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technology.

+ Datasheet EE150

**Humidity and Temperature Sensor
for HVAC Applications**



EE150

Humidity and Temperature Sensor for HVAC Applications

The EE150 is a compact, accurate and reliable sensor for cost effective measurement of relative humidity (RH) and temperature (T) in HVAC applications.

Long-Term Stability and Protection

It employs an E+E capacitive humidity sensing element providing excellent long-term stability. The E+E proprietary coating together with the PTFE (Polytetrafluoroethylene) filter cap ensure outstanding protection against contamination.

Easy Installation and Flexibility

The compact IP65/NEMA 4X enclosure for wall and duct mount together with the Ø6 mm stainless steel probe minimize installation costs. External mounting holes allow installation with closed cover, the electronics are protected against construction site pollution. The EE150 is available with analog current or voltage outputs for RH and T.

Configurable and Adjustable

With an optional configuration kit and free E+E software, users can set the T output scaling and perform 1- or 2-point adjustment for RH and T.

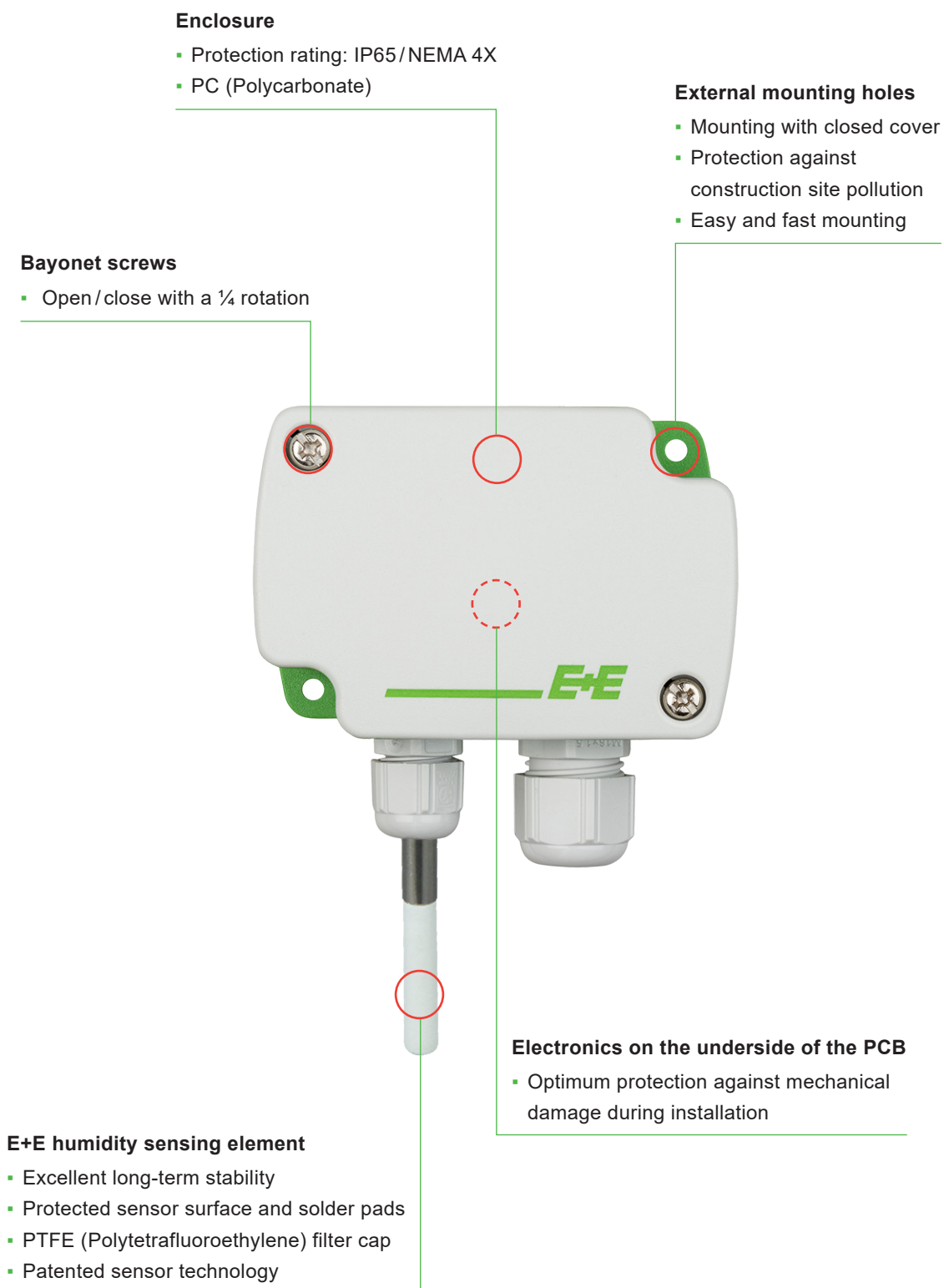


EE150 humidity and temperature sensor for wall mounting



EE150 humidity and temperature sensor for duct mounting

Features



Inspection certificate

According to DIN EN 10204-3.1

Features

Protective Sensor Coating

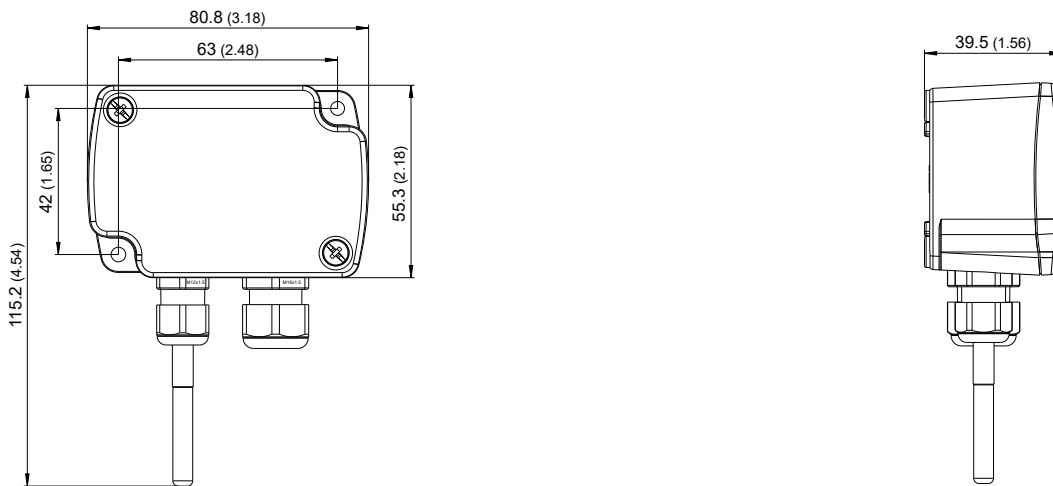
The E+E proprietary sensor coating is a protective layer applied to the active surface of the sensing element. The coating substantially extends sensor lifetime and ensures optimal measurement performance in corrosive environment (salts, off-shore applications). Additionally, it improves the sensors' long term stability in dusty, dirty or oily applications by preventing stray impedance caused by deposits on the active sensor surface.

