HMT330 Series Humidity and Temperature Transmitters

For Demanding Humidity Measurement

Features

- Full 0 ... 100 %RH measurement, temperature range up to +180 °C (+356 °F) depending on model
- Pressure tolerance up to 100 bar depending on model
- 4th generation Vaisala HUMICAP® sensor for superior accuracy and stability
- Corrosion-resistant IP65/IP66 housing
- Excellent performance in harsh conditions; good chemical tolerance
- Traceable calibration for measurement and analog outputs (certificates included)
- 10-year warranty when annually calibrated at the Vaisala Service Center

Vaisala HMT330 Series HUMICAP® Humidity and Temperature Transmitters are designed for demanding industrial applications where stable measurements and extensive customization are essential. With multiple options to choose from, the instrument can be tailored to meet the specific needs of each individual application and is pre-configured for each delivery.

Proven Vaisala HUMICAP Performance

The HMT330 series incorporates Vaisala's 40 years of experience in industrial humidity measurement. The updated fourth-generation HUMICAP® sensor provides accurate and stable measurement even in environments with high humidity or chemical contaminants.

Wide Range of Installation Options

The wide variety of measurement probes, several installation accessories, and universal mains and DC power options make the instruments easy to install in various locations and kinds of environment; walls, poles, pipelines, and ducts, for example. The input/output cable can be fed through the back of the transmitter, which is a useful feature, especially for cleanroom installations.

The HMT330 series includes six models:

- HMT331 for wall-mounted applications
- HMT333 for ducts and tight spaces
- HMT334 for high-pressure and vacuum applications
- HMT335 for high-temperature applications
- HMT337 for high-humidity applications
- HMT338 for pressurized pipelines

With multiple options to choose from, including local display, the HMT330 series can be tailored to meet the specific needs of each individual application and is preconfigured for each delivery. Also the HUMICAP® sensor itself can be selected according to specific measurement application needs.

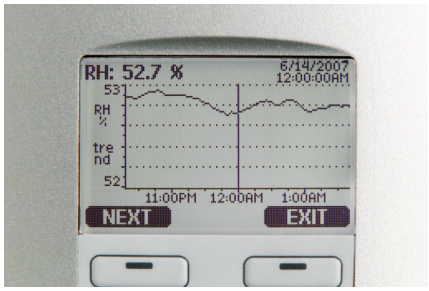
Connectivity

- RS-232/485/422 LAN
- Modbus protocol support (RTU/TCP)
- Optional graphical display and keypad for convenient operation
- Multilingual user interface
- Compatible with Vaisala viewLinc software

HMT330 Series Humidity and Temperature Transmitters

Graphical Display of Measurement Data and Trends for Convenient Operation

The HMT330 series features an optional numerical and graphical display with a multilingual menu and keypad. It allows users to easily monitor operational data, measurement trends, and access measurement history of up to 4 years.



The display shows measurement trends and over four years of real-time measurement history.

The display alarm allows any measured parameter to be tracked, with freely configurable low and high limits.

Versatile Outputs and Data Collection

The HMT330 can support up to three analog outputs; an isolated galvanic power supply and up to four relay outputs are also available.

For serial interface the USB service cable, RS-232, and RS-485/422 can be used.

HMT330 is also capable of applying the Modbus communication protocol and, together with an appropriate connection option, provides either Modbus RTU (RS-485) or Modbus TCP/IP (Ethernet) communication.

The data logger, with real-time clock and battery backup, guarantees reliable logging of measurement data for over four years. The recorded data can be viewed on the local display or transferred to a PC with Microsoft Windows® software. The transmitter can also be connected to a network with an optional LAN interface, which enables an Ethernet connection. A USB service cable makes it easy to connect the HMT330 to a PC via the service port.

Flexible Calibration

The HMT330 instruments are calibrated at five humidity points at the factory and come with a calibration certificate that meets all the relevant traceability and compliance requirements.

A quick, one-point field calibration can be performed with the handheld HM70 meter. A two-point field calibration can be performed, for example, with the HMK15 salt bath calibrator in a controlled environment. The transmitter can also be sent to Vaisala for recalibration, and accredited ISO/IEC17025 calibrations and special calibrations are available.

Chemical Purge Minimizes Effects of Contaminant

In environments with high concentrations of chemicals and cleaning agents, the chemical purge option helps to maintain measurement accuracy between calibration intervals.

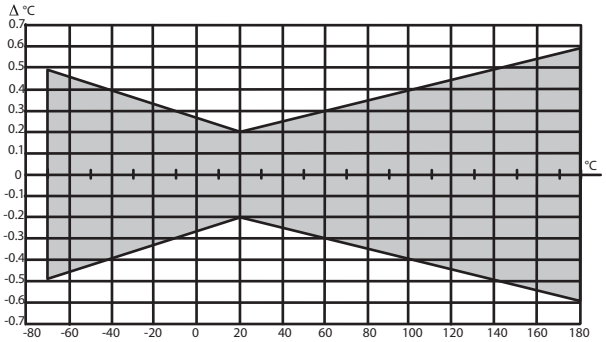
The chemical purge involves heating the sensor to remove harmful chemicals. The function can be initiated manually or programmed to occur at set intervals.

	HMT331	HMT333	HMT334	HMT335	HMT337	HMT338
For	Measurement within rooms	General purposes	High pressure and vacuum applications	High temperatures	High humidity applications	Pressurized pipelines
Temperature Measurement Range	-40 ... +60 °C (-40 ... +140 °F)	-40 ... +80 °C (-40 ... +176 °F) or -40 ... +120 °C (-40 ... +248 °F)	-70 ... +180 °C (-94 ... +356 °F)	-70 ... +180 °C (-94 ... +356 °F)	-70 ... +180 °C (-94 ... +356 °F)	-70 ... +180 °C (-94 ... +356 °F)
Operating Pressure			0 ... 10 MPa (0 ... 100 bar)		0 ... 1 MPa (0 ... 10 bar)	0 ... 4MPa (0 ... 40 bar)

HMT330 Series Technical Data

Measurement Performance

Relative Humidity	
Measurement range	0 ... 100 %RH
Accuracy (including non-linearity, hysteresis, and repeatability)	
at +15 ... +25 °C (59 ... +77 °F)	±1 %RH (0 ... 90 %)
	±1.7 %RH (90 ... 100 %RH)
at -20 ... +40 °C (-4 ... +104 °F)	±(1.0 + 0.008 x reading) %RH
at -40 ... +180 °C (-40 ... +356 °F)	±(1.5 + 0.015 x reading) %RH
Factory calibration uncertainty (+20 °C)	±0.6 %RH (0 ... 40 %RH) ±1.0 %RH (40 ... 97 %RH) (Defined as ±2 standard deviation limits. Small variations possible; see also calibration certificate.)
Response time (90%) at +20 °C (+68 °F) in still air / in 0.1 m/s air flow	
	8 s / 17 s with grid filter [1]
	20 s / 50 s with grid + steel netting filter[1]
	40 s / 60 s with sintered filter[1]
Temperature	
Accuracy at +20 °C (+68 °F)	± 0.2 °C (± 0.36 °F)
Accuracy over temperature range (measurement range depends on model)	



Temperature sensor	Pt100 RTD Class F0.1 IEC 60751
Other Available Variables (Model-Dependent)	
dew point temperature, mixing ratio, absolute humidity, wet bulb temperature, enthalpy, water vapor pressure	

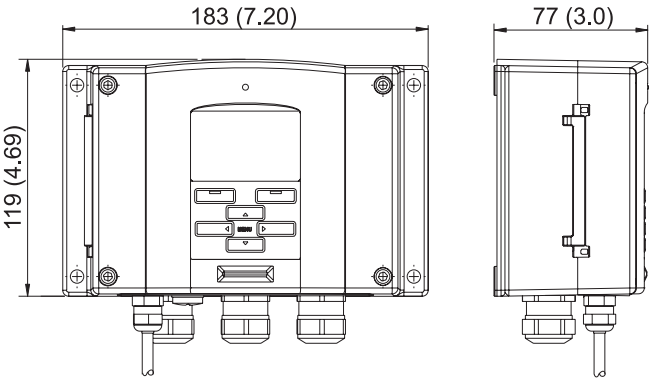
1) With HUMICAP 180R or 180RC or 180VC sensor

Operating Environment

Operating Temperature	
for probe	same as measurement range
for transmitter body	-40 ... +60 °C (-40 ... 140 °F)
with display	0 ... +60 °C (32 ... 140 °F)
Storage temperature	-55 ... +80 °C (-67 ... 176°F)
EMC compliance	EN61326-1, Industrial Environment Note: Transmitter with display test impedance of 40 Ω is used in IEC61000-4-5 (Surge immunity)

Mechanical Specifications

Cable bushing	M20 x 1.5 for cable diameter
	8 ... 11 mm / 0.31 ... 0.43"
Conduit fitting	1/2" NPT
User cable connector (optional)	M12 series 8-pin (male)
option 1	female plug with 5 m (16.4 ft.) black cable
option 2	female plug with screw terminals
Probe Cable Diameter	
HMT333 (+80 °C)	6.0 mm
other probes	5.5 mm
Standard probe cable lengths	2 m, 5 m or 10 m (Additional lengths available, see order forms for details)
Housing material	G-AlSi 10 Mg (DIN1725)
IP rating	IP66 IP65 (NEMA4X) with local display
Weight depending on selected probe, cable and modules	1.0 - 3.0 kgs



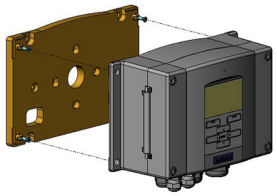
Dimensions in mm (inches)

