



Humidity & Temperature Transmitter E2244

USER MANUAL

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Specifications

Sensor type	Digital combined RH and T sensor
Measurement range	Wall-mount version E2244: 0...100 %RH, -40...+60 °C Duct-mount version E2244-DM: 0...100 %RH, -40...+80 °C
Resolution	0,01 %RH 0,01 °C
Accuracy	±2,5 % RH / ±0,5 °C
Startup time	200 ms
Power supply	12...30 VDC, nominal 24 VDC
Power consumption	< 1,2 VA
Analog outputs	2 × 4-20 mA and 2 × 0-10 V
Analog output scales	0...100 %RH -40...+60 °C as standard, custom scales on request
Load resistance	$RL < (U_s - 2 \text{ V}) / 22 \text{ mA}$ for 4-20 mA outputs $RL > 250 \text{ k}\Omega$ for 0-10 V outputs
Cable connections	Screwless spring loaded terminals
Probe	Incorporated into case, grey painted aluminium body
Enclosure	Grey ABS, wall mount, protection class IP65
Dimensions	Wall-mount version: H135 × W145 × D55 Duct-mount version: H255 × W145 × D88
Weight	Wall-mount version: 200 g Duct-mount version: 250 g
Operating environment	Residential, Industrial and office indoor and outdoor places
Operating conditions	-40...+60 °C, 0...100 %RH (non-condensing) in non-aggressive environment
CE marking	according to 89-336-EEC and EN61326-1 requirements

Product Description

The E2244 is a new wall and duct mount humidity and temperature transmitter. The transmitter is intended for measurement of relative humidity and temperature in air and non-aggressive gases with high accuracy and stability.

The instrument utilises digital fully calibrated and temperature compensated combined relative humidity and temperature sensors with excellent repeatability and stability.

Temperature and humidity readings are transmitted over 0-10 V and 4-20 mA simultaneously on separate lines.

Safety requirements

Always adhere to the safety provisions applicable in the country of use.

Do not perform any maintenance operation with the power on. Do not let water or foreign objects inside the device.

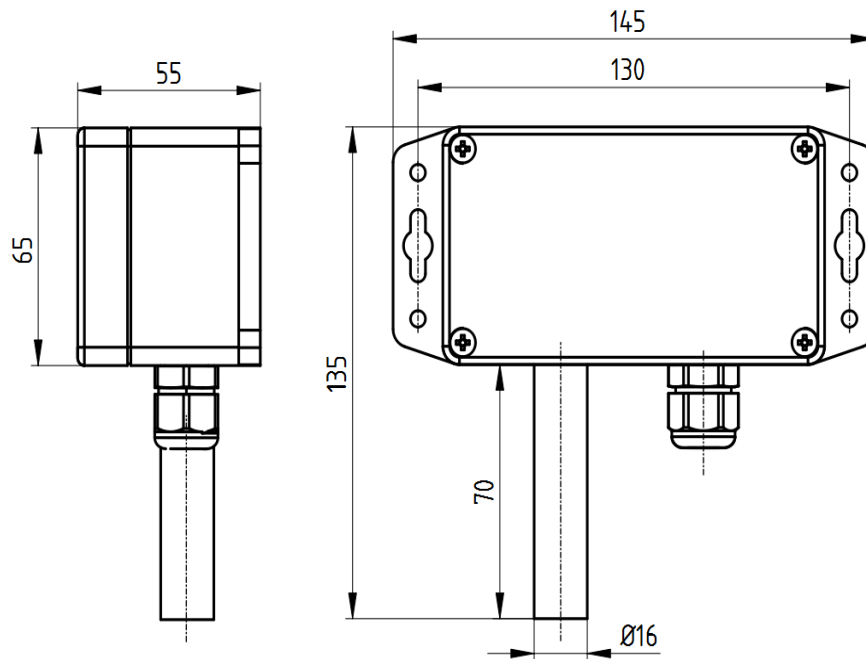
Operating conditions

The device should be used in explosion-safe (non ATEX-rated) indoor areas, without aggressive gases in the atmosphere. Allowed conditions are:

