

# EE32/33 Series

## Humidity / Temperature Transmitter for High Humidity and Chemical Applications

The highly accurate EE32/33 series are designed for fast and reliable measurement of relative humidity / dew point temperature / absolute humidity / ...under the most demanding conditions.

Neither condensation nor heavy chemical pollutions will affect prompt and reliable measurements. Process pressures as high as 100 bar (1450 psi) and continuous high humidity are also no problem for the EE32/33 series.

The core of the EE32/33 series is the new monolithic measurement cell type HMC1, manufactured in thin-film technology by E+E Elektronik.

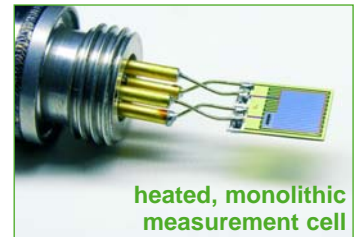
Chemical contamination and also condensation will actually evaporate due to the innovative design of the HMC1 measurement cell. The monolithic construction of the sensor allows a fast return to normal conditions and a continuation of the measurement.

Additionally, with the inimitable E+E sensor coating the HMC1 measurement cell is even better protected against corrosive and short-circuit-causing conductive soils.

Distinctive models and mounting versions allow the EE32/33 series to be utilized in numerous applications:

- **Measurement of relative humidity during temporary condensation:**  
the measurement cell is briefly heated, but very intense
- **Measurement of dew point temperature at continuous high humidity (EE33 only):**  
the measurement cell is controlled and heated continuously
- **Measurement of relative humidity at continuous high humidity:**  
the measurement cell is controlled and heated continuously;  
an additional temperature sensor is added
- **Measurement of relative humidity at high chemical exposure and average humidity:**  
the measurement cell is briefly heated, but very intense
- **Measurement of relative humidity at process pressure up to 100bar (1450psi) and average humidity:**  
the measurement cell is installed in a special high pressure probe

The configuration software included in the scope of supply allows user friendly setup of the operation / sensor heating mode as well as selection and adjustment of the electrical outputs.



### Model

**A** - wall mounting

**B** - duct mounting

**C** - remote sensing probe up to 120°C (248°F)

**D** - remote sensing probe up to 180°C (356°F)

**E** - remote sensing probe, pressure tight up to 15bar (218psi)

**I** - remote sensing probe, pressure tight up to 100bar (1450psi)

**J** - 2 remote sensing probes (RH-measurement),  
pressure tight up to 15bar (218psi)

**K** - remote sensing probe (Td-measurement)  
pressure tight up to 15bar (218psi)

### Environmental Conditions

chemical pollution, temporary condensation

chemical pollution, temporary condensation

chemical pollution, temporary condensation

chemical pollution, temporary condensation

chemical pollution, temporary condensation

chemical pollution, temporary condensation

continuous high humidity and condensation

continuous high humidity and condensation

## Typical Applications

pharmaceutical and food industry  
dryers for ceramics, wood, concrete, polyester, etc  
mushroom farms  
high-humidity storage rooms  
climate, test and curing chambers  
meteorology

## Features

heated, monolithic measurement cell  
working range 0...100% RH / -40...+180°C (-40...356°F)  
measurement near condensation  
fast recovery after condensation  
chemical purge after chemical exposure  
pressure tight up to 100bar (1450psi)  
calculation of additional physical quantities  
optional sensor coating  
traceable calibration

## Product Comparison EE32 - EE33

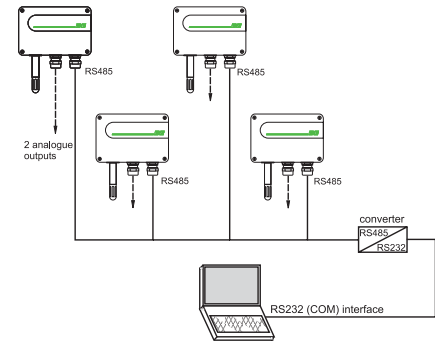
Functions	Comment	EE32	EE33
Measurement of humidity and temperature		✓	✓
Calculation h, r, dv, Tw, Td, Tf, e			✓
2 freely scaleable and configurable analogue outputs		✓	✓
Remote sensing probe up to 20m (65.6ft)		✓	✓
On-site adjustment for relative humidity and temperature		✓	✓
LED indication of transmitter status / error diagnosis of probes		✓	✓
RS232 for transmitter configuration via PC		✓	✓
Configuration software	standard supply	✓	✓
Alternating display with MIN/MAX indication	optional	✓	✓
2 freely configurable alarm outputs	optional	✓	✓
Removeable sensing probe	optional	✓	✓
Sensor protection with coating	optional	✓	✓
Pluggable electrical connections	optional	✓	✓
Data output via RS232 interface			✓
Data output via RS485 interface	optional		✓
Network for up to 32 transmitters via RS485 bus	optional		✓
Ethernet interface for networking and remote monitoring	optional		✓
Data logging and analysis PC software	optional		✓

## Networkability / Ethernet Interface

The optional RS485 interface (order code N) allows for building a network of up to 32 transmitters.

