

EE10 Series

HVAC Humidity / Temperature Transmitter for Indoor Applications

EE10 room transmitters are the ideal solution for indoor applications such as HVAC in residential and official buildings.

The very stylish, functional housing makes easy installation and fast exchange of the sensing unit for service purposes possible. The high quality E+E humidity sensor and state-of-the-art microprocessor controlled electronics are the guarantee for best accuracy and a wide range of options.

The standard humidity output of EE10 transmitters is 4 - 20 mA or 0 - 10 V. The temperature output signal can be active or passive.

All EE10 versions can be equipped with a good legible LC display. For EE10-FT versions the displayed values for humidity and temperature will alternate.



Typical Applications

building management for residential and office areas
air conditioning
switching cabinets
climate control in hotels and museums

Features

excellent price / performance ratio
easiest installation
modern design
long term stable
optional display
traceable calibration

Technical Data

Measuring Quantities

Relative Humidity

Humidity sensor	HC103	
Analogue output 0...100% RH	0-10 V	-1 mA < I _L < 1mA
	4-20 mA (two wires)	R _L < (U _v -10)/0.02 < 500 Ohm
Working range ¹⁾	0...95 % RH	
Accuracy at 20°C (68°F) and U _v =24VDC	±2% RH (40...60% RH)	±3% RH (10...90% RH)
	Traceable to intern. standards, administrated by NIST, PTB, BEV...	
Temperature dependence at 60% RH	typical 0.06% RH / °C (0.03% RH / °F)	


Temperature (active output)

Analogue output 0...50°C (32...122°F) ²⁾	0-10 V	-1 mA < I _L < 1mA
	4-20 mA (two wires)	R _L < (U _v -10)/0.02 < 500 Ohm
Accuracy at 20°C (68°F) and U _v =24VDC	FT3: ±0.25°C (±0.45°F)	FT6: ±0.4°C (±0.72°F)

Temperature (passive output)

Type of T-Sensor	please see ordering guide	
------------------	---------------------------	--

General Data

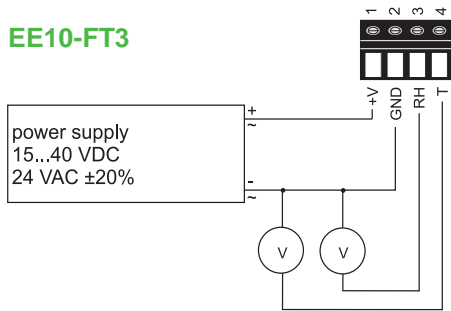
Voltage supply (U _v)	for 0 - 10 V	15 - 40 VDC or 24 VAC ±20%
	for 4 - 20 mA	28V DC > U _v > 10 + 0.02 x R _L (R _L < 500 Ohm)
Current consumption	for DC supply:	typical 4 mA
	for AC supply:	typical 15 mA _{eff}
Electrical connection	screw terminals max. 1.5 mm ² (AWG 16)	
Display	for EE10-FTx version	Humidity / Temperature alternating
	for EE10-Fx and EE10-FPx version	Humidity
CE compatibility according	EN61326-1	
	EN61326-2-3	
Temperature ranges	working temperature range:	-5...55°C (23...131°F)
	working temperature with display:	-5...55°C (23...131°F)
	storage temperature range:	-25...60°C (-13...140°F)

1) Please refer to the working range of the HC103

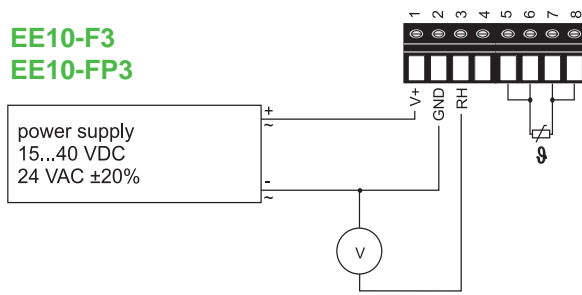
2) Other T-scaling refer to page 146

Connection Diagram

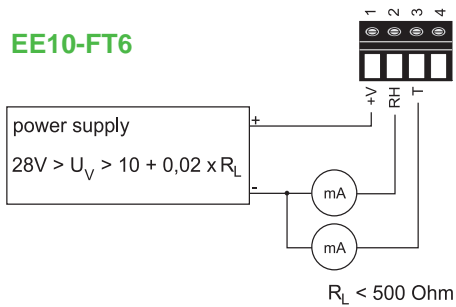
EE10-FT3



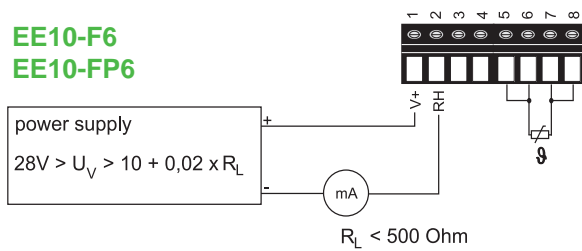
EE10-F3 EE10-FP3



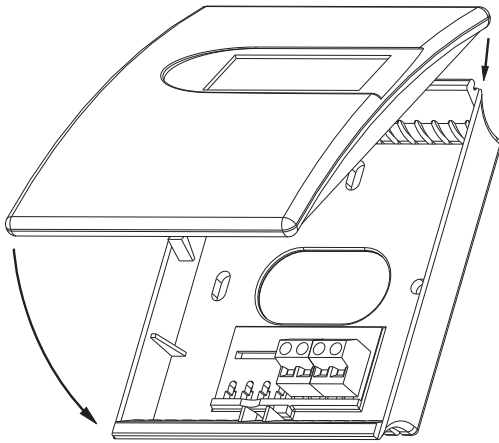
EE10-FT6



EE10-F6 EE10-FP6



Dimensions (mm)