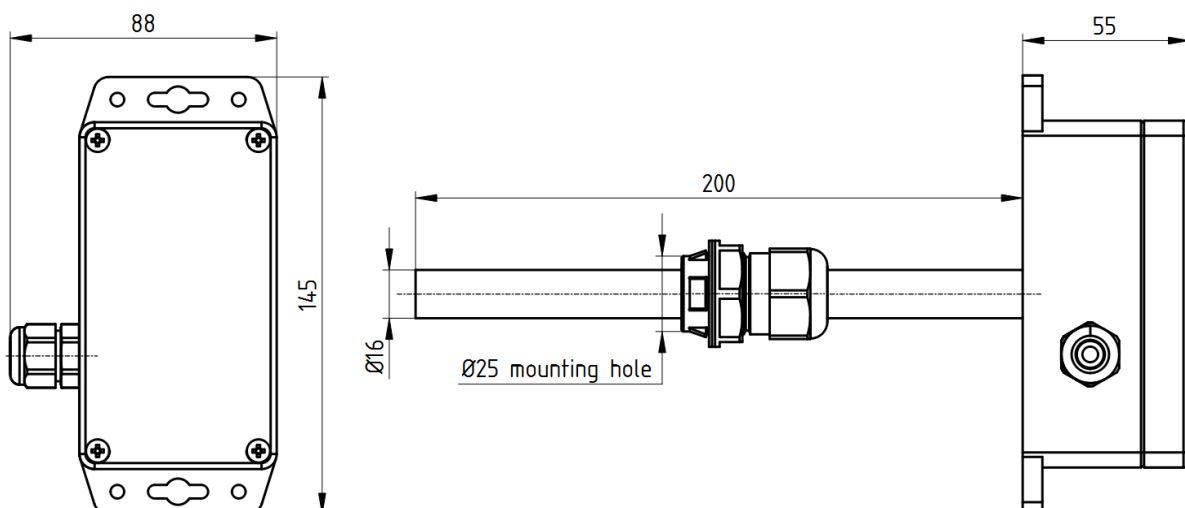
- Temperature in the range of -40...+60 °C;
- Relative humidity in the range of 0...100%;
- Non-condensing;
- Atmospheric pressure in the range of 84...106,7 kPa.

Mounting dimensions

Wall-mount version



Duct-mount version



Installation and connections

Unscrew four lid screws and detach the lid from the instrument. Plug the power cable and connect the analog outputs to the relevant devices according to the connection diagram.

The 0-10 V and 4-20 mA outputs are independent and can be used simultaneously.

Connection diagram

+U		Power +		+24 V
GND		Power -		0 V
GND		Analog GND		0 V
RH		Humidity mA		4-20 mA
TEMP		Temperature mA		4-20 mA
RH		Humidity V		0-10 V
TEMP		Temperature V		0-10 V

The relative humidity output range is 0-100 %RH.

The standard temperature output range is -40°C...60°C, custom ranges on request.

To calculate the values from readings, use the following formulas:

RH:

Voltage output, RH(%) = $U_{out} * 10$

Current output, RH(%) = $(I_{out} - 4) / 16 * 100$

T:

Voltage output, T(°C) = $U_{out} * 10 - 40$

Current output, T(°C) = $(I_{out} - 4) / 16 * 100 - 40$

Where U_{out} is voltage output in volts, I_{out} is current output in milliamperes.

Delivery set

- Humidity and temperature transmitter E2244
- Mounting accessories:
 - 4 screws with plastic dowels

Order code for E2244 options

E2244 options	Order code
Wall mount, -40...+60 °C	E2244
Duct mount, with stem Ø25×L200 mm, -40...+80 °C	E2244-DM
High accuracy ±1,8 %RH	E2244-A
Duct mount, with stem Ø25×L200 mm, -40...+80 °C; high accuracy ±1,8 %RH	E2244-DM-A

Warranty

This product is warranted to be free from defects in material and workmanship for a period of one year from the date of the original sale. During this warranty period, the Manufacturer will, at its option, either repair or replace a product that proves to be defective. This warranty is void if the product has been operated in conditions outside ranges specified by the Manufacturer or damaged by customer error or negligence or if there has been an unauthorised modification.



APL ASIA CO., LTD. Authorized Distributor

**Address: 11/129-132 Moo.5 Lamlukka Rd.,
T.Kookut, A.Lamlukka, Pathumthani 12130 Thailand.**

TEL: 0-2995-4461-4

Website: www.apl-asia.com

EMAIL: sales@apl-asia.com

LINE@: @APL-ASIA

