

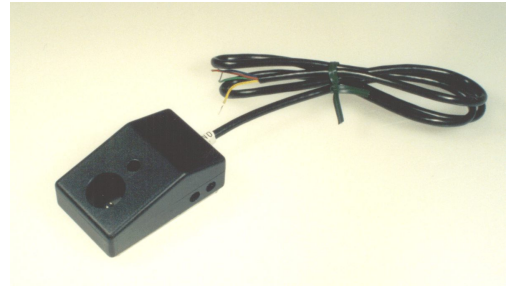
Condensation detectors

Overview

Low cost self contained sensors for detecting the onset of condensation. The units are available in normally open or normally closed versions providing volt-free contact or current outputs. These units are installed on the surface requiring monitoring.

Typical applications include:-

- Detecting condensation in chilled beam airconditioning systems thus preventing "indoor rain"



Specifications

Operating characteristics

Output signals, NO version:

2-wire mode	dry < 5mA	wet >10mA
4-wire mode	dry Open cct	wet 1K

Output signals, NC version:

2-wire mode	dry >10mA	wet <5mA
4-wire mode	dry 1K	wet Open cct

In 4-wire mode, output is isolated from supply

Operating conditions 0 to +40°C

Electrical specifications

Supply voltage	15-30VDC or 21VAC
Maximum supply voltage	40VDC or 27VAC
Max operating current	14mA DC
Connections	Flying lead

Mechanical details

Dimensions	90 x 45 x 32mm
Weight	140g

Features

- Detect onset of condensation
- Suitable for chilled beam airconditioning systems
- Volt free or current output
- Normally open or normally closed versions
- Easily installed using cable tie or metal strap supplied
- 24V AC or DC powered

Connections

2-wire connection:

Red	+24V
Blue	0V or loop input

4-wire connection:

Red	24V AC/+24VDC
Blue	0V
Green	Volt free contact
Yellow	Volt free contact

Product codes

Condensation detector normally open: CD1-NO
Condensation detector normally closed: CD1-NC

These units have 1m flying leads. Other lengths available on request

Installation

The unit should be mounted on a pipe or surface using a cable tie or metal strap (supplied with unit). Holes in the metal strap have 55mm separation and will accept 3mm diameter screws. It is highly recommended that the unit be mounted with the hole facing downwards to prevent matter falling in. Where the unit is mounted on a pipe, the long axis of the unit must be along the length of the pipe. The unit should be mounted close to the coldest part of the pipe or surface being monitored. These units are intended to detect the onset of condensation and although water resistant, should not be allowed to fill up with water for long periods of time.

Cleaning

If it is suspected that dirt on the sensing element is affecting performance, swab with a tissue soaked in water and then wipe with a tissue dampened with isopropanol. If necessary, a stiff brush may be used to remove dirt. Ensure that the whole of the sensing element is clean; conductive dirt in a small area will prevent operation.

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Troubleshooting

These condensation detectors are not likely to become very wet in normal operation, but in the early stages of a project they may be subjected to excessive condensation and become so wet that they take an excessive time to dry out. This can give a false impression that they have a fault that causes them to be permanently giving an alarm signal. If this happens, clean the sensing element with a clean tissue and some isopropyl alcohol. This will cause any water on the sensing element to dry out quickly.

