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Manual Air Humidity Meter PCE-G1A



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1 Introduction

Thank you for purchasing a thermo hygrometer from PCE Instruments.

The PCE-G1A measures both relative humidity and temperature. Its large 7-segment LED display with a figure height of 100 mm makes the measured values easily readable from a distance of up to 50 m. The thermo hygrometer is IP 54 protected and can be mounted to a wall. The relative humidity and temperature values are displayed alternately every 5 seconds. The sensors which are calibrated by the manufacturer are connected to the display by 1 m cables. The passive two-channel analogue output (no individual power supply!) converts relative humidity and temperature values into a 4 ... 20 mA signal before displaying them. The PCE-G1A comes with a screened multipole plug for connection with a device. An optional ISO calibration certificate can be ordered separately.

Delivery content

1 x thermo hygrometer PCE-G1A, 1 x sensors with connection cable (1 m), 1 x cable for analogue output, 1 x mains adapter, 1 x instruction manual

2 Safety notes

Please read this manual carefully and completely before you use the device for the first time. The device may only be used by qualified personnel and repaired by PCE Instruments personnel. There is no warranty of damages or injuries caused by non-observance of the manual.

- Do not allow the cold humidity sensor to come in contact with warm and humid air. This causes condensation and totally falsifies the results. Condensation does not damage the sensors nor does it change its characteristic.
- The humidity sensor is not resistant to acetone or other chemical solvents.
- The device may only be used in the approved temperature range.
- The case should only be opened by qualified personnel of PCE Instruments.
- The instrument should never be placed with the user interface facing an object (e. g. keyboard side on a table).
- You should not make any technical changes to the device.
- If the filter or sensors become dusted wash them gently with alcohol and let them dry. Mechanical cleaning is not allowed as it may damage the filter or cause scratches to the sensors.

This user's handbook is published by PCE Instruments without any guarantee.

We expressly point to our general guarantee terms which can be found in our general terms of business.

If you have any questions please contact PCE Instruments.

