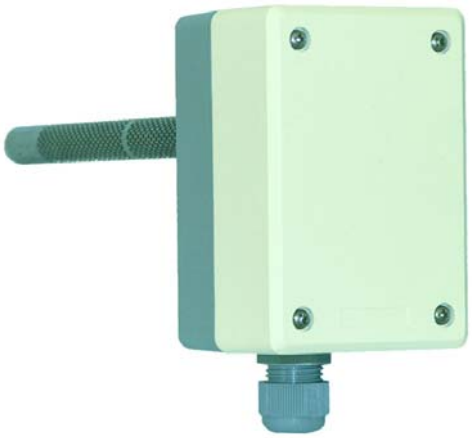
## Device Description

## LRF105 Duct Humidity Monitor



### Application

The LRF105 duct humidity monitor with a changeover switch is used to monitor and provide 2-point control of the relative humidity in ventilation ducts. Setpoints are set directly on the duct humidity monitor.

### Type

| | |
|---|---|
| LRF105 | Duct humidity monitor with a changeover switch for 2-point control |

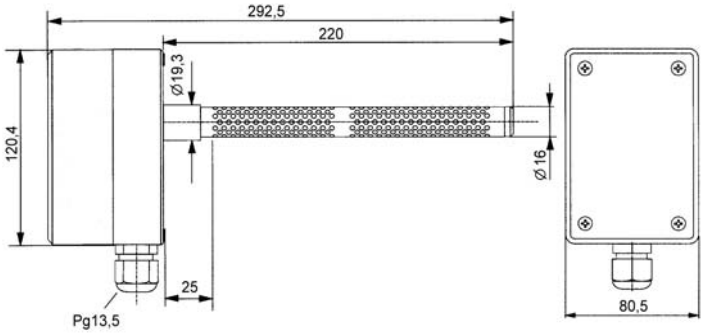
### Technical data

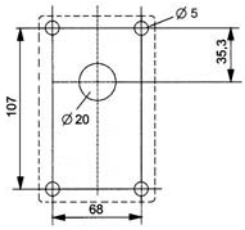
| | |
|---|---|
| Output | 1 floating changeover switch, switching difference 3..6% RH<br>max. AC 250 V, 15 (2) A with non-condensing air<br>max. AC 24 V in damp spaces |
| Measurement range | 30..100% RH, working range 35..100% RH |
| Measuring accuracy | ± 3.5% RH for > 50% RH / ± 4.0% RH for < 50% RH |
| Time constant | T = 120 s at 2 m/s air velocity |
| Medium | Air, solvent-free, non-aggressive |
| Temperature | Working range: 0..+60°C |
| Air velocity | up to 8 m/s, up to 15 m/s with gauze protector (GF2), accessories |
| Installation position | Measuring tube vertically downward to horizontal position |
| Degree of protection | IP64 |
| Weight | approx. 0.7 kg |

### Accessories

| | |
|---|---|
| GF2 | Niro gauze protector to protect against wind for air velocities up to 15 m/s |

### Dimensions




Mounting holes

### Mounting

Use four screws to mount on duct after taking off the hood, see fig. "Mounting holes".

### Installation

Danger

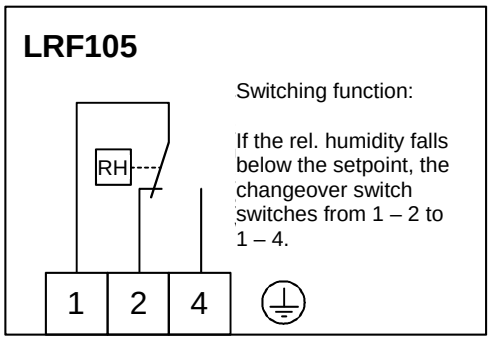
**Mains voltage 230 V**

**Electrical installation may only be carried out by qualified technicians, e.g. an electrician.**

Be sure to comply with local wiring regulations.

The unit must be connected in accordance with the applicable system circuit diagram.

Connection




Subject to change

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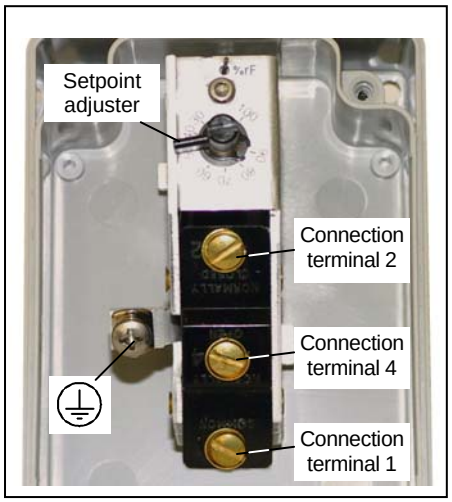
## Setting

Danger

**Mains voltage 230 V**
**Settings can only be made on the humidity monitor when the unit is disconnected from the power supply and by qualified technicians, e.g. the commissioning technician.**




The setpoint adjuster is located under the hood.

**The power supply to the humidity monitor must be shut off before the hood is removed.**

## Maintenance

When operated in clean air, the measuring element requires no maintenance.

Depending on type and concentration, polluted or aggressive air, and air containing solvents can cause errors in measurement.

Provided that no damage has been caused by acids, alkalis or other aggressive substances, the functionality of the measuring element can be restored by cleaning it.

Danger

**Only qualified technicians may clean the measuring element.**
**Prior to cleaning, the power supply must be switched off and the air duct disconnected from the humidity monitor.**

To clean the measuring element, both the measuring tube and the measuring element should be immersed in clear water (20°C). Dirt residue on the surface of the measuring element can be removed with gentle strokes.

We recommend adding a delicate detergent to the water to remove greasy dirt. Since delicate detergents contain chemical substances, the parts must be rinsed in clear water after cleaning.

Caution

The measuring system is open to the interior of the housing. The measuring tube may only be immersed vertically to approx. 25 mm below the base of the housing (max. immersion depth approx. 195 mm, measuring tube perforation).
**The housing, which includes the switching system, may not come into contact with water since this may cause a short-circuit.**

After cleaning, while wet, the humidity monitor displays 100% RH and must be air-dried.
**Caution** Do not dry with warm or hot air (hairdryer); this will damage the measuring element.

After cleaning and drying the humidity monitor, check the switching point at a constant ambient humidity.

Use the adjustment screw at the end of the measuring tube to make any adjustments.

| | |
|---|---|
| Clockwise = | Lower measurement value |
| Counter-clockwise = | Increase measurement value |

After adjustment, re-secure the adjustment screw with locking compound.