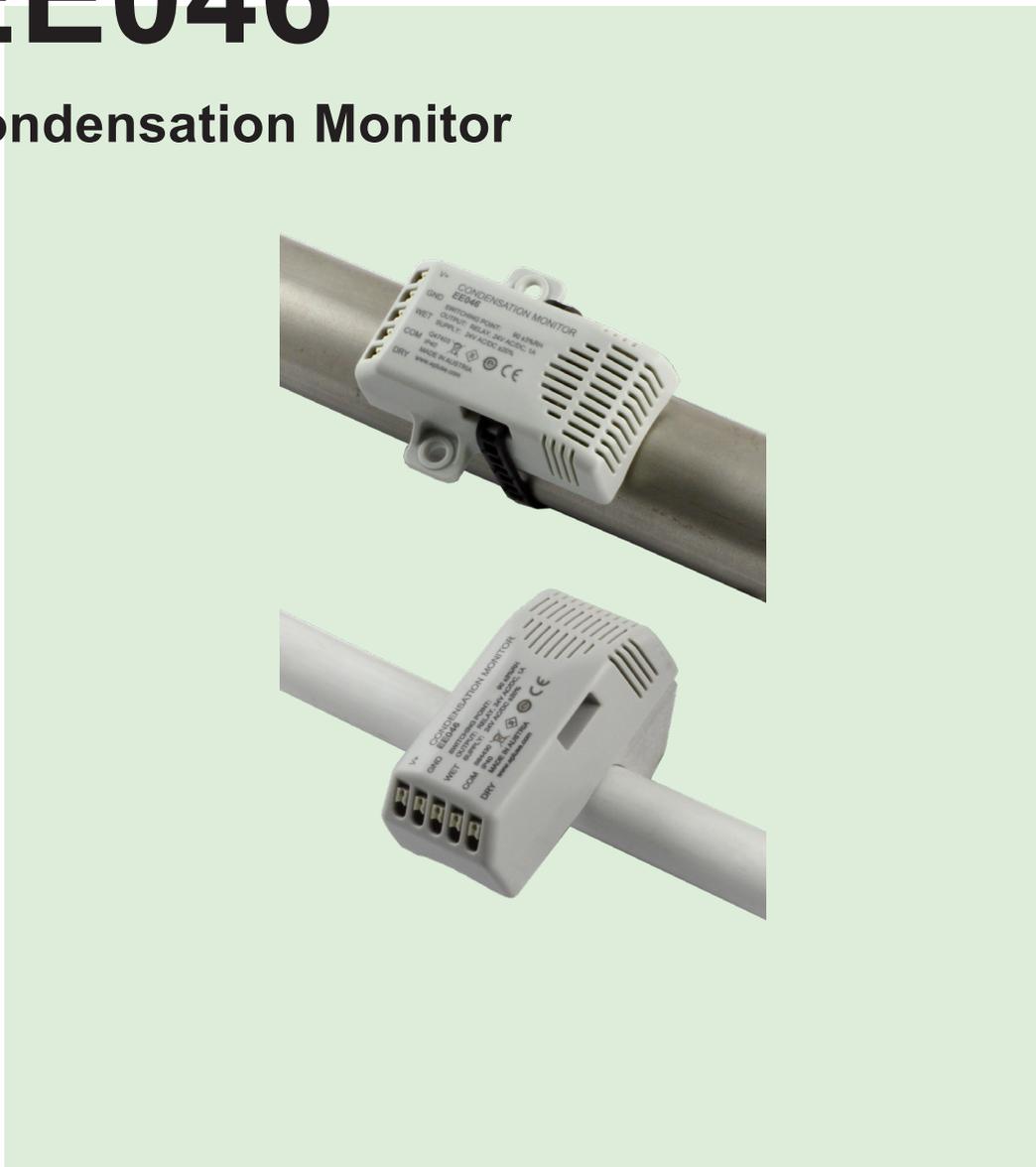


+ Datasheet EE046

Condensation Monitor



EE046

Condensation Monitor

The EE046 condensation monitor helps to prevent condensation on critical cold spots. With the help of its relative humidity (RH) sensing element, it reliably detects the danger of condensation just before it occurs.

Mounting Options

The EE046 is available in two variants. The wall / pipe mount type is appropriate for installation on flat surfaces and on pipes with a maximum diameter of 50 mm (2"). It is mounted on cooling ceilings, on cooling or cold water piping, cooled surfaces and chilled beams. The snap-on type can be mounted on plastic and aluminium composite pipes with 16 mm or 20 mm diameter. It's typical applications are cooling and heating by concrete core activation.

