EE10

Преобразователь влажности/температуры для систем вентиляции, отопления и кондиционирования воздуха в помещениях

Прибор выпускается в стильном корпусе - возможно выбрать разные цвета и размеры в соответствии с местными требованиями.

The back cover, which contains only the screw terminals, can can be mounted and wired first. The front cover containing the electronics can be simply snapped onto the back cover right before commissioning. Thus the active part of the device is not exposed to construction site pollution and can be replaced without tools within seconds.

Typical Applications

Building automation
Indoor climate control

Features

High accuracy and long term stability
Fast and easy installation
Modbus, BACnet or analogue outputs

Technical Data

Measured values

Relative Humidity		
Working range	0...95 % RH	
Accuracy[1] at 20 °C (68 °F) and U_v=24 V DC		
Analogue (0-10 V, 4-20 mA)	±2 % RH (40...60 % RH)	±3 % RH (10...90 % RH)
Digital (RS485)	±3 % RH (30...70 % RH)	±5 % RH (10...90 % RH)
Temperature dependence	typical 0.06 % RH /°C (0.03 % RH / °F)	
Temperature		
Accuracy[1] at 20 °C (68 °F) and U_v=24 V DC	output A3: ±0.25 °C (±0.45 °F) output J3: ±0.3 °C (±0.54 °F)	output A6: ±0.4 °C (±0.72 °F)

Output

Analogue	0-10 V	-1 mA < I_L < 1 mA
(RH: 0...100 % RH / T: see ordering guide)	4-20 mA (two wires)	R_L < (U_v-10)/0.02 < 500 Ohm
Digital Interface	RS485 with max. 32 devices on one bus	
Protocol	Modbus RTU or BACnet MS/TP	
Temperature passive	please see ordering guide	

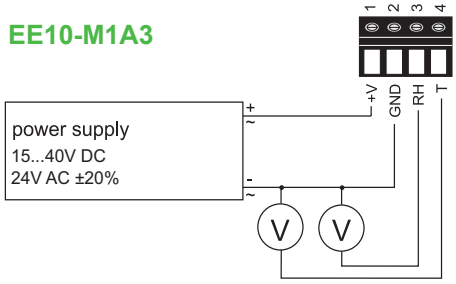
General

Voltage supply (U_v)		
0 - 10 V	15 - 40 V DC or 24 V AC ±20%	
4 - 20 mA	10 + 0.02 x R_L < U_v < 28 V DC	(R_L < 500 Ohm)
RS485	15 - 35 V DC or 24 V AC ±20%	
Current consumption		
Analogue (0-10 V, 4-20 mA)	for DC supply: typ. 4 mA / for AC supply: typ. 15 mA_{eff}	
Digital (RS485)	for DC supply: typ. 9 mA / for AC supply: typ. 20 mA_{eff}	
Electrical connection	screw terminals max. 1.5 mm^2 (AWG 16)	
Housing (polycarbonate)	US Version: UL94V-0 approved / EU Version: UL94HB approved	
Protection class	IP30	
Display	for EE10-M1	Humidity / Temperature alternating
	for EE10-M6	Humidity
CE compatibility according	EN61326-1 EN61326-2-3	CE
Temperature working range	-5...55 °C (23...131 °F)	
Temperature storage range	-25...60 °C (-13...140 °F)	

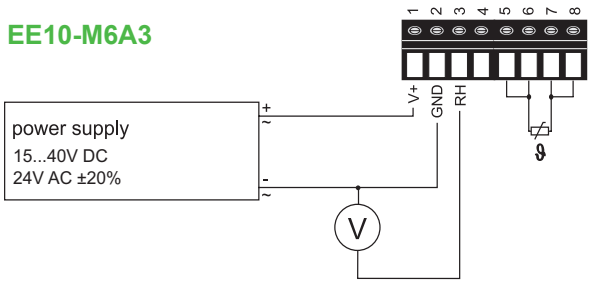
1) Traceable to intern. standards, administrated by NIST, PTB, BEV...
The accuracy statement includes the uncertainty of the factory calibration with an enhancement factor k=2 (2-times standard deviation). The accuracy was calculated in accordance with EA-4/02 and with regard to GUM (Guide to the Expression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