W x H x D = 85 x 100 x 26mm
 (3.3 x 3.9 x 1")

Housing: PC
 Protection class: IP30

Housing colour: Cover: RAL 9003 (signal white)
 Back: RAL 7035 (light grey)

Order Example

EE10-FT3-D04-T04

Model: humidity + temperature
 Output humidity: 0-10V
 Output temperature: 0-10V
 Display: with display
 T-Unit: °C
 T-Scale: 0...50°C

Ordering Guide

MODEL		OUTPUT	T-SENSOR (only passive)	DISPLAY	T - UNIT (only for (D04))	T-SCALE (only for FT)
humidity + temperature	(FT)	0-10V	(3)	Pt 100 DIN A (A)	without display (-)	°C (-)
humidity	(F)	4-20 mA	(6)	Pt 1000 DIN A (C)	with display (D04)	°F (E01)
humidity + temperature passive	(FP)					0...40 (T04)
						other (Txx)
EE10-						

Scaling of T-outputs

EE08, EE10, EE10-T, EE21, EE22, EE23, EE29, EE30EX, EE31, EE32, EE33, EE35, EE36, EE75 and EE80

Following Txx defines the scaling of the outputs for **temperature (T)**, **dew point temperature (Td)**, **frost point temperature (Tf)** and **wet bulb temperature (Tw)**. The Txx codes are to be used in the order number of EE08, EE10, EE10-T, EE21, EE22, EE23, EE29, EE30EX, EE31, EE32, EE33, EE35, EE36, EE75 and EE80 transmitter series.

Please see the ordering guide at the end of each data sheet.

The limits of the temperature scale shall be within the temperature working range of respective EExx transmitter.

For T scale in °C, please use Txx code alone:

Example :

EE29-PFTD3025AB6-T57 T output scale: 4...20mA = -20...+140°C

For T scale in °F, please use E01-Txx:

Example:

EE31-PFTE3056AB5-E01-T57 T output scale: 0...10V = -20...+140°F

T01	-30...+40	T35	+100...+180	T69	0...+20	T103	-30...+100
T02	-40...+60	T36	0...+150	T70	-10...+25	T104	-60...+40
T03	-10...+50	T37	0...+130	T71	+50...+130	T105	-40...+40
T04	0...+50	T38	-40...+70	T72	+50...+140	T106	+10...+50
T05	0...+100	T39	-30...+20	T73	-20...+70	T107	0...+200
T06	-5...+45	T40	+20...+180	T74	-40...+356	T108	-112...+32
T07	0...+60	T41	+60...+110	T75	+32...+212	T109	-40...+32
T08	-30...+70	T42	-10...+100	T76	+32...+122	T110	-35...+50
T09	-30...+120	T43	-35...+35	T77	+20...+140	T111	-60...0
T10	-20...+120	T44	-40...+50	T78	-40...+248	T112	0...+30
T11	-10...+70	T45	-30...+50	T79	-40...+100	T113	-23...+85
T12	-40...+120	T46	0...+75	T80	-40...+176	T114	+60...+180
T13	+15...+25	T47	-20...+150	T81	-40...+250	T115	+10...+40
T14	-20...+100	T48	-20...+50	T82	-40...+350	T116	-80...+180
T15	+20...+120	T49	0...+170	T83	-40...+140	T117	+15...+35
T16	0...+120	T50	-10...+60	T84	-40...+300	T118	-70...+180
T17	0...+70	T51	-50...+70	T85	0...+140	T119	-25...+25
T18	-10...+40	T52	-40...+180	T86	0...+176	T120	-70...+60
T19	+10...+100	T53	+80...+120	T87	0...+248	T121	+55...+95
T20	-30...+60	T54	-30...+35	T88	0...+250	T122	-20...+20
T21	0...+80	T55	0...+40	T89	0...+350	T123	-80...+80
T22	-40...+80	T56	0...+5	T90	+32...+120		
T23	-30...+130	T57	-20...+140	T91	+32...+140		
T24	-20...+80	T58	+10...+30	T92	+32...+180		
T25	-20...+60	T59	-10...+30	T93	+32...+248		
T26	0...+180	T60	-20...+40	T94	+32...+250		
T27	-50...+50	T61	-5...+100	T95	+32...+300		
T28	-80...+60	T62	-5...+50	T96	+32...+132		
T29	-20...+180	T63	-80...+20	T97	-60...+120		
T30	0...+160	T64	-60...+60	T98	-60...+212		
T31	-5...+55	T65	-60...+20	T99	-110...+70		
T32	-80...0	T66	-50...+100	T100	-76...+140		
T33	-40...+160	T67	-80...+100	T101	+32...+350		
T34	-70...+40	T68	-40...+150	T102	-15...+25		