

Datasheet - 8.320

QH.CS(.02) Condensation sensors

The QH.CS is a cost-effective dew point monitor designed to protect chilled ceilings against condensation. The device controls a servo motor that interrupts the chilled water flow or increases the chilled water temperature as soon as condensation is likely to occur. The condensation sensor is available with an integrated sensor (type QH.CS) or with an external sensor (type QH.CS.02).

Technical specifications

Power supply	18 – 30 V (AC/DC)
Power consumption	42 mA (DC), 100 mA (AC)
Relay output (changeover contact)	1 A, 24 V (AC/DC)
Ambient temperature	0 – 50 °C
Enclosure protection class	IP65
Weight	approx. 130 g (QH.CS) approx. 220 g (QH.CS.02)
Dimensions (B x H x D)	See dimension drawing on page 3
Sensor cable QH.CS.02	2 x 0,75 mm ² , length 2 m
Cable entry	1 x M16 (QH.CS) 2 x M16 (QH.CS.02)
Housing	Housing: PBT, ~ RAL 7016 Cover: PC, transparent Ring: PBT, ~ RAL 5015
Seal	EPDM
Sensor strip	FR4 with aluminium core



Features

- ✓ Adjustable relay output
- ✓ Status indication via LED
- ✓ Fast wiring via screw-on cover
- ✓ Tool-free removable spring terminals
- ✓ Aluminium condensation sensor strip for fast response time

Interested in or questions about QH.CS?

Our experts are happy to advise you on the application of this product within your project or installation.

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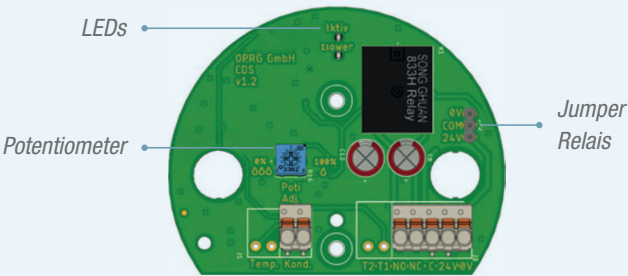
Versions



Operation

The resistance of the condensation sensor decreases as relative humidity increases and, via a latching relay, switches a changeover contact when the dew point is reached. The switching point can be precisely adjusted using a potentiometer.

In the non-activated state, contact C-NO is closed and C-NC is open when the power supply is present. The green LED is illuminated. When the relay switches due to moisture, the red “Active” LED on the PCB lights up.

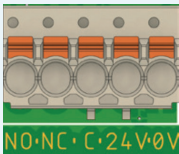


Switching threshold

- ☹ Potentiometer 100% (highest sensitivity) : approx. 88% RH
- ☹☹ Potentiometer 50% (medium sensitivity) : approx. 92% RH
- ☹☹☹ Potentiometer 0% (lowest sensitivity) : approx. 96% RH

Electrical connection

- 0 V 0 V / GND
- 24 V 24 V AC/DC
- C Common
- NC Normally Closes
- NO Normally Open



For relays with an internal switchable jumper, the supply voltage or GND can be connected to the relay contact via the supplied jumper. This function is intended for DC operation only and is not suitable for AC operation. An external jumper is not required. When using this 3-wire connection, the maximum current of 1 A must not be exceeded. When used, a jumper must be placed in the following positions:

0V	COM	24 V	Bridge from GND (0V) to relay
0V	COM	24 V	Bridge from 24V DC to relay



Switching status

No power
C+NC closed, C+NO open

Power present
C+NC open, C+NO closed, **Power** LED on

Moisture > set value
C+NC closed, C+NO open, **Active** LED on

Installation

Installation (QH.CS)

Secure to the side of the pipe using two cable ties.

Installation (QH.CS.02)

Sensor: secure to the side or underneath the pipe using two cable ties.
Housing: mount to the wall using screws.

