Hydronix

High Temperature Digital Microwave Moisture Sensor

Hydro-Mix HT

High Temperature

GRAIN : FEED : NUTS : GRANULES

Hydro-Mix HT

High temperature, flush mount, digital moisture sensor

The Hydro-Mix HT has been designed to be installed in drying, ducting, conveying and mixing systems in process control environments where the operating temperature is high.

Reading at 25 times per second and combined with on-board functionality such as signal processing, smoothing and averaging, the Hydro-Mix HT accurately measures the moisture content of material as it passes 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.

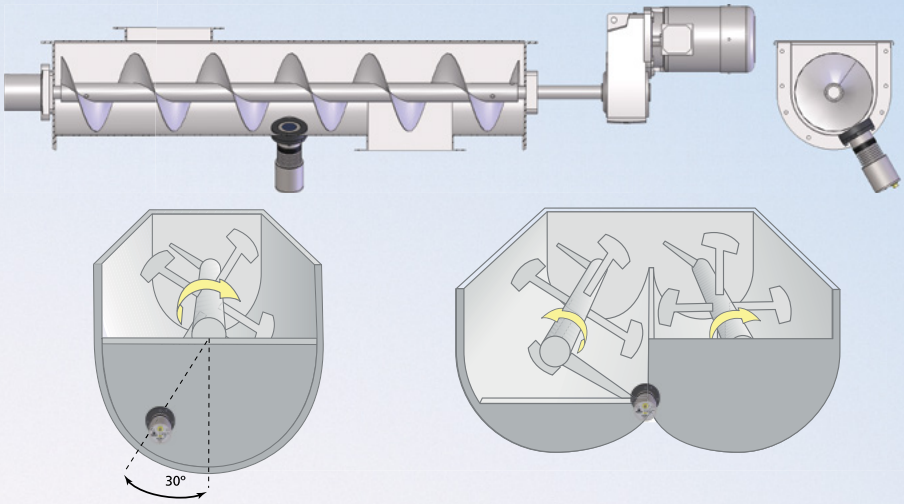
Features

- Continuous process temperature up to 120°C.
- Digital measurement technology provides precise linear moisture measurement with 25 readings per second.
- Advanced Digital Signal Processing provides a clear signal with rapid response.
- Choice of measurement modes for optimising sensor performance in a variety of applications and material types.
- Fully temperature 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 system.

Mixer / Conveyor Installation

Adjustable fixing system for flush mounting.

Typical Installation into Mixers or Conveyors



The Hydro-Mix HT can be mounted in many different locations where there is a continuous flow of material across the ceramic faceplate. These can include drying, ducting, conveying and mixing systems.

Installation into Ducting

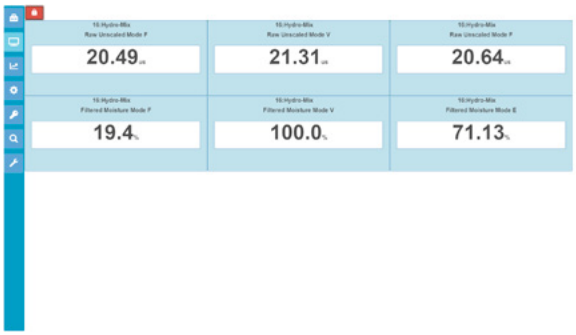
Hydronix has developed a ducting system for the Hydro-Mix HT sensor. This makes it simple to install the sensor in exactly the right position to achieve the most precise moisture measurement results. Hydronix recommends that our system is used in all ducting applications as it will easily allow us to support the Hydro-Mix HT.

The Hydronix Ducting System is a stainless steel unit that diverts a portion of the flowing material across the measuring surface of the sensor. This provides a consistent and stable flow of material that is required to accurately measure moisture.

The system can be installed into either new or existing ducting and comes in two versions, a vertical system or an angled system (30°-50° to the vertical) providing a choice of installation options.

