

Hydronix

Hydro-Probe

**Digital Microwave Moisture Sensor
for Bins, Silos and Conveyors**



CONCRETE • AGGREGATES • ASPHALT

Hydro-Probe

Digital microwave moisture sensor for bins, silos and conveyors

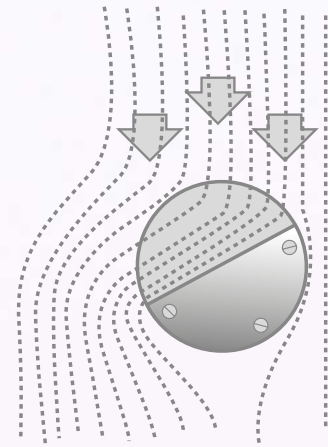
The Hydro-Probe is a rugged, microwave moisture measurement sensor designed to be installed in bins, silos and conveyors in process control environments.

Measuring at 25 times per second and with on-board functionality such as signal processing and averaging, the Hydro-Probe accurately measures the moisture content of material as it flows over the ceramic faceplate. Remote configuration, calibration, diagnostics and firmware upgrades are simple using Hydronix Hydro-Com software. The linear output allows direct integration with any control system using industry standard interfaces.



Angle of Sensor

Ensures continuous flow over the sensor

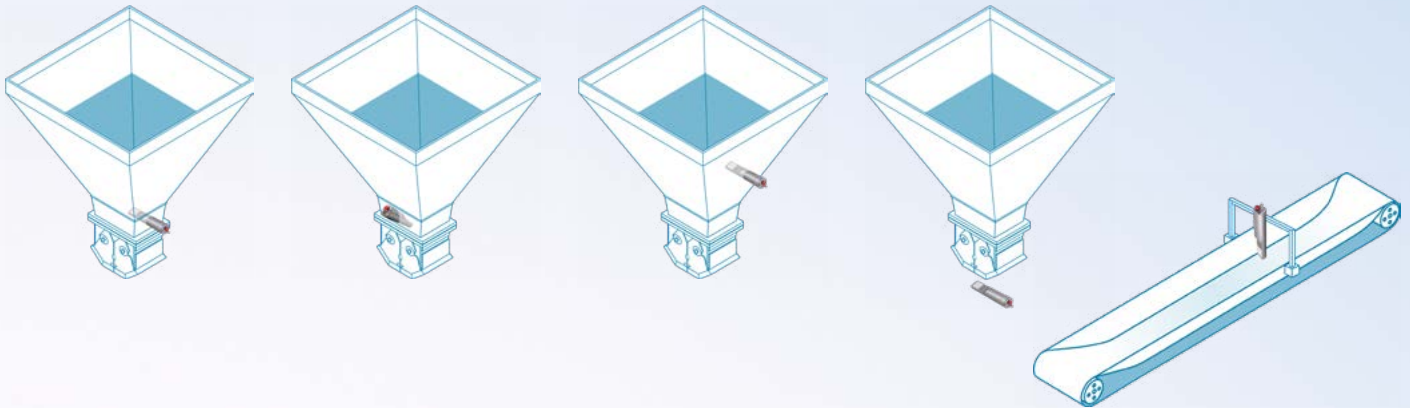


Features

- Digital technology provides precise linear moisture measurement with 25 readings per second.
- Advanced Digital Signal Processing provides a clear signal with rapid response.
- Fully temperate compensated measurement.
- Two analogue outputs, digital RS485 communications and configurable digital inputs/output, alarms.
- Remote communication with Hydro-Com software allows configuration of all sensor parameters.
- Consistent performance with no need for recalibration except for use with different materials.
- Calibration data points stored within the sensor for improved quality control.
- Stand alone or simple integration into a new or existing automation system.
- The Averaging Mode provides a continuous “average” moisture over a batch.
- Averaging, “Bin Empty” and “High Moisture” Alarms and Signal Processing are performed internally by the sensor.

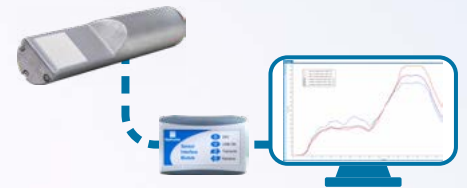
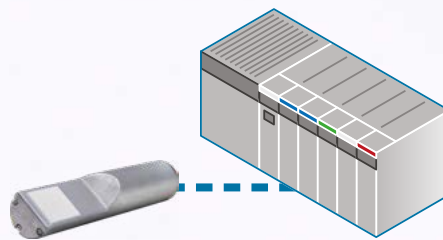
Typical Installation

The Hydro-Probe offers a choice of installation options to suit all bin types and conveyor applications. This ensures that the sensor measures the most representative sample of material.



Connectivity

Extensive range of connectivity options.



Hydro-View Connection

The Hydro-Probe can be connected to a Hydro-View to provide a continuous moisture display. It also enables the sensor to be easily calibrated if calibration facilities are not available on a PC or control system.

Direct Connection to a Control System

The analogue or serial interface integrates easily with a moisture control system.