Connection Diagram

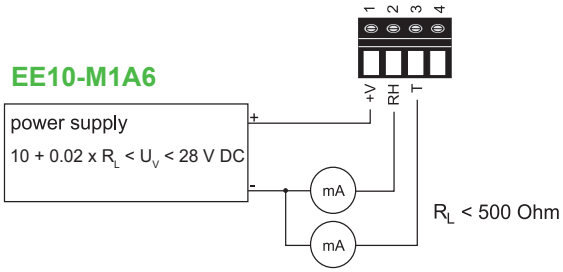
EE10-M1A3



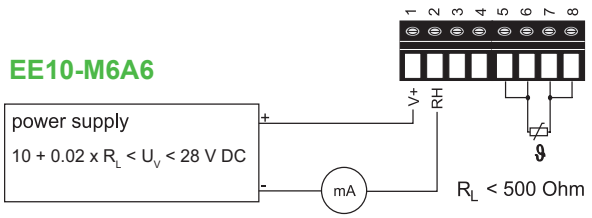
EE10-M6A3



EE10-M1A6

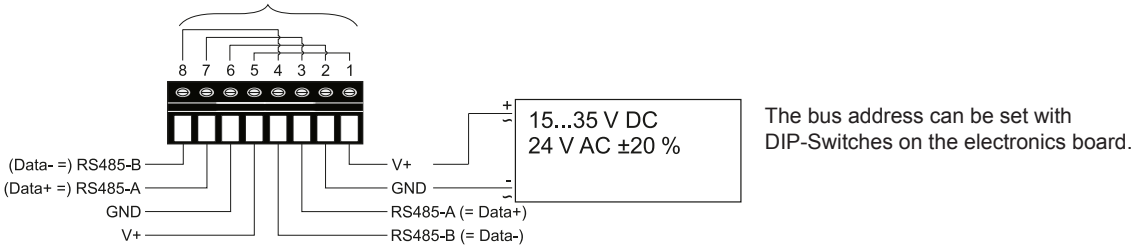


EE10-M6A6



EE10-M1J3

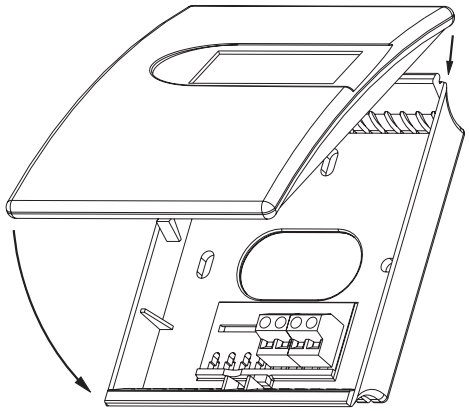
Connected on the electronics board.



The bus address can be set with DIP-Switches on the electronics board.

Screw terminals appropriate for daisy-chain wiring

Enclosure



Dimensions:

EU: W x H x D = 85 x 100 x 26 mm (3.3 x 3.9 x 1")
US: W x H x D = 85 x 136 x 26 mm (3.3 x 5.4 x 1")

Colour:

EU-Standard, US:
Front cover: signal white RAL9003
Back cover: light grey RAL7035

EU-Grey:
Front and back cover: anthracite grey RAL7016

EU-Silver:
Front and back cover: white aluminum RAL9006

Scope of Supply

- EE10 Sensor according to ordering guide
- Mounting materials
- Test report according to DIN EN10204 - 2.2
- Quick user guide (for digital output only)

Ordering Guide

			EE10-
	Model	Humidity + Temperature	**M1**
		Humidity + Temperature passive	**M6**
	Output	0-10 V	**A3**
		4-20 mA	**A6**
		RS485	**J3**
	T-sensor passive[1]	none	**no code**
		Pt 100 DIN A	**TP1**
		Pt 1000 DIN A	**TP3**
		NTC 10k ±1%, $B_{25/100}$ = 3950K	**TP5**
		NTC 1.8k	**TP7**
		Ni1000, TK6180	**TP9**
		NTC 10k ±0.5%, $B_{25/50}$ = 3950K	**TP11**
		NTC 10k ±1%, $B_{25/85}$ = 3435K	**TP14**
	Display	without display	**no code**
		with display	**D1**
	Enclosure	EU-Standard (RAL9003 / RAL7035)	**no code**
		EU-Grey (RAL7016)	**CH74**
		EU-Silver (RAL9006)	**CH93**
		US (RAL9003 / RAL7035)	**RG2**
Output Setup	**Temperature Unit**	T [°C]	**no code**
Analogue M1A3, M1A6		T [°F]	**MB2**
	Scale T low	0	**no code**
		value[2]	**SBL value**
	Scale T high	50	**no code**
		value[2]	**SBH value**
Digital J3	**Protocol**	Modbus RTU[3]	**P1**
		BACnet MS/TP[4]	**P3**
	Unit	metric-SI	**no code**
		non-metric	**U2**
	Baud rate	9600 (usual for Modbus)	**BD5**
		19200	**BD6**
		38400 (usual for BACnet)	**BD7**
		57600[5]	**BD8**
		76800[5]	**BD9**

1) Only with output A3 and A6. T sensor details at www.epluse.com/R-T_Characteristics. For other passive T sensors please contact E+E.
2) -5 °C (23 °F) < Scale T low < 20 °C (68 °F). 25 °C (77 °F) < Scale T high < 55 °C (131 °F). Scale T high – Scale T low > 20 °C (68 °F).
3) Factory setting: Even Parity, Stopbits 1. Modbus Map see User Guide at www.epluse.com/ee10
4) Factory setting: No Parity, Stopbits 1. Product Implementation Conformance Statement (PICS) available at www.epluse.com/ee10
5) Only for BACnet MS/TP

Order Examples

EE10-M1A3D1

Model:	Humidity + Temperature
Output:	0-10 V
T-sensor passive:	none
Display:	with display
Enclosure:	EU-Standard (RAL9003 / RAL7035)
Temperature Unit:	°C
Scale T low:	0 °C
Scale T high:	50 °C

EE10-M1J3P3BD7

Model:	Humidity + Temperature
Output:	RS485
T-sensor passive:	none
Display:	without display
Enclosure:	EU-Standard (RAL9003 / RAL7035)
Protocol:	BACnet MS/TP
Unit:	metric-SI
Baud rate:	38400

EE10-M6A6TP3

Model:	Humidity + Temp. passive
Output:	4-20 mA
T-sensor passive:	Pt 1000 DIN A
Display:	without display
Enclosure:	EU-Standard (RAL9003 / RAL7035)