



## doI SENSORS DOL 104 Humidity Sensor User Guide

[Home](#) » [doI SENSORS](#) » doI SENSORS DOL 104 Humidity Sensor User Guide 

### Contents

- [1 doI SENSORS DOL 104 Humidity Sensor](#)
- [2 PRODUCT DESCRIPTION](#)
- [3 MAINTENANCE](#)
- [4 INSTALLATION](#)
- [5 TECHNICAL DATA](#)
- [6 Documents / Resources](#)
- [7 Related Posts](#)

# DOL

### doI SENSORS DOL 104 Humidity Sensor



### PRODUCT DESCRIPTION

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

## **MAINTENANCE**

### **IMPORTANT**

Clean DOL 104 using water and a brush. Do not use:

- High-pressure cleaner
- Highly compressed air
- Solvents
- Corrosive/caustic agents
- Alcohol-based disinfectants
- During cleaning and disinfection, the sensor must be protected using a protection cap and be placed in vertical position.
- After the sensor has been exposed to water and condensation, the sensor requires time during which the relative humidity is less than 80% in order to measure correctly.
- Do not bend the sensor as this would inflict permanent damage on the electronics of the sensor. dol-sensors reserve the right to change this document and the product herein described without further notice.

LED		LED/LIGHT PROTOCOL
Green	Red	Status
ON		Operation OK
Flash		Outside normal range (below 10% RH or exceeding 95% RH)
	ON	Connection error Load error, Fig 4.
	Flash	Sensor defect Over/under voltage alarm Overload

## INSTALLATION

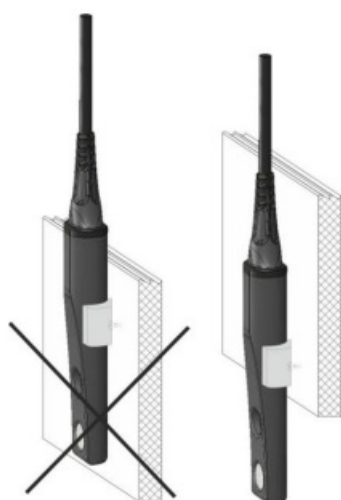


Figure 1 Mounting

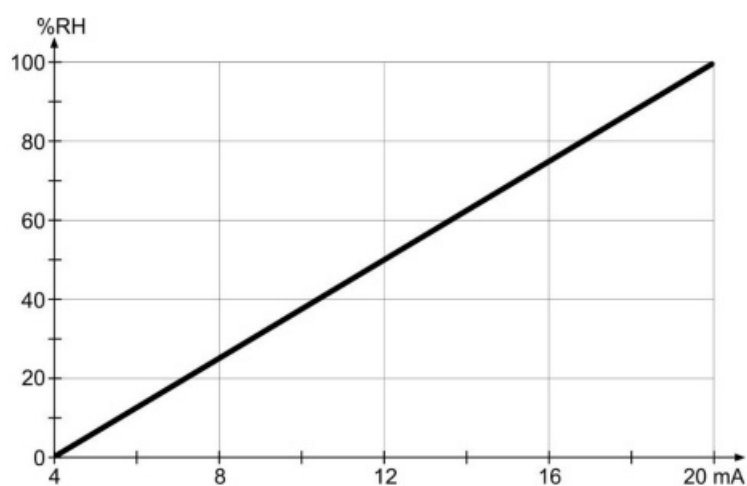


Figure 2: Functional graph

For optimum mounting of the sensor, use mounting clips or mount it free-hanging in the cable. The sensor

element requires free air passage.

See Figure 1. Mount the sensor so it is not exposed to direct sunlight, as this would affect the measurement.  
**REMEMBER TO PUT ON A PROTECTION CAP BEFORE MOUNTING THE CABLE.**

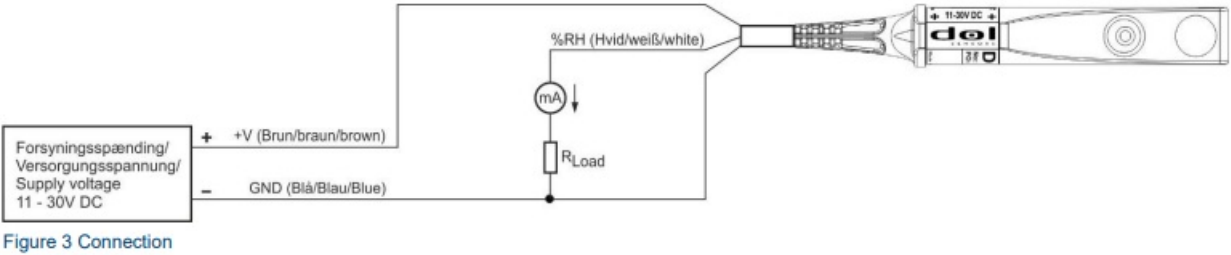


Table 1: Signals and wire colors in other products. L USER

DOL 14	→	DOL 14 HQ		DOL 114		DOL 104
Black = +13-24V DC	→	White = +13-28V DC	→	Brown = +11-30V D C	→	Brown = +11-30V D C
Brown = 0...10V / % RH	→	Green = 0...10V / %R H	→	White =0...10V / % RH	→	White =0...10V / %R H
No temperature outpu t	→	No temperature output	→	Black =0...10V / °C	→	No temperature outpu t
Blue = GND (0V)	→	Brown = GND (0V)	→	Blue = GND (0V)	→	Blue = GND (0V)

