



2-wire transmitter with HART protocol

5337D



- RTD, TC, Ohm, and bipolar mV input
- 2 analog inputs and 5 device variables with status available
- HART protocol revision selectable from HART 5 or HART 7
- Hardware assessed for use in SIL applications
- Mounting in hazardous gas and dust area



Application

- Linearized temperature measurement with TC and RTD sensors e.g. Pt100 and Ni100.
- HART communication and 4...20 mA analog PV output for individual, difference or average temperature measurement of up to two RTD or TC input sensors.
- Conversion of linear resistance to a standard analog current signal, e.g from valves or Ohmic level sensors.
- Amplification of bipolar mV signals to standard 4...20 mA current signals.
- Up to 63 transmitters (HART 7) can be connected in a multidrop communication setup.

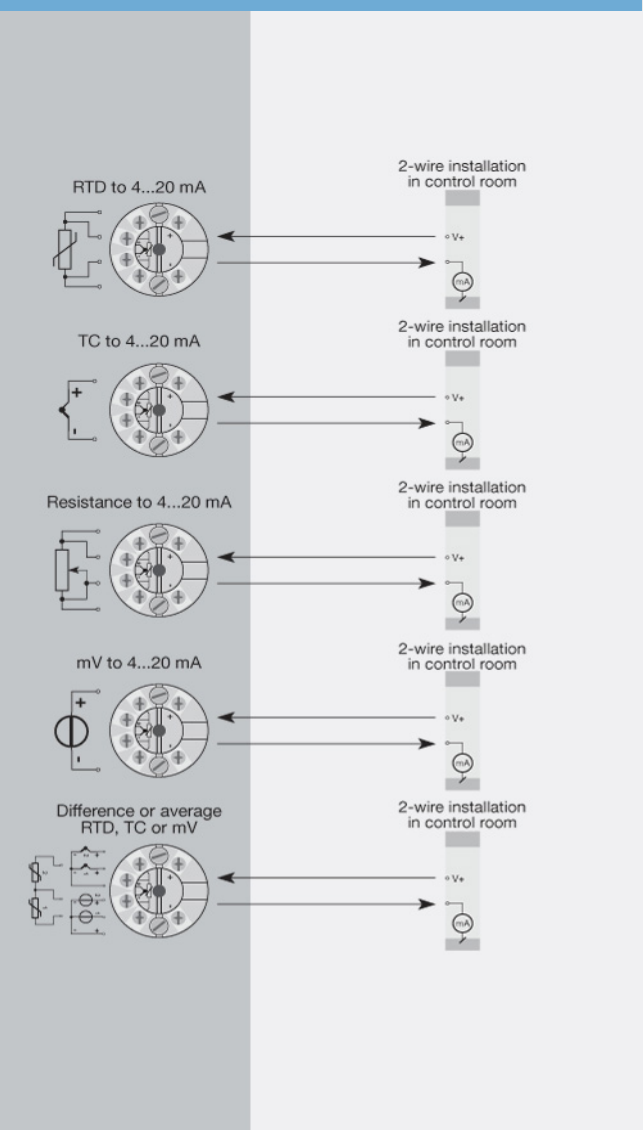
Technical characteristics

- HART protocol revision can be changed by user configuration to either HART 5 or HART 7 protocol.
- The HART 7 protocol offers:
 - Long Tag numbers of up to 32 characters.
 - Enhanced Burst Mode and Event notification with time stamping.
 - Device variable and status mapping to any dynamic variable PV, SV, TV or QV.
 - Process signal trend measurement with logs and summary data.
 - Automatic event notification with time stamps.
 - Command aggregation for higher communication efficiency.
- 5337D is designed according to strict safety requirements and is therefore suitable for applications in SIL installations.
- Continuous check of vital stored data.
- Meeting the NAMUR NE 21 recommendations, the 5337 HART transmitter ensures top measurement performance in harsh EMC environments. Additionally, the 5337D meets NAMUR NE43 and NE89 recommendations.

Mounting / installation

- For DIN form B sensor head mounting.
- Configuration via standard HART communication interfaces or by PR 5909 Loop Link.

Connections



Order:

Type
5337D

Environmental Conditions

Specifications range.....	-40°C to +85°C
Calibration temperature.....	20...28°C
Relative humidity.....	< 95% RH (non-cond.)
Protection degree (encl./terminal).....	IP68 / IP00

Mechanical specifications

Dimensions.....	Ø 44 x 20.2 mm
Weight approx.....	50 g
Wire size.....	1 x 1.5 mm ² stranded wire
Screw terminal torque.....	0.4 Nm
Vibration.....	IEC 60068-2-6 : 2007
Vibration: 2...25 Hz.....	±1.6 mm
Vibration: 25...100 Hz.....	±4 g

Common specifications**Supply**

Supply voltage.....	8.0...30 VDC
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Isolation voltage

Isolation voltage, test / working.....	1.5 kVAC / 50 VAC
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Response time

Response time (programmable).....	1...60 s
Voltage drop.....	8.0 VDC
Communications interface.....	Loop Link & HART®
Signal / noise ratio.....	> 60 dB
Accuracy.....	Better than 0.05% of selected range
EMC immunity influence.....	< ±0.1% of span
Extended EMC immunity: NAMUR NE 21, A criterion, burst.....	< ±1% of span

Input specifications**Common input specifications**

Max. offset.....	50% of selected max. value
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RTD input

RTD type.....	Pt50, Pt100, Pt200, Pt500, Pt1000, Ni50, Ni100, Ni120, Ni1000
Cable resistance per wire (max.).....	5 Ω (up to 50 Ω per wire is possible with reduced measurement accuracy)
Sensor current.....	Nom. 0.2 mA

TC input

Thermocouple type.....	B, E, J, K, L, N, R, S, T, U, W3, W5, LR
Cold junction compensation (CJC).....	Constant, internal or external via a Pt100 or Ni100 sensor

Voltage input

Measurement range.....	-800...+800 mV
Min. measurement range (span).....	2.5 mV
Input resistance.....	10 MΩ

Output specifications**Current output**

Signal range.....	4...20 mA
Min. signal range.....	16 mA
Load resistance.....	≤ (Vsupply - 8) / 0.023 [Ω]
Sensor error indication.....	Programmable 3.5...23 mA
NAMUR NE 43 Upscale/Downscale.....	23 mA / 3.5 mA

Common output specifications

Updating time.....	440 ms
HART protocol revisions.....	HART 5 and HART 7

Approvals

EMC.....	2004/108/EC
ATEX 94/9/EC.....	KEMA 03ATEX1537
IECEX.....	KEM 10.0083X
FM.....	2D5A7
CSA.....	1125003
INMETRO.....	NCC 12.0844 X
EAC.....	TR-CU 020/2011
EAC Ex TR-CU 012/2011.....	RU C-DK.GB08.V.00410
DNV Marine.....	Stand. f. Certific. No. 2.4
SIL.....	Hardware assessed for use in SIL applications

Whilst every effort has been made to ensure the accuracy of this specification, we cannot accept responsibility for damage, injury, loss or expense from errors or omissions. In the interest of technical improvement, this specification may be altered without notice.

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