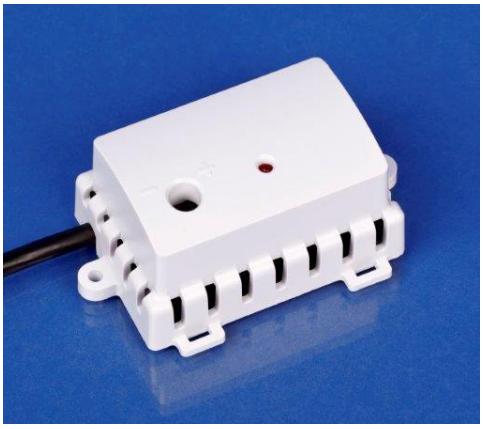
Condensation Prevention Detector

WCD-single

Feb. 17

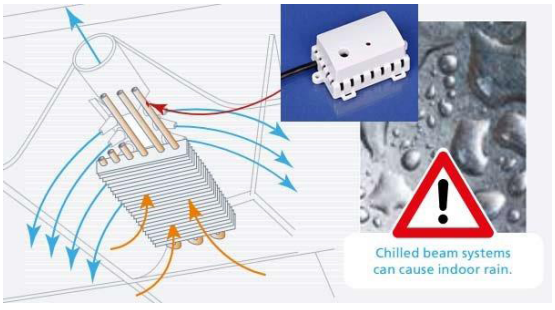


Features

- **Screw or strap-on mounting**
- **Voltage Free Contact or Output**
- **Adjustable set point**
- **LED indication of status**
- **Low smoke & fume flying lead cable**
- **Prevents ¨indoor rain¨ condensation**
- **Enabless optimal efficiency for chilled beam applications**

Technical Data

Output	VFC 24Vac/dc@ 1A resistive SPDT
Supply voltage	24Vdc ±5% or 24Vac ± 10%
Supply current	20 mA max.
Response time	< 5 sec.
Measurem. Accuracy	
Temp	± 0,2°C
rH	± 5%
Flying lead length	5 m Low Smoke Zero Halogen (LSZH)
Dimensions (WxHxD)	73 x 48 x 30 mm
Mounting plate	1 mm thick stainless steel
Weight	80 g
Stratutory Compliance	
EMC	
Emission	EN61000-6-3
Immunity	EN61000-6-3
Connections	
Red	+24Vac/dc
Blue	0V
Yellow	N/O
Black	Common



Application/Technical overview

The WCD condensation prevention sensor is designed to meet the requirements for a low cost device to provide early warning of condensation conditions.

Applications include chilled beam/ceiling systems where contol safeguards are requiried to avoid “inddor rain”.

The sensor provides a volt-free contact and is housed in a small enclosure which can be strapped to the surface that requires monitoring.

Operation

The WCD operates on dew point temperature rather than a fixed value of relative humidity.

The dew point is calculated from a temperature compensated RH element and a high accuracy thermistor which are thermally bonded to the metal plate of the WCD.

The switching set point is determined as 3 degree +/- the point offset above the current dew point.

The relay is activated when the dew point temperature is below the offset set point.

NB. To obtain maximum accuracy over a narrow band of RH-values, the device will not perform valid circulations on levels of RH below 75%.

Ordering Code

WCD- single	Condensation Prevention Detector, 5 m lead

Installation

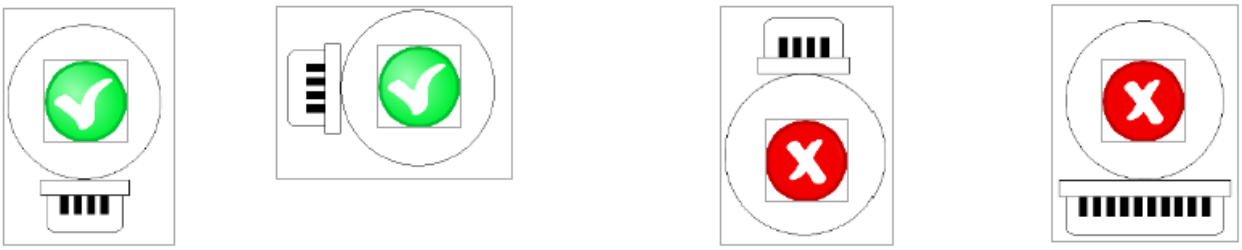
Antistatic precautions must be observed when handling these sensors. The PCB contains circuitry that can be damaged by static discharge.

1. The WCD should only be installed by a competent, suitably trained technician.
2. Ensure that all power is disconnected before carrying out any work on the WCD.
3. Choose a suitable location and mount the detector (see page 3). The unit should be mounted as close as possible to the chilled water inlet, or the coldest part of the system to be measured. Ambient air must be allowed to enter and circulate around the detector element.
4. **Important!**

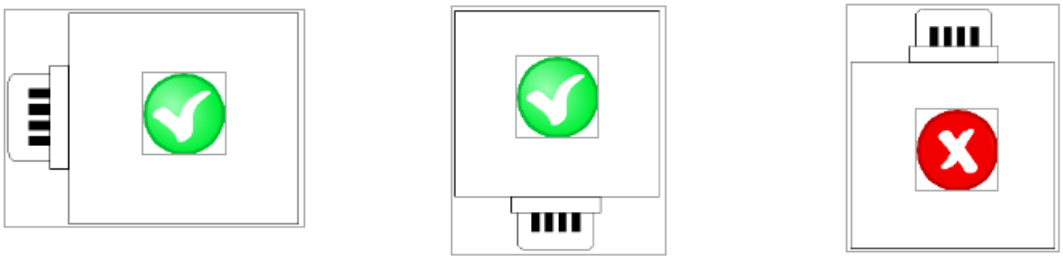
   It is essential thar no insulating is between the detector and the mounting surface. The detector plate must be kept at the same temperture as the potential condensing surface.
5. The detector can be simply fixed in place on a pipe with cable-ties with with the 2 self-tapping screws provided.
6. If the detector is to be mounted onto a pipe, it is important the unit is mounted length-wise to ensure maximum thermal transfer efficiency. See.page 3.
7. Terminate the flying lead cores as required and ensure that the supply voltage is within the specification tolerances.

Mounting Position

Round section surface:



Square or rectangular section surface:



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