

Description

This sensor is designed to measure the temperature and relative humidity in indoor environments such as schools, hotels, swimming pools, commercial buildings, offices, homes...

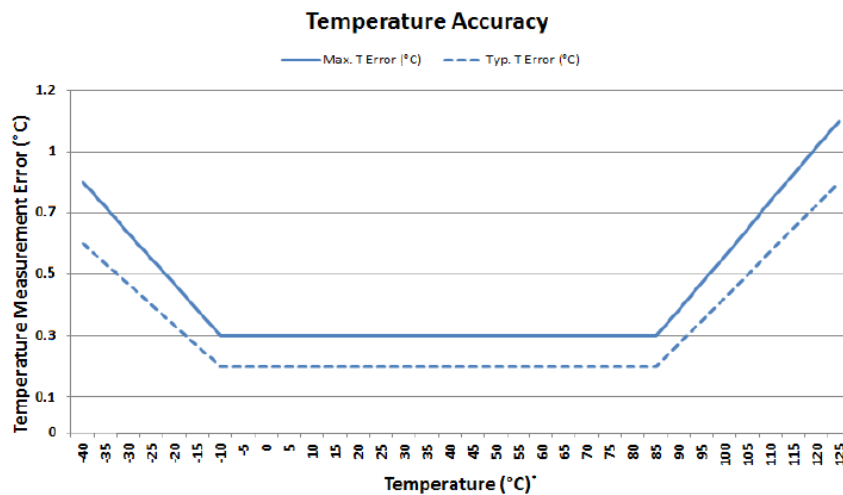
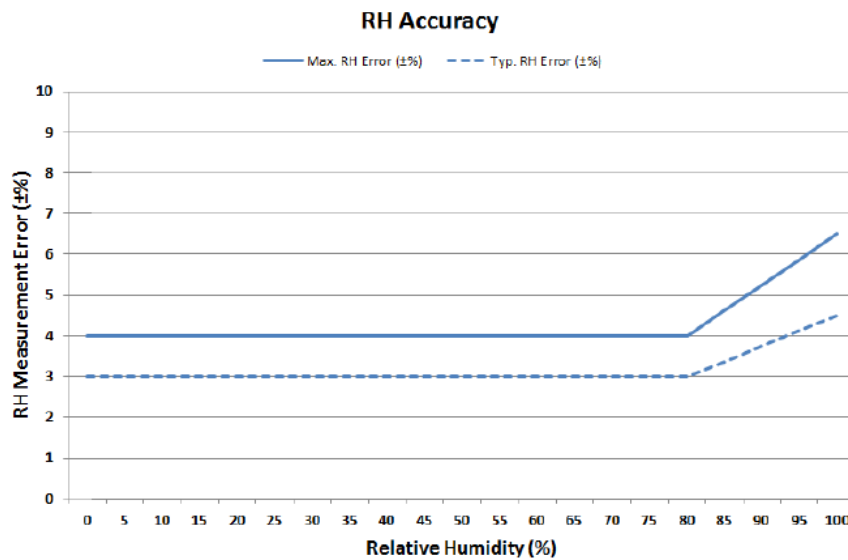
Applications

- HVAC applications for building management
- Air conditioning
- Hotels, museums, offices...



Technical Specifications

Humidity		Temperature	
sensing principle	capacitive	sensing principle	capacitive
Measuring Range	0 to 100% RH	Measuring Range	- 40°C to +125°C
Accuracy Typ.	± 3% (0% ≤ rH ≤ 80%)	Accuracy Typ.	best± 0.25°C (- 10°C ≤ ta ≤ +85°C)
resolution min.	0.2 %	resolution min.	0.08°C



