AR250 Humidity transducer

AR250/L150
probe on a stainless steel pipe

AR250
standard

PROGRAMMING

COPYING

- a high class digital relative humidity sensor with a protective filter (ABS material as a standard, slot width 1 mm, and steel wire mesh with mesh size of 0.15 mm)
- a probe integrated with the enclosure, external or on a stainless steel pipe
- a current output 4÷20 mA (2-wire, with power supply from the current loop) or a voltage output 0÷10 V (3-wire)
- temperature compensation of humidity measurement, high measurement stability
- programmable processing ranges for humidity
- configuration of parameters through the PRG port (programmer AR956 or AR955) and free ARsoft-CFG software that enables quick setting and copying of all configuration parameters
- protection rating IP65 provided by the enclosure which improves reliability of operation thanks to high resistance to penetration of water and dust and surface condensation of steam inside of the device, an IP40 probe
- available accessory filter with a metal wire mesh to protect the sensor against dust

Contents of the package:
- a transducer
- a user instruction
- a warranty card

Available accessories:
- a metal wire mesh filter (mesh size approx. 25 µm)
- an AR956 (or AR955) programmer

Ordering method

AR250 / ☐ / ☐ / ☐

Output	Code
output 4÷20 mA	**I**
output 0÷10 V	**U**

Probe installation method	Code
radial (standard)	-
back (to pipe, channel)	**T**

Measurement probe type	Code
integrated with the enclosure (standard)	-
external with a 1,5m wire*	**2**
external in an enclosure with a 1,5m wire*	**3**
on a stainless steel pipe, 140 mm long*	**L150**
on a stainless steel pipe, 240 mm long*	**L250**

* options charged separately

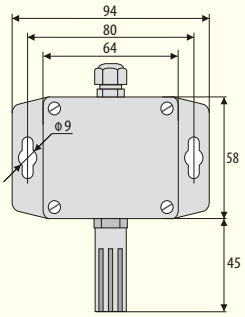
Order examle:
Note: for the standard design, only the output type must be stated e.g.:
AR250 / I
AR250, output 4÷20 mA, radially mounted probe and integrated with the enclosure
AR250 / U / L150 / T
AR250, analog output 0÷10 V, probe on a stainless steel pipe 140 mm long, installed in the back of the enclosure (for channel installations)

TECHNICAL DATA (the detailed data can be found in the user's instructions)

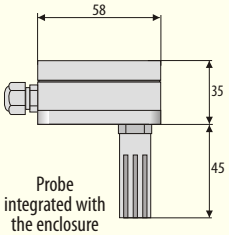
Sensor		SHT31 made by Sensirion, an ABS cover (slot width 1mm) and a stainless steel wire mesh (slot width 0,15mm)
Measurement range		0÷100 %RH
Measurement acurancy		±2 %RH in the entire measurement range
Histeresis and stability		±0,8 %RH, long-term stability < 0,25 %RH / year
Measurement period		1s
Response time (63%)		8s (for air flow > 3,6km/h)
Outputs	current (I_H)	4÷20 mA (2P), load $R_0 < (U_{zas}-12) / 22$ mA
	voltage (U_H)	0÷10 V (3P), load $I_0 < 4,5$ mA ($R_w > 2,5$ kΩ)
Supply	for the 4÷20 mA	12÷36 Vdc (2-wire) supply from the current loop
	for the 0÷10 V	18÷30 Vdc, current consumption: ~7mA
Operating conditions		air and neutral gases (do not pour water on the measurement probe) -30÷80 °C, <100 %RH (no condensation)

INSTALLATION DATA

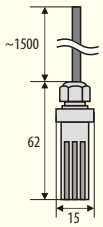
Dimensions	58x94x35 mm
Material	polycarbonate



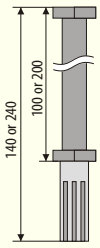
Probe integrated with the enclosure
AR250



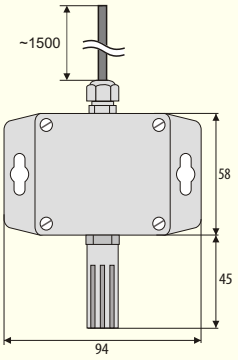
Probe integrated with the enclosure channel design
AR250/T



External probe with a wire
AR250/2



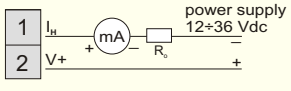
Probe on a stainless steel pipe
AR250/L150
AR250/L250



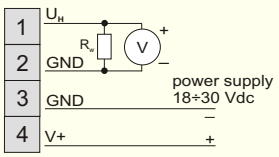
External probe in an enclosure with a wire
AR250/3

TERMINAL

AR250/I



AR250/U



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Calibration Certification – **Digital Humidity- and Temperature Sensors**

SENSIRION
THE SENSOR COMPANY

Calibration Certification

Name and address of the manufacturer: **Sensirion AG**
Laubisruetistrasse 50
CH-8712 Switzerland

Description: Digital Humidity- and Temperature Sensors

- SHT1x
- SHT2x
- SHT3x
- SHT7x
- SHTC1
- SHTW1
- STS21
- STSC1

The above mentioned products are calibrated to meet the specifications according to the corresponding Sensirion data sheet. Each device is individually tested after its calibration.

Sensirion uses transfer standards for the calibration. These transfer standards are themselves subject to a scheduled calibration procedure. The calibration of the reference itself used for the calibration of the transfer standards is performed by an ISO/IEC 17025 accredited laboratory.

The accreditation body is full member of the International Laboratory Accreditation Cooperation (www.ilac.org). Calibration certificates issued by facilities accredited by a signatory to the ILAC Mutual Recognition Arrangement (MRA) are accepted by all signatories to the ILAC MRA.

This provides traceability of measurement to recognized national standards and to units of measurement realized at the "National Physical Laboratory" (NPL) or other recognized national standards laboratories like "Physikalisch-Technische Bundesanstalt" (PTB) or "National Institute of Standards and Technology" (NIST).

Staefa, November 2015

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