Inputs and Outputs

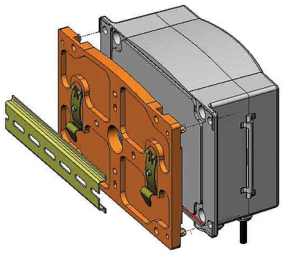
Operating Voltage	10 ... 35 VDC, 24 VAC ±20%
with optional power supply module	100 ... 240 VAC, 50/60 HZ
Power Consumption at +20 °C (U_{in} 24 VDC)	
RS-232	max. 25 mA
U_{out} 2 x 0 ... 1 V/0 ... 5 V/0 ... 10 V	max. 25 mA
I_{out} 2 x 0 ... 20 mA	max. 60 mA
display and backlight	+ 20 mA
during chemical purge	max. 110 mA
during probe heating (HMT337)	+ 120 mA
Analog Outputs (2 standard, 3rd optional)	
current output	0 ... 20 mA, 4 ... 20 mA
voltage output	0... 1 V, 0... 5 V, 0... 10 V
Accuracy of analog outputs at +20 °C	±0.05% full scale
Temperature dependence of the analog outputs	±0.005%/°C full scale
External loads:	
current outputs	R_L < 500 Ω
0 ... 1 V output	R_L > 2 kΩ
0 ... 5 V and 0 ... 10 V outputs	R_L > 10 kΩ
Max. Wire Size	0.5 mm2 (AWG 20)
	stranded wires recommended
Digital outputs	RS-232, RS-485 (optional)
Protocols	ASCII commands, Modbus RTU
Service Connection	RS-232, USB
Relay Outputs (Optional)	0.5 A, 250 VAC
Ethernet Interface (Optional)	
Supported standards	10BASE-T, 100BASE-TX
Connector	8P8C (RJ45)
IPv4 address assignment	DHCP (automatic), static
Protocols	Telnet, Modbus TCP/IP
Optional Data Logger with Real-Time Clock	
Logged parameters	max. four with trend/min/max values
Logging interval	10 sec. (fixed)
Max. logging period with max. temporal resolution	4 years, 5 months
Logged points	13.7 million points per parameter
Battery lifetime	min. 5 years
Display	LCD with backlight, graphical trend display of any parameter
Menu languages	English, Chinese, Finnish, French, German, Japanese, Russian, Spanish, Swedish

Mounting Options

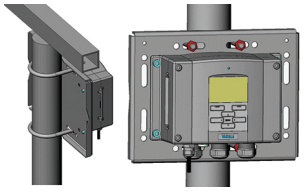
Mounting with Wall Mounting Kit (not mandatory for wall installations)



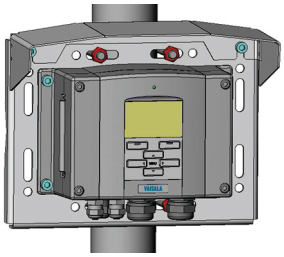
Mounting with DIN Rail Installation Kit

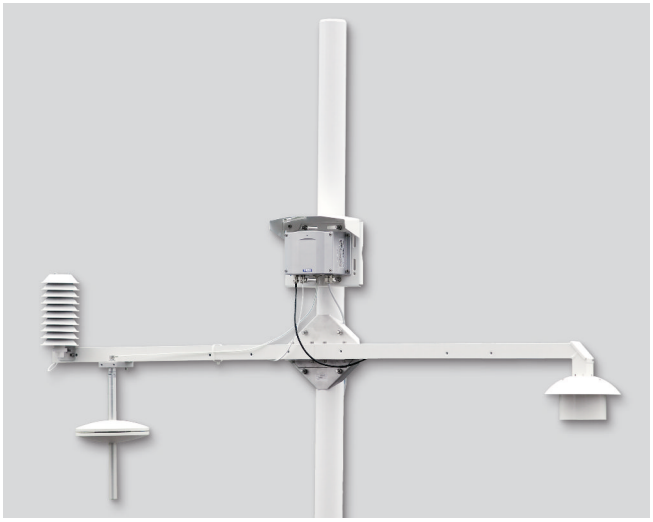


Pole Installation with Installation Kit for Pole or Pipeline



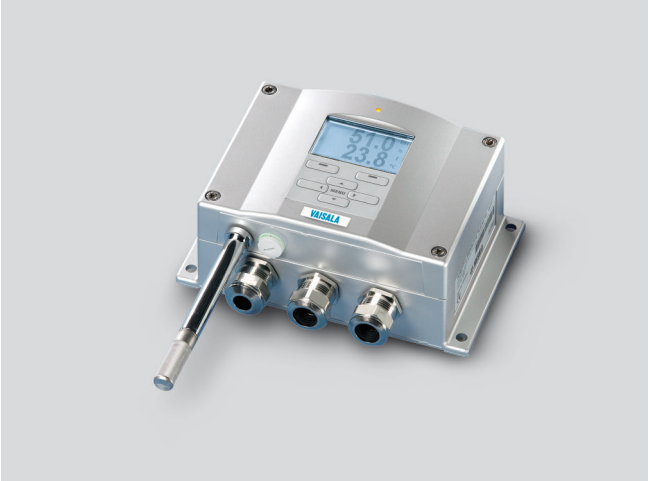
Mounting Rain Shield with Installation Kit





Vaisala Meteorological Installation Kit HMT330MIK enables HMT337 to be installed outdoors to obtain reliable measurements for meteorological purposes

HMT331 Humidity and Temperature Transmitter for Demanding Wall-Mounted Applications



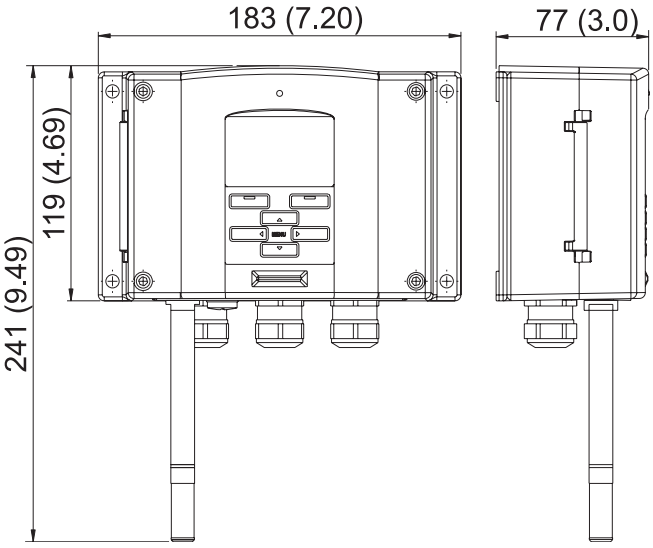
Typical Applications

- Cleanrooms
- Pharmaceutical processes
- Swimming halls
- Data centers
- Archives

Vaisala HUMICAP® Humidity and Temperature Transmitter HMT331 is a high-quality wall-mounted transmitter for demanding HVAC and condition-monitoring applications.

Technical Data

Temperature measurement range	-40 ... +60 °C (-40 ... +140 °F)



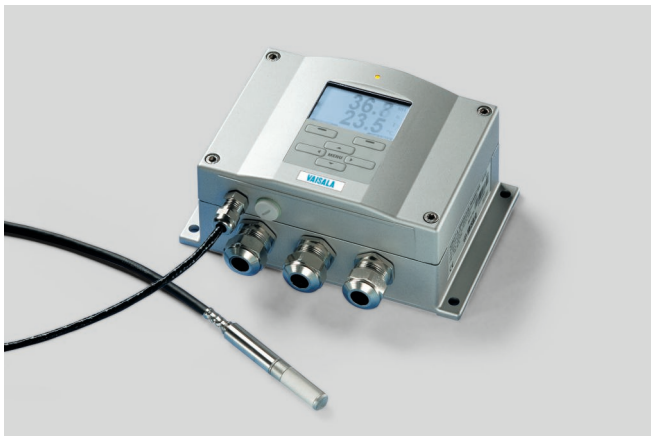
Dimensions in mm (inches)

HMT331 with short cable probe

Accessories

USB service port cable with PC software	219916
Connection cable for HM70	211339
Wall-mounting plate (plastic)	214829
Pole installation kit with rain shield	215109
DIN rail installation set	215094
PPS plastic grid filter with stainless steel net	DRW010281SP
Stainless steel sintered filter	HM47280SP

HMT333 Humidity and Temperature Transmitter for Ducts and Tight Spaces



Vaisala HUMICAP® Humidity and Temperature Transmitter HMT333 is a versatile instrument for applications where a small remote probe is needed, for example in demanding HVAC applications. Its small thermal mass enables rapid response to temperature changes.

Typical Applications

- Cleanrooms
- Industrial HVAC systems
- Environmental chambers
- Processes with moderate temperature and humidity

Flexible Installation

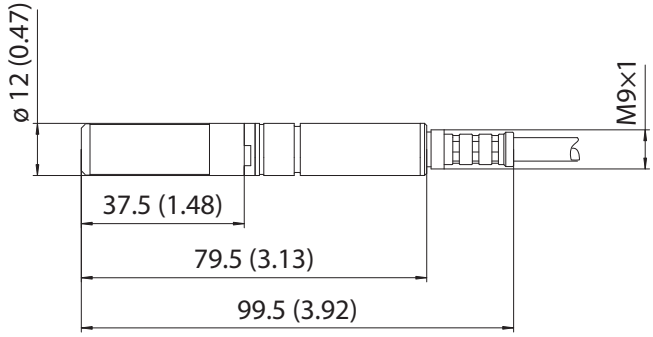
To install the probe in ducts, channels, and through walls, an installation kit is available with a stainless steel flange, lead-through piece, and steel support bar.

HMT333 has two probe cable options – a flexible rubber cable that withstands temperatures of up to +80 °C, and a durable FEP cable that withstands temperatures of up to +120 °C. Both cable options are available in lengths of 2, 5, and 10 meters. Additionally, flexible rubber cable (+80 °C) is available in 20-meter lengths.

For outdoor environments, the DTR502B solar radiation shield provides protection for the probe. The shield can be installed on a pole, beam, or flat surface.

Technical Data

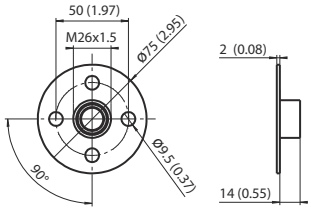
Temperature measurement range	-40 ... +80 °C (-40 ... +176 °F) or -40 ... +120 °C (-40 ... +248 °F)



Dimensions in mm (inches)

Duct installation kit for HMT333. The flange allows easy adjustment of probe installation depth.

Installation flange dimensions in mm (inches)



Accessories

Duct installation kit	210697
Cable gland with split seal	HMP247CG
USB service port cable with PC software	219916
Connection cable for HM70	211339
Wall-mounting plate (plastic)	214829
Pole installation kit with rain shield	215109
Solar radiation shield	DTR502B
DIN rail installation set	215094
PPS plastic grid filter with stainless steel net	DRW010281SP
PPS plastic grid filter	DRW010276SP
Stainless steel sintered filter	HM47280SP

HMT334 Humidity and Temperature Transmitter for High Pressure and Vacuum Applications

Typical Applications

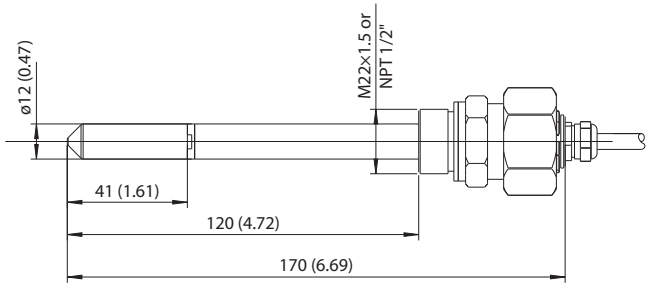
- Test chambers
- High-pressure and vacuum processes

Vaisala HUMICAP® Humidity and Temperature Transmitter HMT334 is designed for humidity measurement in pressurized spaces or vacuum chambers.