The measurement data can be collected in a shared database and made available for all kinds of further processing.

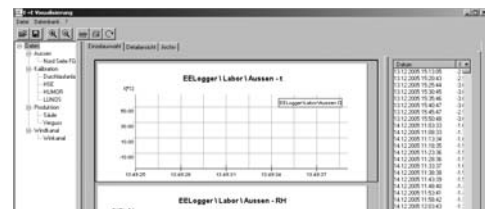
Additionally, the transmitters can be networked with an Ethernet module (order code E) for remote monitoring.



## Software

**Configuration Software:** (included in the scope of supply)

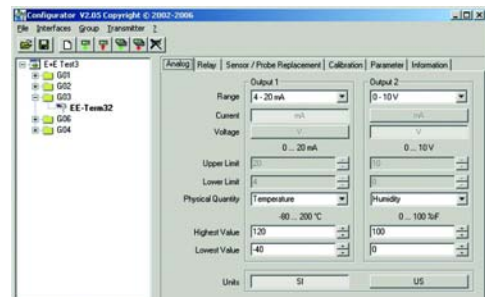
The configuration software allows flexible and simple adjustment of the analogue and alarm outputs in accordance with the requirements. The adjustment / calibration of the humidity and temperature outputs is possible as well. Furthermore the settings of the start and duration of the heating of the measurement cell can be defined.



**Data Logging / Analysis Software:** (EE33 only ordering code HA010602)

An additional software package enables data recording and management, including alerts by e-mail or text message when set points are triggered.

It is also possible to present the collected measurement data on a PC in graphs or tables. If the option N (RS485) or E (Ethernet) is selected in the ordering code, the data logging and analysis software will be included in the scope of supply.



## Integrated Display

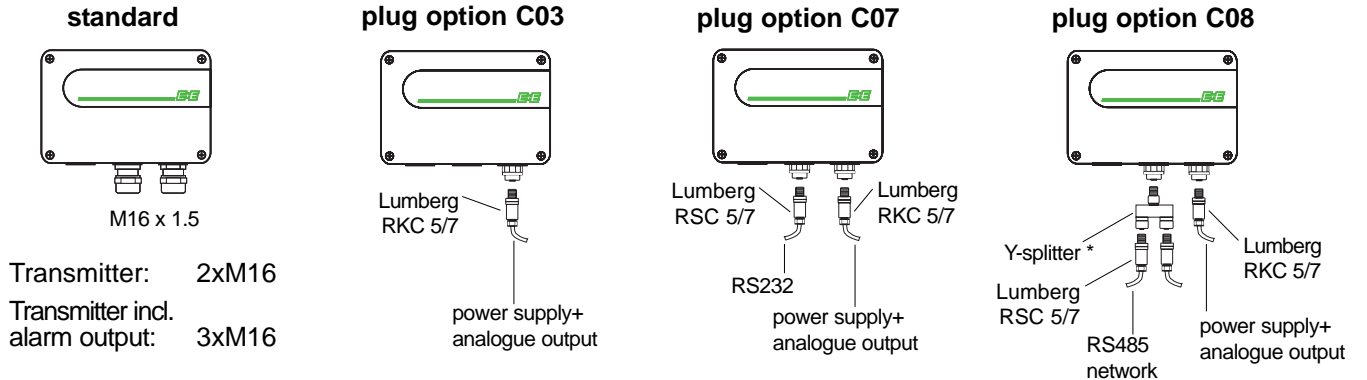
The actual measurement data and the corresponding Min/Max values can be indicated in an optional display (order code D05). The physical quantity to be displayed is selected by the push buttons next to the display.



## Alarm Outputs

An optional alarm module with 2 relay outputs is available for control and alarm purposes (order code SW). The selection of the physical quantity and the setting of threshold and hysteresis can be made with the configuration software included in the scope of supply.

