

# Datasheet | base BHT duct

## *base* BHT duct

Humidity & Temperature  
Transmitter

The simplest way of  
precise measurement.



### Highlights:

- Humidity & Temperature transmitter engineered for HVAC applications
- High precision with accuracies of  $\pm 2\%RH$  and  $\pm 0.2K$
- Smart PCB design for optimum cost efficiency
- Easy to install in the duct
- All common analog output signals selectable
- Sensor protection with either wire mesh filters or sintered filters
- Optional display

## Technical Data

Measurement data	
Measurement range	<p><b>Relative Humidity</b> 0 ... 100 %rH</p> <p><b>Temperature</b> Selectable via model code -20... 80 °C [T1] -20... 60 °C [T2] 0... 50 °C [T3]</p>
Units	<p><b>Relative Humidity</b> %rH</p> <p><b>Temperature</b> Selectable via model code °C [C] °F [F]</p>
Overall accuracies	<p><b>Relative Humidity</b> ± 2% rH typ. @ 0... 90 % rH   ± 3% rH typ. @ Range 91... 100 % rH</p> <p><b>Temperature</b> ± 0,2 K typ. @ -20... 60 °C   ± 0,3 K typ. @ Range ≠ -61... 80 °C</p>
Long-term stability:	<p><b>Relative Humidity</b> ± 0,5 % rH/Year</p> <p><b>Temperature</b> ± 0,05 K/Year</p>
Electrical data	
Power supply	22...27 VAC (50 Hz) / 19...31 VDC
Output signal	<p><b>Selectable via model code</b> 0... 10 V [010] 2... 10 V [210] 5... 10 V [510] 4... 20 mA [420] 0... 20 mA [020]</p> <p><i>Valid for humidity and temperature outputs</i></p>
Electrical connections	Spring loaded terminals max. 2.5 mm <sup>2</sup>
Ambient conditions	
Operating conditions	<p>Humidity: 0... 100% rF non-condensing Temperature: -20°C... 80 °C</p>

Storing conditions	Humidity: 0... 100% rF non-condensing Temperature: -30°C... 80 °C
Ambient pressure	600 ... 1200 hPa
<b>Housing</b>	
Dimensions	Housing: 86 x 56 x 40 mm (H x W x D) Sensor probe: 200 x 12 mm (L x Outer Diameter)
Mounting	Duct mounting via duct flange
Material housing transmitter	Grilamid XE4073 PA610
Material housing probe	AL6063
Material filter sensor probe	<b>Option selectable via model code</b> Wire mesh filter [W] Sinter filter [S]
Cable glands	Skintop M16 x 1,5 mm (4,5 - 10 mm)
Protection type	IP65
Display	<b>Option selectable via model code</b> Display [D]

## Model Code

<i>Beispiel   Example</i>		BHT	D	H	T1	C	W	010	D
Model name	Base Humidity and temperature	BHT							
Sensor mounting variant	Duct		D						
Range Humidity	0... 100%RH			H					
Range Temperature	-20... 80°C				T1				
	-20... 60°C				T2				
	0... 50 °C				T3				
Unit Temperature	°C					C			
	°F					F			
Filter material sensor probe	Wire mesh filter						W		
	Sinter filter						S		
Output signal	0-10 V							010	
	2-10 V							210	
	0-5 V							005	
	4-20 mA							420	
	0-20 mA							020	
Display	Display								D
	None								X