HMHT-EX Explosive Atmosphere Related Information

EX Schedule Drawing.
No modifications are permitted without prior reference to the notified body

To re-order quote part number:	HD0962
Revision:	1.2.0
Revision date:	March 2022

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CUSTOMER RESPONSIBILITY

The customer in applying the product described in this documentation accepts that the product is a programmable electronic system which is inherently complex, and which may not be completely free of errors. In doing so the customer therefore undertakes responsibility to ensure that the product is properly installed commissioned operated and maintained by competent and suitably trained persons and in accordance with any instructions or safety precautions made available or good engineering practice and to thoroughly verify the use of the product in the particular application.

ERRORS IN DOCUMENTATION

The product described in this documentation is subject to continuous development and improvement. All information of a technical nature and particulars of the product and its use including the information and particulars contained in this documentation are given by Hydronix in good faith.

Hydronix welcomes comments and suggestions relating to the product and this documentation

ACKNOWLEDGEMENTS

Hydronix, Hydro-Probe, Hydro-Mix, Hydro-Skid, Hydro-View and Hydro-Control are Registered Trade Marks of Hydronix Limited

CUSTOMER FEEDBACK

Hydronix is continually looking to improve not only its products but also the services that we offer to our customers. If you have any suggestions about how we can do this or if you have any other feedback that would be helpful, please complete our short form at www.hydronix.com/contact/hydronix_feedback.php.

If your feedback is concerning an Atex certified product or associated service, it would be very helpful for you to give us your contact details and the model number and serial number of the product if possible. This will enable us to contact you with any relevant safety advice should this be necessary. It is not obligatory to leave your contact details and any information will be treated as confidential.

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Revision history

Revision No	Date	Description of Change
1.0.0	August 2021	First Release
1.1.0	September 2021	Updated Temperature rating classification
1.2.0	March 2021	Ingress Protection Specifications Added

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Chapter 1 Explosive Atmosphere Related Information

This information is in relation to the safe operation and installation of Hydronix microwave moisture sensors compliant with the Explosive Atmosphere regulations detailed below.

All installation work carried out must comply with and meet the standards required in EN60079-14 or to the relevant local standards. The safety of any system incorporating this sensor is the responsibility of the assembler of the system. If this sensor is used in a manner not specified, the protection provided by this equipment may be impaired.

The products covered by this document are to be installed as per the manufacturer's instructions.

The products covered have been evaluated to the environmental conditions as defined by the standard up to an altitude of 2000 Metres and a temperature range of -20°C (-4°F) to 60°C (140°F).

The products have been evaluated for use in a Pollution Degree 2 environment.

1 Classifications and Markings

The following approvals and certification are provided:

II 1 D

Ex ta IIIC T_{200}115°C Da

Atex Certificate: ITS-I21ATEX29990X

UKCA: ITS21UKEX0323X

IECEx Certificate: IECEx ITS 21.0003X

CA: ETL21CA104568918X

Class II, Division 1 Groups E, F, G T115°C

Zone 20 Ex ta IIIC T_{200}115°C Da

Figure 1: Label

2 Protection Levels

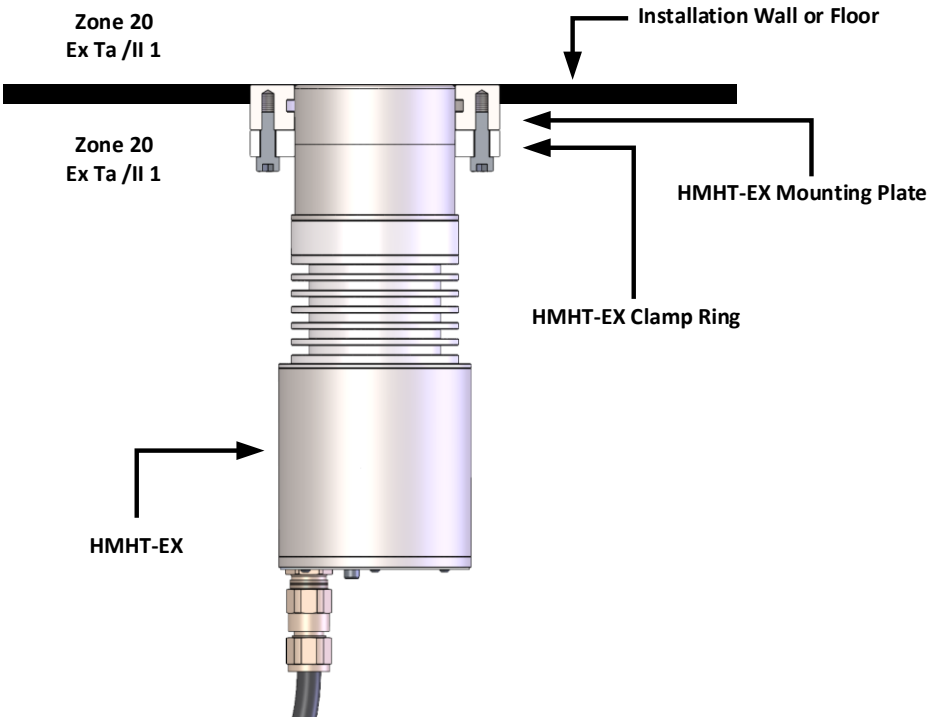

Figure 2: Protection Levels

3 Specifications

Operation Temperature Range:	Minimum	-20°C (-4°F)
	Maximum:	+120°C (248°F)
Moisture Detection Temperature Range:	Minimum:	0°C (32°F)
	Maximum:	+120°C (248°F)
Storage Temperature Range:	Minimum:	-20°C (-4°F)
	Maximum:	+75°C (167°F)
Ambient Temperature	Minimum	-20°C (-4°F)
	Maximum	+60°C (140°F)
Humidity Range:	0-90%RH Non-Condensing	
Maximum Power Consumption:	4W	
Maximum Signal Output Strength:	0.000268 µJ	
Mass:	7.55kg (16.64lbs) ±5%	
Prospective Short Circuit Current:	1200mA	
Ingress Protection:	IP66, NEMA 4X	