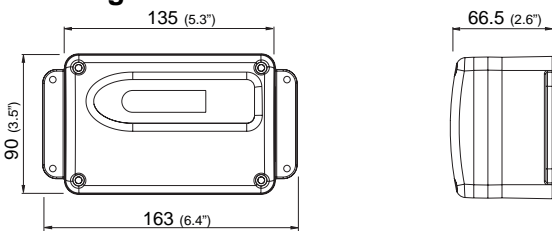
## Connection Versions



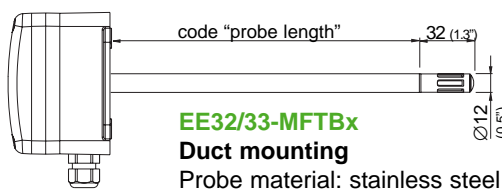
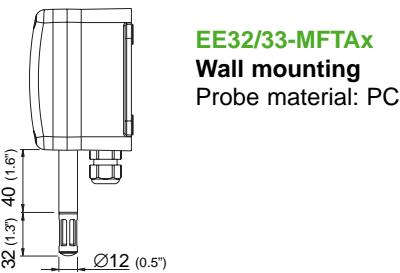
\* Siemens 6ES7 194-1KA01-0XA0

## Dimensions (mm)

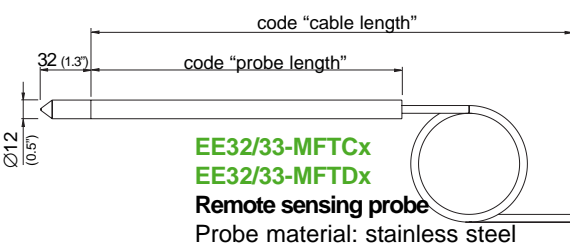
### Housing:



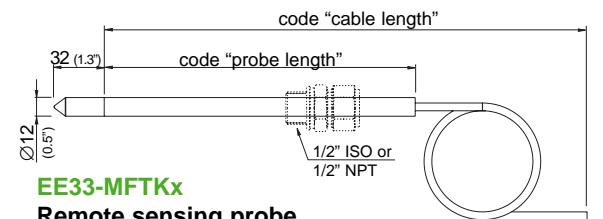
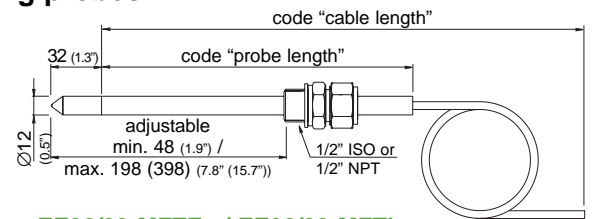
### Models:



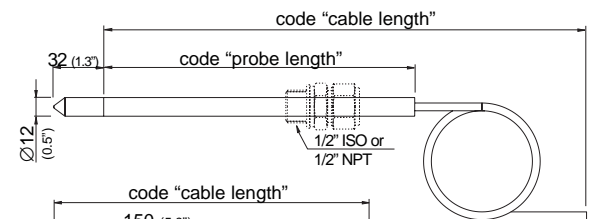
### Sensing probes:



### Sensing probes:



screw connection: 1/2" ISO Ø12mm HA011102  
1/2" NPT Ø12mm HA011103



screw connection: 1/2" ISO Ø12mm HA011102  
1/2" NPT Ø12mm HA011103  
1/2" ISO Ø6mm HA011104  
1/2" NPT Ø6mm HA011105

## Technical Data EE33

### Measurement values

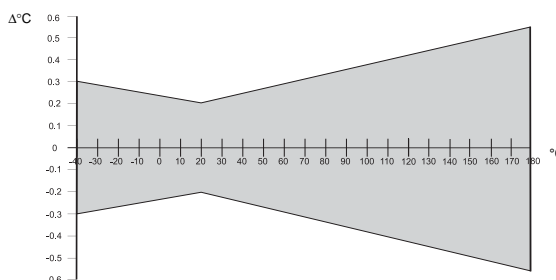
#### Relative humidity

Humidity sensor <sup>1)</sup>	heated, monolithic measurement cell HMC1	
Working range <sup>1)</sup>	0...100% RH	
Accuracy <sup>2)</sup> (including hysteresis, non-linearity and repeatability, traceable to intern. standards, administrated by NIST, PTB, BEV...)		
-15...40°C (5...104°F) <90% RH	± (1.3 + 0.3%*mv) % RH	
-15...40°C (5...104°F) >90% RH	± 2.3% RH	
-25...70°C (-13...158°F)	± (1.4 + 1%*mv) % RH	
-40...180°C (-40...356°F)	± (1.5 + 1.5%*mv) % RH	
Temperature dependence of electronics	typ. ± 0.01% RH/°C (0.0055% RH/°F)	
Response time with metal grid filter at 20°C (68°F) / t <sub>90</sub>	< 15s	

