



## 2-wire transmitter with HART® protocol

### 5337A

- RTD, TC, Ohm, and bipolar mV input
- 2 analogue 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 Safe area or Zone 2/22



#### 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.

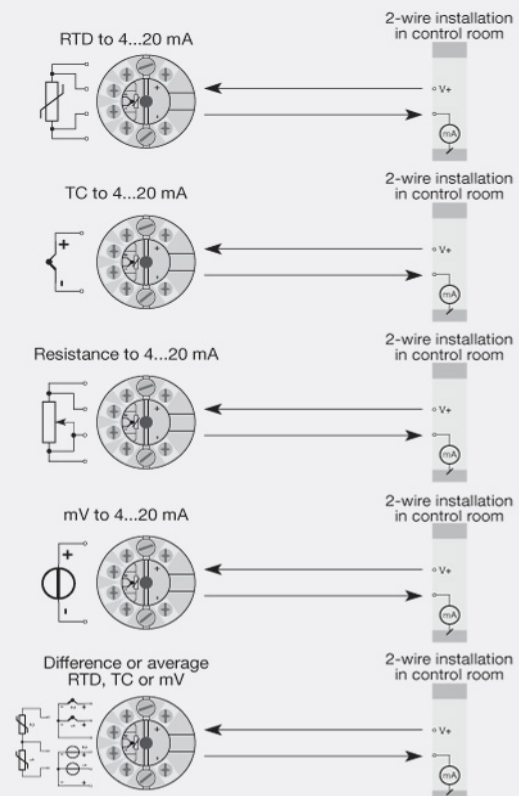
#### Technical characteristics

- 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.
- 5337A 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 NE21 recommendations, the 5337 HART® transmitter ensures top measurement performance in harsh EMC environments. Additionally, the 5337 meets NAMUR NE43 and NE89 recommendations.

#### Mounting / installation

- For DIN form B sensor head or DIN rail mounting via the PR fitting type 8421.
- Configuration via standard HART® communication interfaces or by PR 5909 Loop Link.

#### Connections



**Order:**

Type
5337A

**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 <sup>2</sup> 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 voltage.....	8.0...35 VDC
Voltage drop.....	8.0 VDC
Isolation voltage, test / working.....	1.5 kVAC / 50 VAC
Signal / noise ratio.....	> 60 dB
Communications interface.....	Loop Link & HART®
Response time (programmable).....	1...60 s
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**

Max. offset.....	50% of selected max. value
RTD input.....	Pt50, Pt100, Pt200, Pt500, Pt1000, Ni50, Ni100, Ni120, Ni1000
Cable resistance per wire (max.), RTD.....	5 Ω (up to 50 Ω per wire is possible with reduced measurement accuracy)
Sensor current, RTD.....	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), voltage input.....	2.5 mV
Input resistance, voltage input.....	10 MΩ

**Output specifications**

Current output: Signal range.....	4...20 mA
Min. signal range.....	16 mA
Updating time.....	440 ms
Load resistance, current output.....	≤ (Vsupply - 8) / 0.023 [Ω]
Sensor error indication, current output.....	Programmable 3.5...23 mA
NAMUR NE 43 Upscale/Downscale.....	23 mA / 3.5 mA
HART protocol revisions.....	HART 5 and HART 7

**Approvals**

EMC.....	EN 61326-1
ATEX 2004/108/EC.....	KEMA 03ATEX1508 X
IECEx.....	KEM 10.0083X
INMETRO.....	NCC 12.0844 X
EAC TR-CU 020/2011.....	EN 61326-1
DNV Marine.....	Stand. f. Certific. No. 2.4
SIL.....	Hardware assessed for use in SIL applications