TECHNICAL DATA

Measuring range	0 – 100 % RH
Accuracy	± 2% RH (40–85 %) ± 3% RH (10-95 %) at 0-40 °C *
Output signal	0.16 mA / % RH

<b>Time constant T63</b>	20 s at 0.5 m/s air velocity
<b>Supply voltage</b>	11 – 30 V DC
<b>Supply current max.</b>	35 mA
<b>Load</b>	See Figure 4.
<b>Recommended load</b>	500 kΩ at 24 V DC supply voltage
<b>Output current</b>	20 mA (current limited)
<b>Temperature, operation and storage</b>	– 40 °C – 60 °C
<b>IP classification</b>	IP 67
<b>Cable</b>	2 m. 3 x 22 AWG / 0.34 mm <sup>2</sup>
<b>Shipment weight ex. connector</b>	150 g
<b>Measure, shipment</b>	275 × 200 × 20 mm
<p>* After direct water exposure and condensation a period with less than 80%RH is needed for correct measurement.</p>	

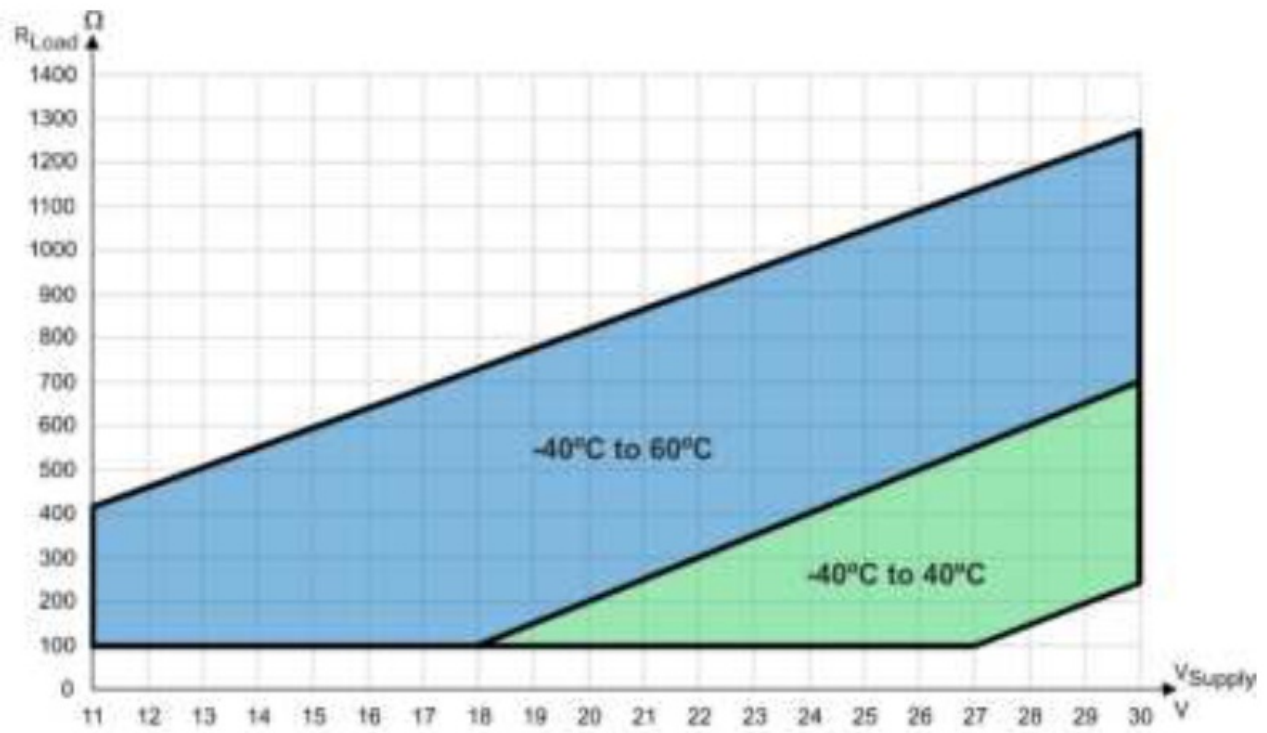


Figure 4



Figure 5 Dimensions (mm)

- 2016.06.17
- 604240
- 16.08
- EN
- Made in Denmark
- dol-sensors a/s Hedelund 4, Glyngøre 7870 Roslev Denmark Tlf. +45 72 17 58 88 Fax +45 72 17 59 59  
[www.dol-sensors.com](http://www.dol-sensors.com)

## Documents / Resources



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