#### Temperature

Temperature sensor element	monolithic measurement cell HMC1	
Working range sensing head	EE33-MFTA: -40...60°C (-40...140°F)	EE33-MFTB: -40...80°C (-40...176°F)
	EE33-MFTC: -40...120°C (-40...248°F)	EE33-MFTD/E/I/J/K: -40...180°C (-40...356°F)

Accuracy (typ.)



Temperature dependence of electronics	typ. ± 0.005°C/°C
External temperature probe	Pt1000 (DIN A)

### Outputs<sup>2)</sup>

Two freely selectable and scaleable analogue outputs	0 - 1V	-1mA < I <sub>L</sub> < 1mA
	0 - 5V	-1mA < I <sub>L</sub> < 1mA
	0 - 10V	-1mA < I <sub>L</sub> < 1mA
	4 - 20mA	R <sub>L</sub> < 500 Ohm
	0 - 20mA	R <sub>L</sub> < 500 Ohm
Digital interface	RS232	optional: RS485 or ethernet

### Max. adjustable measurement range<sup>2)3)</sup>

		from	EE33-A	EE33-B	to	EE33-C	EE33-D/E/I/J	EE33-K	unit
Humidity	RH	0	100	100	100	100	100	/	% rF
Temperature	T	-40 (-40)	60 (140)	80 (176)	120 (248)	180 (356)	/	/	°C (°F)
Dew point temperature	T <sub>d</sub>	-40 (-40)	60 (140)	80 (176)	100 (212)	100 (212)	100 (212)	100 (212)	°C (°F)
Frost point temperature	T <sub>f</sub>	-40 (-40)	0 (32)	0 (32)	0 (32)	0 (32)	0 (32)	0 (32)	°C (°F)
Wet bulb temperature	T <sub>w</sub>	0 (32)	60 (140)	80 (176)	100 (212)	100 (212)	100 (212)	/	°C (°F)
Water vapour partial pressure	e	0 (0)	200 (3)	500 (7.5)	1100 (15)	1100 (15)	/	/	mbar (psi)
Mixture ratio	r	0 (0)	425 (2900)	999 (9999)	999 (9999)	999 (9999)	/	/	g/kg (gr/lb)
Absolute humidity	dv	0 (0)	150 (60)	300 (120)	700 (300)	700 (300)	/	/	g/m <sup>3</sup> (gr/f <sup>3</sup> )
Specific enthalpy	h	0 (0)	400 (50000)	1000 (375000)	2800 (999999)	2800 (999999)	/	/	kJ/kg (lb/lb)

### General

Supply voltage	SELV 8...35V DC	SELV = Safety Extra Low Voltage
	SELV 12...30V AC	(optional 100...240V AC, 50/60Hz)
Current consumption - 2x voltage output	for 24V DC/AC: typ. 40mA / 80mA	
- 2x current output	typ. 80mA / 160mA	
Pressure range for pressure tight probe	EE33-MFTEx/Jx/Kx: 0.01...15bar (0.15...218psi)	
	EE33-MFTIx: 0...100bar (0...1450psi)	
System requirements for software	WINDOWS 98 or later; serial interface	
Housing / protection class	Al Si 9 Cu 3 / IP65; (Nema 4)	
Cable gland	M16 x 1.5 cable Ø 4.5 - 10 mm (0.18 - 0.39")	
Electrical connection	screw terminals up to max. 1.5mm <sup>2</sup> (AWG 16)	
Working and storage temperature range of electronics	-40...60°C (-40...140°F)	
	-20...50°C (-4...122°F) - housing with display	
Electromagnetic compatibility according to	EN61000-6-2	EN61000-6-3 ICES-003 ClassB
	EN61326-1+A1+A2	FCC Part15 ClassB



<sup>1)</sup> Refer to the working range of the humidity sensor.

<sup>2)</sup> Can be easily changed by software.

<sup>3)</sup> Refer to accuracies of calculated values (page 140)

\*) 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).

