

# Dew Point Sensor



The TPDP Dew Point Sensor is designed for applications with chilled beams and other cooling coils to prevent the onset of condensation. There are two versions, the clamp-on (TPDP/CS) or flying lead (TPDP/FL).

The TPDP/CS unit is strapped to the pipe surface via the supplied banding while the TPDP/FL is mounted in close proximity to the cooling coil with its flying lead temperature sensor strapped to the coil. The sensors measure the pipe temperature and surrounding relative humidity through the on board humidity sensor and from these two readings, continuously calculate the dew point temperature and provides an early indication via either a 0-10V or Volt Free relay output of the onset of condensation to prevent what is commonly called 'indoor rain'.

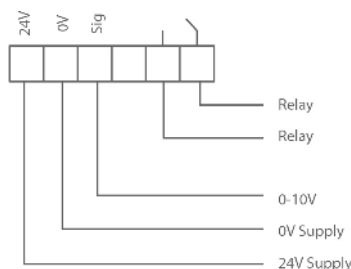
The TPDP has LED status indication as well as adjustable switching hysteresis for relay operation.

**Please note that the sensor will require a 30 minute 'settling period' after installation to allow the sensor to acclimatise.**

## Specification

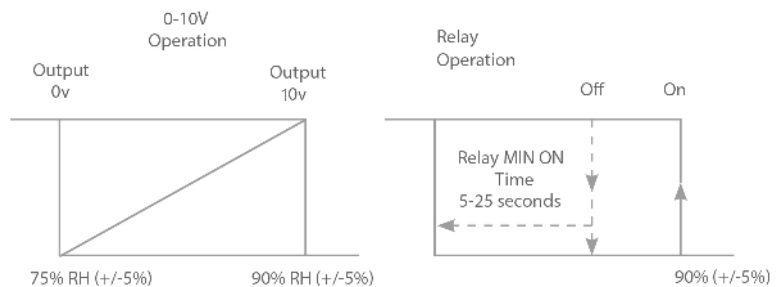
Material Body:	Flame retardant to UL94-V0
Cable (Connections):	LSZH
0-10V Output (3mA load):	Dry = 0V, wet = 10V
Relay Output (VFC-SPST):	24V - 0.5A max
Relay Switch Point:	90% RH (+/- 5%) On
MIN Relay ON Time:	5-25 seconds
Measurement Accuracy:	Temperature +/- 0.3°C Humidity +/- 5%
Response Time:	30 seconds
Power Supply:	24V AC/DC +10%
Power Consumption:	3VA
Operating Temperature:	0 to +50°C
Operating Humidity (RH):	10 - 95%
Enclosure Mounting:	Mounting plate
Mounting Protection Class:	IP40
EMC Compliance:	EN61000-6-2 immunity EN61000-6-3 emissions
Dimensions (mm):	80 x 60 x 30
Country of Origin:	UK
Product Code:	TPDP/CS (clamp-on version) TPDP/FL (flying lead version)

## Connections



## Flying Lead Wiring

- Brown = 24V
- White = 0V
- Pink = Dew point 0-10V signal
- Grey = no connection
- Yellow = Relay (normally open contact)
- Green = Relay (normally open contact)



## Installation of TPDP/CS

The sensor is designed to fit pipe sizes from 10mm - 51mm. Please ensure that it is mounted in the most suitable location as near as possible to the chilled water inlet or at the coldest part of the chilled pipework.

It is extremely important to ensure that all of the temperature measuring strip on the underneath of the product is in complete contact with the pipe. Ambient air needs to be allowed to circulate through the TPDP/CS housing to ensure the humidity measurement can be accurately taken.

The TPDP/CS is fitted to the pipe via the supplied banding. This is tightened to ensure the TPDP/CS is securely fastened to the chilled pipework.

**The Dew Point Sensor is designed to be used with all Titan BACnet controllers**