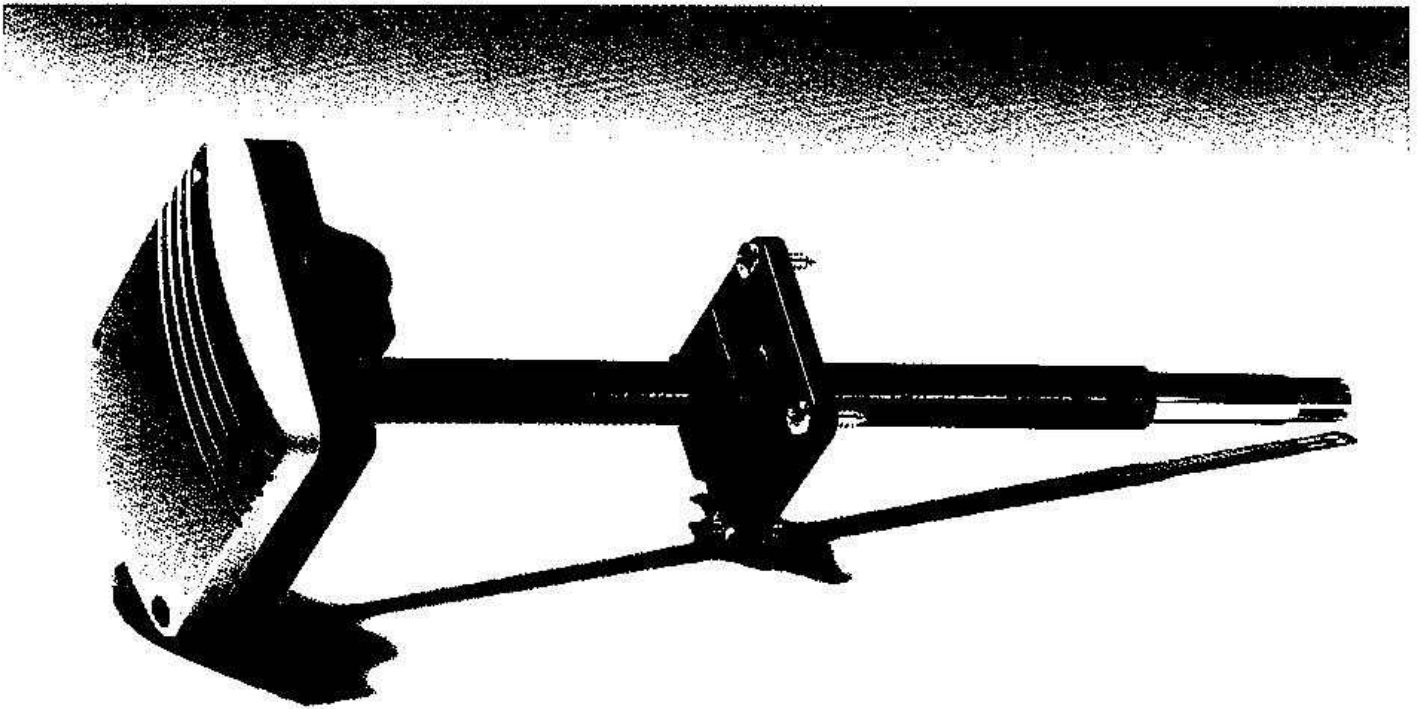


HMD40 & HMD50 humidity and temperature transmitters



ENERGY SAVINGS

Correct relative humidity of the air we breathe is important to our health and comfort: in many HVAC energy management systems the accurate measurement of relative humidity as well as temperature is essential to for optimum control of the environment. Dry air feels colder than humid air, and so when humidity is maintained at the correct level, it saves energy needed for heating. Accurate control of relative humidity is also very important in many storage and manufacturing applications.