DPF-MITH Humidity and Temperature MODBUS sensor

Electrical Specifications		General Specifications	
Power supply	24 Vdc (7-28 Vdc)	Regulatory Compliance	CE Mark: EMC 2004/108/EC, RoHS 2011/65/EU, WEEE
Power consumption	Less than 10mA		EN61000-6-1/2/3/4
Operating Temperature	-40 ~ +125° C	Casing Material	ABS UL94-V0
Storage Temperature	-40 ~ + 120 °C	Protection Class	IP20
Operating Humidity	0 ~ 95% non-condensing	Housing color	White
Electrical connection	screw terminals max. 1.5 mm2	Dimensions	80x80x25 mm
MODBUS output	EIA-485 physical layer RTU <i>Default: 9600, even, 1 bit, address 7</i>		3.15x3.15x0.98 "
		Weight	0.049 kg

MODBUS REGISTERS

INPUT REGISTERS [100-101-102-103-104-105-106-107-108] i.e. protocol-message address counts from 0
 HOLDING REGISTERS [101-102-103-104-105-106-107-108-109] i.e. device address counts from 1

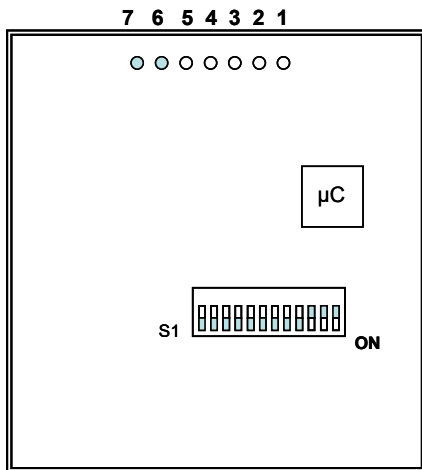
Unsigned integer 16 bits [101-102-103-104-105] i.e. HOLDING REGISTERS

101	Last measured Humidity value (Integer value)
102	Last measured temperature value (Integer value)
103	Last measured Humidity sensor value (Integer value) $\%RH = (125 * [103]) / (65536) - 6$
104	Last measured Temperature sensor value (Integer value) $^{\circ}C = (175,72 * [104]) / (65536) - 46,85$
105	TIME REFERENCE
106 & 107	Last Measured temp value in IEEE-754 float big endian <i>Example: if the number were 1,2345678 in hex 0x3f9e0651 then the transmitted number will be</i> <i>106: 0x0651</i> <i>107: 0x3f9e</i>
108 & 109	Last measured humidity value in IEEE-754 float big endian

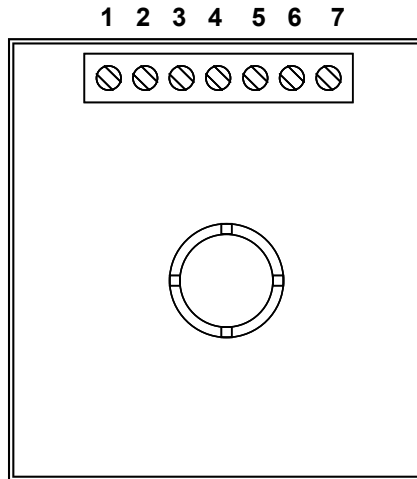
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Installation Diagram - Cabling