## Technical Data EE32

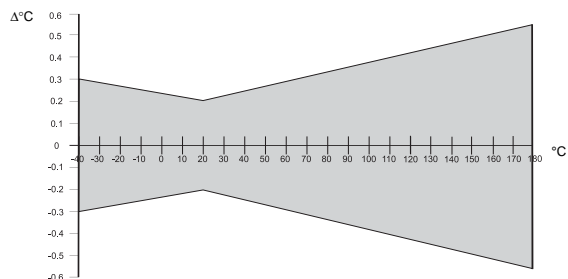
### Measurement values

#### Relative humidity

Humidity sensor <sup>1)</sup>	heated, monolithic measurement cell HMC1	
Working range <sup>1)</sup>	0...100% RH	
Accuracy <sup>2)</sup> (including hysteresis, non-linearity and repeatability, traceable to intern. standards, administrated by NIST, PTB, BEV...)		
-15...40°C (5...104°F) <90% RH	± (1.3 + 0.3%*mv) % RH	
-15...40°C (5...104°F) >90% RH	± 2.3% RH	
-25...70°C (-13...158°F)	± (1.4 + 1%*mv) % RH	
-40...180°C (-40...356°F)	± (1.5 + 1.5%*mv) % RH	
Temperature dependence of electronics	typ. ± 0.01% RH/°C (0.0055% RH/°F)	
Response time with metal grid filter at 20°C (68°F) / t <sub>90</sub>	< 15s	

#### Temperature

Temperature sensor element	monolithic measurement cell HMC1	
Working range sensing head	EE32-MFTA: -40...60°C (-40...140°F)	EE32-MFTB: -40...80°C (-40...176°F)
	EE32-MFTC: -40...120°C (-40...248°F)	EE32-MFTD/E/I/J: -40...180°C (-40...356°F)
Accuracy (typ.)		



Temperature dependence of electronics	typ. ± 0.005°C/°C
External temperature probe	Pt1000 (DIN A)

### Outputs <sup>2)</sup>

Two freely selectable and scaleable analogue outputs	0 - 1V	-1mA < I <sub>L</sub> < 1mA
	0 - 5V	-1mA < I <sub>L</sub> < 1mA
	0 - 10V	-1mA < I <sub>L</sub> < 1mA
	4 - 20mA	R <sub>L</sub> < 500 Ohm
	0 - 20mA	R <sub>L</sub> < 500 Ohm

### Max. adjustable measurement range <sup>2)3)</sup>

		from			to			unit
			EE32-A	EE32-B	EE32-C	EE32-D/E/I/J		
Humidity	RH	0	100	100	100	100	% RH	
Temperature	T	-40 (-40)	60 (140)	80	120 (248)	180 (356)	°C	

### General

Supply voltage	SELV 8...35V DC	SELV = Safety Extra Low Voltage
	SELV 12...30V AC	(optional 100...240V AC, 50/60Hz)
Current consumption - 2x voltage output	for 24V DC/AC: typ. 40mA / 80mA	
- 2x current output	typ. 80mA / 160mA	
Pressure range for pressure tight probe	EE32-MFTEx/Jx: 0.01...15bar (0.15...218psi)	
	EE32-MFTIx: 0...100bar (0...1450psi)	
System requirements for software	WINDOWS 98 or later; serial interface	
Housing / protection class	Al Si 9 Cu 3 / IP65; (Nema 4)	
Cable gland	M16 x 1.5	cable Ø 4.5 - 10 mm (0.18 - 0.39")
Electrical connection	screw terminals up to max. 1.5mm <sup>2</sup> (AWG 16)	
Working and storage temperature range of electronics	-40...60°C (-40...140°F)	
	-20...50°C (-4...122°F) - housing with display	
Electromagnetic compatibility according to	EN61000-6-2	EN61000-6-3 ICES-003 ClassB
	EN61326-1+A1+A2	FCC Part15 ClassB



<sup>1)</sup> Refer to the working range of the humidity sensor.

<sup>2)</sup> Can be easily changed by software.

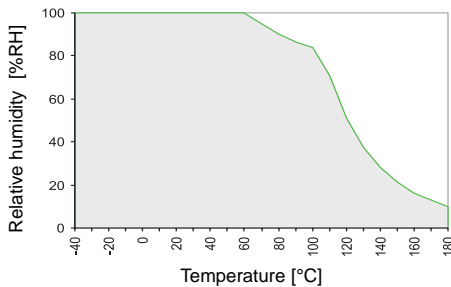
<sup>3)</sup> Refer to accuracies of calculated values

\*) 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).

