

## Product info sheet

### Humidity sensors for monitoring condensation

**Analogue- and switching output (changeover contact)**  
 Type HSF2.KW.F300.F00.1K0

**Switching output (changeover contact)**  
 Type HSFS.KW.0000.00.1K0

### Description

Sensors for monitoring condensation are suitable for installation on cooling water pipes or cooled surfaces and monitor whether the temperature of the direct surroundings falls below the dew point.

They measure the relative humidity directly on the surface of the cool section of the system and can be used to:

- influence the cooling capacity
- switch cooling systems on and off
- signal when the temperature falls below the dew point

This means, for example, that even with critical climatic values, cooling ceilings can be operated effectively without condensation forming.

### User information

The HSF sensors should be fitted onto the bare metal pipe at the position which is at greatest risk of condensation formation and secured using cable ties (not included in the standard delivery). It is also possible to fit the sensors onto a clean surface which is free from grease using the ZA30 installation kit, available as an accessory. In both cases, the lowest possible heat transfer resistance should be observed, as this is essential to ensure that the appliance works correctly. Installation positions in which water may collect in the sensor should also be avoided.

Further information which should be observed when using humidity sensors with a capacitive sensor element can be found in the sensor elements application information (product info no. A1) or by asking the manufacturer.

### Technical data

Adjusting the sensor unit at ..... 90 %rh  $\pm$ 2%rh  
 hysteresis ..... 3%rh  
 Voltage supply ..... 15...30VDC / 24VAC  $\pm$ 10%  
 Degree of protection ..... IP 65  
 power consumption .....  
 .....„Relay off“ approx.1 mA / „Relay on“ approx. 14 mA  
 Weight ..... approx. 85g  
 Contacting ..... cable connection 1.5 m<sup>1)</sup>  
 Range of operating temperature ..... -20...+70°C  
 EMC according to DIN EN 61326-1 .....  
 DIN EN 61326-2 .....  
<sup>1)</sup>Further cable lengths on request.

### Type HSF2.KW.F300.F00.1K0

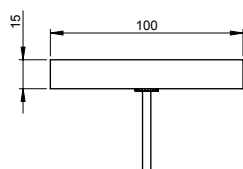
**Switching output** ..... potential-free changeover contact  
 voltage ..... max. 48V  
 switching current ..... max. 0.5A  
 Switching power ..... max. 10W  
**Analogue output** ..... 0...10V  
 Output range ..... 50...100%rh  
 Accuracy (MR 50...95% rh, at 23°C) .....  $\pm$ 2%rh

### Type HSFS.KW.0000.F00.1K0

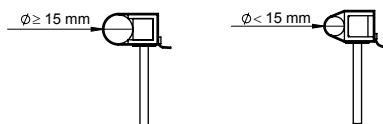
**Switching output** ..... potential-free changeover contact  
 voltage ..... max. 48V  
 switching current ..... max. 0.5A  
 Switching power ..... max. 10W

### Assembly drawing

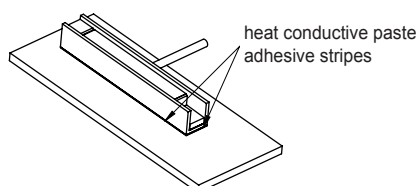
mounted on:



...pipes



...smooth surfaces  
 mounting kit ZA30



### Connection assignment

	Wire colour	Connection
Supply	brown	- (~)
	green	+ (~)
Analogue output (only for HSF2...)	white	0...10 V
	yellow	GND
Relay output	blue	make contact
	pink	break contact
	grey	COMMON