Dimensions

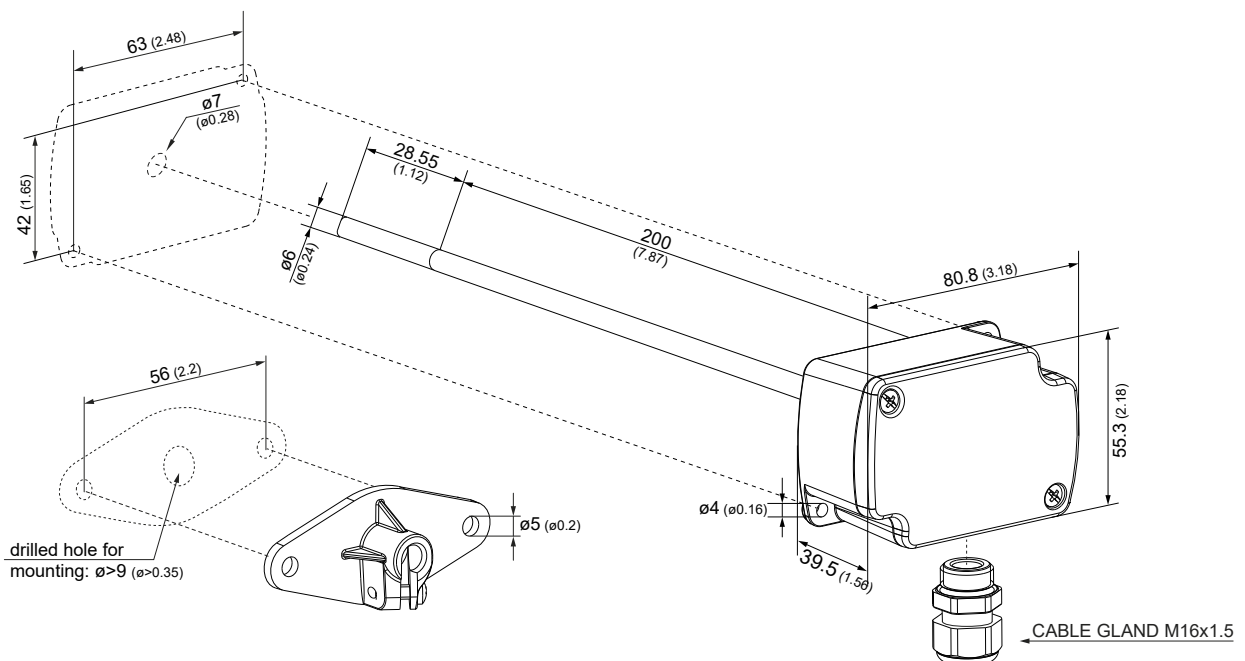
Values in mm (inch)

Type

Wall mount



Duct mount



Technical Data

Measurands

Relative Humidity (RH)

Measuring range	0...100 %RH, non-condensing
Accuracy @ 20 °C (68 °F)	±3 %RH (0...90 %RH), otherwise ±5 %RH
Temperature dependency, typ.	±0.03 %RH/°C

Temperature (T)




Measuring range	-5...+55 °C (23...131 °F)
Accuracy @ 20 °C (68 °F)	±0.3 °C (±0.5 °F)

Outputs

Analogue

RH: 0...100 %, T: see ordering guide	4 - 20 mA (2-wire) 0 - 10 V	$R_L \leq 500 \Omega$ $0 \text{ mA} < I_L < 1 \text{ mA}$	$R_L = \text{load resistance}$ $I_L = \text{load current}$
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General

Power supply class III  USA & Canada: Class 2 supply necessary, max. voltage 30 V DC		for 0 - 10 V for 4 - 20 mA	15 - 35 V DC or 24 V AC ±20 % $10 \text{ V} + R_L \times 20 \text{ mA} < U_V < 35 \text{ V DC}$	$R_L = \text{load resistance}$
Current consumption, typ.	DC supply AC supply		5 mA 13 mA _{rms}	
Electrical connection			Screw terminals max. 1.5 mm ² (AWG16)	
Cable gland			M16x1.5/UL94 V-2	
Humidity working range			0...100 %RH, non-condensing	
Temperature working range			-5...+55°C (23...131 °F)	
Storage conditions			-25...+60 °C (-13...+140 °F) 20...80 %RH	
Material	Enclosure Probe Filter cap		PC (Polycarbonate), UL94 V-0 approved Stainless steel 1.4571 PTFE (Polytetrafluoroethylene) filter, non-removable	
Protection rating	Enclosure		IP65/NEMA 4X	
Electromagnetic compatibility			EN 61326-1 FCC Part15 Class B	EN 61326-2-3 ICES-003 Class B Industrial environment
Conformity			 	
Configuration and adjustment			EE-PCS Product Configuration Software (free download) and configuration adapter	

Ordering Guide

Feature	Description	Code
Hardware Conf.		EE150-
	Model	RH + T M1
	Analogue output	0 - 10 V A3
		4 - 20 mA (2-wire) A6
Type	Duct mount No code	
	Wall mount T1	
Analogue Outp.	T unit	Temperature T [°C] No code
		Temperature T [°F] MB2
	T scaling low	0 No code
		Value ¹⁾ SBLValue
	T scaling high	50 No code
		Value ¹⁾ SBHValue

1) Within working range. For scaling beyond working range limits please contact the E+E sales representative.