## Technical Data for Options

Display	graphical LC display (128x32 pixels), with integrated push-buttons for selecting parameters and MIN/MAX function		
Alarm outputs	2 x 1 switch contact 250V AC / 6A 28V DC / 6A threshold + hysteresis: can be adjusted with configuration software switching parameters:		
	freely selectable between	EE32-MFTA/B/D/E/I/J	EE32-MFTK
RH	Relative humidity	✓	
T	Temperature	✓	
Td	Dew point temperature	✓ (EE33 only)	✓
Tf	Frost point temperature	✓ (EE33 only)	✓
Tw	Wet bulb temperature	✓ (EE33 only)	
e	Water vapour partial pressure	✓ (EE33 only)	
r	Mixture ratio	✓ (EE33 only)	
dv	Absolute humidity	✓ (EE33 only)	
h	Specific enthalpy	✓ (EE33 only)	

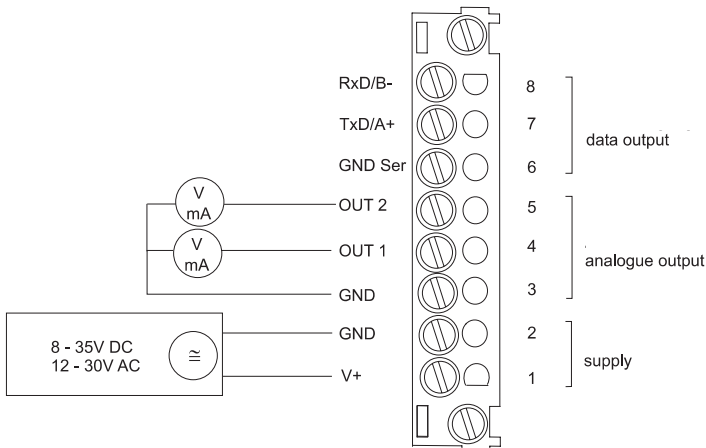
## Working Range Humidity Sensor



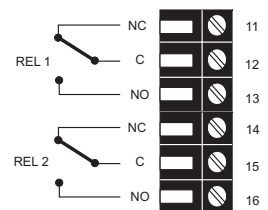
The grey area shows the allowed measurement range for the humidity sensor.

Operating points outside of this range do not lead to destruction of the sensor, but the specified measurement accuracy cannot be guaranteed.

## Connection Diagram



Terminal configuration - Alarm output (order code SW)



## Accessories / Replacement Parts

(For further information, see data sheet "Accessories", page 128)

- |                                      |            |                                    |            |
|--------------------------------------|------------|------------------------------------|------------|
| - Filter caps                        | (HA0101xx) | - Drip water protection            | (HA010503) |
| - Display + housing cover            | (D05M)     | - 1% Calibration                   | (EE90/3H)  |
| - Interface cable                    | (HA010301) | - Calibration set                  | (HA0104xx) |
| - 1/2" NPT-adapter for configuration | (HA011101) | - Pressure tight screw connections |            |
| - Mounting flange 12mm (RH probe)    | (HA010201) | 1/2" ISO Ø12mm                     | (HA011102) |
| - Mounting flange 6mm (T probe)      | (HA010207) | 1/2" NPT Ø12mm                     | (HA011103) |
|                                      |            | 1/2" ISO Ø6mm                      | (HA011104) |
|                                      |            | 1/2" NPT Ø6mm                      | (HA011105) |
- EE33 only:**
- RS485 Kit (HW + SW) for networking (HA010601)
  - Data logging / analysis software (HA010602)

