

# EE046

## Condensation Monitor

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

### Mounting options

EE046 is available in two variants. The wall mount/pipe mount model 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 model can be mounted on plastic and aluminium composite pipes with 16 mm diameter. Typical applications for this model are cooling and heating by concrete core activation.

### Reliable anti-condensation safe guard

Condensation on a surface occurs when the humidity of the air close to the surface reaches 100 %. 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.



## Typical Applications

- Concrete core activation
- Chilled beams
- Switching cabinets
- Climate control

## Features

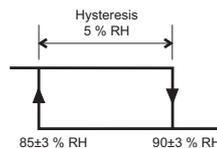
- Fast response time
- Dust protection
- Compact design and easy mounting
- LED status indication

## Technical Data

### Measurand

#### Humidity (RH)

Working range	10...100 % RH
Threshold at 20 °C (68 °F), 24 V AC/DC	90 ± 3 % RH
Hysteresis	



Response time at change of the surface temperature	$t_{90} < 3 \text{ min}$
Response time at change of the relative humidity	$t_{90} < 25 \text{ s}$

## Output

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

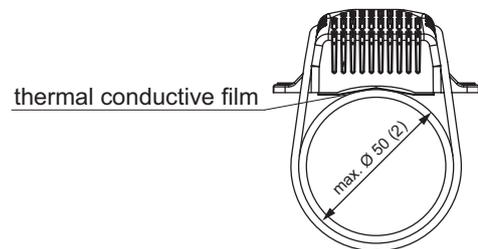
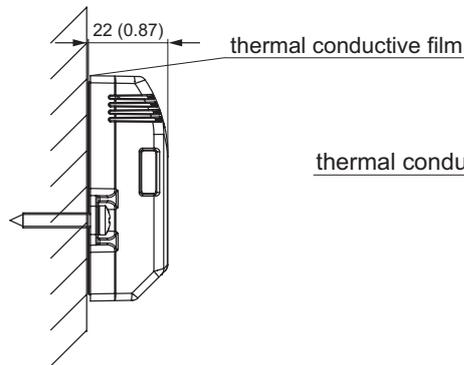
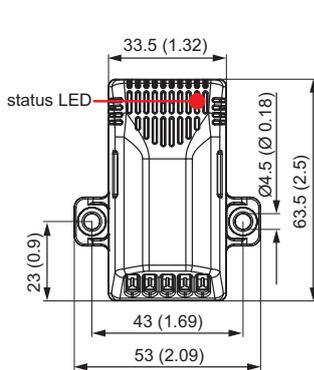
## General

Supply voltage (Class III) 	24 V AC/DC ± 20 %
Current consumption	< 6 mA for 24 V DC supply < 10 mA for 24 V AC supply
Relay status indication	LED, red
Electrical connection	5-pole push-in terminal, max. 1.5 mm <sup>2</sup> (AWG 16)
Protection sensor / electronics	E+E proprietary coating / varnish
Housing protection class	IP40
Housing material	Polycarbonate, UL94-V2 approved
Electromagnetic compatibility	EN 61326-1 Industrial environment
Temperature range	Operation 0...50 °C (32...122 °F)
	Storage -20...70 °C (-4...158 °F)
Weight	Wall mount/pipe mount version: approx. 60 g
	Snap-on mount version: approx. 80 g

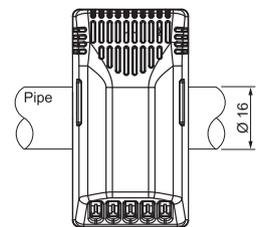
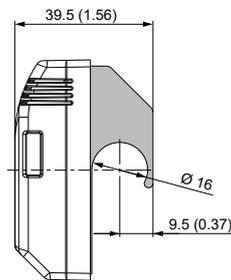
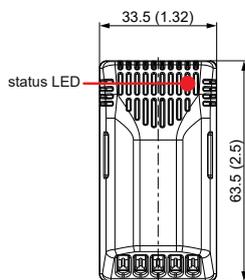


## Dimensions (mm/inch)

### Wall mount/Pipe mount



### Snap-on mount



## Ordering Guide

Type	Wall/pipe mount	EE046-
	Snap-on mount for 16 mm pipe	no code T25