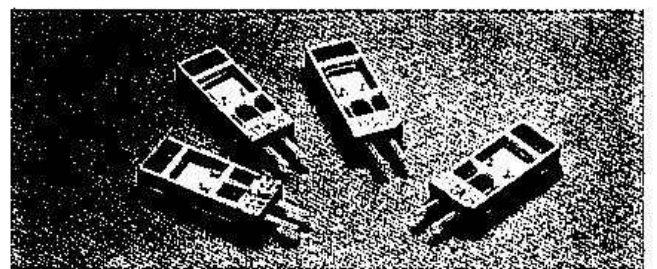
LOWER MAINTENANCE COSTS

HMD40, 50 two and three-wire duct mounted humidity and temperature transmitters have been designed for use in building energy management systems. They combine excellent stability with easy installation, reliable operation and no recalibration if the sensor is changed. This means great savings in overall maintenance costs. These features make the HMD40/50 transmitters the ideal choice for most air-conditioning applications.

The HMD40/50 transmitters can operate in the humidity range from 0 to 100 %RH but measure from 10 to 90 %RH. The Y-models measure also temperature from -10 to +60 °C.

WORLD'S FIRST TRULY INTERCHANGEABLE CAPACITIVE HUMIDITY SENSOR

The HMD40, 50 humidity transmitters use — the world's first interchangeable capacitive humidity sensor. Transmitters that incorporate this sensor require no calibration even when the sensor is changed. The transmitters measure humidity with ± 3 %RH accuracy and ± 1 %RH stability per year. The sensor has excellent long-term stability, negligible hysteresis and is insensitive to dust as well as most chemicals.



Easy and flexible way to measure humidity — INTERCAP® interchangeable humidity sensors

TECHNICAL DATA

HMD40U/40Y HMD50U/50Y

RELATIVE HUMIDITY

Measuring range (for which accuracy is specified)	10...90 %RH
Operating range	0...100 %RH
Accuracy at +20 °C	better than ± 3 %RH (see figure 1)
Temperature dependence	$< \pm 1.5$ %RH (see figure 2)
Sensor	INTERCAP [®] humidity sensor, part no. 15778

Fig. 1 Accuracy of humidity measurement

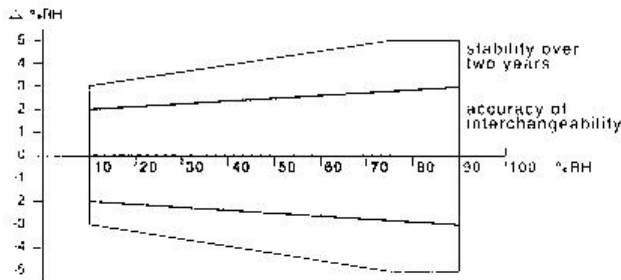
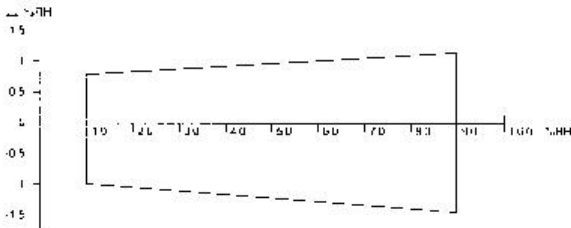


Fig. 2 Temperature dependence (-10...+60 °C)



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TEMPERATURE (Y-models only)

Measuring range	-10...+60 °C
Total accuracy at +25 °C	± 0.3 °C
Temperature dependence	0.01 °C/°C
Sensor	Pt 1000 IEC 751 class B

GENERAL

Output signal equals 0...100 %RH & -10...+60 °C	
HMD40U/40Y	-1...20 mA
HMD50U/50Y RH	0...1 V & 0...10 V
T	0...10 V
load resistance > 20 kohm	

Power supply

HMD40U/40Y	10...28 VDC
HMD50U/50Y 0...1 V	12...35 VDC
	12...24 VAC
HMD50U/50Y 0...10 V	15...35 VDC
	15...24 VAC

Current consumption

HMD40U/40Y	4 mA minimum
HMD50U/50Y	6 mA typical

Operating temperature range	-10...+60 °C
Storage temperature range	-10...+60 °C
Operating humidity range	0...100 %RH

Sensor protection

standard	membrane filter, part no. 17039
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option	plastic grid, part no. 17038
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Housing material	ABS plastic
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Housing classification	IP 65
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Dimensions in mm

