

## HSUP: Room transducer for relative humidity

Used in conjunction with *centair* controllers for measuring the relative humidity in occupied rooms. Conforms to the regulations on pressure equipment (97/23/EG Art. 3.3).

Anthracite-grey housing baseplate (RAL 7016) of light metal, with nozzle-ball force-balance system; the measuring element comprises a nylon band and a lever system with conversion spring; cover of thermoplastic with off-white frame and (RAL 9002) and pure-white front plate (RAL 9010); compressed-air connection for soft plastic tubing of Ø 4 mm; measuring connection M4.

Type	Measuring range %rh	Output pressure bar	Weight kg
<b>HSUP 1 F001</b>	20...90	0.2...1.0	0.17
Supply pressure <sup>1)</sup> (via ext. restrictor of Ø 0.2 mm)	1.3 ± 0.1 bar	Effect of temperature Permissible ambient temp.	-0.5 %rh/K 10...40 °C
Air capacity, air consumption	33 l <sub>n</sub> /h		
Max. hysteresis	5 %rh	Connection diagram	<a href="#">A02782</a>
Linearity	see characteristic	Dimension drawing	<a href="#">M303048</a>
Time constant (0.2 m/s)	approx. 10 min	Fitting instructions	MV 2427

### Accessories

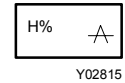
- [0296218 000\\*](#) Buckle-proof adaptor for push-on connection
- [0296990 000\\*](#) Buckle-proof adaptor for screw-on connection, MV 7322
- [0303124 000\\*](#) Recessed junction box
- [0310315 000\\*](#) Surface junction box

\*) Dimension drawing or wiring diagram are available under the same number

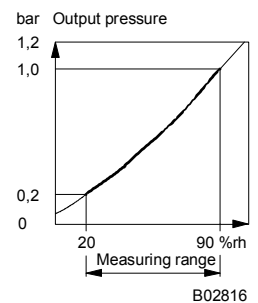
- 1) In the RCP and RPP 20 controllers, the restrictors (Ø 0.2 mm) are fitted at inputs 3 and 4.  
See Section 60 on regulations concerning the quality of supply air, especially at low ambient temperatures.



T03 424



Y02815



B02816

### Operation

As the humidity increases, the nylon band expands, thereby creating a stroke on the lever system. This stroke is converted by the conversion spring into a force. The bleed-off nozzle-ball system converts this force into an equivalent pressure change. As the humidity increases, the output pressure rises.

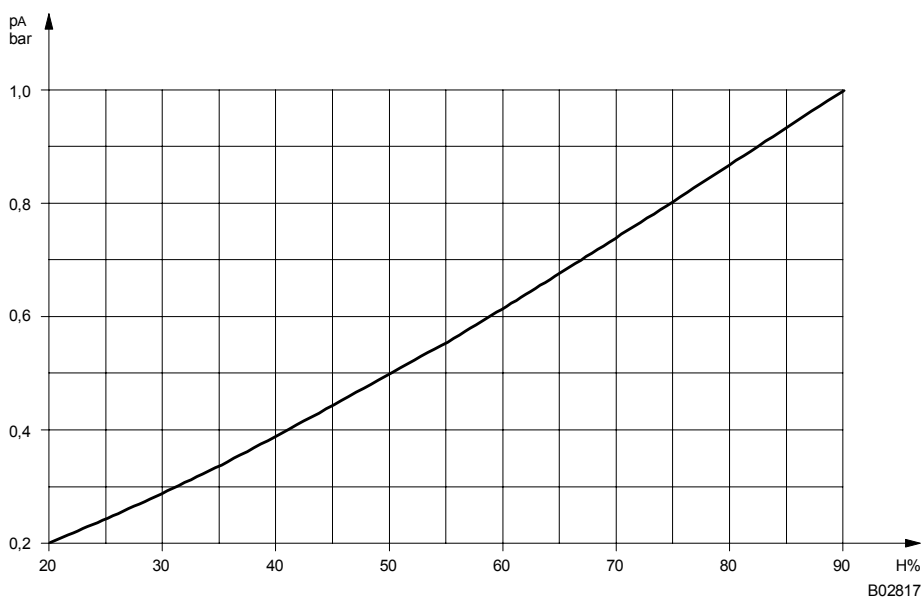
### Engineering and fitting notes

The effect of temperature can easily be negated by making the necessary adjustment of the hexagonal screw at the end of the lever. Since the measuring span is unaffected by either fitting or use, the tension of the spring converter should not be altered.

### Technical information

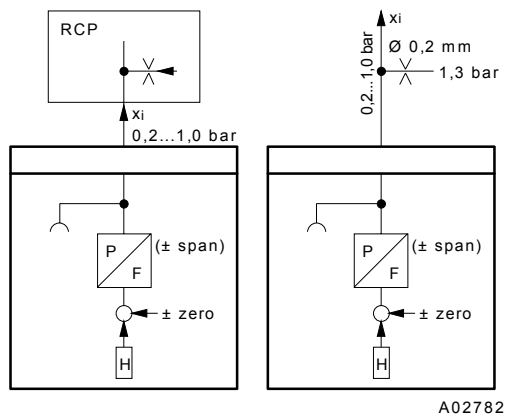
Technical manual: *centair* system 304991 003

Output pressure as a function of the relative humidity at 23 °C

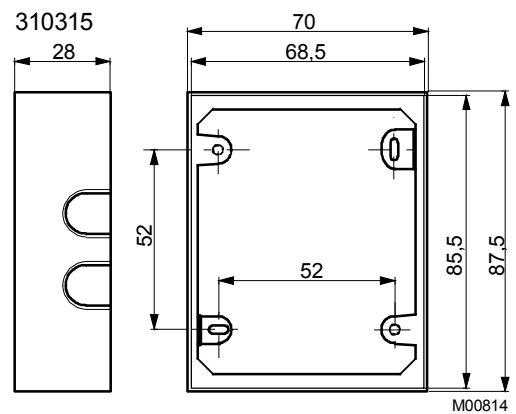


B02817

### Connection diagram



## Accessories



## Dimension drawing