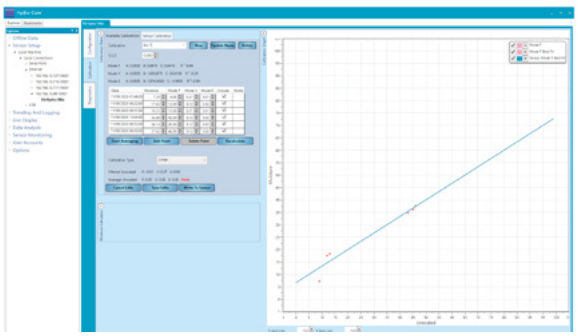
Display and Control Options

Hydronix has a range of display and control options



Configure and Calibrate

Easily configure and calibrate the sensor using Hydro-Com Software



Technical Information

Construction

Body: 316 Stainless Steel (Food Safe).

Faceplate: Ceramic (Food Safe).

Internal Seals: FDA Approved O-Rings.

Fixing

The sensor is flush mounted with the internal wall of the installation using the included mounting assembly.

Measurement Range

Moisture: 0-100%, material dependant.

Depth: Approx. 75-100mm, material dependant.

Operating Temperature

Process:

Continuous 0-120°C.

Intermittent: 120-130°C ≤ 10 minutes.

Ambient:

0-60°C.

Refresh Rate

25 times per second

Analogue Outputs

Two configurable 4-20mA or 0-20mA current loop source available for moisture and temperature. May also be converted to 0-10V DC.

Digital Inputs/Output

Two configurable digital signals available for averaging and alarm functions.

Digital (Serial) Communication

Opto-Isolated RS485 2-wire port.

RS232 converter, Ethernet and USB interfaces available.

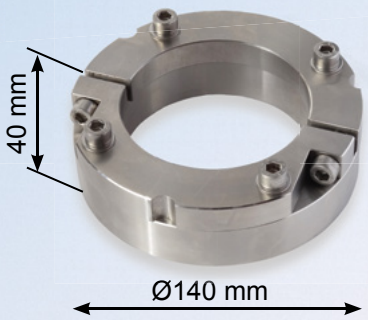
Programming details to access sensor values and parameters are available on request.

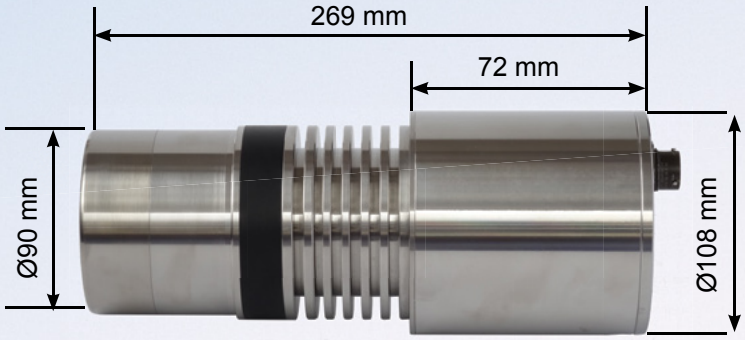
Extension Cable

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.





Part Number	Description
HMHT-01	Hydro-Mix HT Digital Microwave Moisture Sensor
DSVHT01	HMHT Ducting System - Vertical
DSAHT01	HMHT Ducting System - Angled
4010	HMHT Fixing Plate (provided with sensor)
4020	HMHT Clamp Ring (provided with sensor)
0975A	4m Sensor Cable with military specification sensor connector
0116	Power Supply 30 Watt for up to 4 sensors
0049A	RS232-485 Converter - DIN rail mounting
0049B	RS232-485 Converter - 9 pin D-type to terminal block
SIMxx	USB Sensor Interface Module including cables and power supply
EAK01	Ethernet Adapter Kit
EPK01	Ethernet Power Kit
HTEW	4 Year extended warranty option

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