Reliable Anti-Condensation Safe Guard

Condensation on a surface occurs when the relative humidity of the air close to the surface reaches 100 %RH. Because of the very good thermal coupling with the surface, the EE046 measures the RH of the air directly at surface temperature. Its properties make it the ideal choice for applications where control guards are required to prevent dripping or mould.

Early Detection of Condensation Risk

The relay output provides an early warning before condensation actually happens. It also indicates a power supply failure or a broken cable. A status LED indicates normal operation, alarm or power supply failure. The E+E proprietary coating protects the humidity sensor against dust and dirt.



EE046 wall/pipe mount



EE046 snap-on mount

Features

Performance

- Wide RH/T working range
- Fast response time
- Sensing element protection
- Protected electronics board

Output and connection

- Relay output for early warning
- Indication for power supply / cable failure
- 5 poles push-in spring terminal

Mounting

- Compact design and easy mounting
- Versatile mounting options

LED status indication

Enclosure

- IP40 protection rating
- Polycarbonate, UL94 V-2 approved

Wall/pipe mount

Snap-on mount

- For pipe diameter N16 and N20



Features

Protective Sensor Coating

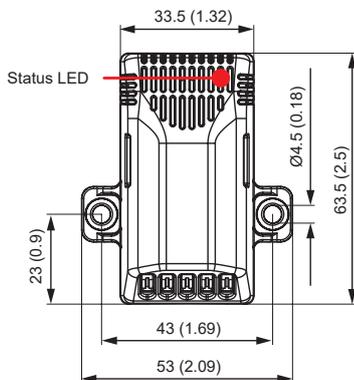
The E+E proprietary sensor coating is a protective layer applied to the active surface of the sensing element. The coating substantially extends sensor lifetime and ensures optimal measurement performance in corrosive environment (salts, off-shore applications). Additionally, it improves the sensors'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

Dimensions

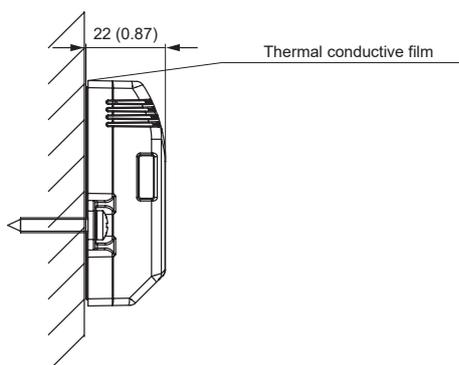
Values in mm (inch)

Wall / Pipe mount

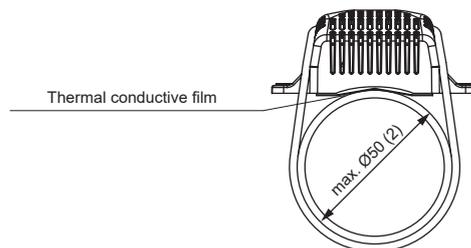
Front view



Wall mount



Pipe mount

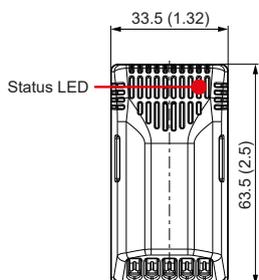


Dimensions

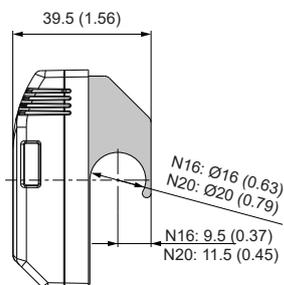
Values in mm (inch)

Snap-on mount

Front view

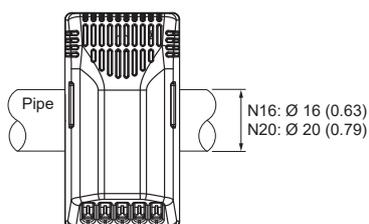


Side view



Snap-on mount

On Pipe



Technical Data

Measurands

Relative Humidity (RH)

Working range	10...100 %RH, non condensing
Threshold @ 24 V AC/DC, 20 °C (68 °F)	90 ±3 %RH
Hysteresis	<p>Hysteresis 5 %RH</p> <p>85 ±3 %RH 90 ±3 %RH</p>
Response time t_{90} , change of the relative humidity (RH) change of the surface temperature	<25 s <3 min

