

HYGROFLEX3-SERIES

SHORT INSTRUCTION MANUAL

Digital transmitter for humidity & temperature: Duct & Wall Version



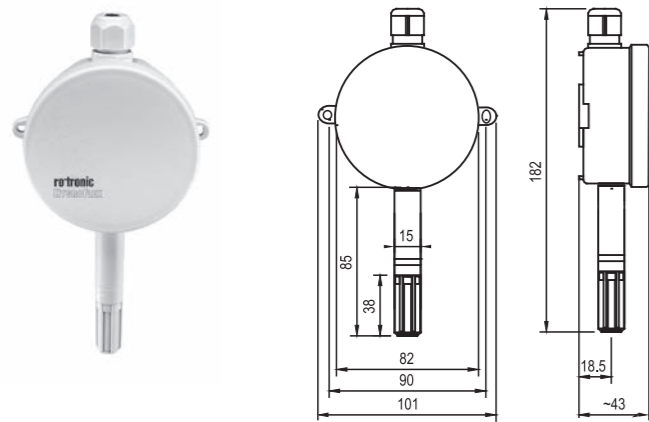
Congratulations on your purchase of the new state-of-the-art HygroFlex3-series transmitter. Please read these short instructions carefully before installing the device.

General description

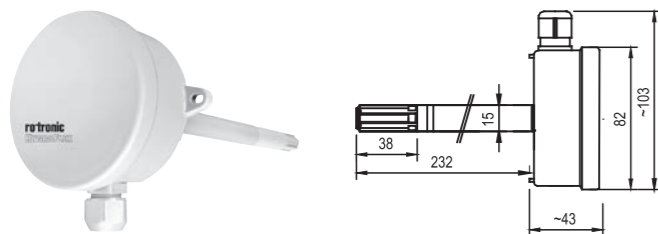
The HygroFlex3-series devices are universal transmitters for transmission of humidity and temperature measurements. These short instructions are limited to a description of the main functions and installation of the device. The detailed instruction manual can be found on the internet at www.rotronic.com

Dimensions / Connections

Type W



Type D



Mechanical installation

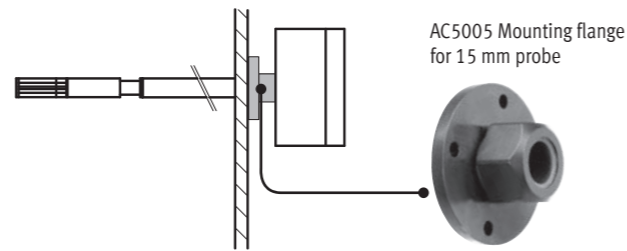
General recommendations

Relative humidity is extremely temperature-dependent. In order to measure it exactly, the probe and sensors must be set exactly on the temperature level of the environment that is to be measured. The installation site can therefore have a significant influence on the performance of the device. Follow the guidelines below to ensure optimum performance:

- Select a representative installation site: Install the probe at a point where the humidity, temperature and pressure conditions are representative for the environment that is to be measured.
- Make sure there is sufficient air movement around the probe: An air flow of at least 1 metre/second accelerates and facilitates adjustment of the probe to changing temperatures.
- Avoid:
 - Probe too close to heating elements, cooling coils, cold or hot walls, direct sunlight, etc.
 - Probe too close to steam, injectors, humidifiers or direct precipitation.
 - Unstable pressure conditions with high air turbulence.
- Insert the probe as far as possible into the environment that is to be measured.
- Avoid accumulation of condensation at the contact wires of the sensor. Install the probe so that the tip points down. If that is not possible, install it in horizontal position.

Mounting the duct version

To avoid measurement errors, at least 200 mm of the probe should be inserted into the environment that is to be measured. If necessary, use the mounting flange AC5005 to install the probe and fasten the transmitter.



