

# DOL 104 Humidity Sensor



Climate sensor for measuring relative humidity.

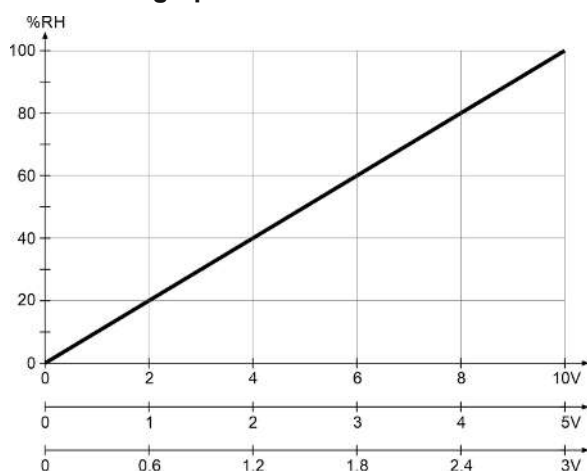
DOL 104 is a high-precision sensor for measuring relative humidity. It is intended for application in livestock houses but is also well suited for a number of industrial applications.

The sensor features one analogue output with very low output resistances and full protection against short circuits and wiring failures.

The special sensor element and the built-in filter enable application in livestock houses with constantly high humidity. The sensor comes with a cable. The cable can be supplied with a specially adapted specification area upon agreement.

The sensor is microprocessor-controlled and has a two-color light emitting diode (LED) to communicate the operation status and the error diagnostic.

## Functional graph



## Dimensions (mm)



## Product survey



**140263 DOL 104 humidity sensor 0-10 V**

**140274 DOL 104 humidity sensor 0-5 V**

**140275 DOL 104 humidity sensor 0-3 V**

The DOL 104 comes with a protective cap.



**140298 DOL 114 protective cap (5 pcs).**

Kit including extra protection caps. Used for DOL 114 and DOL 104.

In connection with cleaning and disinfection of the livestock house, the sensor must be protected by a protection cap.



**380101 Bracket for DOL 16/104/114**

Mounting brackets are used if the sensor is to be mounted in an accurate position.

## Technical data

Measurement range	% RH	0 – 100
Accuracy	% RH	0-10 V $\pm 2\%$ RH (40–85 %) $\pm 3\%$ RH (10-95 %) at 0-40 °C 0-5 V $\pm 3\%$ RH (40–85 %) $\pm 4\%$ RH (10-95 %) at 0-40 °C 0-3 V $\pm 3\%$ RH (40–85 %) $\pm 4\%$ RH (10-95 %) at 0-40 °C
Output signal	V	0-10 V 0.1 V / % RH 0-5 V 0.05 V / % RH 0-3 V 0.03 V / % RH
Time constant	T <sub>63</sub>	20 s at 0.5 m/s air speed
Supply voltage	V DC	11 – 30
Current	mA	12 mA no load 35 mA max. load
Load	Ω	> 500 Ω - < 10 MΩ
Recommended load	kΩ	≥ 100
Output current	mA	20 (current limited)
Output impedance	Ω	< 1
Cable		2 m 3 x 22 AWG / 0.34 mm <sup>2</sup>
Max. cable length		100 m 0.75 mm <sup>2</sup> 200 m 1.50 mm <sup>2</sup>
Temperature, operation and storage	°C	-40 to -60
Protection class	IP	67
Measurement, shipment	mm	275 × 200 × 20
Shipment weight ex. connector	g	150

# DOL 114 4-20 mA Humidity and Temperature Sensor



DOL 114 is a high-precision humidity sensor for measuring relative humidity and temperature. It is intended for application in livestock houses but is also well suited for a number of industrial applications.

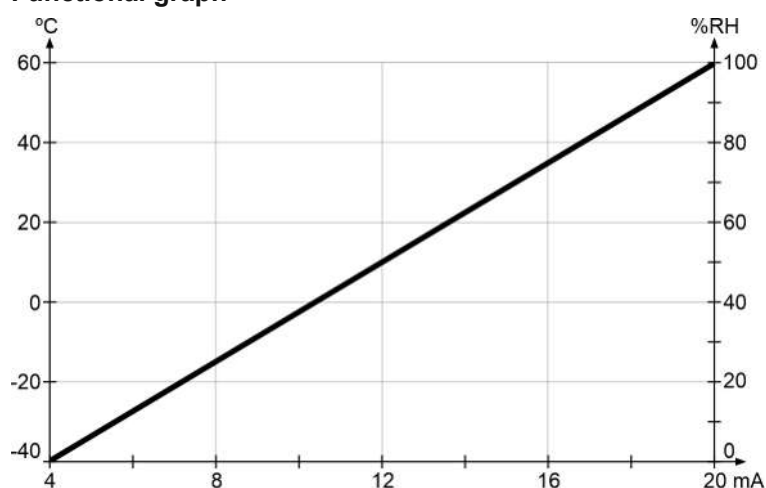
The sensor has two 4 to 20 mA outputs with a very low output resistance and full protection against short circuits and wiring failures.

The special sensor element and the built-in filter enable application in livestock houses with constantly high humidity. The sensor is available with built-in connector or cable according to requirement.

The sensor is microprocessor-controlled and has a two-color light emitting diode (LED) to communicate the operation status and the error diagnostic.

Sensor can be supplied with blinded LED for applications where this is needed.

## Functional graph



## Product survey



### **140262 DOL 114 humidity and temperature sensor 4-20 mA**

The DOL 114 is a dual-purpose temperature and humidity sensor that can be used to regulate the livestock house relative air humidity and temperature.

The DOL 114 is a high-quality sensor which is especially useful under particularly harsh conditions and in areas of high air humidity.

The DOL 114 comes with a protective cap.



### **140298 DOL 114 protective cap (5 pcs).**

Kit including extra protection caps. Used for DOL 114 and DOL 104.

In connection with cleaning and disinfection of the livestock house, the sensor must be protected by a protection cap.



### **380101 Bracket for DOL 16/104/114**

Mounting brackets are used if the sensor is to be mounted in an accurate position.

## Technical data

		Humidity measurement	Temperature measurement
Specifications			
Measurement range		0 - 100% RH	- 40 °C – 60 °C
Accuracy		± 2 % RH (40–85 %) ± 3 % RH (10-95 %) at 0-40 °C	± 0.5 °C (10 – 40 °C) ± 1.5 °C (- 30 °C – 60 °C)
Output signal		0.16 mA/% RH	0.16 mA/°C; 0°C at 10.4 mA
Time constant T <sub>63</sub>		20 s at 0.5 m/s air speed	6 min. at 0.5 m/s air speed
		Common	
Electrical			
Supply voltage	V DC	11 - 30	
Current	mA	55	
Load	kΩ	490 – 1 at 24 V DC supply voltage	
Recommended load	Ω	500	
Max. output current	mA	20	
Mechanical			
Cable dimensions	AWG	2 m 4 x 22 AWG / 0.34 mm <sup>2</sup>	
Max. cable length	m	200 m at 1.50 mm <sup>2</sup>	
Environment			
Temperature, operation and storage	°C	- 40 °C – 60 °C	
Protection class	IP	67	
Shipment			
Packing dimensions H x W x D	mm	275 × 200 × 20	
Shipment weight ex. connector	g	150	

## Dimensions

Dimensions in mm.



