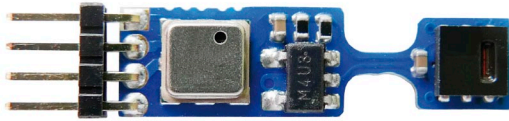


Miniature multi-sensor module for measuring temperature, humidity, and pressure with integrated EEPROM FH0D 46-C



Our new plug-in digital multi-sensor module - with its miniature design and extremely low energy consumption - combines the measurable variables - temperature, atmospheric humidity, and atmospheric pressure. It takes a complete reading of all these ambient parameters and can thus accurately determine all humidity-related and pressure-dependent variables, e.g. the frequently needed mixture ratio (r).

It communicates its findings via an I²C interface; the user can selectively access individual sensor variables and data saved to the integrated EEPROM.

Before leaving our factory the sensor module is adjusted and assigned an electronic identification code that can be read out on

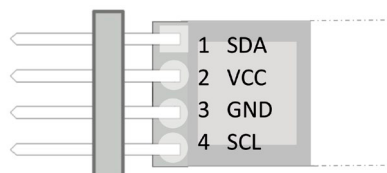
receipt of the appropriate command. The integrated EEPROM can be used to save the user's own adjustment data, fine tuning, or electronic ID data (ID number, comments text, etc.). Since the saved parameters are retained in the EEPROM, a multi-sensor module can only be exchanged or replaced with modules that are identically calibrated and have all the same data.

The module is specially designed with very good thermal isolation to withstand temperature influence / thermal conduction and thus ensure that all variables are measured precisely. This system - unlike analog measured value processing - virtually excludes the risk of varying line lengths or disturbance factors adversely affecting the accuracy of measured results.

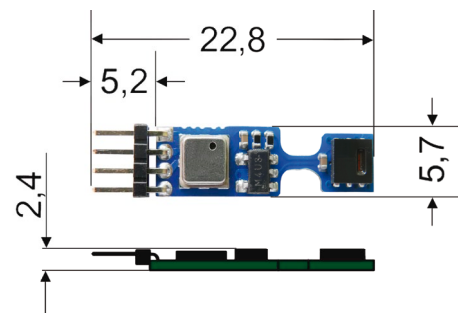
Technical data

Temperature range	-40 to +85 °C	I²C interface	
Accuracy	+5 to +60 °C, typical ±0.2 K +5 to +60 °C, maximum 0.4 K -20 to +85 °C, maximum 0.7 K	Data rate	0 to 400 kHz
Reproducibility	typical ±0.1 K	Sampling rate	2/sec at highest resolution
Humidity range	5.0 to 98.0 % RH	Electrical data	
Accuracy	10 to 90 % RH, maximum ±2 % RH at 23 °C ±5 K 5 to 98 % RH, maximum ±4 % RH at 23 °C ±5 K	Power supply	2.1 to 3.6 V, typical 3.3 V
Hysteresis	typical ±1 % RH	Current consumption	during measuring typical 310 µA in standby typical 0.35 µA
Pressure range	300 to 1100 mbar	Energy consumption	during measuring typical 1.02 mW in standby typical 1.16 µW
Accuracy	700 to 1100 mbar, ±2.5 mbar at 23 °C ±5 K	Connection	male strip connector, 4-pin, spacing 1.27 mm see pin assignment
Internal memory	two-wire serial EEPROM 4 kbit (512 x 8 bit)		lead-free, halogen-free, and RoHS-compliant (restriction of hazardous substances)

Pin assignment



Dimensions



Variants

Miniature multi-sensor module for, humidity, temperature, and pressure with integrated EEPROM
 packaging unit 1 piece
 packaging unit 10 pieces
 packaging unit 100 pieces

Order no.

FH0D46C
FH0D46CVE0010
FH0D46CVE0100