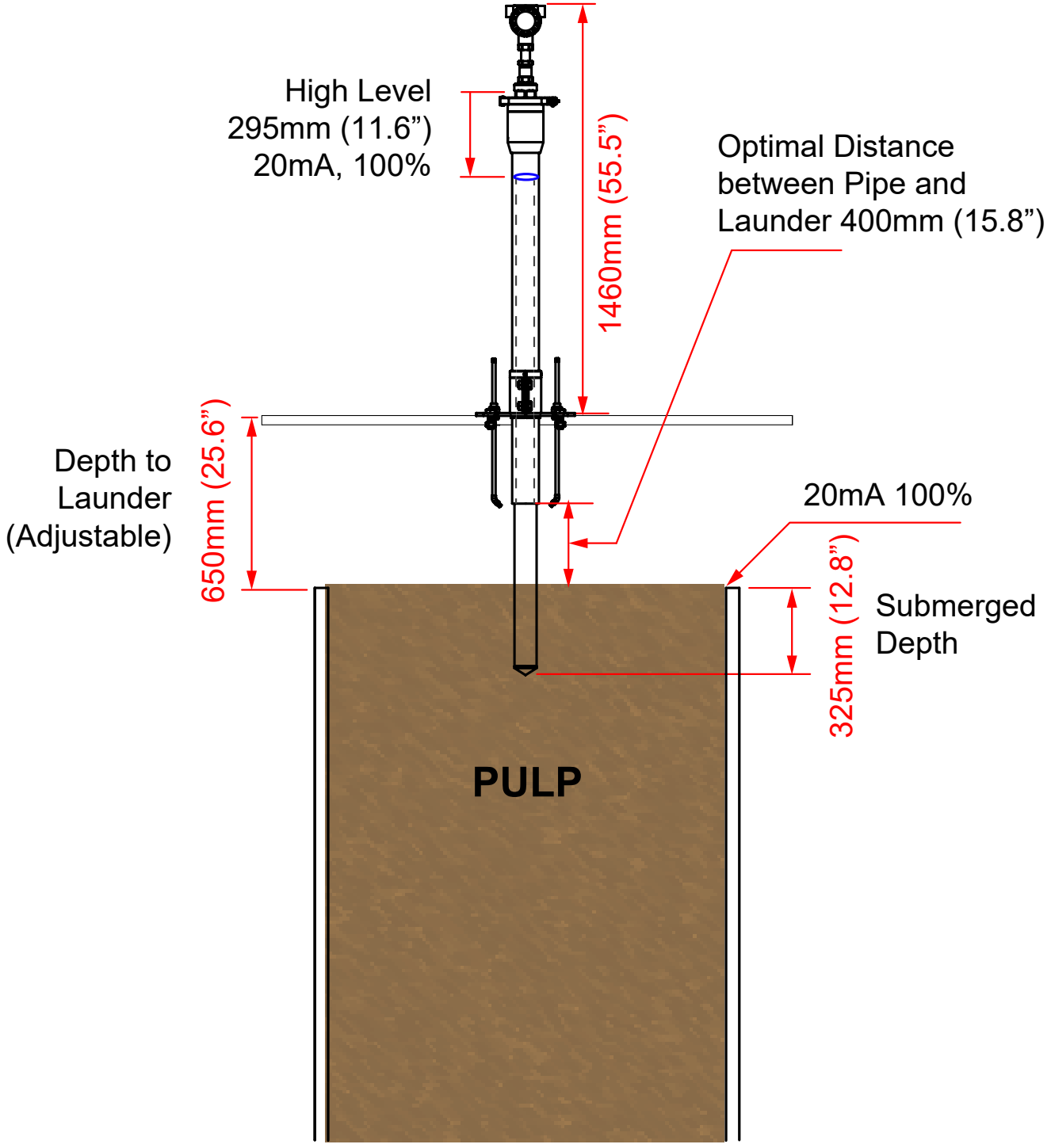
Single Chamber



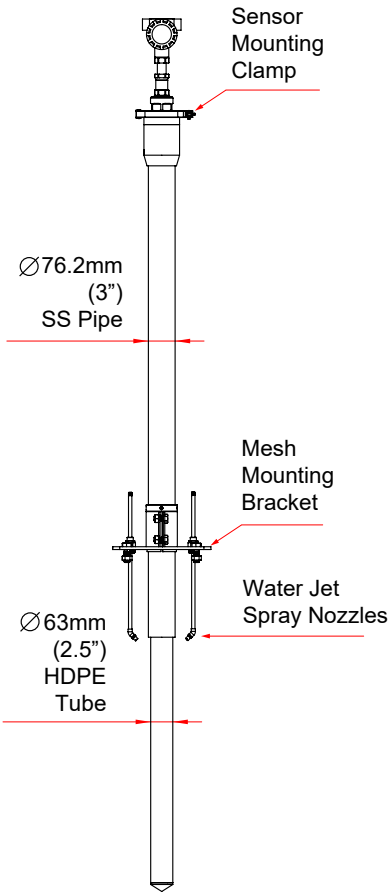
Installed Dimensions - Float at full extension (0%)

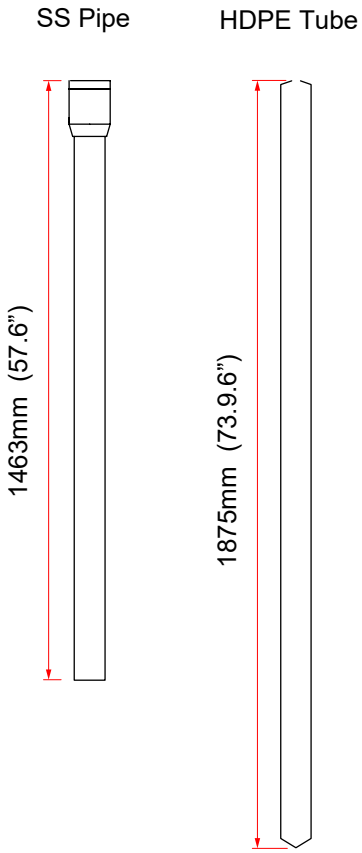


Installed Dimensions - Float fully Retracted (100%)