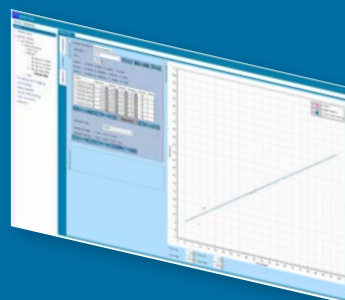
Direct Connection to PC

The RS485 serial interface provides a direct connection to an operator interface or a PC.



DISPLAY AND CONTROL

Hydronix has a range of display and control options.



CONFIGURE AND CALIBRATE

Hydro-Com Software, configure and calibrate sensors.



NETWORKING

Hydro-Hub, sensor network connection.

Technical Information

Construction

Body: Stainless Steel

Faceplate: Ceramic

Fixing

The sensor must be placed in the flow of material.

Bins and Silos: Install in the neck of a bin or underneath the gate. Standard and Extension Mounting Sleeves are available to suit different bin widths.

Conveyors: Secure in the flow of material.

Operating Temperature

0-60° C. The sensor will not measure ice.

Penetration of Field

Approximately 75-100mm dependent upon material.

Refresh Rate

25 times per second.

Moisture Range

The sensor will measure up to saturation of material.

Connectivity: Native to sensor

Two Analogue Outputs 4-20mA / 0-20mA (0-10V).

Two configurable Digital I/O.

Modbus.

Opto-Isolated RS485 2-wire port.

Connectivity: Through Hydro-Hub/Hydro-View

Ethernet/IP

PROFINET

PROFIBUS

Web API

Connectivity: Other Interfaces

RS232

Internet (TCP/IP)

USB

Programming details to access sensor values and parameters are available on request.

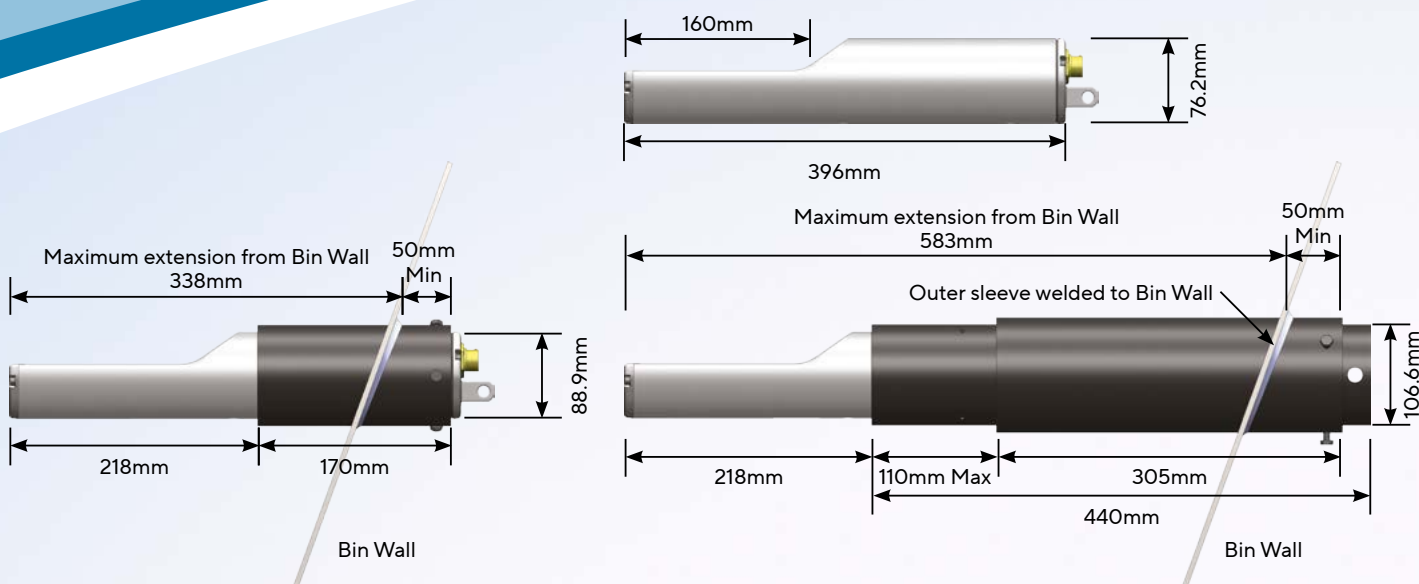
Extension Cable

Six twisted pairs, 22AWG, 0.35mm² conductors.

Screen braid with 65% minimum coverage plus aluminium/polyester foil. Maximum cable run of 100m.

Power Supply

+15V to +30V DC, 4W.



Hydronix

Head Office – United Kingdom

Tel: +44 (0)1483 468900

Email: enquiries@hydronix.com

Central Europe & Southern Africa

Tel: + 49 2563 4858

France

Tel: + 33 652 04 89 04

America, Spain & Portugal

Tel: +1 231-439-5000

hydronix.com

Part Number	Description
HP04	Hydro-Probe Digital Microwave Moisture Sensor
0025	Standard Mounting Sleeve
0026	Extension Mounting Sleeve
0024X	Flanged Mounting Sleeve (for vertical mounting)
0023	Clamp Ring for use with Flanged Mounting Sleeve
0975A	4m Sensor Cable
0975AT	Sensor Cable with Network Termination (4, 10, 25 and 50 meters)
P4EW	4 Year extended warranty option