## Ordering Guide EE33

				EE33-	EE33-	EE33-	EE33-	EE33-	EE33-	EE33-	EE33-
<b>Hardware Configuration</b>											
<b>Housing</b>	metal housing			M	M	M	M	M	M	M	M
<b>Type</b>	humidity + temperature			FT	FT	FT	FT	FT	FT	FT	FT
<b>Model</b>				A	B	C	D	E	I	J	K
<b>Filter</b>	stainless steel sintered filter			3	3	3	3	3	3	3	3
	PTFE filter			5	5	5	5	5	5	5	5
	stainless steel grid filter (up to 180°C / 356°F)			9	9	9	9	9	9	9	9
<b>Cable length</b>	2m (6.6ft)					02	02	02	02	02	02
<b>(incl. probe length)</b>	5m (16.4ft)					05	05	05	05	05	05
	10m (32.8ft)					10	10	10	10	10	10
	20m (65.6ft)					20	20	20	20	20	20
<b>Probe length</b>	65mm (2.6")			2		2	2	2			2
	200mm (7.9")				5	5	5	5	5	5	5
	400mm (15.8")				6	6	6	6			6
<b>Pressure tight feedthrough</b>	1/2" male thread							HA03	HA03		
	1/2" NPT thread							HA07	HA07		
<b>Interface</b>	RS232										
	RS485			N	N	N	N	N	N	N	N
	ethernet interface <sup>1)</sup>			E	E	E	E	E	E	E	E
<b>Display</b>	without display										
	with display			D05	D05	D05	D05	D05	D05	D05	D05
<b>Alarm output <sup>2)</sup></b>	without relay										
	with relay			SW	SW	SW	SW	SW	SW	SW	SW
<b>Plug</b>	cable glands										
	1 plug for power supply and outputs			C03	C03	C03	C03	C03	C03	C03	C03
	2 plugs for power supply / outputs and RS232			C07	C07	C07	C07	C07	C07	C07	C07
	2 plugs for power supply / outputs and RS485 network			C08	C08	C08	C08	C08	C08	C08	C08
<b>Sensing probe</b>	fixed										
	connectable in the housing					P03	P03	P03	P03	P03	P03
<b>Coating sensor</b>	no			HC01	HC01	HC01	HC01	HC01	HC01	HC01	HC01
	yes										
<b>Supply voltage</b>	8...35V DC / 12...30V AC										
	integrated power supply 100...240V AC, 50/60Hz <sup>3)</sup>			V01	V01	V01	V01	V01	V01	V01	V01
<b>Software Configuration</b>											
<b>Physical parameters of outputs</b>	Relative humidity	RH [%]	(A)	Output 1	Select according to Ordering Guide (A - J)						C
	Temperature	T [°C]	(B)								
	Dew point temperature	Td [°C]	(C)	Output 2	Select according to Ordering Guide (A - J)						D
	Frost point temperature	Tf [°C]	(D)								
	Wet bulb temperature	Tw [°C]	(E)								
	Water vapour partial pres.	e [mbar]	(F)								
	Mixture ratio	r [g/kg]	(G)								
	Absolute humidity	dv [g/m <sup>3</sup> ]	(H)								
	Specific enthalpy	h [kJ/kg]	(J)								
<b>Type of output signal</b>	0-1V			1	1	1	1	1	1	1	1
	0-5V			2	2	2	2	2	2	2	2
	0-10V			3	3	3	3	3	3	3	3
	0-20mA			5	5	5	5	5	5	5	5
	4-20mA			6	6	6	6	6	6	6	6
<b>Measured value units</b>	metric / SI			E01	E01	E01	E01	E01	E01	E01	E01
	non metric / US										
<b>T-Scaling</b>	-40...60 (T02)		-20...100 (T14)	Output T	Select according to Ordering Guide (Txx)						
<b>Td-Scaling</b>	-10...50 (T03)		+20...120 (T15)								
<b>Tf-Scaling</b>	0...50 (T04)		0...120 (T16)	Output Td	Select according to Ordering Guide (Tdx)						
<b>Tw-Scaling</b>	0...100 (T05)		0...80 (T21)								
<b>(in °C or °F)</b>	0...60 (T07)		-40...80 (T22)	Output Tf	Select according to Ordering Guide (Tfxx)						
	-30...70 (T08)		-20...80 (T24)								
	-30...120 (T09)		-40...160 (T33)	Output Tw	Select according to Ordering Guide (Twxx)						
	-20...120 (T10)		+20...180 (T40)								
	-40...120 (T12)		-40...180 (T52)		Other T/Td/Tf/Tw-scaling refer to page 134						

1) Combination ethernet and alarm output is not possible / combination ethernet and integrated power supply is not possible  
 2) Combination alarm output and plugs is not possible (with cable glands only) / combination alarm output and integrated power supply is not possible  
 3) Integrated power supply includes 2 plugs for power supply and outputs / further plug options are not possible

## Order Example

### EE33-MFTD5025ND05SW/BC3-T02-Td07

#### Hardware Configuration:

Housing: metal  
 Type: humidity + temperature  
 Model: remote sensing probe  
 Filter: PTFE filter  
 Cable length: 2m (6.6ft)  
 Probe length: 200mm (7.9")  
 Interface: RS485

Display: with display  
 Alarm output: with relay  
 Plug: cable glands  
 Sensing probe: fixed  
 Coating sensor: no  
 Supply voltage: 8...35V DC / 12...30V AC

