

# DX 311



## Digital combined temperature and relative humidity probe



- Multi-point relative humidity calibration
- Interchangeable
- Low power
- Centesimal temperature and humidity resolution
- Ergonomic handle
- Fast and accurate
- Optional DAkkS/ACCREDIA certification available

### DESCRIPTION

DX 311 is a digital combined temperature and relative humidity probe for the PRO D01 / PRO D05 handheld meters.

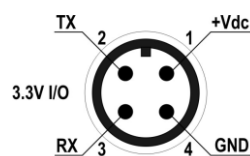
The probe supplies the following calculated quantities:

- Dew point
- Wet bulb temperature
- Absolute and specific humidity
- Mixing ratio
- Specific enthalpy
- Partial vapor pressure
- Frost point temperature
- Saturation vapor pressure above water and above ice

The probe is supplied factory-calibrated in multiple points for relative humidity, and it is ready to use. The probe can be optionally supplied with a DAkkS/ACCREDIA calibration certificate.

The calibration data are stored in the probe, allowing for interchangeability without the need for recalibration.

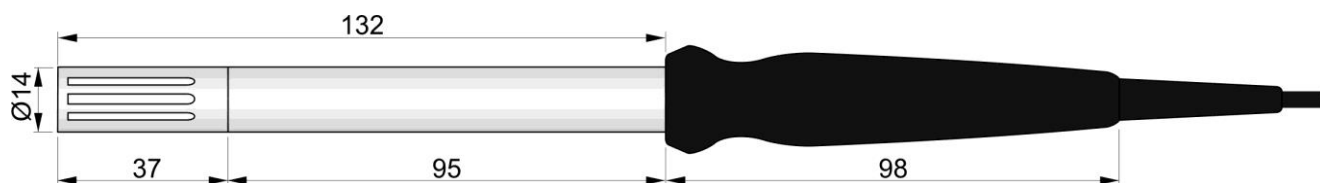
Supplied with 1, 2 or 5 m cable with 4-pin M12 connector.



M12 DX 310 sensor pin out

## TECHNICAL SPECIFICATIONS

Sensor	RH	Capacitive, temperature compensated
	Temperature	Pt100
Measuring range	RH	0...100%
	Temperature	-50...+160 °C
Resolution	RH	0.01%
	Temperature	0.01 °C
Accuracy	RH	$\pm 1.2\%$ (0...85%) / $\pm 2\%$ (85...100%) @ T=0...50 °C (1.5 + 1.5% of the measured value) % @ T=remaining range
	Temperature	$\pm 0.1$ °C $\pm 0.1\%$ of the measured value
RH response time		10 s (10 → 80 %RH; air speed=2 m/s @ constant temperature)
Long-term drift	RH	$\pm 0.5$ %RH/year
	Temperature	$\pm 0.03$ °C/year
Calculated quantities		Dew point Wet bulb temperature Absolute humidity Specific humidity Mixing ratio Specific enthalpy Partial vapor pressure Frost point temperature Saturation vapor pressure above water Saturation vapor pressure above ice
Operating conditions		-50...+160 °C / 0...100 %RH
Output		UART (TTL 3.3V): DX-Sensor-Interface
Power supply		3.3...6 Vdc
Power consumption		<1 mA typ.
Connection		4-pole M12 via cable
Dimensions		Stem: $\varnothing 14$ x 132 mm Handle length 98 mm Cable length: 2, 5 or 10 m
Weight		100 g approx. with 2 m cable
Materials		Stem and protector cap: PBT Handle: Polyamide (PA6-GF30) Cable: PVC



## Ordering codes

DX 311 <sup>1.</sup>

1.	Cable length	
	-L01	1 m
	-L02	2 m
	-L05	5 m
	-XXX	other length on request

## Standard articles

**DX 311-L01** Digital combined temperature and relative humidity probe, stem Ø14 x 132 mm, cable length 1 m.

**Art.No. 486774**

## Suitable instruments

**PRO D01** 1-channel handheld meter for digital probes. Supplied with 4 x AA alkaline batteries  
**Art.No. 486134**

**PRO D05.2** 2-channel handheld data logger for digital probes. Supplied with 4 NiMH rechargeable batteries, USB cable and software downloadable from Senseca website.  
**Art.No. 486136**

**PRO D05.3** 3-channel handheld data logger for digital probes. Supplied with 4 NiMH rechargeable batteries, USB cable and software downloadable from Senseca website.  
**Art.No. 486137**