Datasheet

Temperature and Humidity sensor

I2C Interface

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1. Introduction

1.1 General

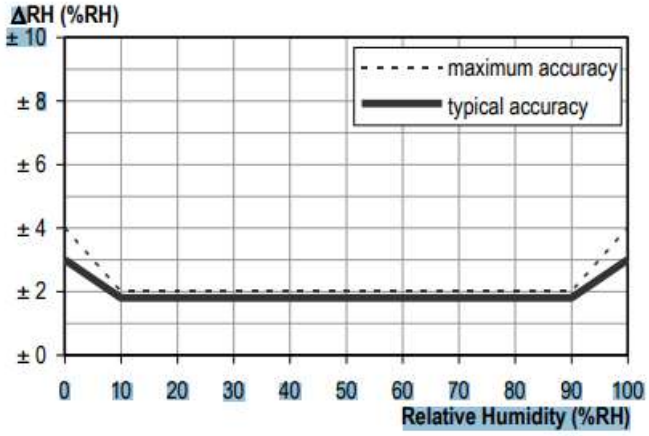
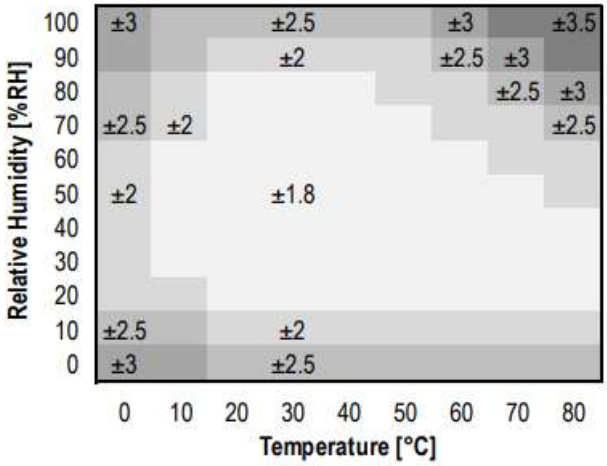
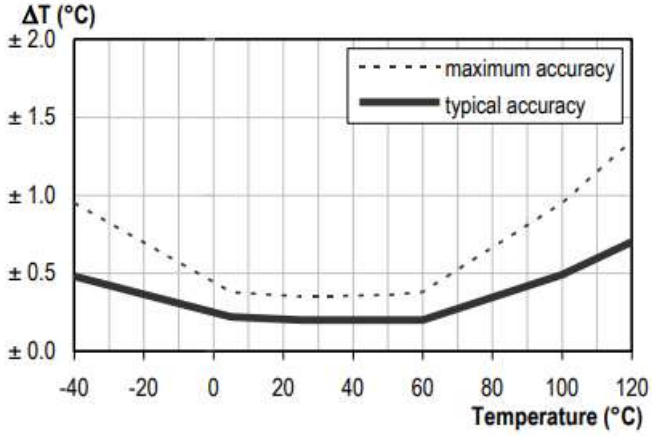
The Temperature and Humidity sensor has been designed to meet costumers' specifications. The sensor is used as input to datalogger which monitors air temperature and humidity inside electrical panels

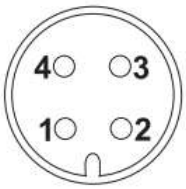
Key features

- Stainless steel parts.
- Standard M12 connector.
- 0-100 % RH measurement range.
- -40 - +125 °C measurement range
- Protected against transients

1.2. Technical data

Mechanical	
Housing	
Mounting	M12
Dimensions	Ø12 x 81.3 mm.
Weight	35g max.
Enviromental	
Operation Temperature range	-40 to 125°C
Storage Temperature range	-40°C to 125°C
Humidity	Up to 100% RH
Filter	20u filter for protecting PCB modules from dust, particle pollution and oxidation of most chemicals to ensure sensors a long-term stable operation, higher reliability and long service life.
Electrical	
Power supply	2.1 to 3.6V
current	Max 330uA.

Sensor IC	Sensirion SHT25. Typical and maximal tolerance at 25°C:  RH accuracy at various temperatures:  Maximal tolerance for temperature sensor in °C: 
Sensor interface	I2C Digital
Electrical connection	
Standard M12 sensor cables	



1...GND
2...+UB
3...DATA
4...CLOCK

Metal housing of the sensor grounded through M12 connector shielding.

IP Class /Approvals	
IP class	IP20
Approvals	EMC test according to relevant parts of EN 61000-6-2 and EN 61000-6-4: Radiated emission (30-1000 Mhz). Conducted emission (0.15-30 Mhz). Power frequency magnetic field (50Hz). Radio frequency electromagnetic field (80-2700 Mhz). Electrostatic discharge (ESD).. Radio frequency common mode (0.15-80 Mhz /30V).
Ordering information	Part no. 9501SPT162

1.3. Document revision

Rev.		*Changed by*	*Description of changes (including affected section numbers)*	*Reviewed by Date*	*Approved by Date*
01	26-06-2020	ABJ	First version		ABJ
02	10-07-2020	ABJ	1, Added feature 1.2, added sensor interface	10-07-2020	ABJ
03	06-08-2020	KED	IP Class defined	06-08-2020	ABJ
04	07-08-2020	KED	Connection picture added	07-08-2020	ABJ
05	26-11-2020	KED	metal house grounding	27-11-2020	ABJ
06	17-12-2020	KED	Accuracy detail	17-12-2020	ABJ