3 Specifications

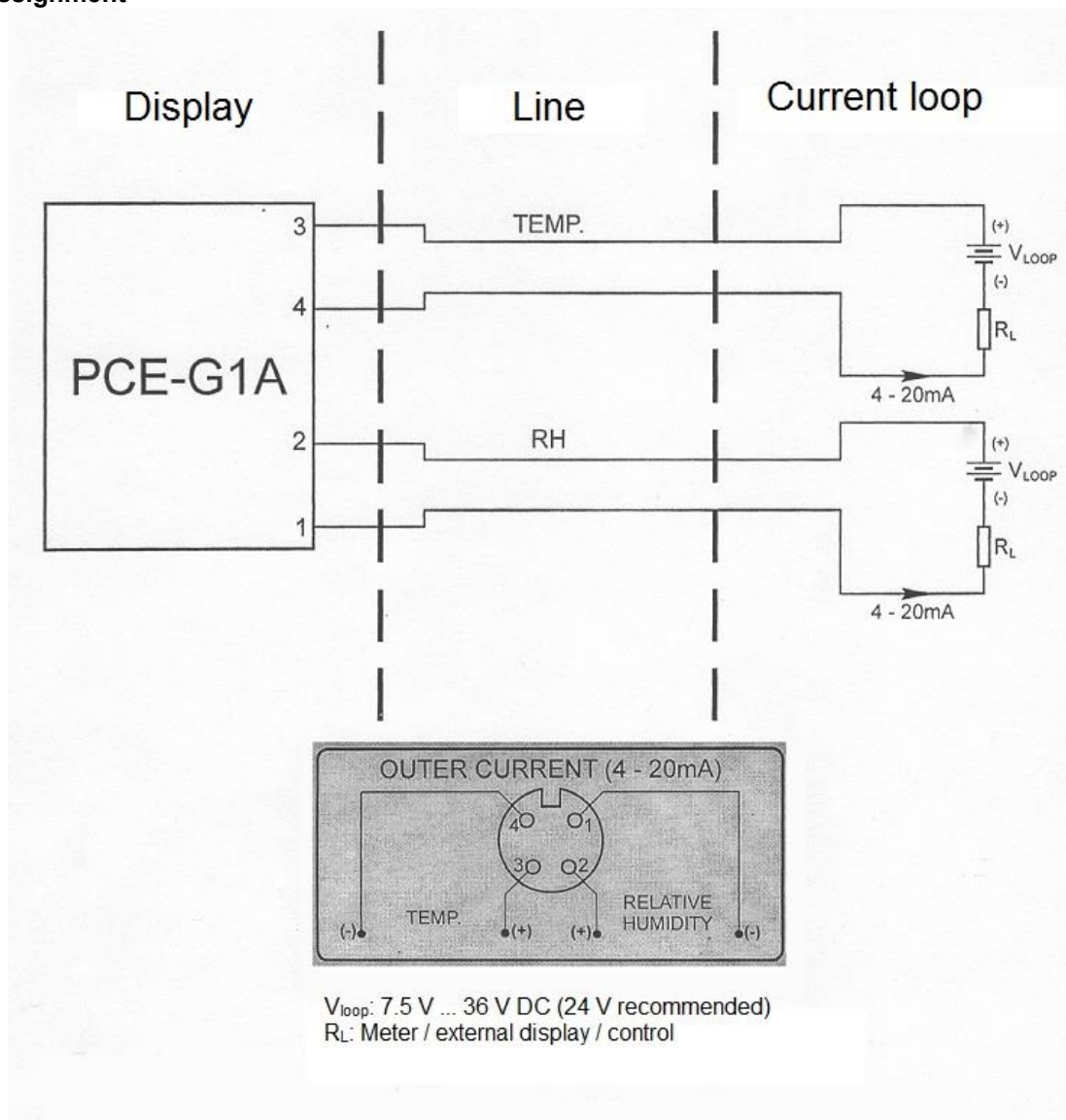
	Humidity	Temperature
Measurement range	10 ... 95 % RH	0 ... 60 °C
Sensor type	Capacitance	Resistance
Display	LED, 2 digits	
Accuracy	±2 %	±1 °C
Power supply	220 V, 50 Hz	
Dimensions	175 x 250 x 75 mm	

4 System description

Interface



Pin assignment



5 Instructions

5.1 Before measurement

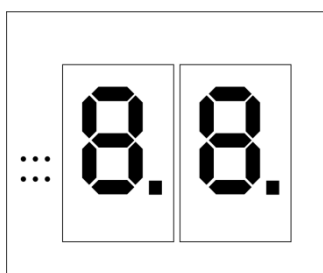
Before measuring, attach the sensors 1 and 2 to the upper side of the display and install the output in a current loop if required.

5.2 Measurement

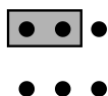
Plug the instrument into a power socket. After several seconds the results of humidity and temperature will be indicated in the LED display.

5.3 Jumper settings

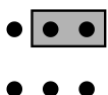
1. Jumper location



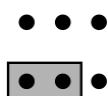
2. Display only relative humidity (%RH) permanently



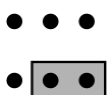
3. Display only temperature (°C) permanently



4. Display absolute moisture contents (g/m³) alternately with temperature (°C)



5. Display relative humidity (%RH) alternately with temperature (°C)



5.4 Calibration and testing

A periodic testing of the operation of the PCE-G1A can be done using special saturated salts solutions or humidity generators. Testing and calibration can be carried out by an accredited calibration laboratory on behalf of PCE. It is recommended to test and calibrate the instrument every 12 months. Testing can also be done by comparing the results given by PCE-G1A with the results of a reference humidity meter. If there is a significant difference the instrument can be adjusted. Adjusting can be done by turning a potentiometer using a small screwdriver. The potentiometer is located below a hole in the lower part of the probe. Turning it clockwise decreases the humidity results, anticlockwise increases the humidity results.

6 Contact

If you have any questions about our range of products or measuring instruments please contact PCE Instruments.

6.1 PCE Instruments UK

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