HLX355

OEM Dew Point Transmitter down to -60 °C Td

The compact HLX355 Dew Point Transmitter with a measuring range down to -60 °C Td is ideal for applications in compressed air systems, plastic dryers and industrial drying processes. An integrated auto-calibration procedure permits a measurement accuracy of <2 °C Td.

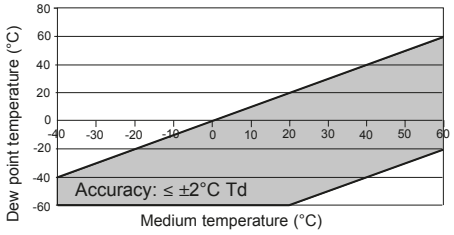
The measured values for dew point, frost point or ppm volume concentration are available on an analog 4-20 mA and a digital Modbus RTU output. Integration into the measurement task is simplified by the compact design and the exceptionally robust stainless steel housing.

With an optional Modbus to USB converter and the free HLX-PCS configuration software the user can adjust the transmitter, set the Modbus parameters, and change the scaling of the analog output.

Technical Data

Measuring values

Dew point (Td)

Measurement range	-60...60 °C Td (-76...140 °F Td)
Accuracy [1]	

Response time t_{90}	< 5 min -20 °C Td (-4 °F Td)	-60 °C Td (-76 °F Td)
	<15 sec -60 °C Td (-76 °F Td)	-20 °C Td (-4 °F Td)

Volume concentration (ppm)

Measurement range	20...200,000 ppm
Accuracy at 20 °C (68 °F) and 1013mbar	±(5 ppm + 9 % from measured value)

Output

Analog output (scalable)	4 - 20 mA (3-wire technology)	RL < 500 Ohm
Maximum adjustable scaling	-100...80 °C Td (-148...176 °F Td)	
Resolution of analog output	2 µA	
Digital interface	MODBUS RTU (max. 32 units in one bus)	
Temperature dependence	±5ppm of the measuring span / °C (Deviating from 20 °C)	

General

Supply voltage	18...28 V DC
Current consumption at 24V DC	<20 mA + load current / with autocalibration: 100 mA + load current
Pressure range of use	0...80 bar
Housing / protection class	Stainless steel 1.4404 (AISI 316L) / IP65
Electrical connection [2]	M12x1 5-pin plug
Sensor protection	Stainless steel sintered filter
Temperature / humidity operating range	-40...70 °C (-40...158 °F) / 0...100 % RH
Storage temperature range	-40...60 °C (-40...140 °F)
Electromagnetic compatibility	EN61326-1 EN61326-2-3 Industrial environment FCC Part 15 ICES-003 ClassB

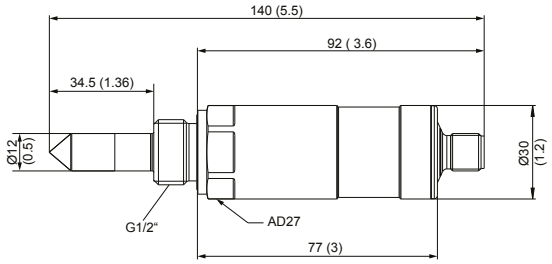
CE

1) The accuracy statement includes the uncertainty of the factory calibration with an enhancement factor k=2 (2-times standard deviation). The accuracy was calculated in accordance with EA-4/02 and with regard to GUM (Guide to the Expression of Uncertainty in Measurement).

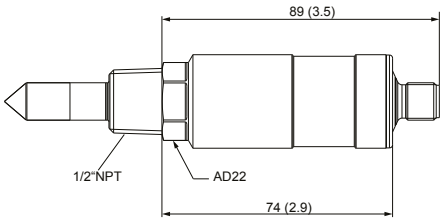
2) Field-attachable mating connector is included in the scope of supply.

Dimensions in mm (inch)

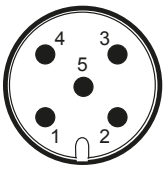
ISO



NPT



Connection Diagram



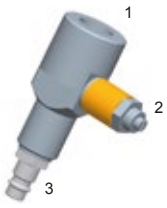
Plug

1...V+
2...Analog output 4-20mA
3...GND
4...RS485 A (=D+)
5...RS485 B (=D-)

Sampling Cell with Quick Connector

The sampling cell is specially developed for use in compressed air lines and has a quick-connector suitable for standard compressed air connections (DN7.2). It allows for the cell to be fitted and removed without interrupting the process. The flow of gas can be adjusted using a bleed screw. Pressure range: 0...10 bar (0...145 psi).

1 = G 1/2“ or NPT
2 = Bleed screw
3 = Quick connector (only with G 1/2“)



Ordering Information

					HLX355-
Process connection	G1/2" thread 1/2“ NPT thread				**PA1** **PA2**
Software configuration					
Physical parameter for analog output	Dew point temperature	Td	[°C]		no code
	Frost point temperature	Tf	[°C]	for Td < 0 °C output is Tf	**MA65**
	Dew point temperature	Td	[°F]		**MA53**
	Frost point temperature	Tf	[°F]	for Td < 32 °F output is Tf	**MA66**
	volume fraction of water vapor	Wv	[ppm]		**MA75**
Scaling of analog output	scaling low	-60 value			no code **SAL*value***
	scaling high	60 value			no code **SAH*value***
Measured value unit for Modbus RTU	metric [°C] non metric [°F]				no code **U2**

Scope of Supply

- HLX355 Transmitter according to Ordering Guide
- Mating plug M12x1 field attachable
- Operation Manual - Quick guide
- Inspection certificate according to DIN EN10204 - 3.1

Order example

HLX355-PA1SAH20

Pressure-tight screw connection:	G1/2” thread
Output:	Dew point Td [°C]
Output scaling:	4-20 mA = -60...20 °C Td
Measured value unit:	metric [°C]

Accessories

M12x1 5pin connection cable socket/flying leads 1.5m	HA010819	sampling cell G 1/2“ with quick connector	HA050102
M12x1 5pin connection cable socket/flying leads 5m	HA010820	sampling cell NPT with bleed screw only	HA050107
M12x1 5pin connection cable socket/flying leads 10m	HA010821	sampling cell G 1/2“ for atmospheric dew point	HA050106
Modbus - USB converter for HLX35x	HA011013	basic sampling cell G 1/2“	HA050103
stainless steel sintered filter	HA010103	basic sampling cell NPT	HA050105

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