Every probe is tested for gas and vacuum-tight installation.

Technical Data

Temperature measurement range	-70 ... +180 °C (-94 ... +356 °F)
Operating pressure	0 ... 10 MPa (0 ... 100 bar)



Dimensions in mm (inches)

Accessories

Fitting body NPT 1/2"	17225SP
USB service port cable with PC software	219916
Connection cable for HM70	211339
Wall-mounting plate (plastic)	214829
Pole installation kit with rain shield	215109
DIN rail installation set	215094
PPS plastic grid filter with stainless steel net	DRW010281SP
PPS plastic grid filter	DRW010276SP
Stainless steel sintered filter	HM47280SP
Stainless steel grid filter	HM47453SP
Fitting body ISO M22 x 1.5	17223SP

HMT335 Humidity and Temperature Transmitter for High Temperatures

Typical Applications

- Hot drying processes
- Food processes, e.g. baking ovens

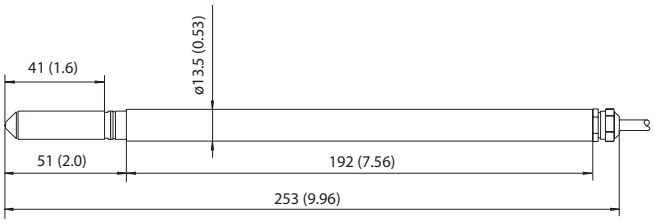
Robust Probe Ideal for High Flow Rates

The Vaisala HUMICAP® Humidity and Temperature Transmitter HMT335 has a long stainless steel probe designed for high temperatures.

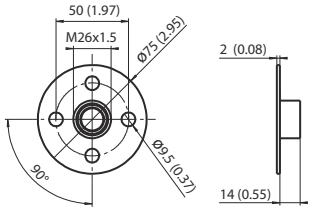
With high tolerance for mechanical stress and high flow rates, HMT335 is ideal for duct measurements. The stainless steel installation flange allows easy adjustment of the probe's installation depth. Long, robust probe allows easy installation through insulation in ovens and similar applications.

Technical Data

Temperature measurement range	-70 ... +180 °C (-94 ... +356 °F)



Dimensions in mm (inches)



Installation flange dimensions in mm (inches)

Flange installation kit for HMT335

Accessories

Mounting flange	210696
USB service port cable with PC software	219916
Connection cable for HM70	211339
Wall-mounting plate (plastic)	214829
Pole installation kit with rain shield	215109
DIN rail installation set	215094
PPS plastic grid filter with stainless steel net	DRW010281SP
PPS plastic grid filter	DRW010276SP
Stainless steel sintered filter	HM47280SP
Stainless steel grid filter	HM47453SP

HMT337 Humidity and Temperature Transmitter for High Humidity Applications

Typical Applications

- Professional meteorology
- Intake air monitoring of engines and gas turbines
- Timber drying kilns

HMT337 Configurations

Vaisala HUMICAP® Humidity and Temperature Transmitter HMT337 is ideal for the most demanding process and meteorological measurements in high-humidity condensing environments.

HMT337 is delivered in one of three configurations:

1. Basic HMT337, with a non-warmed probe for applications where humidity levels are not constantly near condensation

2. HMT337 with a warmed probe, for dew point temperature measurement under constant near-condensing conditions

3. HMT337 with a warmed probe and an additional temperature sensor, for relative humidity measurement under constant near-condensing conditions

True Humidity Readings in Condensation Conditions

Vaisala's unique warmed probe provides fast and reliable measurement in environments where humidity is near saturation. The heating prevents condensation from forming on the sensor.

As the probe is heated, the relative humidity level inside it stays below the ambient level. With accurate temperature measurement, the ambient dew point temperature can be calculated precisely.

If the relative humidity value is needed, an optional temperature sensor is used (configuration option 3). The measured ambient temperature provides the compensation for calculating relative humidity and other temperature-dependent humidity parameters.

Installation Options

A pressure and vapor tight installation up to 10 bars through a process wall can be achieved by sealing with Swagelok® fittings from the probe, or sealing from the cable with a gland. The optional HMT330MIK Installation Kit is available for outdoor installations; duct installation kits are also available.

Technical Data

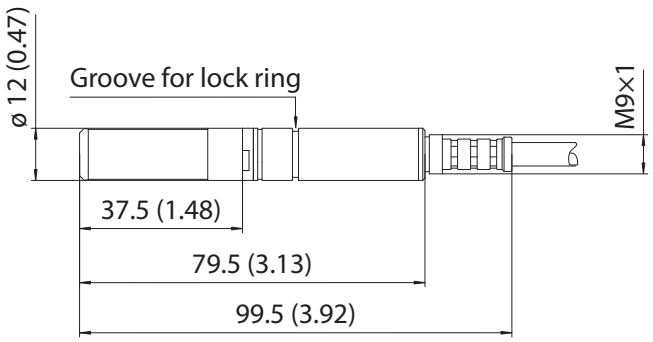
Temperature measurement range	-70 ... +180 °C (-94 ... +356 °F)

Accessories

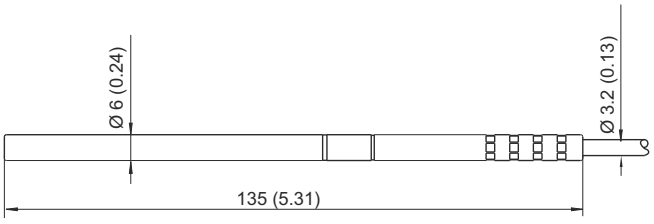
Cable gland for probe cable	HMP247CG
Duct installation kit (RH probe)[1)]	210697
Duct installation kit (T probe) [1)]	215003
Swagelok fittings (NPT and ISO) for both RH and T probes (up to 10 bar)	
Solar radiation shield	DTR502B
Meteorological installation kit	HMT330MIK
USB service port cable with PC software	219916
Connection cable for HM70	211339
Wall-mounting plate (plastic)	214829
Pole installation kit with rain shield	215109
DIN rail installation set	215094
Warmed probe accessory	HMT330WPA
PPS plastic grid filter with stainless steel net	DRW010281SP
PPS plastic grid filter	DRW010276SP
Stainless steel sintered filter	HM47280SP
Stainless steel grid filter	HM47453SP

For more installation accessories, check the order form.

1) For an image of the duct installation kit, see HMT333 page.



HMT337 RH Dimensions in mm (inches)



HMT337 T Dimensions in mm (inches)

HMT338 Humidity and Temperature Transmitter for Pressurized Pipelines

Typical Applications

- Process lines
- Environmental chambers
- Vacuum-drying processes
- Compressed air lines with refrigerant dryers

Vaisala HUMICAP® Humidity and Temperature Transmitter HMT338 is ideal for installations in pressurized processes where the probe needs to be removed while the process is running.

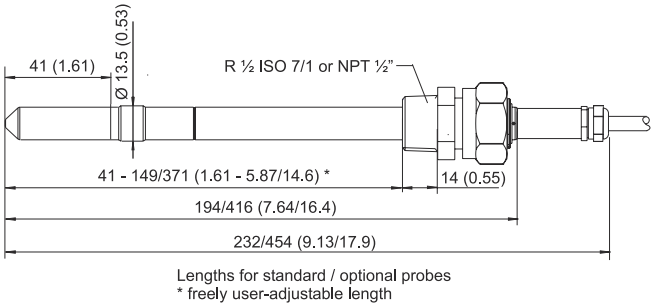
Insert or Remove the Probe while the Process is Running

With “hot tapping”, the probe is inserted directly into the process while it is running, without the need for venting or lowering the process pressure. The probe is tightened to a ball-valve assembly fixed to the process pipe or wall. The adjustable hex nut is hand-tightened to hold the probe in place temporarily.

The probe is then pushed down to the appropriate depth. The hex nut is then tightened with a wrench to lock the probe in place. Hot tapping is possible in pressures up to 10 bar.

Technical Data

Temperature measurement range	-70 ... +180 °C (-94 ... +356 °F)
Operating pressure	0 ... 4MPa (0 ... 40 bar)



Dimensions in mm (inches)

Accessories

Ball-valve set	BALLVALVE-1
Pressure fitting ISO 1/2 to NPT 1/2	210662
USB service port cable with PC software	219916
Connection cable for HM70	211339
Wall-mounting plate (plastic)	214829
Pole installation kit with rain shield	215109
DIN rail installation set	215094
PPS plastic grid filter with stainless steel net	DRW010281SP
PPS plastic grid filter	DRW010276SP
Stainless steel sintered filter	HM47280SP
Stainless steel grid filter	HM47453SP

VAISALA

www.vaisala.com

Published by Vaisala | B210951EN-N © Vaisala 2018

VAISALA

Order form | **Valid from March 2017**
Purchaser ______________________ | Order no. ______________________

HMT331 Humidity and Temperature Transmitter

For wall mounting

Position	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
Vaisala HUMICAP® Humidity and Temperature Transmitter HMT330	1		0																A				1	PRICE

Item	Selection	Details	Code
1 Transmitter type	**HMT331**		**1**
2 Wall probe	**fixed**		**A**
	with short cable	*Probe holder plate recommended in selection 16*	**8**
3 No additional temperature probe			**0**
4 Parameters	**RH+T+Td+Tdf+a+x+Tw+ppm+pw+pws+h+dT**		**B**
5 Display	**No display**		**0**
	Graphical display with keypad		*1*
6 Power supply	**10...35 VDC , 24 VAC**		**0**
	10..35 VDC, 24 VAC with galvanic isolation		*1*
	Universal AC-power (100...240 VAC)		*2*
	Universal AC-power (100...240 VAC) + US power cord		*3*
	Universal AC-power (100...240 VAC) + EUR power cord		*4*
	Universal AC-power (100...240 VAC) + UK power cord		*5*
	Universal AC-power (100...240 VAC) + AUS power cord		*6*
	External US AC-adapter (for LAN/WLAN interface in USA and Canada)	*Not IP65*	*9*
7 Signal output	**Analog output channel (Ch1&Ch2&Ch3)**	**4... 20 mA**	**1**
	Analog output channel (Ch1&Ch2&Ch3)	**0... 20 mA**	**2**
- Ch1&Ch2 are mandatory	**Analog output channel (Ch1&Ch2&Ch3)**	**0... 1 V**	**3**
- Ch3 is optional	**Analog output channel (Ch1&Ch2&Ch3)**	**0... 5 V**	**4**
	Analog output channel (Ch1&Ch2&Ch3)	**0... 10 V**	**5**
	+ Serial interface RS232 or optional communication module		

