

HYGIENIC TEMPERATURE SENSOR HART



- G1/2" HYGIENIC
- 4...20 MA HART OR CANOPEN
- 1.4571 THROUGHOUT
- MEDIUM UP TO +200 °C
- IP 65 / IP 68



KEY DATA

Property	Value	Property	Value
Input	1x or 2x Pt100 · Pt1000	Medium	-50 ... +200 °C
Output	4...20 mA HART · CANopen · direct	Ambient	-20 ... +80 °C with transmitter (1)
Accuracy	0.3 % of span	without transmitter	-30 ... +100 °C
Process connection	G1/2" hygienic or immersion probe	System pressure	max. 25 bar
Material	stainless steel 1.4571 throughout	Product code	VH

The compact sensor in the version for hygienic areas: sensor tube, process connection and housing all in stainless steel 1.4571, with no plastic insert.

TECHNICAL DATA

INPUT AND OUTPUT

Sensor	1x or 2x Pt100 · Pt1000
Sensor connection	2-, 3- or 4-wire
Classes	A · B · AA · C on request
Maximum range	-50 ... +200 °C, smallest span 50 K
Current output	4 ... 20 mA with HART, 2-wire loop
Current range	3.6 ... 21 mA
Fault signal	21 mA on break, short circuit or underrange
CANopen	CiA 404 · CAN 2.0A · CAN 2.0B, 2 transmit PDOs
Without transmitter	terminals directly on the connector
Measuring rate	10 measurements/s

PERFORMANCE

Total accuracy HART	0.3 % of span
Resolution	16 bit
Filter	0 ... 99 s
Transfer characteristic	linear with temperature
Switch-on delay	< 5 s
Accuracy CANopen	±0.1 K
Resolution CANopen	16 bit, 0.1 K
Conversion time CANopen	20 ms
Transmission rate CANopen	50 kbit/s ... 1 Mbit/s
Adjustable over HART	LRL · URL · LRV · URV · filter · adjustment · simulation · HART address · 2-point calibr.

SUPPLY AND ENVIRONMENT

Supply HART	current loop 12 ... 40 VDC
Load	$R = (U_B - 12 \text{ V}) / 21 \text{ mA}$
Supply CANopen	8 ... 40 VDC, max. 500 mW
Ambient with transmitter	-20 ... +80 °C (1)
Ambient without transmitter	-30 ... +100 °C
Medium	-50 ... +200 °C
Storage	-40 ... +85 °C
System pressure	max. 25 bar
Weight immersion probe	approx. 106 g
Weight G1/2" hygienic	approx. 170 g

MECHANICS

Process connection	G1/2" hygienic or immersion probe
Sensor tube	Ø 6 mm, stainless steel 1.4571
Process connection material	stainless steel 1.4571
Housing	stainless steel 1.4571
Connector insert	metal — no plastic is provided here
Mounting position	any
System pressure	max. 25 bar
Protection	IP 65 electronics · IP 68 sensor, potted inside

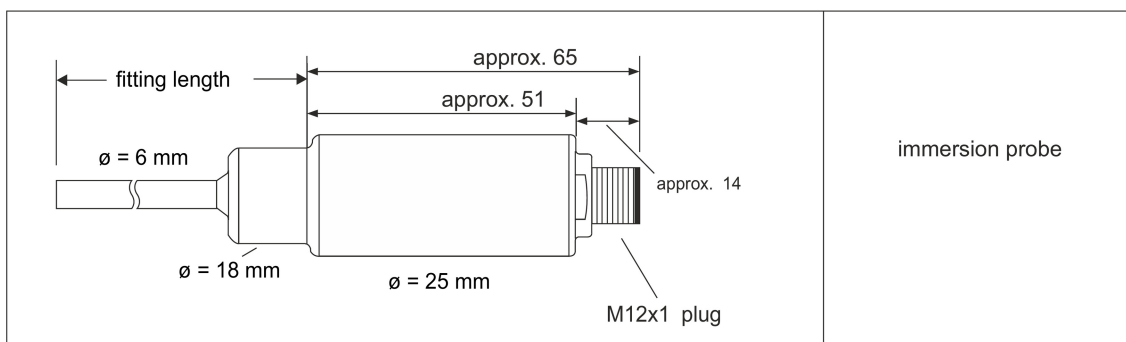
- (1) The ambient temperature is not the medium temperature.
 (2) The CANopen transmitter is adjusted in the factory; only the HART transmitter can be set afterwards.

ELECTRICAL CONNECTION

Two connections: M12x1 four-pole and M12x1 eight-pole, the connector insert always metal. On the CAN bus pin 1 carries the screen, pin 2 plus, pin 3 ground, pin 4 CAN High and pin 5 CAN Low.



DIMENSIONS



Dimensions in mm.



CONFORMITY

Protection	IP 65 electronics, IP 68 sensor
Material to the medium	stainless steel 1.4571

ORDER INFORMATION

Accessories

- HART interface with USB and software, order number 01310-00220. The HART tool is a menu-driven operating program for commissioning, configuration, signal analysis, data backup and documentation. When communicating through a HART modem a resistance of 250 Ω has to be taken into account.

ORDER KEY

Field	Value	Meaning
Product code	VH	stands at the beginning of every order code
Transmitter	F · G · H	none · 4...20 mA HART · CANopen
Sensor	1 ... 4	Pt100 · Pt1000 · 2x Pt100 · 2x Pt1000
Sensor connection	1 · 2 · 3	2-wire · 3-wire · 4-wire
Accuracy	1 ... 4	class A · B · AA · C on request
Fitting length	50 ... A00	50 · 100 · 160 · 200 · 250 · 400 · 600 · 1000 mm (A00), in 5 mm steps
Diameter	6	Ø 6 mm
Process connection	1 · 2	G1/2" hygienic · immersion probe
Connector insert	2	metal — the only possibility
Electrical connection	1 · 3	M12x1 4-pole · M12x1 8-pole
Configuration	0 · 1 · 2	none · factory setting -50...200 °C, span 0...100 °C · customer-specific
Special model	0 · 1	no · yes, please state

The order code is formed from the product code and the fields of the key.