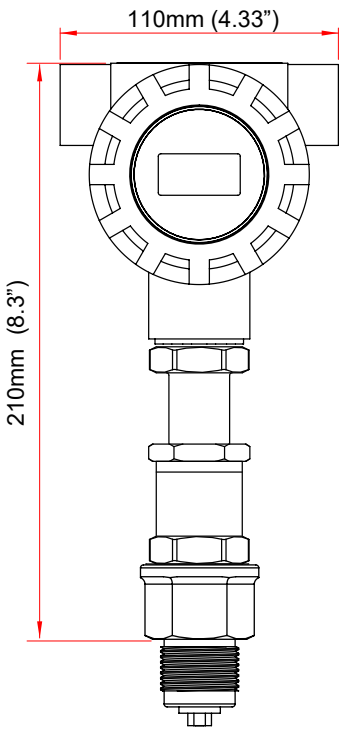


Parts

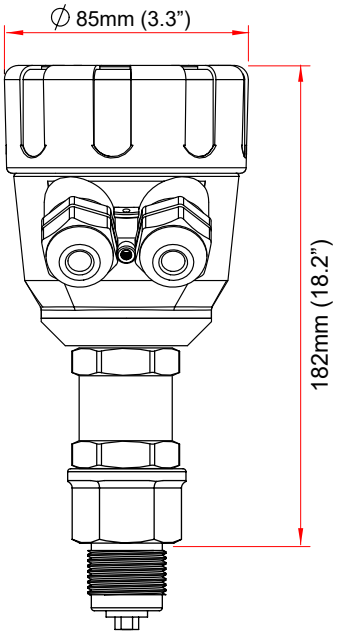




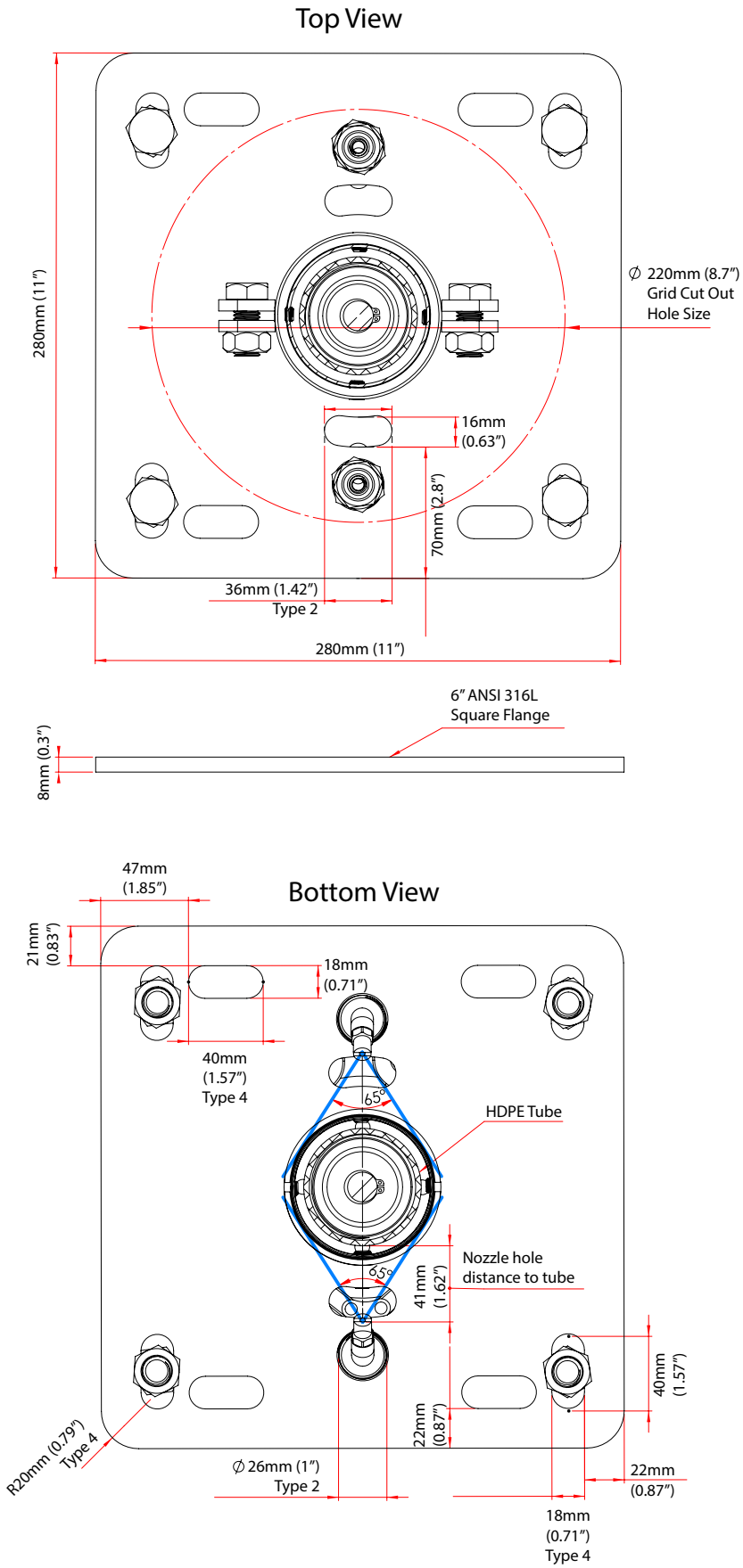
Dual Chamber Enclosure



Single Chamber Enclosure



6” ANSI Square Mounting Bracket



Part Numbers

Model

FPM2H Flotation Pulp Master, 2 wire loop with HART 7
FPM4M Flotation Pulp Master, 24VDC, 4 wire with Modbus
FPM4E Flotation Pulp Master, Modbus over PoE (Powered Ethernet)

Housing

1 Dual Chamber Aluminum, Epoxy Painted with viewing window
2 Dual Chamber 316L Stainless Steel with viewing window
A Single Chamber Aluminum, powder coated with viewing window.
B Single Chamber Aluminum, powder coated, no viewing window.
C Single Chamber 316L with viewing window, M20 conduit only
D Single Chamber 316L with no viewing window. M20 conduit only

Display and Keypad for Housing options 1 & 2 are side mount. Options A, B, C, D are top mount

Electrical Conduit Entry

1 1/2” NPT
3 M20 x 1.5

Sensor Element Materials

XXX Not Required (Electronics only)
HSP HDPE encapsulated SS316

Mounting

XXX Not Required (Electronics only)
ADJ 6” square multi-fit clamp-on flange with float cleaner spray assembly