#### Software Configuration:

Output 1: T  
 Output 2: Td  
 Output signal: 0-10V  
 Measurand value unit: metric / SI  
 T-Scaling: -40...60°C  
 Td-Scaling: 0...60°C

## Ordering Guide EE32

		EE32-	EE32-	EE32-	EE32-	EE32-	EE32-	
<b>Hardware Configuration</b>								
<b>Housing</b>	metal housing	M	M	M	M	M	M	
<b>Type</b>	humidity + temperature	FT	FT	FT	FT	FT	FT	
<b>Model</b>		A	B	C	D	E	I	
<b>Filter</b>	stainless steel sintered filter	3	3	3	3	3	3	
	PTFE filter	5	5	5	5	5	5	
	stainless steel grid filter (up to 180°C / 356°F)	9	9	9	9	9	9	
<b>Cable length (incl. probe length)</b>	2m (6.6ft)			02	02	02	02	
	5m (16.4ft)			05	05	05	05	
	10m (32.8ft)			10	10	10	10	
	20m (65.6ft)			20	20	20	20	
<b>Probe length</b>	65mm (2.6")	2		2	2	2		
	200mm (7.9")		5	5	5	5	5	
	400mm (15.8")		6	6	6	6		
<b>Pressure tight feedthrough</b>	1/2" male thread					HA03	HA03	
	1/2" NPT thread					HA07	HA07	
<b>Display</b>	without display							
	with display	D05	D05	D05	D05	D05	D05	
<b>Alarm output <sup>1)</sup></b>	without relay							
	with relay	SW	SW	SW	SW	SW	SW	
<b>Plug</b>	cable glands							
	1 plug for power supply and outputs 2 plugs for power supply / outputs and RS232	C03 C07	C03 C07	C03 C07	C03 C07	C03 C07	C03 C07	
<b>Sensing probe</b>	fixed							
	connectable in the housing			P03	P03	P03	P03	
<b>Coating sensor</b>	no							
	yes	HC01	HC01	HC01	HC01	HC01	HC01	
<b>Supply voltage</b>	8...35V DC / 12...30V AC							
	integrated power supply 100...240V AC, 50/60Hz <sup>2)</sup>	V01	V01	V01	V01	V01	V01	
<b>Software Configuration</b>								
<b>Physical parameters of outputs</b>	relative humidity	RH [%]	(A)	Output 1				Select according to Ordering Guide (A or B)
	temperature	T [°C]	(B)	Output 2				Select according to Ordering Guide (A or B)
<b>Type of output signal</b>	0-1V			1	1	1	1	
	0-5V			2	2	2	2	
	0-10V			3	3	3	3	
	0-20mA			5	5	5	5	
	4-20mA			6	6	6	6	
<b>Measured value units</b>	metric / SI			E01	E01	E01	E01	
	non metric / US							
<b>T-Scaling (in °C or °F)</b>	-40...60 (T02)	-20...100 (T14)		Output T				Select according to Ordering Guide (Txx)
	-10...50 (T03)	+20...120 (T15)						Other T-scaling refer to page 134
	0...50 (T04)	0...120 (T16)						
	0...100 (T05)	0...80 (T21)						
	0...60 (T07)	-40...80 (T22)						
	-30...70 (T08)	-20...80 (T24)						
	-30...120 (T09)	-40...160 (T33)						
	-20...120 (T10)	+20...180 (T40)						
	-40...120 (T12)	-40...180 (T52)						

1) Combination alarm output and plugs is not possible (with cable glands only) / combination alarm output and integrated supply voltage is not possible  
 2) Integrated power supply includes 2 plugs for power supply and outputs / further plug options are not possible

## Order Example

### EE32-MFTJ5025D05SW/AB3-T02

#### Hardware Configuration:

Housing: metal  
 Type: humidity + temperature  
 Model: remote sensing probe  
 Filter: PTFE filter  
 Cable length: 2m (6.6ft)  
 Probe length: 200mm (7.9")

Display: with display  
 Alarm output: with relay  
 Plug: cable glands  
 Sensing probe: fixed  
 Coating sensor: no  
 Supply voltage: 8...35V DC / 12...30V AC

#### Software Configuration:

Output 1: RH  
 Output 2: T  
 Output signal: 0-10V  
 Measurand value unit: metric / SI  
 T-Scaling: -40...60°C

#### Accessories:

Pressure tight screw connections: HA011102 (1/2" ISO Ø12mm)  
 HA011104 (1/2" ISO Ø6mm)