



RELATIVE HUMIDITY AND TEMPERATURE PROBE

MS9035



USER MANUAL

PLOVDIV 2020

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I. ADVANTAGES:

- ✓ **High accuracy and high speed**
- ✓ **Wide temperature range -25 °C to 75 °C**
- ✓ **Rapid recovery after condensation of water**
- ✓ **It does not require user setup**

II. ORDER CODE

MS 9035 - x.x.x.x.x

<p>Analog outputs RH% or RH% & T °C</p> <p>Code</p> <p>H1 - 4-20 mA for RH% - 2 wire</p> <p>H2 - 0-1 V for RH% and T °C</p> <p>H3 - 0-5 V for RH% and T °C</p> <p>H4 - 0-10 V for RH% and T °C</p> <p>H5 - 0-2 V for RH% and T °C for probe with socket</p> <p>H9 - others by order</p> <p>Cable type</p> <p>Code</p> <p>1 - PVC-4X7x0,2mm - only for PC4</p> <p>2 - LIYY 4X0,25</p> <p>3 - LIYY 4X0,34</p> <p>4 - LIYCY 4X0,25 shield</p> <p>5 - LIYCY 4X0,34 shield</p>	<p>Range of temperature output**</p> <p>Code</p> <p>T1 - default (-25÷ 75)°C</p> <p>T9 - by order</p> <p>Coupling</p> <p>Код</p> <p>B0 - wire</p> <p>B1 - PC-4 (4pin connector)</p> <p>B2 - by order</p> <p>Cable length</p> <p>Code</p> <p>K1 - 1000 mm PVC isolation</p> <p>K9 - by order</p>
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* when ordering, specify the voltage range for each output!

Example: MS9035 - H4.2.K9=1500mm.B0.T1

MS9035 (0 ÷ 100) %rh & (-25 ÷ 75) °C with voltage outputs 0-10 V DC, cable type LIYY 4 X 0,25, length 1,5 m ,wire free coupling



Installation and operation must comply with the condition that the electronics of the transmitter are at operating temperature ≤ 70oC

III. DESIGNATION

The MS9035 is an accurate, stable and reliable probe designed to provide measurement of relative humidity for process control over a wide range of applications.

The MS9035 probe is equipped with a capacitive sensor for measuring relative humidity, an integrated sensor for measuring temperature and a transmitter.

The relative humidity sensor is protected by a removable protective cap, which must be well screwed in with the rubber seal.

The probe is configured at the request of the user according to the order code and can be executed in one of the following variants:

- with one analog current output (4 ÷ 20) mA for measuring RH%;
- with two voltage outputs in ranges up to 10 V for measuring RH% and T ° C.

MS9035 is widely used for control and monitoring in:

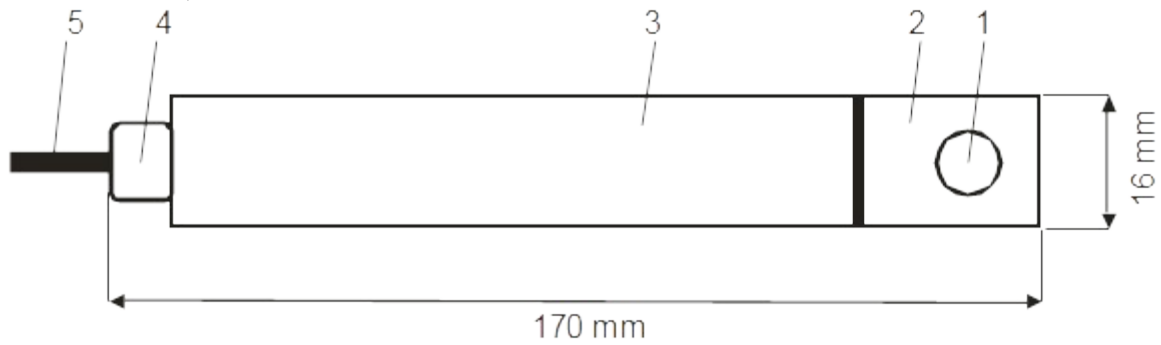
- ✓ portable measuring instruments (eg MS2000 from Microsys Ltd.);
- ✓ dryers, cameras for the pharmaceutical industry, warehouses for storing fruits and vegetables, production facilities and others.

IV. TECHNICAL DATA

Sensors	Relative humidity	Temperature
Analog outputs	range (0 to 100) %rh	range (-25 to 75) °C (or by order)°C
2 W current	4÷20 mA	-
voltage	(0÷1) V; (0÷ 5); V(0÷10) V; other by order - up to 10 VDC	(0÷1) V; (0÷ 5); V(0÷10) V; other by order - up to 10 VDC
For probe powered by MS2000/2012	(0÷2)V other by order - up to 4 VDC	(0÷2)V other by order - up to 4 VDC
Accuracy	±1,5% in range 5 ÷ 95 % rh	±0,5°C
Supply voltage	Nominal	Max.
At 2 W current output	9 ÷ 28 VDC	31 VDC
At voltage output	15 ÷ 28VDC	31 VDC
For probe powered by MS2000/2012	4.05 ÷ 5 VDC	5.5 VDC
Operating Specifications	Working conditions	Storage
Temperature	-25...75 °C	-25 ÷ 75 °C
Relative humidity	5 ... 95 % rh	5 ÷ 95 % rh
Overall dimensions (ØxL)	16 mm x 170 mm	
Protection	IP65 for the transmitter	
Weight	max 150 rp.	