Technical Data

Output

Relay	Changeover contact, potential free
Switching capacity, max.	24 V AC/DC, 1 A
Contact functions	WET DRY Contact for RH > threshold, Power off (NC) Contact for RH < threshold, Power on (NO)

General

Power supply class III  USA & Canada: Class 2 supply necessary	24 V AC/DC ±20 %
Current consumption	@ 24 V DC <6 mA @ 24 V AC <10 mA _{rms}
Electrical connection	5 pole push-in terminal, max. 1.5 mm ² (AWG 16)
Protection	Sensing Element Electronics E+E proprietary coating Varnish
Relay status indication	LED, red
Temperature range	Operation 0...50 °C (32...122 °F) Storage -20...+70 °C (-4...+158 °F)
Weight, typ.	Wall/pipe mount version 60 g Snap-on mount version 80 g
Enclosure	Material PC (Polycarbonate), UL94 V-2 approved Protection rating IP40
Electromagnetic compatibility	EN 61326-1 EN 61326-2-3 Industrial environment FCC Part15 Class A ICES-003 Class A
Conformity	 

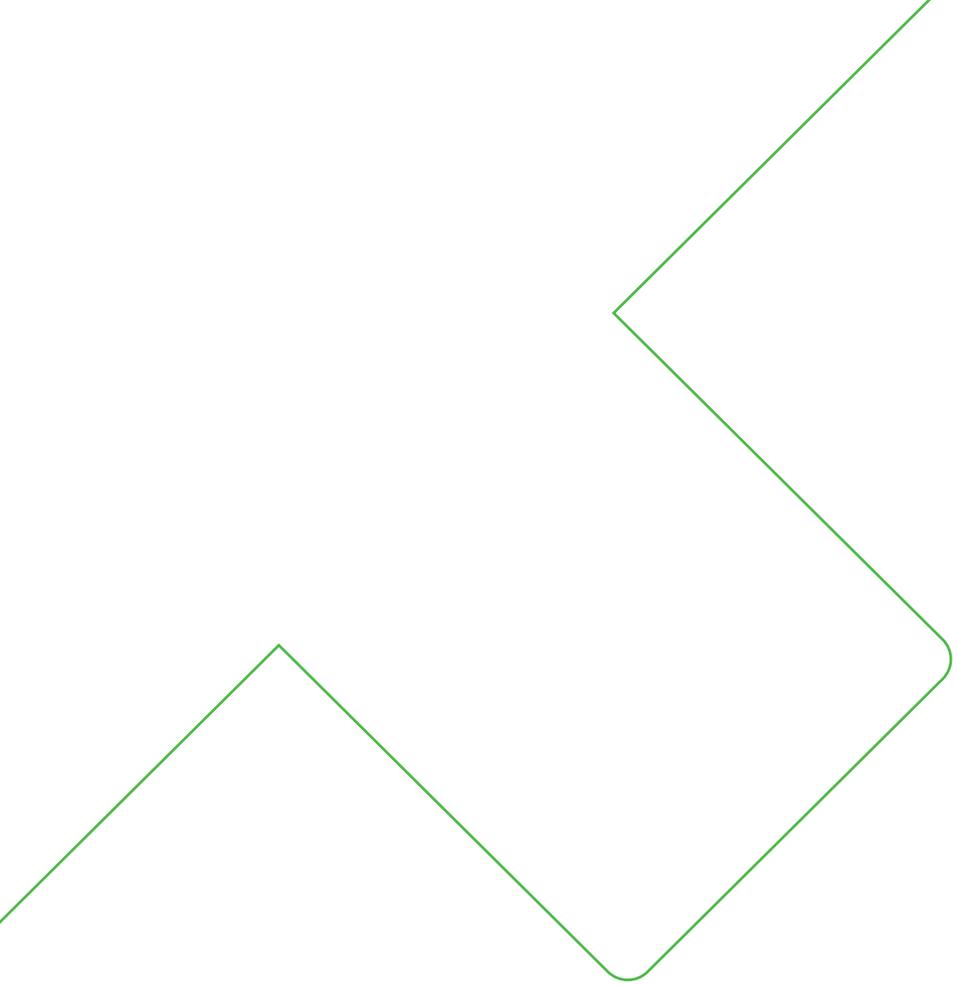
Ordering Guide

Feature	Description	Code	
Hardware		EE046-	
	Type	Wall/pipe mount	T11
		Snap-on mount	T25
	Pipe diameter	16 mm (0.63")	N16
20 mm (0.79")		N20	

Order Example

EE046-T25N16

Feature	Code	Description
Type	T25	Snap-on mount
Pipe diameter	N16	16 mm (0.63")



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