

Hydronix

Hydro-Mix HT-EX

High Temperature Digital Microwave Moisture
Sensor for Hazardous Dust Environments



RECOGNIZED
COMPONENT



Intertek



GRAIN · FEED · NUTS · GRANULES

Hydro-Mix HT-EX

High temperature, flush mount, digital moisture sensor for installation in explosive dust environments

The Hydro-Mix HT-EX has been designed to measure moisture in flowing bulk solids such as animal feed, grain, rice and pulses. The sensor can be easily installed in ducting, conveying and mixing systems. It is suitable for Zone 20 process environments and is specifically designed for high temperature applications.

Comprising a single, intelligent unit that contains all on-board functionality including signal processing and averaging, the Hydro-Mix HT-EX precisely measures the moisture content of material passing 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

- Compact, self-contained unit
- Continuous process temperature up to 120°C
- Certified for installation in Zone 20, Class II Div 1 environments
- 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.



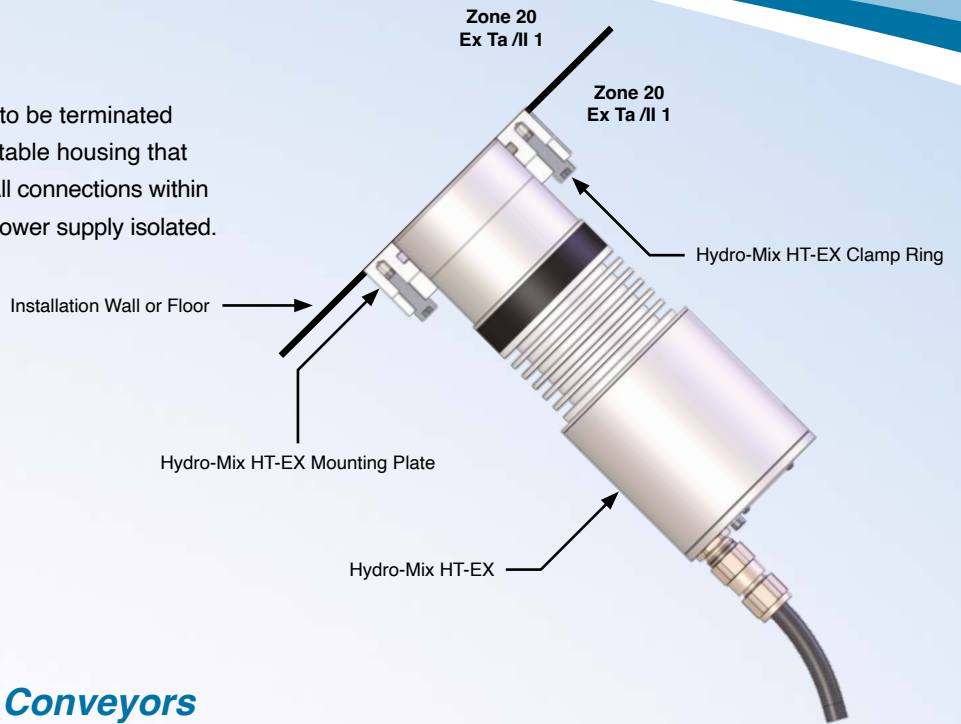
Mixer / Conveyor Installation

Fixing Plate for simple installation.



