

SIGNUX THG01

Weather and radiation — RS485



SX-THG01



DESCRIPTION

Air temperature and humidity transmitter with RS485 Modbus output. Two versions to choose from, PE or PVC.

The PE version has a metal collar and a ceramic filter, and is the one that best withstands condensation and cleaning. The PVC version is slotted plastic, lighter and more economical, for indoor spaces with no splashing. Both measure the same and speak the same.

The cable can be ordered with a connector, to plug in without tools, or with bare wires, to go straight into a terminal block. It speaks Modbus RTU with no gateway in between and is protected against reverse polarity: connecting it the wrong way round does not break it.

FEATURES

- Two formats for the same device: PE for damp environments and PVC for dry indoor ones. It is chosen by where it will live, not by what it measures.
- With a connector or bare wires: A four-contact M10 connector with 50 cm of cable, or a stripped end to go into a terminal block.
- One point of drift a year: Under 1 % RH and 0.1 °C of annual drift. What separates a process sensor from a desktop one is how far it wanders over time.
- Modbus RTU communication: RS485 with Modbus RTU, no gateway and no proprietary protocol in between.

AT A GLANCE

Measures	Temperature · Humidity
Output	RS485
Power supply	5 to 28 V DC
Operating	–20 to +60 °C

PART NUMBERS

PART NUMBER	MATERIAL / HOUSING	CABLE LENGTH	CONNECTOR / OUTPUT
SX-THG01-PE-50C-M10	PE head	50 cm	M10 connector
SX-THG01-PE-50C-PT	PE head	50 cm	Pigtail
SX-THG01-PVC-50C-M10	PVC head	50 cm	M10 connector
SX-THG01-PVC-50C-PT	PVC head	50 cm	Pigtail

GENERAL

Measured parameters	Temperature · Humidity	
Output	RS485	Modbus RTU, no gateway
Medium	Air	
Heads	PE	for damp environments
	PVC	for dry indoor spaces
	other	On request

RELATIVE HUMIDITY

Range	0 to 100 % RH	
Accuracy	±4 % RH	From 5 to 95 % RH, at 25 °C. Two units measuring the same air can differ by that much: they are not guaranteed to agree any closer than their specification
Resolution	.1 % RH	
Stability	≤1 % RH/year	
Response time	≤8 s	At 1 m/s air speed. The equipment datasheet states ≤4 s; the less favourable of the two is published

TEMPERATURE

Range	-40 to +80 °C	
Accuracy	±0.5 °C	At 25 °C
Resolution	.1 °C	
Stability	≤0.1 °C/year	
Response time	≤25 s	At 1 m/s air speed. The equipment datasheet states ≤15 s; the less favourable of the two is published

OUTPUT AND POWER

Output interface	RS485	Modbus RTU protocol
Power supply	5 to 28 V DC	
Maximum consumption	.05 W	
Factory settings	4800 8N1, address 1	
Baud rates supported	2400 · 4800 · 9600 bps	These three only
Protection	Reverse polarity	Connecting it the wrong way round does not break it
Measurement refresh	2 s	

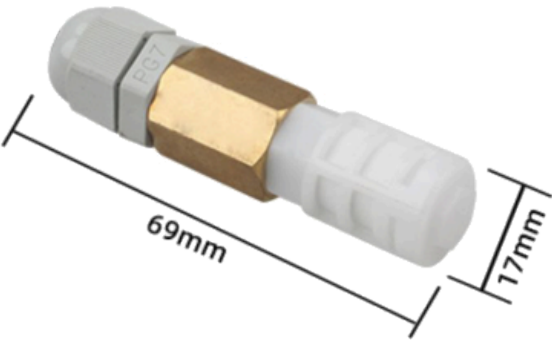
CABLE AND CONNECTION

Termination	M10 connector or According to the part number ordered bare wires	
Cable length	50 cm	
Wires	4	Brown and black the supply, green and blue the bus

CONSTRUCTION

Electronics operating temperature	-20 to +60 °C	At 0 to 80 % RH non-condensing. The other two equipment documents state -40 °C and up to 100 % RH; for each figure the less favourable one is published
Head dimensions	69 × 17 mm 66.5 × 15 mm	PE. Length by diameter PVC. Length by diameter

GALLERY



The PE head, dimensioned



The PVC head, dimensioned