Digitron
HLX46 Series

Condensation Monitor

HLX46 condensation monitors are used to monitor the formation of condensation on chilled ceilings or to prevent condensation at critical spots of heating-, ventilation- and air conditioning systems. It is also used as a dew point 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 dew point. The condensation monitor measures the relative humidity near the dew point using its high-quality capacitive 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...). An additional status light indicates the condensation danger.

Thanks to the special protection coating, sensor and electronics are highly insensitive to dust and dirt.
HLX46 condensation monitors can be mounted on walls, ducts and pipes up to 2".

HLX46

Typical Applications

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

Features

early detection of condensation danger
compact design
fast response time
dust protection
simple and easy mounting
status indication

Technical Data

Humidity sensor	HC105
Working range	10...100% RH
Switching point at 20°C (68°F)	90±3% RH
Switching hysteresis	

Hysteresis 5% RH

85±3% RH   90±3% RH
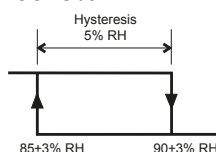
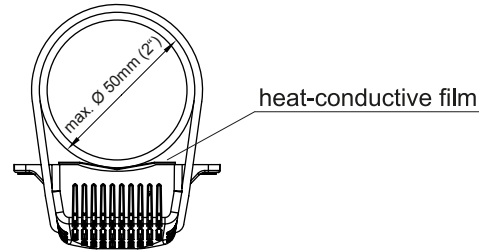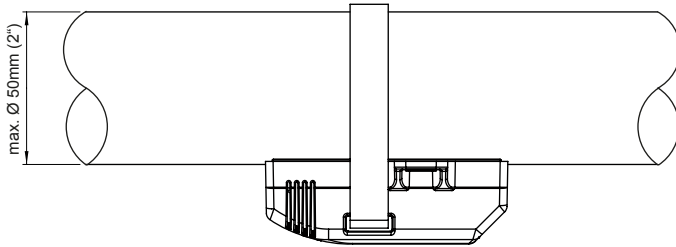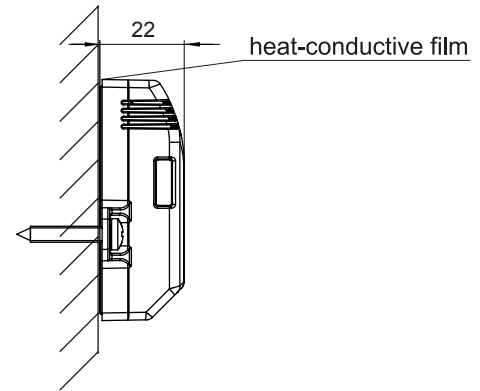|	
Response time at change of pipe/wall temperature	t_{90} < 3 min.
Response time at change of relative humidity	t_{90} < 25 sec.
Electrical output	potentialfree relay with changeover contact
Switching capacity	max. 24V AC/DC, 1A
Supply voltage	24V AC/DC ±20%
Current consumption at 24V DC	< 3mA
Relay status indication	LED, red
Electrical connection	5-pole push-in terminal, max. 1.5 mm² (AWG 16)
Dust protection	by special coating (permeable for water vapour)
Housing protection class	IP40
Housing material	PC, fire resistant according UL94-V0
Electromagnetic compatibility	EN 61326-1 EN 61326-2-3 industrial environment
Temperature range	working temperature range 0...50°C (32...122°F)
	storage temperature range -20...70°C (-4...158°F)
Weight	approx. 60g

CE

HLX46

Dimensions (mm)
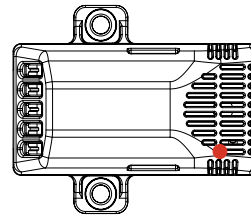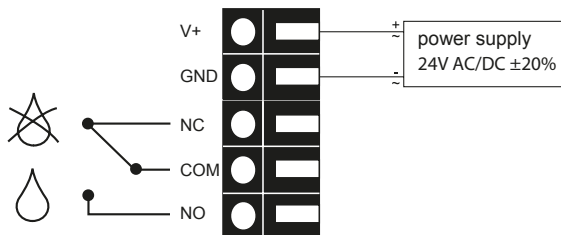
1 mm = 0.03937" / 1" = 25.4 mm

Pipe mounting

max. Ø 50mm (2")

heat-conductive film

Wall mounting

33.5

Ø4.5

63.5

23

43

53

22

heat-conductive film
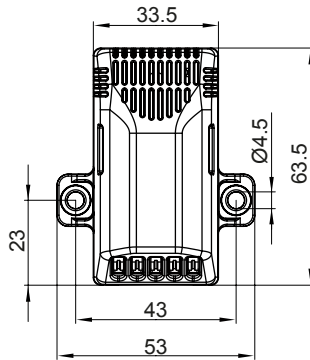
Connection Diagram

Status Indication

V+
GND
NC
COM
NO

power supply
24V AC/DC ±20%

██████ LED continuous red: Operating < 90% RH

●●●● LED blinking red: Condensation danger

Ordering Guide

Condensation Monitor HLX46   (HLX46)