4 Pre-Installation

- It is the responsibility of the installing person to determine if this sensor is suitable for the application and location. Check the marking above and on the sensor prior to installation.
- The sensor shall only be installed by qualified personnel with the necessary knowledge of the protection ratings required for the location, local regulations and hold all relevant certifications.
- If in any doubt about the suitability of the sensor for the location do not install.
- If the sensor is damaged do not install.
- The sensor cable and gland shall never be used to support the weight of or to pick-up the sensor.
- The grounding of the equipment shall be assessed in the end-user's application.

5 Special Conditions of Use

- The user shall provide for the required cable strain relief to protect the cable gland
- Only power supplies that are classified as Class 2 and Class II shall be used with this sensor.
- Class II PSU is to be double insulated and have a limited energy protection.
- The external power supply rated 24vDC or 15 to 30vDC shall be isolated and be for the rated DC Voltage.
- The sensor must be installed in a manner to avoid impact damage to the ceramic face plate.

6 Installation

- During installation all relevant local regulations must be followed.
- The electrical cable of this sensor has to be either 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.
- See the Hydro-Mix HT sensor user guides for detailed installation and electrical connection instructions.
- When installing the cable, the user shall provide for the required strain relief to protect the cable gland (Figure 3). The cable must maintain a minimum bend radius of 90mm. Any bend in the cable must start at least 25mm from the cable gland.

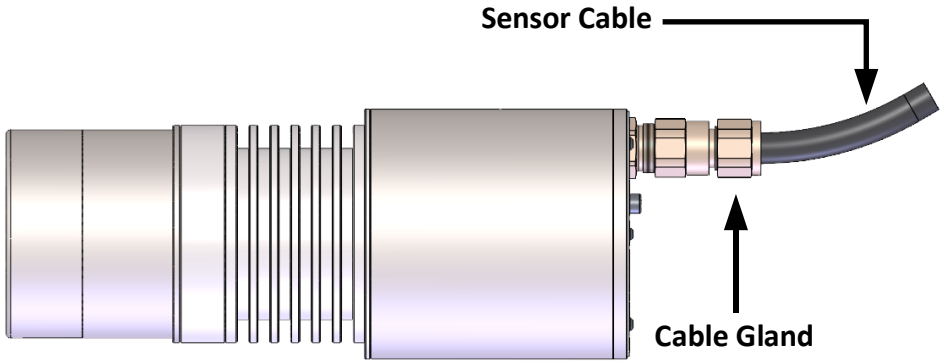

Figure 3: Sensor Cable Gland

- Ensure the sensor is installed in a location to avoid dust collecting.
- Avoid any possibility of electrostatic charges building up on the cable.
- Ensure the sensor, mounting components and housing are suitably earthed. The sensor must be earthed using a cable conductor ≥ 4mm² (11 AWG). The supplied M5 spring washer must be used when connecting the earth cable (Figure 4).

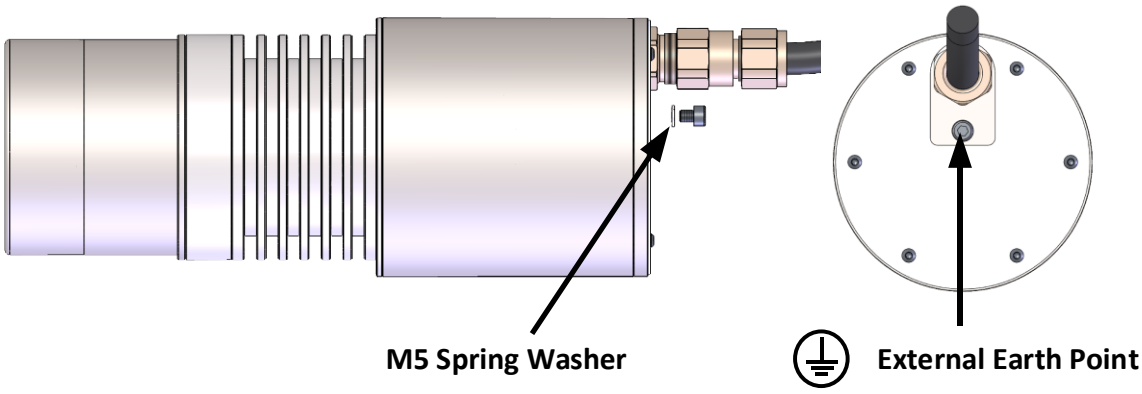

Figure 4: External Earth Point

- For detailed installation instructions see the sensor user guide. See Page 15 for the relevant document numbers.

6.1 Maintenance

Caution external surfaces can become hot during operation.

- The unit contains no user serviceable parts and cannot be opened or modified. If damaged, or in the case of a fault, the unit must be returned for repair. Contact the manufacturer to arrange any repair.
- Regular inspections of the sensor shall be carried out to ensure it is not damaged. If damage is discovered immediately stop using the sensor.
- Do not disconnect any sensor wiring when energised.
- Regular checks to ensure the sensor does not become covered in dust are required. The sensor shall be regularly cleaned using suitable equipment appropriate to the protection zone.

1 Document Cross Reference

This section lists all of the other documents that are referred to in this User Guide. You may find it beneficial to have a copy available when reading to this guide.

Document Number	Title
HD0766	Hydro-Mix HT Mechanical Installation Guide
HD0678	Hydronix Moisture Sensor Electrical Installation Guide

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