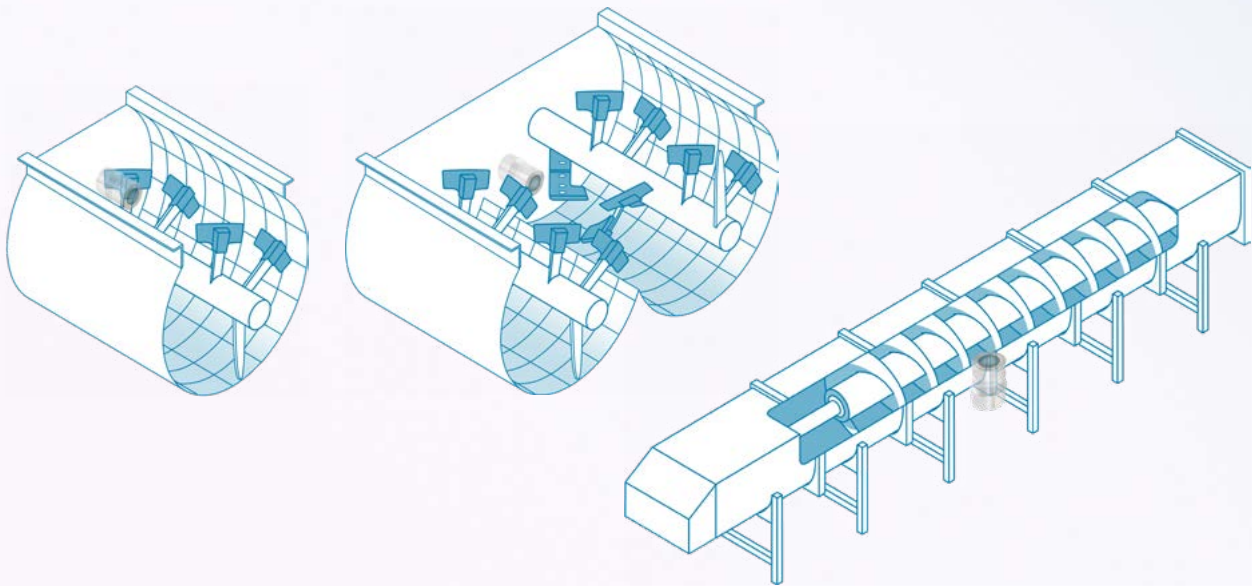
Electrical Installation

The integrated 4m cable of this sensor has to be terminated outside of the protected area or within a suitable housing that complies with the relevant protection zone. All connections within the protection zone must be made with the power supply isolated.



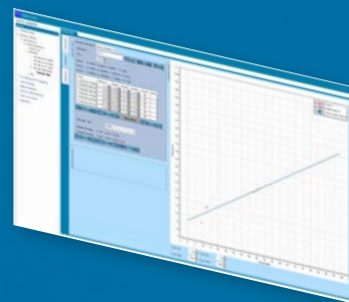
Installation into Mixers or Conveyors

The Hydro-Mix HT-EX 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.



Display and Control Options

Hydronix has a range of display and control options.



Configure and Calibrate

Easily configure & 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 range -20 – 60°C

Process: Continuous 0-120°C
Ambient: 0-60°C

Refresh Rate

25 times per second

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
Ethernet (TCP/IP)
USB

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

Extension Cable

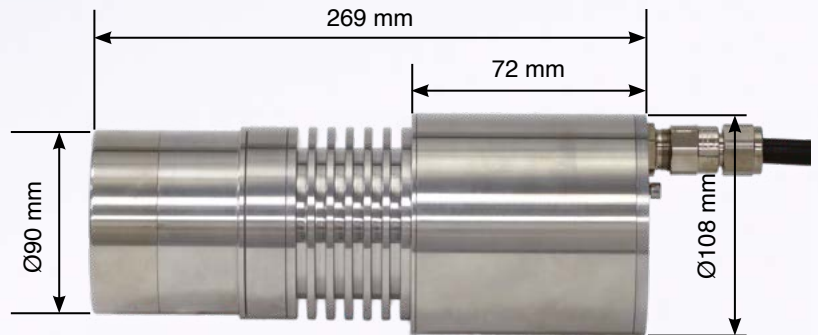
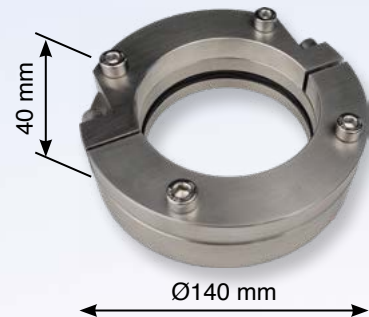
Integrated Cable 4m, six twisted pairs, 22AWG, 0.35mm² conductors. Screen braid with 65% minimum coverage plus aluminium/polyester foil. Maximum recommended cable run of 100m.

Power Supply

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

Ratings

ATEX: Ex II 1 D
IECEX: Zn 20 AEx ta IIIC T₂₀₀ 115°C Da
ETL: Cl II, Div 1 Grps E, F, G T115°C



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Part Number	Description
HMHT-EX01	Hydro-Mix HT-EX Digital Microwave Moisture Sensor
4020	Hydro-Mix HT Clamp Ring (provided with sensor)
4100	Fixing plate with seal (provided with the sensor)
HMHTEXEW	4 Year extended warranty option