

## HTP: Duct transducer for relative humidity

### How energy efficiency is improved

Accurate recording of air humidity in pneumatic installations for optimal control of HVAC systems.

### Areas of application

Continuous measurement and/or control of relative humidity in combination with pneumatic control equipment, e.g. in ducting.

### Features

- Part of the Centair family of systems
- Conversion of relative air humidity into a standard 0.2 to 1.0 bar pneumatic signal
- Sensor tube made of glass-fibre-reinforced thermoplastic
- Measuring element consists of temperature-compensated humidity sensor with stabilised artificial textile tape
- Fixing flange supplied with seal for duct and wall mounting
- Compressed-air connection Rp 1/8"
- Complies with directive 97/23/EC Art. 3.3 on pressure equipment

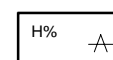
### Technical description

- Supply pressure 1.3 bar  $\pm$  0.1
- Nozzle/ball system
- Hysteresis of output signal < 4% rH

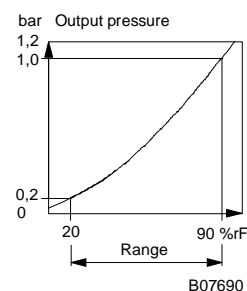
Type	Range %rh	Output pressure bar	Weight kg
<b>HTP 151 F001</b>	20...90	0,2...1,0	0,3
Supply pressure <sup>1)</sup> via ext. restrictor $\varnothing$ 0,2 mm	1,3 bar $\pm$ 0,1	Permissible ambient temp.	0...70 °C
Air capacity, air consumption	33 l <sub>n</sub> /h	Effect of temperature	compensated
Linearity	see characteristic	Wiring diagram	<a href="#">A07692</a>
Hysteresis	4% rh	Dimension drawing	<a href="#">M07694</a>
Time constant at 0,2 m/s	approx. 3 min	Fitting instructions	<a href="#">MV 505514</a>
Max. air speed	10 m/s		
1) In the RCP/RPP 20 standard controllers, the restrictors ( $\varnothing$ 0,2 mm) are fitted at inputs 3 and 4. For regulations concerning the quality of the air supply, especially at low ambient temperatures, see Section 60.			



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### Operation

The synthetic textile strip expands as the humidity rises, creating a proportionate stroke on the lever system. The stroke is converted by a conversion spring into a force. The bleed-off nozzle-ball system converts this force into a corresponding change of pressure. As the humidity rises, so does the output pressure.

### Technical information

Technical manual for *centair* system 304991 001

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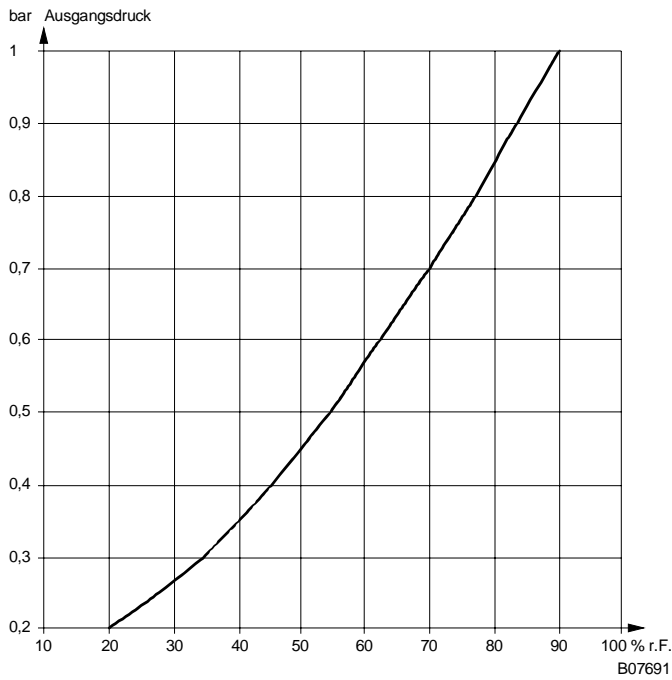
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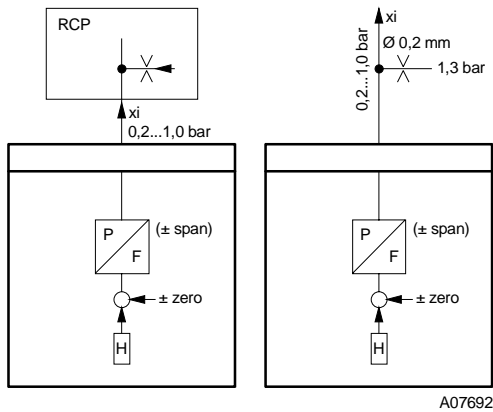
**Engineering and fitting notes**

To compensate for the positional effects, the Allen screw on the nozzle-ball system can be adjusted.

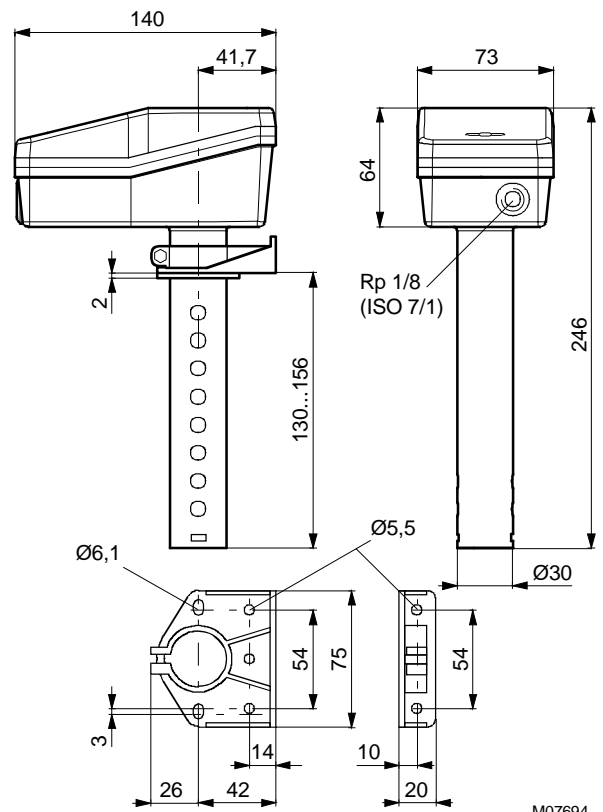
Output pressure dependent on relative humidity at 23 °C



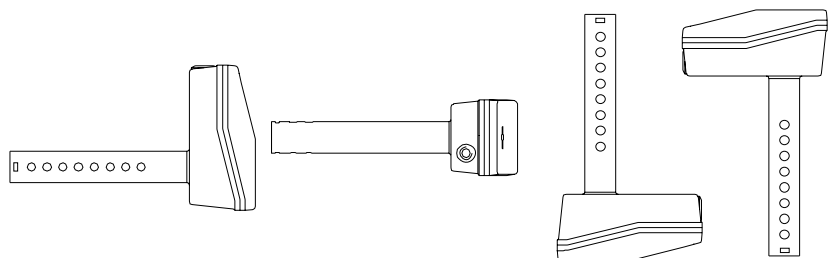
**Wiring diagram**



**Dimension drawing**



## Permissible fitting positions



Compensate for effects of position

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