Item	Selection		8 (Channel 1)	9 (Channel 2)	10 (Channel 3, choose A if not needed)
8 Analog output signals	**No 3rd analog output**				**A**
9 for Ch1 , Ch2 and Ch3	**RH**	**(0...100%RH)**	**B**	**B**	*B*
10	**T**	**(range: see below)**	**C**	**C**	*C*
	Td (-20...100°C)	**(-4...+212 °F)**	**D**	**D**	*D*
	Tdf (-20...100°C)	**(-4...+212 °F)**	**E**	**E**	*E*
	a (0...600g/m3)	**(0...262 gr/ft3)**	**F**	**F**	*F*
	Tw (0...100°C)	**(+32...+212°F)**	**G**	**G**	*G*
	x (0...500g/kg d.a)	**(0...3500gr/lb)**	**H**	**H**	*H*
	h (-40...1500 kJ/kg)	**(-9.5...+652.6 Btu/lb)**	**J**	**J**	*J*
	ppm (0…5000)	**(0…5000)**	**K**	**K**	*K*
	pw (0…1000 hPa)	**(0…14.5psi)**	**L**	**L**	*L*
	pws (0…1000 hPa)	**(0…14.5psi)**	**M**	**M**	*M*
	dT (-10...+50 °C)	**(14...+122 °F)**	**N**	**N**	*N*
SPECIAL Define quantity	**Ch1:**______________	**Ch2:**______________ **Optional Ch3:**_____________	**X**	**X**	*X*
Define scale	**Ch1:**______________	**Ch2:**______________ **Optional Ch3:**_____________			

Item	Selection	Details	Code
11 Analog output range for temperature	**No temperature output**		**A**
	-40...+60°C	**(-40...+140°F)**	**B**
Note:	**-20...+60°C**	**(-4...+140°F)**	**F**
- Choose option A, if no T output is desired	**0...+60°C**	**(+32...+140°F)**	**K**
	Special	**:**____________________	**X**
12 Output units	**Metric**		**1**
	Non-metric		**2**
13 Option for module slot 1	**No module**		**0**
	Relay output		*1*
	RS-485 serial interface (galvanically isolated)		*2*
	LAN (Ethernet) interface + 2 m cable (RJ45)	*Please see note *) below*	*4*
	WLAN (Wireless Ethernet) interface + antenna	*With short cable probe only*	*5*
	Data logger module		*6*
14 Option for module slot 2	**No module**		**0**
	Relay output		*1*
	3rd Analog output	*Choose also analog output signal for Ch3*	*3*
	Data logger module	*Not possible if the data logger module has already been chosen in item 13*	*6*
15 Cable bushings	**Cable gland M20 x 1.5**		**A**
Note: The Universal	**Conduit fitting NPT1/2"**		**B**
AC power not connected	*8-pole connector with 5 m cable*	*spare cable: 212142*	*C*
through 8-pole connector!	*8-pole counter connector equipped with screw terminals*	*spare connector: 212416*	*D*
	Bushing Set (Cable gland M20 x 1.5 and Conduit fitting NPT1/2")		*G*
16 Transmitter installation	**Normal mounting**		**0**
	Wall mounting plate	*item: 214829*	*1*
	Pole installation kit	*item: 215108*	*2*
	Pole installation kit with rain shield	*item: 215109*	*3*
	DIN rail kit	*item: 215094*	*4*
	Probe holder plate *Recommended with short cable probe*		*5*
17 Humidity sensor type	**General purpose and high chemical concentrations** **HUMICAP180R**	*spare: HUMICAP180R*	**A**
	with chemical purge function *HUMICAP180RC*	*spare: HUMICAP180RC*	*C*
	Catalytic humicap sensor with chemical purge *HUMICAP180VC*	*spare: HUMICAP180VC*	*K*
18 Sensor protection	**PPS plastic grid & stainless steel netting**	*spare: DRW010281SP*	**A**
	PPS plastic grid	*spare: DRW010276SP*	**B**
	Sintered stainless steel filter	*spare: HM47280SP*	**C**
19 No probe installation kit			**A**
20 Operating manual language	**No manual**		**A**
	English		**B**
	German		**C**
	French		**D**
	Finnish		**E**
	Swedish		**F**
	Spanish		**G**
pdf user's guides avalable at:	**Japanese**		**J**
www.vaisala.com/hmt330	**Russian**		**K**
	Chinese		**V**
21 PC Accessories	**No**		**A**
	Service cable for PC, RS232 (D9 female connector)	*item: 19446ZZ*	*B*
	MI70LINK software for Windows® with RS232 service cable	*item: 215005*	*C*
	Service cable for PC, USB	*item: 219685*	*D*
	MI70LINK software for Windows® with USB service cable	*item: 219916*	*E*
22 Calibration	**ISO9001 compliant factory calibration**	*service item for calibration: RHCALSTD*	**A**
	Special calibration	*see separate order form*	*X*
23 Additional maintenance	**No maintenance and repair contract**		**1**

TOTAL	
QTY	
TOTAL VALUE	

*) Note! Simultaneous installation of LAN and Universal AC-power is possible only with a short cable probe.

Selections in bold are included in the prices of the basic versions.
Selections in italic are available at an extra price.

Example of order code with typical settings:

HMT330	1	A	0	B	1	0	1	B	C	A	B	1	0	0	A	1	A	A	A	B	A	A	1

End customer: ____

VAISALA

Order form
Purchaser _____

Valid from March 2017
Order no. _____

HMT333 Humidity and Temperature Transmitter

For general use

Vaisala HUMICAP® Humidity and Temperature Transmitter			**HMT330**	**3**		**0**																		**1**	PRICE
1 Transmitter type	**HMT333**			**3**																					
2 Cable length	**2 m cable, +80 °C**				**E**																				
	5 m cable, +80 °C				*F*																				
	10 m cable, +80 °C				*G*																				
	20 m cable, +80 °C				*Q*																				
	2 m cable, +120 °C				*4*																				
	5 m cable, +120 °C				*5*																				
	10 m cable, +120 °C				*6*																				
3 No additional temperature probe						**0**																			
4 Parameters	**RH+T+Td+Tdf+a+x+Tw+ppm+pw+pws+h+dT**						**B**																		
5 Display	**No display**							**0**																	
	Graphical display with keypad							*1*																	
6 Power supply	**10...35 VDC , 24 VAC**								**0**																
	10..35 VDC, 24 VAC with galvanic isolation								*1*																
	Universal AC-power (100...240 VAC)								*2*																
	Universal AC-power (100...240 VAC) + US power cord								*3*																
	Universal AC-power (100...240 VAC) + EUR power cord								*4*																
	Universal AC-power (100...240 VAC) + UK power cord								*5*																
	Universal AC-power (100...240 VAC) + AUS power cord								*6*																
	External US AC-adapter (for LAN/WLAN interface in USA and Canada)							*Not IP65*	*9*																
7 Signal output	**Analog output channel (Ch1&Ch2&Ch3)**	**4... 20 mA**								**1**															
	Analog output channel (Ch1&Ch2&Ch3)	**0... 20 mA**								**2**															
- Ch1&Ch2 are mandatory	**Analog output channel (Ch1&Ch2&Ch3)**	**0... 1 V**								**3**															
- Ch3 is optional	**Analog output channel (Ch1&Ch2&Ch3)**	**0... 5 V**								**4**															
	Analog output channel (Ch1&Ch2&Ch3)	**0... 10 V**								**5**															
	+ Serial interface RS232 or optional communication module																								
8 Analog output signals	**No 3rd analog output**																								
9 for Ch1 , Ch2 and Ch3	**RH**	**(0... 100%RH)**								**B**	**B**														
10	**T**	**(range: see below)**								**C**	**C**														
	Td (-20...100 °C)	**(-4...+212 °F)**								**D**	**D**														
	Tdf (-20...100 °C)	**(-4...+212 °F)**								**E**	**E**														
	a (0...600g/m3)	**(0...262 gr/ft3)**								**F**	**F**														
	Tw (0...100 °C)	**(+32...+212 °F)**								**G**	**G**														
	x (0...500g/kg d.a)	**(0...3500gr/lb)**								**H**	**H**														
	h (-40...1500 kJ/kg)	**(-9.5...+652.6 Btu/lb)**								**J**	**J**														
	ppm (0…5000)	**(0…5000)**								**K**	**K**														
	pw (0…1000 hPa)	**(0…14.5psi)**								**L**	**L**														
	pws (0…1000 hPa)	**(0…14.5psi)**								**M**	**M**														
	dT (-10...+50 °C)	**(14...+122 °F)**								**N**	**N**														
	SPECIAL Define quantity	**Ch1:_____ Ch2:_____ Optional Ch3:_____**								**X**	**X**														
	Define scale	**Ch1:_____ Ch2:_____ Optional Ch3:_____**																							
			Channel 1																						
			Channel 2																						
			Channel 3, choose A if not needed																						
11 Analog output range	**No temperature output**											**A**													
for temperature	**-40...+60 °C**	**(-40...+140 °F)**										**B**													
- Choose option A, if no	**-40...+80 °C**	**(-40...+176 °F)**										**C**													
T output is desired	**-40...+120 °C**	**(-40...+248 °F)**										**D**													
	-20...+60 °C	**(-4...+140 °F)**										**F**													
	-20...+80 °C	**(-4...+176 °F)**										**G**													
	-20...+120 °C	**(-4...+248 °F)**										**H**													
	0...+60 °C	**(+32...+140 °F)**										**K**													
	0...+100 °C	**(+32...+212 °F)**										**L**													
	0...+120 °C	**(+32...248 °F)**										**M**													
	special	**:_____**										**X**													
12 Output units	**Metric**												**1**												
	Non-metric												**2**												
13 Option for module slot 1	**No module**													**0**											
	Relay output													*1*											
	RS-485 serial interface (galvanically isolated)													*2*											
	LAN (Ethernet) interface + 2 m cable (RJ45)													*4*											
	Data logger module													*6*											
14 Option for module slot 2	**No module**														**0**										
	Relay output														*1*										
	3rd Analog output	*Choose also analog output signal for Ch3*													*3*										
	Data logger module	*Not possible if the data logger module has already been chosen in item 13*													*6*										
15 Cable bushings	**Cable gland M20 x 1.5**															**A**									
Note: The Universal	**Conduit fitting NPT1/2"**															**B**									
AC power not connected	*8-pole connector with 5m cable*														*spare cable: 212142*	*C*									
through 8-pole connector!	*8-pole counter connector equipped with screw terminals*														*spare connector: 212416*	*D*									
	Bushing Set (Cable gland M20 x 1.5 and Conduit fitting NPT1/2")															*G*									
16 Transmitter installation	**Normal mounting**																**0**								
	Wall mounting plate														*item: 214829*		*1*								
	Pole installation kit														*item: 215108*		*2*								
	Pole installation kit with rain shield														*item: 215109*		*3*								
	DIN rail kit														*item: 215094*		*4*								
17 Humidity sensor type	**General purpose and high chemical concentrations**		**HUMICAP180R**												*spare: HUMICAP180R*			**A**							
	with chemical purge function		*HUMICAP180RC*												*spare: HUMICAP180RC*			*C*							
	Catalytic humicap sensor with chemical purge		*HUMICAP180VC*												*spare: HUMICAP180VC*			*K*							
18 Sensor protection	**PPS plastic grid & stainless steel netting**														*spare: DRW010281SP*				**A**						
	PPS plastic grid														*spare: DRW010276SP*				**B**						
	Sintered stainless steel filter														*spare: HM47280SP*				**C**						
19 Installation kit	**No kit**																			**A**					
for probe	*Duct installation kit*														*item: 210697*					*C*					
	Cable gland AGRO	*M20 x 1.5 with split seal*													*item: HMP247CG*					*D*					
20 Operating manual	**No manual**																				**A**				
language	**English**																				**B**				
	German																				**C**				
	French																				**D**				
	Finnish																				**E**				
	Swedish																				**F**				
	Spanish																				**G**				
pdf user's guides avalable at:	**Japanese**																				**J**				
www.vaisala.com/hmt330	**Russian**																				**K**				
	Chinese																				**V**				
21 PC Accessories	**No**																					**A**			
	Service cable for PC, RS232 (D9 female connector)														*item: 19446ZZ*							*B*			
	MI70LINK software for Windows® with RS232 service cable														*item: 215005*							*C*			
	Service cable for PC, USB														*item: 219685*							*D*			
	MI70LINK software for Windows® with USB service cable														*item: 219916*							*E*			
22 Calibration	**ISO9001 compliant factory calibration**														*service item for calibration: RHCALSTD*								**A**		
	Special calibration														*see separate order form*								*X*		
23 Additional maintenance	**No maintenance and repair contract**																							**1**	