Back View
Front Plate

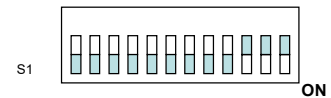


Back plate View



PIN	Signal
1	A-RS485
2	B-RS485
3	LT
4	
5	
6	GND
7	24V dc

DIP switch configuration – MODBUS settings



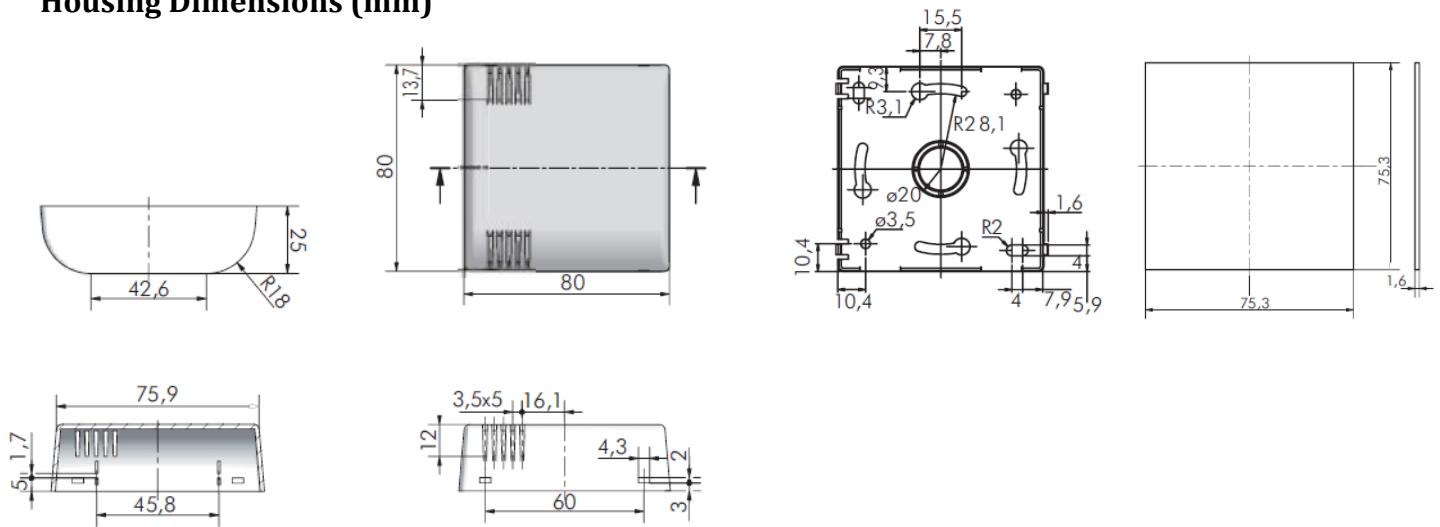
DIP switch NR	12	11	10	9	8	7	6	5	4	3	2	1				
SIGNAL	PARITY1	PARITY0	BAUD1	BAUD0	ADD7	ADD6	ADD5	ADD4	ADD3	ADD2	ADD1	ADD0	PARITY	STOP BITS	BAUDRATE	ADDRESS ^{*(1)}
	ON	ON											EVEN	1		
	ON	OFF											ODD	1		
	OFF	ON											NONE	1		
	OFF	OFF											EVEN	2		
			ON	ON											9600	
			ON	OFF											19200	
			OFF	ON											38400	
			OFF	OFF											57600	
					ON	ON	ON	ON	ON	ON	OFF	ON				2
					ON	ON	ON	ON	ON	OFF	OFF	OFF				7
					ON	ON	ON	ON	OFF	ON	ON	ON				8
					ON	ON	ON	ON	OFF	ON	ON	OFF				9
					ON	ON	ON	ON	OFF	ON	OFF	ON				10
					ON	ON	ON	ON	OFF	ON	OFF	OFF				11
					ON	ON	ON	ON	OFF	OFF	ON	ON				12
					ON	ON	ON	OFF	ON	OFF	ON	OFF				21
					ON	OFF	OFF	OFF	ON	ON	ON	OFF				115
					ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF				127
					OFF	OFF	ON	OFF	ON	ON	OFF	OFF				211
					OFF	OFF	OFF	OFF	OFF	OFF	ON	ON				252

Default Values-Configuration by factory
 Address= Binary DIP switch combination from 0 to 257 address

*(1)
 ON=0
 OFF=1

DPF-MITH Humidity and Temperature MODBUS sensor

Housing Dimensions (mm)



Ordering Info Codes

Product Name	Reference
DPF-MITH Humidity and Temperature MODBUS sensor	EN220212

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