* Exceeding the maximum voltage may cause permanent damage to the probe

V. HOUSING, DIMENSIONS AND WIRING DIAGRAMS

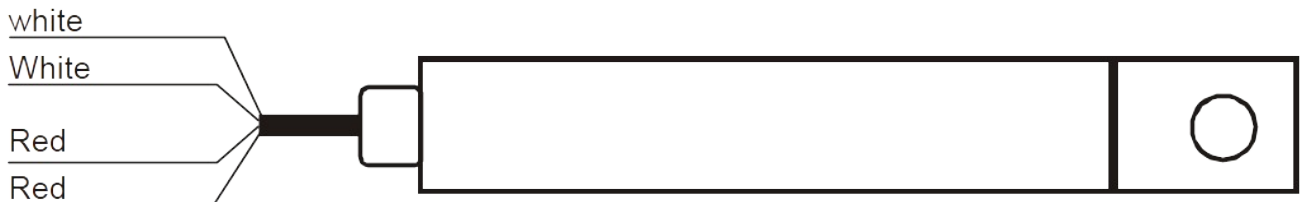


1	Sensor
2	Sensor protection cap
3	Probe MS 9035
4	Fitting
5	Connection cable



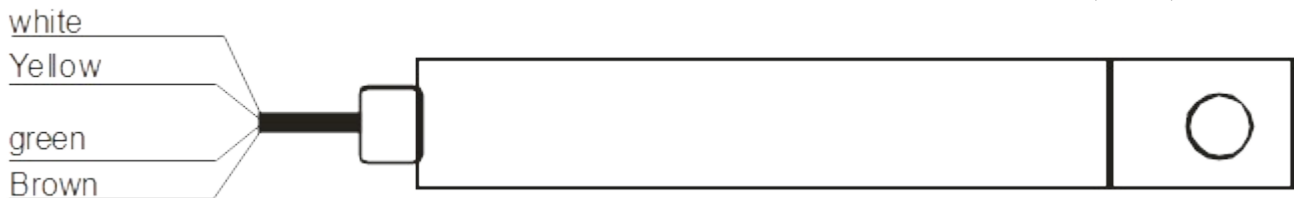
- The power supply to the probe is:
 $9 \div 28$ VDC at current output
 $15 \div 28$ VDC at voltage output.
- Depending on the connecting cable selected
it is necessary to make the appropriate connection! See the table below!

PROBE CONNECTING TO CABLE TYPE PVC 4X7x0,2mm



PVC 4X7x0,2mm(BLACK)	
COLOR	current output
white	GND (4-20)mA
white	
red	+V (4-20)mA
red	

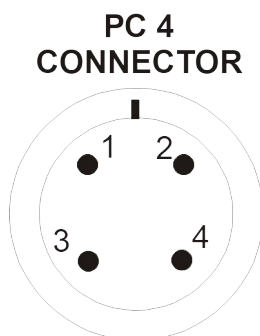
PROBE CONNECTING TO CABLE TYPE LIYCY/LIYY 4X0,25/0,34



LIYCY/LIYY 4X0,25/0,34 (gray)		
COLOR	current output	voltage output
white	GND (4-20)mA	GND
yellow		T °C
green	+ V (4-20)mA	RH %
brown		+V (POWER)

PROBE CONNECTING TO PC 4 (4 pin connector) and cable PVC 4X7x0,2mm(BLACK) type

(for portable devices MS2000 by Microsyst Ltd.)



PC 4 PIN №	SIGNAL
1	RH %
2	+V (POWER SUPPLY)
3	GND
4	T °C

VI. RECOMMENDATION AGAINST EMI (Electromagnetic Interference)

Recommendations for use of connecting wires

- For longer distances for lines subjected to electromagnetic interference, it is desirable to use a twisted pair wire.
- For better noise protection, a shielded cable may be used, which must be grounded at only one end.
- Wires that carry a similar type of signals can be packed together, but if the signals are different, the wires must be separated to prevent electromagnetic interaction.
- When there have to be crossed wires with different signal types this must be done at an angle of 90 degrees and a long distance.
- Wires, which carry weak signals and wires connecting the sensors to the controller must not be near contactors, motors, generators, radios and wires, which carry large currents.

WARRANTY CARD

Warranty card №:.....

Warranty term:..... months

Factory number:.....

The items were purchased from :.....

Invoice number:...../..... 20..... year .

GUARANTEE CONDITIONS

The guaranty consists in free repairs of all the factory defects which can occur during the guarantee period. **The repair is performed as in the repair base is being presented the current guarantee card with which the device is bought.** The warranty does not refer to issue caused by a bad transport, bad conservation, wrong exploitation, natural disasters, not following the instructions and the cases when there is an attempt to fix any defects by other people. In those cases the issue is being fixed only against payment.

The maintenance during the guarantee period and doing the claims happens according to the valid legislation.

PERFORMED REPAIRS IN THE SERVICE

Service	Date of receipt	Order number	Type of repairs done	Date of transmission	Carried out the repair

Seller:.....

Buyer:.....

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