TOTAL
QTY
TOTAL VALUE

Selections in bold are included in the prices of the basic versions.
Selections in italic are available at an extra price.

Example of order code with typical settings:

HMT330	3	E	0	B	1	0	1	B	C	A	F	1	0	0	A	0	A	A	A	B	A	A	1

End customer: _____

VAISALA

Order form Purchaser ____________________

Valid from March 2017 Order no. ____________________

HMT334 Humidity and Temperature Transmitter

For pressurized processes

Item	Selection	Details	Code
Vaisala HUMICAP® Humidity and Temperature Transmitter		**HMT330**	PRICE
1 Transmitter type	**HMT334**		**4**
2 Cable length	**2 m cable**		**H**
	5 m cable		*J*
	10 m cable		*K*
3 No additional temperature probe			**0**
4 Parameters	**RH+T+Td+Tdf+a+x+Tw+ppm+pw+pws+h+dT**		**B**
5 Display	**No display**		**0**
	Graphical display with keypad		*1*
6 Power supply	**10...35 VDC , 24 VAC**		**0**
	10..35 VDC, 24 VAC with galvanic isolation		*1*
	Universal AC-power (100...240 VAC)		*2*
	Universal AC-power (100...240 VAC) + US power cord		*3*
	Universal AC-power (100...240 VAC) + EUR power cord		*4*
	Universal AC-power (100...240 VAC) + UK power cord		*5*
	Universal AC-power (100...240 VAC) + AUS power cord		*6*
	External US AC-adapter (for LAN/WLAN interface in USA and Canada)	*Not IP65*	*9*
7 Signal output	**Analog output channel (Ch1&Ch2&Ch3)**	**4... 20 mA**	**1**
	Analog output channel (Ch1&Ch2&Ch3)	**0... 20 mA**	**2**
- Ch1&Ch2 are mandatory	**Analog output channel (Ch1&Ch2&Ch3)**	**0... 1 V**	**3**
- Ch3 is optional	**Analog output channel (Ch1&Ch2&Ch3)**	**0... 5 V**	**4**
	Analog output channel (Ch1&Ch2&Ch3)	**0... 10 V**	**5**
	+ Serial interface RS232 or optional communication module		

Item	Selection	Range	Channel 1 (8)	Channel 2 (9)	Channel 3 (10)
8 Analog output signals	**No 3rd analog output**				**A**
9 for Ch1 , Ch2 and Ch3	**RH**	**(0... 100%RH)**	**B**	**B**	*B*
10	**T**	**(range: see below)**	**C**	**C**	*C*
	Td (-20...100°C)	**(-4...+212 °F)**	**D**	**D**	*D*
	Tdf (-20...100°C)	**(-4...+212 °F)**	**E**	**E**	*E*
	a (0...600g/m3)	**(0...262 gr/ft3)**	**F**	**F**	*F*
	Tw (0...100°C)	**(+32...+212°F)**	**G**	**G**	*G*
	x (0...500g/kg d.a)	**(0...3500gr/lb)**	**H**	**H**	*H*
	h (-40...1500 kJ/kg)	**(-9.5...+652.6 Btu/lb)**	**J**	**J**	*J*
	ppm (0…5000)	**(0…5000)**	**K**	**K**	*K*
	pw (0…1000 hPa)	**(0…14.5psi)**	**L**	**L**	*L*
	pws (0…1000 hPa)	**(0…14.5psi)**	**M**	**M**	*M*
	dT (-10...+50 °C)	**(14...+122 °F)**	**N**	**N**	*N*
SPECIAL Define quantity	**Ch1:______________ Ch2:______________**	**Optional Ch3:_____________**	**X**	**X**	*X*
Define scale	**Ch1:______________ Ch2:______________**	**Optional Ch3:_____________**			

Channel 1
Channel 2
Channel 3, choose A, if not needed

Item	Selection	Details	Code
11 Analog output range for temperature	**No temperature output**		**A**
	-40...+60°C	(-40...+140°F)	**B**
	-40...+80°C	(-40...+176°F)	**C**
Note:	**-40...+120°C**	(-40...+248°F)	**D**
- Choose option A, if no T output is desired	**-40...+180°C**	(-40...+356°F)	**E**
	-20...+60°C	(-4...+140°F)	**F**
	-20...+80°C	(-4...+176°F)	**G**
	-20...+120°C	(-4...+248°F)	**H**
	-20...+180°C	(-4...+356°F)	**J**
	0...+60°C	(+32...+140°F)	**K**
	0...+100°C	(+32...+ 212°F)	**L**
	0...+120°C	(+32...248°F)	**M**
	0...+180°C	(+32...356°F)	**N**
	-60...60 °C	(-76...+140°F)	**P**
	Special	**:______________________**	**X**
12 Output units	**Metric**		**1**
	Non-metric		**2**
13 Option for module slot 1	**No module**		**0**
	Relay output		*1*
	RS-485 serial interface (galvanically isolated)		*2*
	LAN (Ethernet) interface + 2 m cable (RJ45)		*4*
	Data logger module		*6*
14 Option for module slot 2	**No module**		**0**
	Relay output		*1*
	3rd Analog output	*Choose also analog output signal for Ch3*	*3*
	Data logger module	*Not possible if the data logger module has already been chosen in item 13*	*6*
15 Cable bushings	**Cable gland M20 x 1.5**		**A**
Note: The Universal AC power not connected through 8-pole connector!	**Conduit fitting NPT1/2"**		**B**
	8-pole connector with 5m cable	*spare cable: 212142*	*C*
	8-pole counter connector equipped with screw terminals	*spare connector: 212416*	*D*
	Bushing Set (Cable gland M20 x 1.5 and Conduit fitting NPT1/2")		*G*
16 Transmitter installation	**Normal mounting**		**0**
	Wall mounting plate	*item: 214829*	*1*
	Pole installation kit	*item: 215108*	*2*
	Pole installation kit with rain shield	*item: 215109*	*3*
	DIN rail kit	*item: 215094*	*4*
17 Humidity sensor type	**General purpose and high chemical concentrations** **HUMICAP180R**	*spare: HUMICAP180R*	**A**
	with chemical purge function HUMICAP180RC	*spare: HUMICAP180RC*	*C*
	Catalytic humicap sensor with chemical purge HUMICAP180VC	*spare: HUMICAP180VC*	*K*
18 Sensor protection	**PPS plastic grid & stainless steel netting**	*spare: DRW010281SP*	**A**
	PPS plastic grid	*spare: DRW010276SP*	**B**
	Sintered stainless steel filter	*spare: HM47280SP*	**C**
	Stainless steel grid	*spare: HM47453SP*	**D**
19 Installation kit for probe	**Fitting body M22 x 1,5**		**E**
	Fitting body NPT 1/2"		**F**
20 Operating manual language	**No manual**		**A**
	English		**B**
	German		**C**
	French		**D**
	Finnish		**E**
	Swedish		**F**
	Spanish		**G**
pdf user's guides avalable at:	**Japanese**		**J**
www.vaisala.com/hmt330	**Russian**		**K**
	Chinese		**V**
21 PC Accessories	**No**		**A**
	Service cable for PC, RS232 (D9 female connector)	*item: 19446ZZ*	*B*
	MI70LINK software for Windows® with RS232 service cable	*item: 215005*	*C*
	Service cable for PC, USB	*item: 219685*	*D*
	MI70LINK software for Windows® with USB service cable	*item: 219916*	*E*
22 Calibration	**ISO9001 compliant factory calibration**	*service item for calibration: RHCALSTD*	**A**
	Special calibration	*see separate order form*	*X*
23 Additional maintenance	**No maintenance and repair contract**		**1**
		TOTAL	
		QTY	
		TOTAL VALUE	

Selections in bold are included in the prices of the basic versions.
Selections in italic are available at an extra price.

