

# EE45 Series

## Condensation Monitor

EE45 condensation monitors are used to monitor the formation of condensation on chilled ceilings and to prevent condensation at critical spots of heating-, ventilation- and air conditioning systems. It is also used as a dewpoint monitor for systems operating near the dewpoint.

Because of the temperature coupling between the condensation monitor and the environment, the relative humidity is a measure for the dewpoint. The condensation monitor measures the relative humidity near the dewpoint using its high-quality capacitive RH sensor. At reaching the switching point of 90% RH the output will provide an early warning signal for the initiation of control steps (increasing the initial water temperature, reducing the cooling capacity, switching on the heating, etc..).

A special coating protects electronics and sensor against contamination.

The EE45 series can be mounted on pipes, ducts and walls.



### Typical Applications

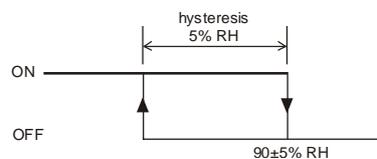
**chilled ceilings**  
**heating-, ventilation- and**  
**air conditioning systems**

### Features

**early detection of condensation danger**  
**compact design**  
**fast response time**  
**protection against contamination for**  
**sensor & electronics by a special coating**  
**simple and easy mounting**

### Technical Data

Humidity sensor	HC103
Working range	10...100% RH
Output	floating photocoupler output
Switching point at 25 degC (77°F)	90±5% RH



Max. switch voltage	< 50V DC
Max. switch current	< 10 mA DC
Current consumption	< 10 mA <sub>eff</sub>
Supply voltage	SELV 24V AC ±20% <span style="float: right;">SELV = Safety Extra Low Voltage</span>
Response time at change of duct resp. wall temperature	t <sub>90</sub> < 3 min.
Response time at change of rel. humidity	t <sub>90</sub> < 25 sec.
Connection	4 leads cable
Cable length	see to order guide
Sensor / electronic protection	by special coating (permeable for water vapour)
Electromagnetic compatibility according	EN 61000-6-2    EN 61000-6-3 EN 61326-1+A1+A2
Temperature range	Working temperature range    0...50 degC (32...122°F) Storage temperature range    -20...70 degC (-4...158°F)

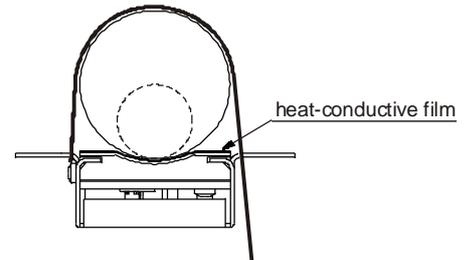
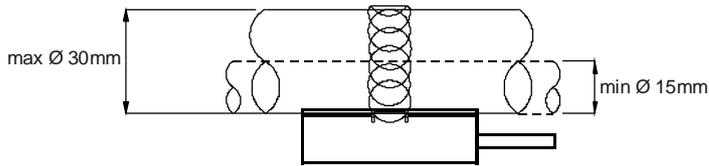


## Dimensions (mm)

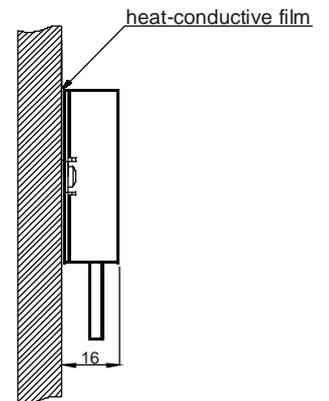
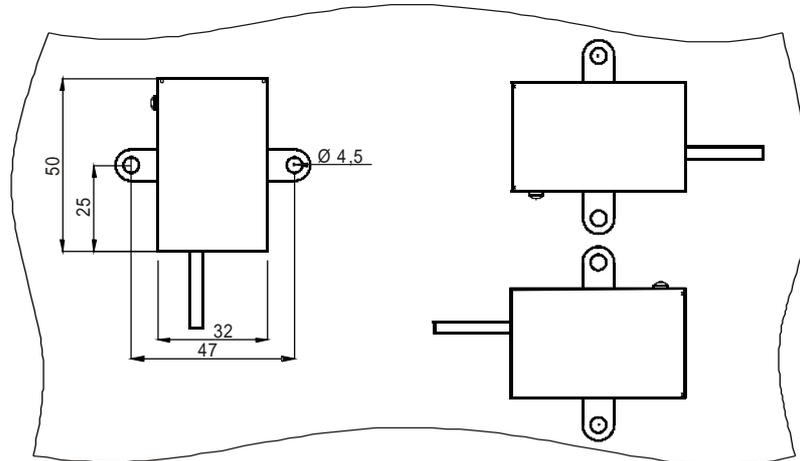
## Installation

1 mm = 0.03937 inch / 1 inch = 25.4 mm

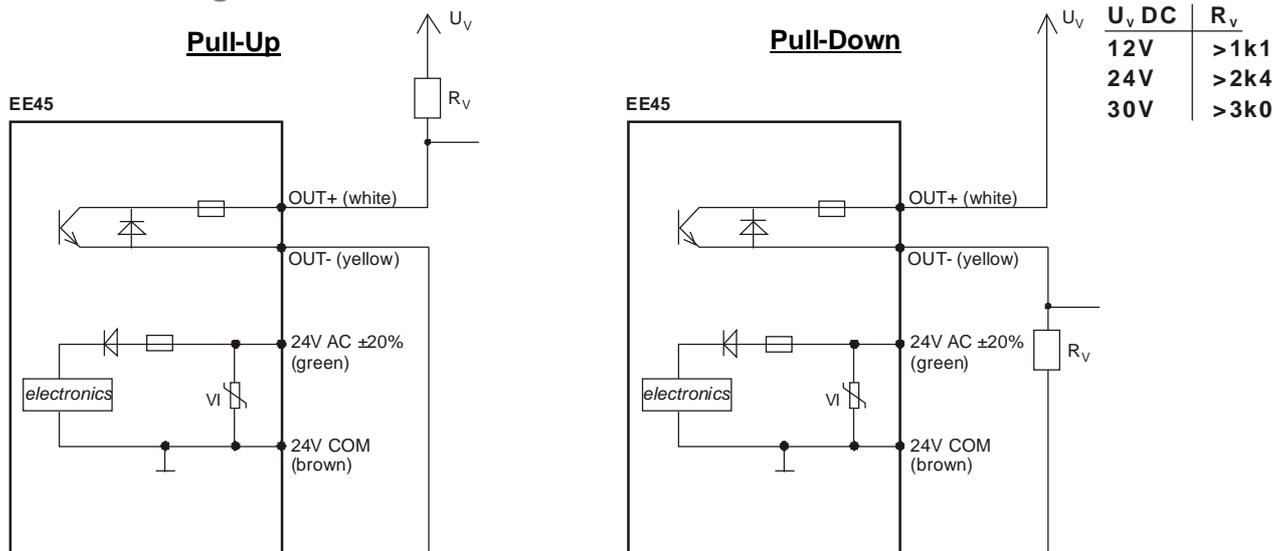
### Pipe / Duct mounting



### Wall mounting / versions



## Connection Diagram



## Ordering Guide

## Order Example

**Cable length**    2m (6.6ft)    **(K200)**  
                          5m (16.4ft)    **(K500)**

**EE45-K500**  
 Condensation Monitor EE45 Series  
 Cable length: 5m (16.4ft)