Measured Range (Maximum Froth Height)

XXX Not Required (Electronics only)
1000 1000mm

FPM2H 1 3 HSP ADJ 1000

Part Numbers

Part Assemblies & Spares

FPM2H13XXXXXXXXX
Replacement Electronics head unit (2 wire HART, dual chamber housing, M20 gland entry

PROBE-KIT-1000
Includes float, 316L rigid probe and accessories. For 1000mm measured span

FPM-MOUNT-KIT-1000
Includes standpipe, mounting bracket and accessories. For 1000mm measured span

Individual Parts & Spares

FPM-SPRAY-ASSY
FPM water spray assembly

FPM-FLA-6SQ-SS-ADJ
6” square multi-fit clamp-on flange

FPM-HS-1000
HDPE float for measured span 100mm.

FPM-PRB-16MM-1295MM
316L 16mm dia Rigid Probe (1295mm length)

FPM-ELEC-CLAMP
Pipe Clamp kit for Mounting Electronics

FPM-SP-1000
FPM Stand pipe kit for 1000mm measured span (does not include flange)

FPM-SN-1-8
Water hoze nozzle, 1/8” NPT fitting (qty 2)

Specifications

FPM Flotation PulpMaster

Power

- 2 wire loop powered
- 24VDC (14 to 28VDC)
- Ethernet Powered (48VDC)

Power Consumption

- <500mW @ 24VDC

Analog Output

- 14V @ 0 Ohm
- 19V @ 250 Ohms
- 24V @ 500 Ohms
- Current park at 4mA, 8mA, 12mA

Communications

- HART (Revision 7)
- Modbus
- GoshawkII via HART, Modbus, Ethernet
- Modbus over Ethernet
- HawkEye365

Minimum Range (Blanking)

- <=150mm (6.0”)

Frequency

- 2.2 GHz

Resolution

- Analog: 1uA
- Display: 1.0mm

Accuracy

- +/- 3mm

Measurements Per Second

- 3

Response Time

- <1 second (application dependent)

Sum of Non Linearity, Non repeatability, Hysteresis

- Analog +/- 0.02%

Repeatability

- +/- 3mm

Memory

- Non-Volatile (No backup battery required)
- >10 years data retention

Operating Temperature (Electronics)

- -40°C to +80°C (-40°F to +176°F)

Display

- 4 line graphic display (128 x 64 pixels)

Language

- English

Configuration

- 4 button (up down, Cal, Run), GoshawkII via HART. HART 7 DD/DTM

Enclosure

Type

- Dual Chamber with viewing window
- Single Chamber with or without viewing window

Material

- Die-cast Copper-Free Aluminum, Epoxy Painted
- 316L Stainless

Conduit / Cable Entry

- 1/2” NPT
- M20 x 1.5

IP Rating

- NEMA 4X
- IP66

Probe

Wetted Materials[2]

- HDPE

Process Connections

- Clamp on 6” ANSI Multi-fit Flange

HAWK, Since 1988

Hawk Measurement Systems Pty Ltd (HAWK) was established in 1988. It's founding members saw the universal requirement of various industries requiring improved process control and efficiency in their operations.

We Can Help

HAWK understands the difficulties customers face when seeking accurate level measurement. Every application is different, involving a multitude of environmental factors. This is where HAWK excels. Our aim is to ensure that customers feel comfortable with our technology, and are provided with long term and reliable solutions. We believe that a combination of application and product expertise, as well as forward thinking and proactive support policies are the foundation of successful customer-supplier relationships.

Progressive Technical Support

HAWK believes that the future of the Level Measurement Industry revolves around the quality of pre and post sales - support. Our aim is for all sales & support staff to be product experts, and more importantly application experts making our customers applications as efficient and consistent as possible.

Knowledge Sharing

HAWK believes that knowledge sharing is key to creating long term relationships. Empowering our customers and our worldwide distribution network, whilst being available at all times to lend a helping hand, is the perfect recipe for long term solutions and relationships. HAWK openly extends an invitation to share our 25 years of level measurement experience, and ensure that your day to day processes are efficient, understood, and always working.

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Technical data subject to change without notice.

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