Example of order code with typical settings:

HMT330	4	H	0	A	1	0	1	B	C	A	L	1	0	0	A	0	A	A	E	B	A	A	1

End customer: ____

VAISALA

Order form
Purchaser _____

Valid from March 2017
Order no. _____

HMT335 Humidity and Temperature Transmitter

For high temperatures

						1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
Vaisala HUMICAP® Humidity and Temperature Transmitter				**HMT330**	**5**		**0**																				**1**	PRICE
1	**Transmitter type**	**HMT335**			**5**																							
2	**Cable length**	**2 m cable**				**L**																						
		5 m cable				*M*																						
		10 m cable				*N*																						
		15 m cable				*P*																						
3	**No additional temperature probe**						**0**																					
4	**Parameters**	**RH+T+Td+Tdf+a+x+Tw+ppm+pw+pws+h+dT**						**B**																				
5	**Display**	**No display**							**0**																			
		Graphical display with keypad							*1*																			
6	**Power supply**	**10...35 VDC , 24 VAC**								**0**																		
		10..35 VDC, 24 VAC with galvanic isolation								*1*																		
		Universal AC-power (100...240 VAC)								*2*																		
		Universal AC-power (100...240 VAC) + US power cord								*3*																		
		Universal AC-power (100...240 VAC) + EUR power cord								*4*																		
		Universal AC-power (100...240 VAC) + UK power cord								*5*																		
		Universal AC-power (100...240 VAC) + AUS power cord								*6*																		
		External US AC-adapter (for LAN/WLAN interface in USA and Canada)				*Not IP65*				*9*																		
7	**Signal output**	**Analog output channel (Ch1&Ch2&Ch3)**	**4... 20 mA**								**1**																	
		Analog output channel (Ch1&Ch2&Ch3)	**0... 20 mA**								**2**																	
	- Ch1&Ch2 are mandatory	**Analog output channel (Ch1&Ch2&Ch3)**	**0... 1 V**								**3**																	
	- Ch3 is optional	**Analog output channel (Ch1&Ch2&Ch3)**	**0... 5 V**								**4**																	
		Analog output channel (Ch1&Ch2&Ch3)	**0... 10 V**								**5**																	
		+ Serial interface RS232 or optional communication module																										
8	**Analog output signals**	**No 3rd analog output**														**A**												
9	**for Ch1 , Ch2 and Ch3**	**RH**	**(0... 100%RH)**										**B**	**B**		*B*												
10		**T**	**(range: see below)**										**C**	**C**		*C*												
		Td (-20...100 °C)	**(-4...+212 °F)**										**D**	**D**		*D*												
		Tdf (-20...100 °C)	**(-4...+212 °F)**										**E**	**E**		*E*												
		a (0...600g/m3)	**(0...262 gr/ft3)**										**F**	**F**		*F*												
		Tw (0...100 °C)	**(+32...+212 °F)**										**G**	**G**		*G*												
		x (0...500g/kg d.a)	**(0...3500gr/lb)**										**H**	**H**		*H*												
		h (-40...1500 kJ/kg)	**(-9.5...+652.6 Btu/lb)**										**J**	**J**		*J*												
		ppm (0…5000)	**(0…5000)**										**K**	**K**		*K*												
		pw (0…1000 hPa)	**(0…14.5psi)**										**L**	**L**		*L*												
		pws (0…1000 hPa)	**(0…14.5psi)**										**M**	**M**		*M*												
		dT (-10...+50 °C)	**(14...+122 °F)**										**N**	**N**		*N*												
	SPECIAL	**Define quantity**	**Ch1:**_____ **Ch2:**_____ **Optional Ch3:**_____										**X**	**X**		*X*												
		Define scale	**Ch1:**_____ **Ch2:**_____ **Optional Ch3:**_____																									
				Channel 1																								
				Channel 2																								
				Channel 3, choose A, if not needed																								
11	**Analog output range**	**No temperature output**															**A**											
	for temperature	**-40...+60 °C**	**(-40...+140 °F)**														**B**											
		-40...+80 °C	**(-40...+176 °F)**														**C**											
	Note:	**-40...+120 °C**	**(-40...+248 °F)**														**D**											
	- Choose option A, if no	**-40...+180 °C**	**(-40...+356 °F)**														**E**											
	T output is desired	**-20...+60 °C**	**(-4...+140 °F)**														**F**											
		-20...+80 °C	**(-4...+176 °F)**														**G**											
		-20...+120 °C	**(-4...+248 °F)**														**H**											
		-20...+180 °C	**(-4...+356 °F)**														**J**											
		0...+60 °C	**(+32...+140 °F)**														**K**											
		0...+100 °C	**(+32...+ 212 °F)**														**L**											
		0...+120 °C	**(+32...248 °F)**														**M**											
		0...+180 °C	**(+32...356 °F)**														**N**											
		-60...60 °C	**(-76...+140 °F)**														**P**											
		Special	**:**_____														**X**											
12	**Output units**	**Metric**																**1**										
		Non-metric																**2**										
13	**Option for module slot 1**	**No module**																	**0**									
		Relay output																	*1*									
		RS-485 serial interface (galvanically isolated)																	*2*									
		LAN (Ethernet) interface + 2 m cable (RJ45)																	*4*									
		Data logger module																	*6*									
14	**Option for module slot 2**	**No module**																		**0**								
		Relay output																		*1*								
		3rd Analog output	*Choose also analog output signal for Ch3*																	*3*								
		Data logger module	*Not possible if the data logger module has already been chosen in item 13*																	*6*								
15	**Cable bushings**	**Cable gland M20 x 1.5**																			**A**							
	Note: The Universal	**Conduit fitting NPT1/2"**																			**B**							
	AC power not connected	*8-pole connector with 5m cable*																			*C*							
	through 8-pole connector!	*8-pole counter connector equipped with screw terminals*																			*D*							
		Bushing Set (Cable gland M20 x 1.5 and Conduit fitting NPT1/2")																			*G*							
16	**Transmitter installation**	**Normal mounting**																				**0**						
		Wall mounting plate																				*1*						
		Pole installation kit																				*2*						
		Pole installation kit with rain shield																				*3*						
		DIN rail kit																				*4*						
17	**Humidity sensor type**	**General purpose and high chemical concentrations**	**HUMICAP180R**																				**A**					
		with chemical purge function	*HUMICAP180RC*																				*C*					
		Catalytic humicap sensor with chemical purge	*HUMICAP180VC*																				*K*					
18	**Sensor protection**	**PPS plastic grid & stainless steel netting**																						**A**				
		PPS plastic grid																						**B**				
		Sintered stainless steel filter																						**C**				
		Stainless steel grid																						**D**				
19	**Installation kit**	**No kit**																							**A**			
	for probe	*Mounting flange*																							*G*			
20	**Operating manual**	**No manual**																								**A**		
	language	**English**																								**B**		
		German																								**C**		
		French																								**D**		
		Finnish																								**E**		
		Swedish																								**F**		
		Spanish																								**G**		
	pdf user's guides avalable at:	**Japanese**																								**J**		
	www.vaisala.com/hmt330	**Russian**																								**K**		
		Chinese																								**V**		
21	**PC Accessories**	**No**																									**A**	
		Service cable for PC, RS232 (D9 female connector)																									*B*	
		MI70LINK software for Windows® with RS232 service cable																									*C*	
		Service cable for PC, USB																									*D*	
		MI70LINK software for Windows® with USB service cable																									*E*	
22	**Calibration**	**ISO9001 compliant factory calibration**																										**A**
		Special calibration																										*X*
23	**Additional maintenance**	**No maintenance and repair contract**																										**1**

TOTAL
QTY
TOTAL VALUE

Selections in bold are included in the prices of the basic versions.
Selections in italic are available at an extra price.

Example of order code with typical settings:

HMT330	5	L	0	B	1	0	1	B	C	A	B	1	0	0	A	0	A	A	A	B	A	A	1

End customer: _____

VAISALA

Order form
Purchaser _____

Valid from March 2017
Order no. _____

HMT337 Humidity and Temperature Transmitter

For high humidities

				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
Vaisala HUMICAP® Humidity and Temperature Transmitter			**HMT330**	**7**		**0**																				**1**	PRICE
1	**Transmitter type**	**HMT337**		**7**																							
2	**Cable length**	**2 m cable**					**S**																				
		5 m cable					*T*																				
		10 m cable					*U*																				
		20 m cable					*R*																				
3	**Additional temperature probe**	**No probe**					**0**																				
4	**Parameters**	**RH+T+Td+Tdf+a+x+Tw+ppm+pw+pws+h+dT**						**B**																			
5	**Display**	**No display**							**0**																		
		Graphical display with keypad							*1*																		
6	**Power supply**	**10...35 VDC , 24 VAC**								**0**																	
		10..35 VDC, 24 VAC with galvanic isolation								*1*																	
		Universal AC-power (100...240 VAC)								*2*																	
		Universal AC-power (100...240 VAC) + US power cord								*3*																	
		Universal AC-power (100...240 VAC) + EUR power cord								*4*																	
		Universal AC-power (100...240 VAC) + UK power cord								*5*																	
		Universal AC-power (100...240 VAC) + AUS power cord								*6*																	
		External US AC-adapter (for LAN/WLAN interface in USA and Canada)	*Not IP65*							*9*																	
7	**Signal output**	**Analog output channel (Ch1&Ch2&Ch3)**	**4... 20 mA**								**1**																
		Analog output channel (Ch1&Ch2&Ch3)	**0... 20 mA**								**2**																
	- Ch1&Ch2 are mandatory	**Analog output channel (Ch1&Ch2&Ch3)**	**0... 1 V**								**3**																
	- Ch3 is optional	**Analog output channel (Ch1&Ch2&Ch3)**	**0... 5 V**								**4**																
		Analog output channel (Ch1&Ch2&Ch3)	**0... 10 V**								**5**																
		+ Serial interface RS232 or optional communication module																									
8	**Analog output signals**	**No 3rd analog output**												**A**													
9	**for Ch1 , Ch2 and Ch3**	**RH**	**(0... 100%RH)**									**B**	**B**	*B*													
10		**T**	**(range : see below)**									**C**	**C**	*C*													
		Td (-20...100 °C)	**(-4...+212 °F)**									**D**	**D**	*D*													
		Tdf (-20...100 °C)	**(-4...+212 °F)**									**E**	**E**	*E*													
		a (0...600g/m3)	**(0...262 gr/ft3)**									**F**	**F**	*F*													
		Tw (0...100 °C)	**(+32...+212 °F)**									**G**	**G**	*G*													
		x (0...500g/kg d.a)	**(0...3500gr/lb)**									**H**	**H**	*H*													
		h (-40...1500 kJ/kg)	**(-9.5...+652.6 Btu/lb)**									**J**	**J**	*J*													
		ppm (0…5000)	**(0…5000)**									**K**	**K**	*K*													
		pw (0…1000 hPa)	**(0…14.5psi)**									**L**	**L**	*L*													
		pws (0…1000 hPa)	**(0…14.5psi)**									**M**	**M**	*M*													
		dT (-10...+50 °C)	**(14...+122 °F)**									**N**	**N**	*N*													
	SPECIAL **Define quantity**	**Ch1:**_____ **Ch2:**_____ **Optional Ch3:**_____										**X**	**X**	*X*													
	Define scale	**Ch1:**_____ **Ch2:**_____ **Optional Ch3:**_____																									
		Channel 1																									
		Channel 2																									
		Channel 3, choose A, if not needed																									
11	**Analog output range**	**No temperature output**													**A**												
	for temperature	**-40...+60 °C**	**(-40...+140 °F)**												**B**												
		-40...+80 °C	**(-40...+176 °F)**												**C**												
	Note:	**-40...+120 °C**	**(-40...+248 °F)**												**D**												
	- Choose option A, if no	**-40...+180 °C**	**(-40...+356 °F)**												**E**												
	T output is desired	**-20...+60 °C**	**(-4...+140 °F)**												**F**												
		-20...+80 °C	**(-4...+176 °F)**												**G**												
		-20...+120 °C	**(-4...+248 °F)**												**H**												
		-20...+180 °C	**(-4...+356 °F)**												**J**												
		0...+60 °C	**(+32...+140 °F)**												**K**												
		0...+100 °C	**(+32...+ 212 °F)**												**L**												
		0...+120 °C	**(+32...248 °F)**												**M**												
		0...+180 °C	**(+32...356 °F)**												**N**												
		-60...60 °C	**(-76...+140 °F)**												**P**												
		Special	**:**_____												**X**												
12	**Output units**	**Metric**														**1**											
		Non-metric														**2**											
13	**Option for module slot 1**	**No module**															**0**										
		Relay output															*1*										
		RS-485 serial interface (galvanically isolated)															*2*										
		LAN (Ethernet) interface + 2 m cable (RJ45)															*4*										
		Data logger module															*6*										
14	**Option for module slot 2**	**No module**																**0**									
		Relay output																*1*									
		3rd Analog output	*Choose also analog output signal for Ch3*															*3*									
		Data logger module	*Not possible if the data logger module has already been chosen in item 13*															*6*									
15	**Cable bushings**	**Cable gland M20 x 1.5**																	**A**								
	Note: The Universal	**Conduit fitting NPT1/2"**																	**B**								
	AC power not connected	*8-pole connector with 5m cable*																	*C*								
	through 8-pole connector!	*8-pole counter connector equipped with screw terminals*																	*D*								
		Bushing Set (Cable gland M20 x 1.5 and Conduit fitting NPT1/2")																	*G*								
16	**Transmitter installation**	**Normal mounting**																		**0**							
		Wall mounting plate																		*1*							
		Pole installation kit																		*2*							
		Pole installation kit with rain shield																		*3*							
		DIN rail kit																		*4*							
17	**Humidity sensor type**	**General purpose and high chemical concentrations**	**HUMICAP180R**																		**A**						
		with chemical purge function	*HUMICAP180RC*																		*C*						
		Catalytic humicap sensor with chemical purge	*HUMICAP180VC*																		*K*						
18	**Sensor protection**	**PPS plastic grid & stainless steel netting**																				**A**					
		PPS plastic grid																				**B**					
		Sintered stainless steel filter																				**C**					
		Stainless steel grid																				**D**					
19	**Installation kit**	**No kit**																					**A**				
	for probe	*Duct installation kit*																					*C*				
		Cable gland AGRO																					*D*				
		Swagelok NPT 1/2"																					*K*				
		Swagelok ISO 3/8"																					*L*				
		Swagelok ISO 1/2"																					*Y*				
20	**Operating manual**	**No manual**																						**A**			
	language	**English**																						**B**			
		German																						**C**			
		French																						**D**			
		Finnish																						**E**			
		Swedish																						**F**			
		Spanish																						**G**			
	pdf user's guides avalable at:	**Japanese**																						**J**			
	www.vaisala.com/hmt330	**Russian**																						**K**			
		Chinese																						**V**			
21	**PC Accessories**	**No**																							**A**		
		Service cable for PC, RS232 (D9 female connector)																							*B*		
		MI70LINK software for Windows® with RS232 service cable																							*C*		
		Service cable for PC, USB																							*D*		
		MI70LINK software for Windows® with USB service cable																							*E*		
22	**Calibration**	**ISO9001 compliant factory calibration**																								**A**	
		Special calibration																								*X*	
23	**Additional maintenance**	**No maintenance and repair contract**																									**1**

TOTAL
QTY
TOTAL VALUE

Selections in bold are included in the prices of the basic versions.
Selections in italic are available at an extra price.

Example of order code with typical settings:

HMT330	7	S	0	B	1	0	1	B	C	A	B	1	0	0	A	0	A	A	A	B	A	A	1

End customer: _____

VAISALA

Order form
Purchaser ________________

Valid from March 2017
Order no. ________________

HMT337 Humidity and Temperature Transmitter with warmed probe

For high humidities

No.	Item	Selection	Details	Code
	Vaisala HUMICAP® Humidity and Temperature Transmitter		**HMT330**	
1	**Transmitter type**	**HMT337**		**7**
2	**Cable length (dew point probe)**	**2 m cable**		**S**
		5 m cable		*T*
		10 m cable		*U*
		20 m cable		*R*
3	**Additional temperature probe**	**No probe**		**0**
		2 m cable		*1*
	NOTE: select to measure RH and T	*5 m cable*		*2*
		10 m cable		*3*
		20 m cable		*7*
4	**Parameters**	**Td+Tdf+x+pw**	(dew point probe only)	**C**
		RH+T+Td+Tdf+a+x+Tw+ppm+pw+pws+h+dT	(with additional T probe)	**D**
5	**Display**	**No display**		**0**
		Graphical display with keypad		*1*
6	**Power supply**	**10...35 VDC , 24 VAC**		**0**
		10..35 VDC, 24 VAC with galvanic isolation		*1*
		Universal AC-power (100...240 VAC)		*2*
		Universal AC-power (100...240 VAC) + US power cord		*3*
		Universal AC-power (100...240 VAC) + EUR power cord		*4*
		Universal AC-power (100...240 VAC) + UK power cord		*5*
		Universal AC-power (100...240 VAC) + AUS power cord		*6*
		External US AC-adapter (for LAN/WLAN interface in USA and Canada)	*Not IP65*	*9*
7	**Signal output**	**Analog output channel (Ch1&Ch2&Ch3)**	**4... 20 mA**	**1**
		Analog output channel (Ch1&Ch2&Ch3)	**0... 20 mA**	**2**
	- Ch1&Ch2 are mandatory	**Analog output channel (Ch1&Ch2&Ch3)**	**0... 1 V**	**3**
	- Ch3 is optional	**Analog output channel (Ch1&Ch2&Ch3)**	**0... 5 V**	**4**
		Analog output channel (Ch1&Ch2&Ch3)	**0... 10 V**	**5**
		+ Serial interface RS232 or optional communication module		

No.	Item	Selection	Range	Channel 1	Channel 2	Channel 3, choose A, if not needed
8, 9, 10	**Analog output signals for Ch1 , Ch2 and Ch3 (ref. to parameters selection above)**	**No 3rd analog output**				**A**
		RH	**(0... 100%RH)**	**B**	**B**	*B*
		T	**(range: see below)**	**C**	**C**	*C*
		Td (-20...100°C)	**(-4...+212 °F)**	**D**	**D**	*D*
		Tdf (-20...100°C)	**(-4...+212 °F)**	**E**	**E**	*E*
		a (0...600g/m3)	**(0...262 gr/ft3)**	**F**	**F**	*F*
		Tw (0...100°C)	**(+32...+212°F)**	**G**	**G**	*G*
		x (0...500g/kg d.a)	**(0...3500gr/lb)**	**H**	**H**	*H*
		h (-40...1500 kJ/kg)	**(-9.5...+652.6 Btu/lb)**	**J**	**J**	*J*
		ppm (0…5000)	**(0…5000)**	**K**	**K**	*K*
		pw (0…1000 hPa)	**(0…14.5psi)**	**L**	**L**	*L*
		pws (0…1000 hPa)	**(0…14.5psi)**	**M**	**M**	*M*
		dT (-10...+50 °C)	**(14...+122 °F)**	**N**	**N**	*N*
	SPECIAL Define quantity	**Ch1:__________**	**Ch2:__________ Optional Ch3:__________**	**X**	**X**	*X*
	Define scale	**Ch1:__________**	**Ch2:__________ Optional Ch3:__________**			

No.	Item	Selection	Details	Code
11	**Analog output range for temperature**	**No temperature output**		**A**
		-40...+60°C	(-40...+140°F)	**B**
		-40...+80°C	(-40...+176°F)	**C**
	NOTE:	**-40...+120°C**	(-40...+248°F)	**D**
	- Choose option A, if no T output is desired	**-40...+180°C**	(-40...+356°F)	**E**
		-20...+60°C	(-4...+140°F)	**F**
		-20...+80°C	(-4...+176°F)	**G**
		-20...+120°C	(-4...+248°F)	**H**
		-20...+180°C	(-4...+356°F)	**J**
		0...+60°C	(+32...+140°F)	**K**
		0...+100°C	(+32...+ 212°F)	**L**
		0...+120°C	(+32...248°F)	**M**
		0...+180°C	(+32...356°F)	**N**
		-60...60 °C	(-76...+140°F)	**P**
		Special	:______________	**X**
12	**Output units**	**Metric**		**1**
		Non-metric		**2**
13	**Option for module slot 1**	**No module**		**0**
		Relay output		*1*
		RS-485 serial interface (galvanically isolated)		*2*
		LAN (Ethernet) interface + 2 m cable (RJ45)		*4*
		Data logger module		*6*
14	**Option for module slot 2**	**No module**		**0**
		Relay output		*1*
		3rd Analog output	*Choose also analog output signal for Ch3*	*3*
		Data logger module	*Not possible if the data logger module has already been chosen in item 13*	*6*
15	**Cable bushings**	**Cable gland M20 x 1.5**		**A**
	Note: The Universal	**Conduit fitting NPT1/2"**		**B**
	AC power not connected	*8-pole connector with 5m cable*	*spare cable: 212142*	*C*
	through 8-pole connector!	*8-pole counter connector equipped with screw terminals*	*spare connector: 212416*	*D*
		Bushing Set (Cable gland M20 x 1.5 and Conduit fitting NPT1/2")		*G*
16	**Transmitter installation**	**Normal mounting**		**0**
		Wall mounting plate	*item: 214829*	*1*
		Pole installation kit	*item: 215108*	*2*
		Pole installation kit with rain shield	*item: 215109*	*3*
		DIN rail kit	*item: 215094*	*4*
17	**Humidity sensor type**	**Chemical tolerant composite sensor** — **HUMICAP180RC**	*spare: HUMICAP180RC*	**D**
		Composite sensor with chemical purge — **HUMICAP180RC**	*spare: HUMICAP180RC*	**E**
		Composite sensor for fuel cell applications — **HUMICAP180RC**	*spare: HUMICAP180RC*	**F**
		Heated catalytic humicap sensor with chemical purge — *HUMICAP180VC*	*spare: HUMICAP180VC*	*L*
18	**Sensor protection**	**PPS plastic grid & stainless steel netting**	*spare: DRW010281SP*	**A**
		Sintered stainless steel filter	*spare: HM47280SP*	**C**
		Stainless steel grid	*spare: HM47453SP*	**D**
		Membrane SST filter for fuel cell applications	*spare: 214848SP*	**F**
19	**Installation kit for probe**	**No kit**		**A**
		Duct installation kit (for RH probe)	*item: 210697*	*C*
		Swagelok NPT 1/2"	*item: SWG12NPT12*	*K*
		Swagelok ISO 3/8"	*item: SWG12ISO38*	*L*
		Duct installation kit (RH + T probes)	*item: 210697+215003*	*P*
		Swagelok NPT 1/2" + Swagelok NPT 1/8" (RH+T)	*item: SWG12NPT12+SWGNPT18*	*Q*
		Swagelok ISO 3/8" + Swagelok ISO 1/8" (RH+T)	*item: SWG12ISO38+SWG6ISO18*	*R*
		Swagelok ISO 1/2"	*item: SWG12ISO12*	*Y*
		Splash/direct water protector for warmed RH&T and T probes	*HMT330WPA*	*1*
20	**Operating manual language**	**No manual**		**A**
		English		**B**
		German		**C**
		French		**D**
		Finnish		**E**
		Swedish		**F**
		Spanish		**G**
	pdf user's guides avalable at:	**Japanese**		**J**
	www.vaisala.com/hmt330	**Russian**		**K**
		Chinese		**V**
21	**PC Accessories**	**No**		**A**
		Service cable for PC, RS232 (D9 female connector)	*item: 19446ZZ*	*B*
		MI70LINK software for Windows® with RS232 service cable	*item: 215005*	*C*
		Service cable for PC, USB	*item: 219685*	*D*
		MI70LINK software for Windows® with USB service cable	*item: 219916*	*E*
22	**Calibration**	**ISO9001 compliant factory calibration**	*service item for calibration: RHCALSTD*	**A**
		Special calibration	*see separate order form*	*X*
23	**Additional maintenance**	**No maintenance and repair contract**		**1**