Important notes

Please read these instructions carefully. All work, such as installation, electrical connection, commissioning, operation and maintenance, must be carried out exclusively by adequately qualified personnel. Applicable local regulations and guidelines, such as building regulations and electrical standards (e.g. VDE guidelines), must be observed. The installer and user are required to inform themselves thoroughly before commissioning.

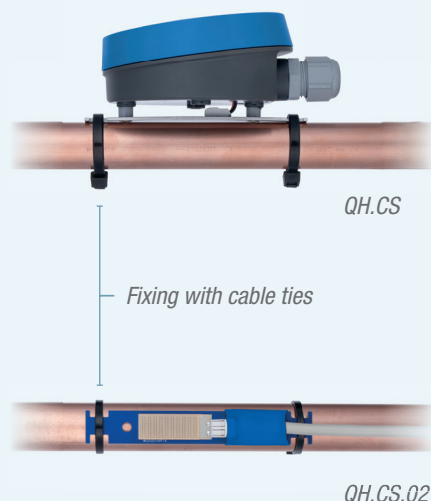
Check whether the product is suitable for the intended application. No liability can be accepted for printing errors or changes made after publication. Incorrect use voids all warranty and liability claims.

Sensor installation

The device or sensor strip must be installed on the supply line (coldest point). The pipe surface must be cleaned to bare metal, thermal paste must be applied locally, and the sensor must be secured using cable ties.

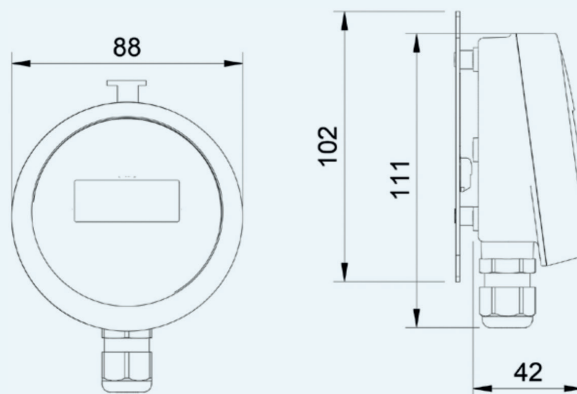
Two cable ties for pipes with a diameter of Ø10-80 mm and thermal paste are supplied for installation.

In dusty environments, it is recommended to install the sensor underneath the pipe.

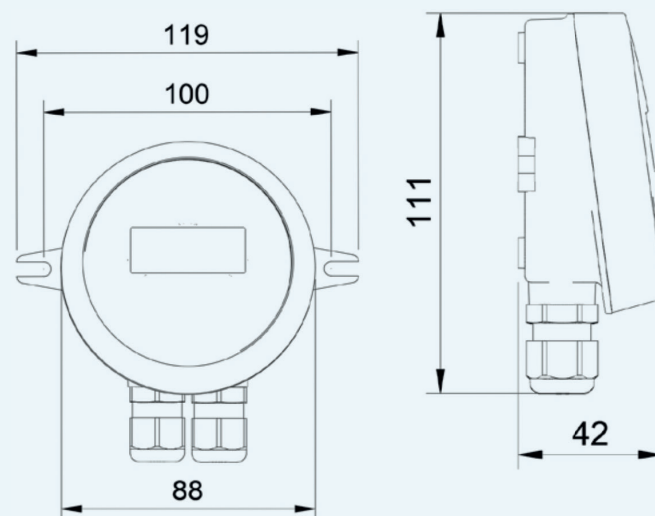


Dimensions

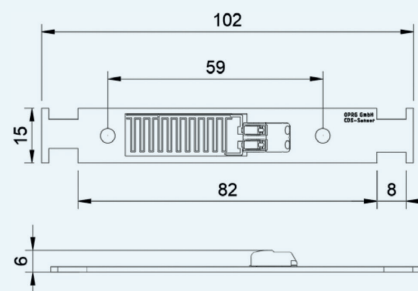
QH.CS



QH.CS.02



Sensor strip



Dimensions in mm