

DOL 115 0-10 V Temperature Sensor



1 Product description

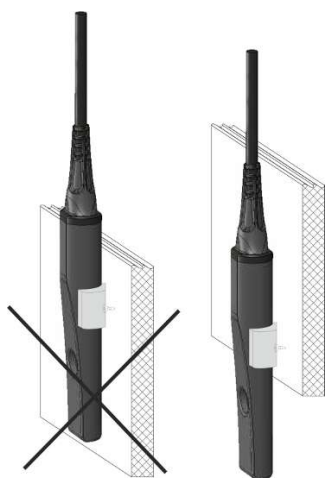
DOL 115 is a precision sensor for temperature measurement. It is intended for use in livestock houses but is also well suited for a number of industrial applications.

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

The sensor comes with a 2-meter cable.

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

2 Mounting guide



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

Free passage around the end of the sensor provides the best accuracy and response time.

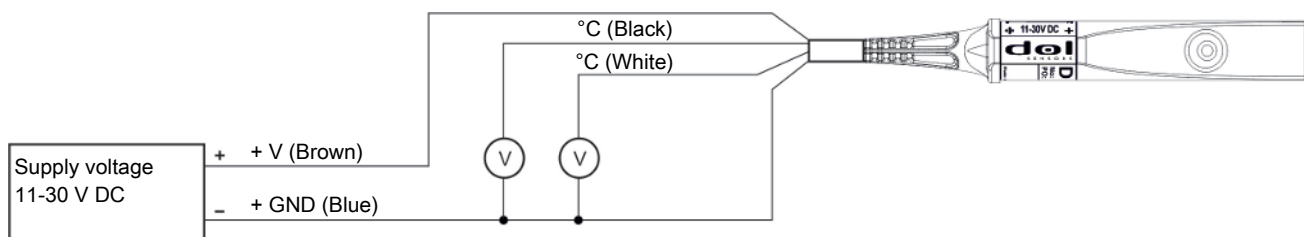
! Mount the sensor so it is not exposed to direct sunlight, as this would affect the measurement.

3 Installation guide



Installation, servicing and troubleshooting of all electrical equipment must be carried out by qualified personnel in compliance with the applicable national and international standard EN 60204-1 and any other EU standards that are applicable in Europe.

3.1 Connection of the sensor



Wire colors / conversion from DOL 15 to DOL 115

DOL 15 0-10V		DOL 115 0-10V
Black = 13-24V DC	→	Brown = +11-30V DC
Blue = GND (0 V)	→	Blue = GND (0 V)
Brown = 0 - 10V/°C	→	Black = 0 - 10V/°C (-40 - +60°C)
		White = 0 - 10V/°C (0 - 50°C)

LED/LIGHT PROTOCOL			Functional graph
LED		Status	
Green	Red		
ON		Operation OK	
	ON	Connection error Load < 500 Ω	
	Flash	Sensor defect Over or under voltage alarm Overload	

4 Maintenance

- Sensor is cleaned with:
- Water and brush
 - Cold water high-pressure cleaning



Do not bend the sensor as this would inflict permanent damage on the electronics of the sensor.

5 Technical data

		Temperature measurement 1 (BLACK)	Temperature measurement 2 (WHITE)
Specifications			
Measuring range		- 40 °C – +60 °C	0 °C – +50 °C
Accuracy		± 0.5 °C (+10 – +40 °C) ± 1.5 °C (- 30 – +60 °C)	± 0.5 °C (+10 – +40 °C) ± 1.5 °C (0 – +50 °C)
Output signal		0.1 V/°C; 0 °C at 4 V	0.2 V/°C; 0 °C at 0 V
Time constant T ₆₃		6 min. 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	12 mA no load 55 mA max. load	
Load	Ω	> 500 Ω - < 10 MΩ	
Recommended load	Ω	≥100 kΩ	
Max. output current	mA	20	
Output impedance	Ω	< 1	
Mechanical			
Cable dimensions	AWG	2 m, 4 x 22 AWG / 0.34 mm ²	
Max. Cable length at 0.75 mm ²	m	100	
Max. Cable length at 1.50 mm ²	m	200	
Environment			
Temperature, operation	°C	-30 °C – +60 °C	
Temperature, storage	°C	- 40 °C – +60 °C	
Protection class	IP	67	
Shipment			
Packing dimensions H x W x D	mm	275 × 200 × 20	
Shipping weight	g	161	

5.1 Dimensions

Dimensions in mm.