PRICE	
TOTAL	
QTY	
TOTAL VALUE	

Selections in bold are included in the prices of the basic versions.
Selections in italic are available at an extra price.

Example of order code with typical settings:

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
HMT330	7	S	1	D	1	0	1	B	C	A	B	1	0	0	A	0	D	A	A	B	A	A	1

End customer: ____

VAISALA

Order form
Purchaser _____

Valid from March 2017
Order no. _____

HMT338 Humidity and Temperature Transmitter

For pressurized pipelines

				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
Vaisala HUMICAP® Humidity and Temperature Transmitter			**HMT330**	**8**		**0**																				**1**	PRICE
1 Transmitter type	**HMT338**			**8**																							
2 Cable length	**2 m cable for 232 mm probe**				**V**																						
	5 m cable for 232 mm probe				*W*																						
	10 m cable for 232 mm probe				*X*																						
	2 m cable for 454 mm probe				*1*																						
	5 m cable for 454 mm probe				*2*																						
	10 m cable for 454 mm probe				*3*																						
	20 m cable for 454 mm probe				*9*																						
3 No additional temperature probe						**0**																					
4 Parameters	***RH+T+Td+Tdf+a+x+Tw+ppm+pw+pws+h+dT***						**B**																				
5 Display	**No display**							**0**																			
	Graphical display with keypad							*1*																			
6 Power supply	**10...35 VDC , 24 VAC**								**0**																		
	10..35 VDC, 24 VAC with galvanic isolation								*1*																		
	Universal AC-power (100...240 VAC)								*2*																		
	Universal AC-power (100...240 VAC) + US power cord								*3*																		
	Universal AC-power (100...240 VAC) + EUR power cord								*4*																		
	Universal AC-power (100...240 VAC) + UK power cord								*5*																		
	Universal AC-power (100...240 VAC) + AUS power cord								*6*																		
	External US AC-adapter (for LAN/WLAN interface in USA and Canada)		*Not IP65*						*9*																		
7 Signal output	**Analog output channel (Ch1&Ch2&Ch3)**	**4... 20 mA**								**1**																	
	Analog output channel (Ch1&Ch2&Ch3)	**0... 20 mA**								**2**																	
- Ch1&Ch2 are mandatory	**Analog output channel (Ch1&Ch2&Ch3)**	**0... 1 V**								**3**																	
- Ch3 is optional	**Analog output channel (Ch1&Ch2&Ch3)**	**0... 5 V**								**4**																	
	Analog output channel (Ch1&Ch2&Ch3)	**0... 10 V**								**5**																	
	+ Serial interface RS232 or optional communication module																										
8 Analog output signals	**No 3rd analog output**												**A**														
9 for Ch1 , Ch2 and Ch3	**RH**	**(0... 100%RH)**									**B**	**B**	*B*														
10	**T**	**(range: see below)**									**C**	**C**	*C*														
	Td (-20...100 °C)	**(-4...+212 °F)**									**D**	**D**	*D*														
	Tdf (-20...100 °C)	**(-4...+212 °F)**									**E**	**E**	*E*														
	a (0...600g/m3)	**(0...262 gr/ft3)**									**F**	**F**	*F*														
	Tw (0...100 °C)	**(+32...+212 °F)**									**G**	**G**	*G*														
	x (0...500g/kg d.a)	**(0...3500gr/lb)**									**H**	**H**	*H*														
	h (-40...1500 kJ/kg)	**(-9.5...+652.6 Btu/lb)**									**J**	**J**	*J*														
	ppm (0…5000)	**(0…5000)**									**K**	**K**	*K*														
	pw (0…1000 hPa)	**(0…14.5psi)**									**L**	**L**	*L*														
	pws (0…1000 hPa)	**(0…14.5psi)**									**M**	**M**	*M*														
	dT (-10...+50 °C)	**(14...+122 °F)**									**N**	**N**	*N*														
SPECIAL **Define quantity**	**Ch1:_____**	**Ch2:_____**	**Optional Ch3:_____**								**X**	**X**	*X*														
Define scale	**Ch1:_____**	**Ch2:_____**	**Optional Ch3:_____**																								
			Channel 1																								
			Channel 2																								
			Channel 3, choose A, if not needed																								
11 Analog output range	**No temperature output**													**A**													
for temperature	**-40...+60 °C**	**(-40...+140 °F)**												**B**													
	-40...+80 °C	**(-40...+176 °F)**												**C**													
Note:	**-40...+120 °C**	**(-40...+248 °F)**												**D**													
- Choose option A, if no	**-40...+180 °C**	**(-40...+356 °F)**												**E**													
T output is desired	**-20...+60 °C**	**(-4...+140 °F)**												**F**													
	-20...+80 °C	**(-4...+176 °F)**												**G**													
	-20...+120 °C	**(-4...+248 °F)**												**H**													
	-20...+180 °C	**(-4...+356 °F)**												**J**													
	0...+60 °C	**(+32...+140 °F)**												**K**													
	0...+100 °C	**(+32...+ 212 °F)**												**L**													
	0...+120 °C	**(+32...248 °F)**												**M**													
	0...+180 °C	**(+32...356 °F)**												**N**													
	-60...60 °C	**(-76...+140 °F)**												**P**													
	Special	**:_____**												**X**													
12 Output units	**Metric**														**1**												
	Non-metric														**2**												
13 Option for module slot 1	**No module**															**0**											
	Relay output															*1*											
	RS-485 serial interface (galvanically isolated)															*2*											
	LAN (Ethernet) interface + 2 m cable (RJ45)															*4*											
	Data logger module															*6*											
14 Option for module slot 2	**No module**																**0**										
	Relay output																*1*										
	3rd Analog output	*Choose also analog output signal for Ch3*															*3*										
	Data logger module	*Not possible if the data logger module has already been chosen in item 13*															*6*										
15 Cable bushings	**Cable gland M20 x 1.5**																	**A**									
Note: The Universal	**Conduit fitting NPT1/2"**																	**B**									
AC power not connected	*8-pole connector with 5m cable*		*spare cable: 212142*															*C*									
through 8-pole connector!	*8-pole counter connector equipped with screw terminals*		*spare connector: 212416*															*D*									
	Bushing Set (Cable gland M20 x 1.5 and Conduit fitting NPT1/2")																	*G*									
16 Transmitter installation	**Normal mounting**																		**0**								
	Wall mounting plate		*item: 214829*																*1*								
	Pole installation kit		*item: 215108*																*2*								
	Pole installation kit with rain shield		*item: 215109*																*3*								
	DIN rail kit		*item: 215094*																*4*								
17 Humidity sensor type	**General purpose and high chemical concentrations**	**HUMICAP180R**	*spare: HUMICAP180R*																	**A**							
	with chemical purge function	*HUMICAP180RC*	*spare: HUMICAP180RC*																	*C*							
	Catalytic humicap sensor with chemical purge	*HUMICAP180VC*	*spare: HUMICAP180VC*																	*K*							
18 Sensor protection	**PPS plastic grid & stainless steel netting**		*spare: DRW010281SP*																		**A**						
	PPS plastic grid		*spare: DRW010276SP*																		**B**						
	Sintered stainless steel filter		*spare: HM47280SP*																		**C**						
	Stainless steel grid		*spare: HM47453SP*																		**D**						
19 Installation kit	*Ball valve set (ISO 1/2")*		*item: BALLVALVE-1*																			*M*					
for probe	**Pressure fitting NPT 1/2"**																					**N**					
	Pressure fitting ISO 1/2"																					**V**					
20 Operating manual	**No manual**																						**A**				
language	**English**																						**B**				
	German																						**C**				
	French																						**D**				
	Finnish																						**E**				
	Swedish																						**F**				
	Spanish																						**G**				
pdf user's guides avalable at:	**Japanese**																						**J**				
www.vaisala.com/hmt330	**Russian**																						**K**				
	Chinese																						**V**				
21 PC Accessories	**No**																							**A**			
	Service cable for PC, RS232 (D9 female connector)		*item: 19446ZZ*																					*B*			
	MI70LINK software for Windows® with RS232 service cable		*item: 215005*																					*C*			
	Service cable for PC, USB		*item: 219685*																					*D*			
	MI70LINK software for Windows® with USB service cable		*item: 219916*																					*E*			
22 Calibration	**ISO9001 compliant factory calibration**		*service item for calibration: 216989*																						**A**		
	Special calibration		*see separate order form*																						*X*		
23 Additional maintenance	**No maintenance and repair contract**																									**1**	

TOTAL
QTY
TOTAL VALUE

Selections in bold are included in the prices of the basic versions.
Selections in italic are available at an extra price.

Example of order code with typical settings:

HMT330	8	V	0	B	1	0	1	B	C	A	B	1	0	0	A	0	A	A	A	B	A	A	1

End customer: _____