Supply voltage / Technology

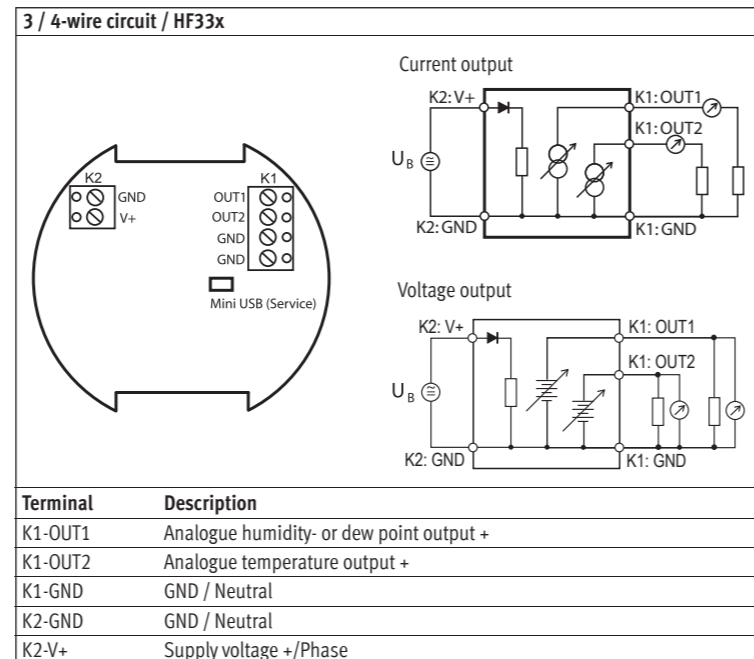
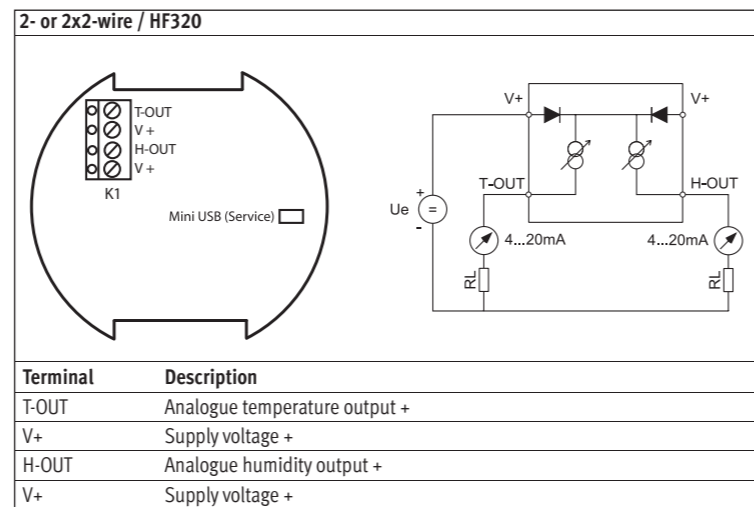
Type	Supply voltage V+	Load	Output
2- or 2x2-wire			
HF320	10...28 VDC: 10 V + (0.02 x load)	Max 500 Ω	4...20 mA
3 / 4-wire			
HF331	18...40 VDC / 13...28 VAC	Max 500 Ω	0...20 mA
HF332	18...40 VDC / 13...28 VAC	Max 500 Ω	4...20 mA
HF333	6...40 VDC / 5...28 VAC	Min 1000 Ω	0...1 V
HF334	10...40 VDC / 8...28 VAC	Min 5000 Ω	0...5 V
HF335	18...40 VDC / 13...28 VAC	Min 10000 Ω	0...10 V



Caution: Wrong supply voltages and excessively high loading of the outputs can damage the transmitter.

Terminal configuration / Connection diagrams

The type is defined using the table «Supply voltage / Technology» to then use the following connection diagrams:



Programming

The basic settings of the devices are made in the factory according to your order. The transmitters are adjusted in the factory and therefore do not need to be checked and readjusted during installation. The devices can be started immediately after installation.

Sources of error

Measured values can be influenced by the following factors:

Temperature errors :

Adaptation time too short, cold outside wall, heating elements, sunlight, etc.

Humidity errors:

Steam, water spray, dripping water or condensation at the sensor, etc. Repeatability and long term stability are, however, not influenced by these factors even if the probe is exposed to high humidity or saturation with steam (condensation) over a longer period of time.

Soiling:

By dust in the air. The choice of probe filter depends on the amount of soiling at the measuring point. The filter must be cleaned or replaced periodically.

Scaling / Adjustment / Firmware update

The following settings can be made with the help of the HW4 software and either the service cable AC3006 or AC3009:

- new scaling of the outputs
- adjustment
- firmware update

You can find a detailed description in the manual that you can download from our web site at www.rotronic-humidity.com

Technical data (measurement)

Humidity:	0...100 %RH
Temperature:	-40...60 °C
Accuracy:	±2 %RH, ± 0.3 K @ 23°C
Protection:	IP65
Outputs:	Current or voltage signals depending on order code, UART service interface

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