

## HART 5 4-20mA IN-HEAD TRANSMITTER

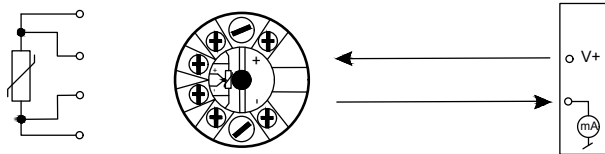


TCX-5335D

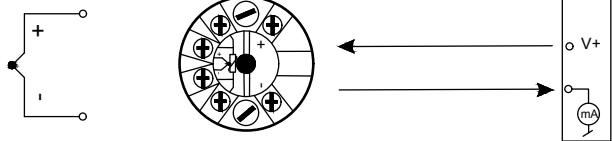
### FEATURES / BENEFITS

- RTD, TC, Ohm, or mV input
- Extremely high measurement accuracy
- HART 5 protocol
- Galvanic isolation
- For DIN form B sensor head mounting

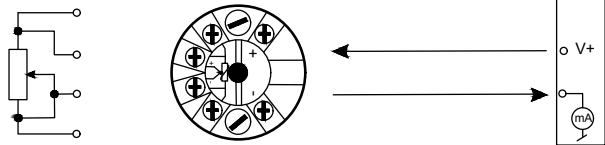
**ORDER YOUR TRANSMITTER:** Use the part number: **TCX-5335D**



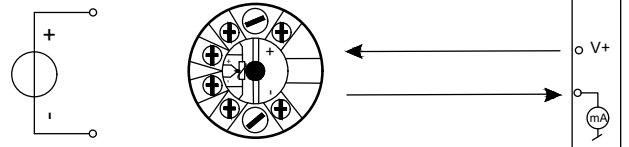
RTD to 4-20 mA



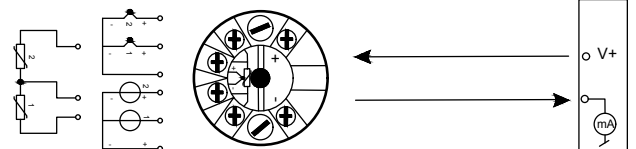
Thermocouple to 4-20 mA



Resistance to 4-20 mA



mV to 4-20 mA



Resistance to 4-20 mA

## HART 5 4-20mA IN-HEAD TRANSMITTER

### SPECIFICATIONS

Environmental Conditions	
Operating Temperature	-40°C to +85°C
Calibration Temperature	20°C to 28°C
Relative humidity	< 95% RH (non-condensing)
Protection degree (enclosure/terminal)	IP68 / IP00
Mechanical Specifications	
Dimensions	Ø 44 x 20.2 mm
Weight approx.	50 g
Wire size	1 x 1.5 mm <sup>2</sup> / stranded wire
Screw terminal torque	0.4 Nm
Vibration	IEC 60068-2-6
2...25 Hz	±1.6 mm
25...100 Hz	±4 g
Common Specifications	
Supply voltage	8...30 VDC
Isolation voltage, test / working	1.5 kVAC / 50 VAC
Response time (programmable)	1...60 s
Warm-up time	30 s
Programming	Loop Link & HART
Signal / noise ratio	Min. 60 dB
Accuracy	Better than 0.05% of selected range
Signal dynamics, input	22 bit
Signal dynamics, output	16 bit
Effect of supply voltage change	< 0.005% of span / VDC
EMC immunity influence	< ±0.1% of span
Extended EMC immunity: NAMUR NE21, A criterion, burst	< ±1% of span

Input Specifications	
Max. offset	50% of selected max. value
RTD type	Pt100, Ni100, lin. R
Cable resistance per wire	5 Ω max. (up to 50 Ω per wire is possible with reduced measurement accuracy)
Sensor current	Nom. 0.2 mA
Effect of sensor cable resistance	< 0.002 Ω / Ω
Sensor error detection	Yes
TC input types	B, E, J, K, L, N, R, S, T, U, W3, W5
Cold junction compensation	< ±1.0°C
Sensor error current: when detecting / else	Nom. 33µA / 0 µA
Voltage input measurement range	-800...+800 mV
Min. measurement range (span)	2.5 mV
Input resistance	10 MΩ
Output Specifications	
Signal range	4...20 mA
Min. signal range	16 mA
Load (@ current output)	≤ (Vsupply - 8) / 0.023 [Ω]
Load stability	≤ 0.01% of span / 100 Ω
Sensor error indication	Programmable 3.5...23 mA
NAMUR NE43 Upscale/ Downscale	23 mA / 3.5 mA
of span	= of the presently selected range

Observed Authority Requirements	
EMC	2014/30/EU
EAC	TR-CU 020/2011

Approvals	
ATEX 2014/34/EU	KEMA 03ATEX1537
IECEX	KEM 10.0083X
FM	FM17US0013X
CSA	1125003
INMETRO	DEKRA 18.0002X
EAC Ex TR-CU 012/2011	RU C-DK.GB08.V.00410
SIL	Hardware assessed for use in SIL applications
DNV-GL Marine	Stand. f. Certific. No. 2.4