Order Examples

EE150-M1A6

Feature	Code	Description
Model	M1	RH + T
Analogue output	A6	4 - 20 mA (2-wire)
Type	No code	Duct mount
T unit	No code	Temperature T [°C]
T scaling low	No code	0
T scaling high	No code	50

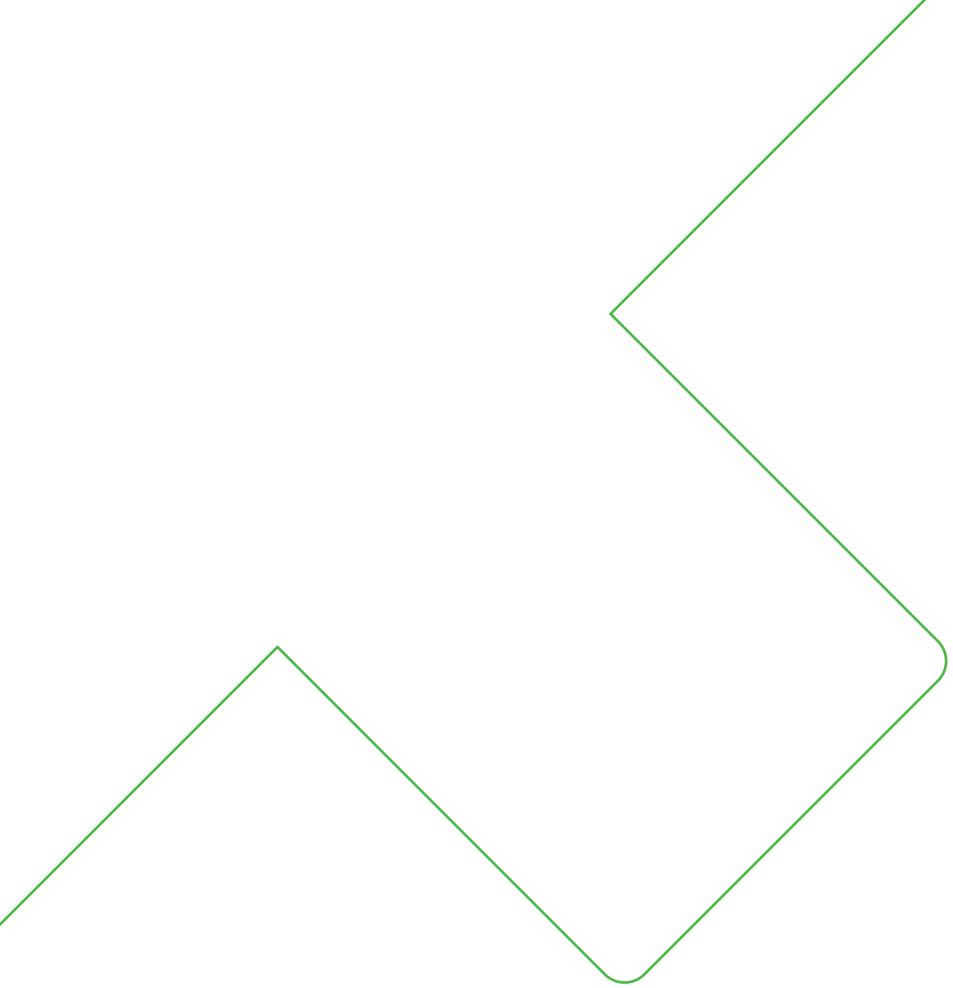
EE150-M1A6T1MB2SBL-5SBH104

Feature	Code	Description
Model	M1	RH + T
Analogue output	A6	4 - 20 mA (2-wire)
Type	T1	Wall mount
T unit	MB2	Temperature T [°F]
T scaling low	SBL-5	-5
T scaling high	SBH104	104

Accessories

For further information see datasheet [Accessories](#).

Description	Code
Product Configuration Adapter (see datasheet EE-PCA)	EE-PCA
Product Configuration Software (free download: www.epluse.com/configurator)	EE-PCS
Power supply adapter	V03
Conduit Adapter, M16x1.5 to ½" NPT	HA011110



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