2-wire HART transmitter

6337D

- 1- or 2-channel converter for RTD, TC, Ohm, and bipolar mV signals
- 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 on a DIN rail 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.
- 6337D 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 6337D HART transmitter ensures top measurement performance in harsh EMC environments. Additionally, the 6337D meets NAMUR NE43 and NE89 recommendations.

Mounting / installation

- DIN rail mounting with up to 84 channels per meter.
- Configuration via standard HART communication interfaces or by PR 5909 Loop Link.
Environmental Conditions
Operating temperature: -40°C to +85°C
Storage temperature: -40°C to +85°C
Calibration temperature: 20...28°C
Relative humidity: < 95% RH (non-cond.)
Protection degree: IP20

Mechanical specifications
Dimensions (HxWxD): 109 x 23.5 x 104 mm
Weight (1 / 2 channels): 150 / 200 g
DIN rail type: DIN EN 60715/35 mm
Wire size: 0.13...2.08 mm² AWG 26...14 stranded wire
Screw terminal torque: 0.5 Nm

Common specifications
Supply
Supply voltage: 8.0...30 VDC
Isolation voltage
Isolation voltage, test / working: 1.5 kVAC / 50 VAC
Response time
Response time (programmable): 1...60 s
Voltage drop: 8.0 VDC
Programming: Loop Link & HART®
Accuracy: Better than 0.05% of selected range
Signal / noise ratio: > 60 dB
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
RTD input
RTD type: Pt50/100/200/500/1000; Ni50/100/120/1000
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
Linear resistance input
Linear resistance min...max.: 0 Ω...7000 Ω
TC input
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 (@ current output): \(5 \text{ (Vsupply - 8) / 0.023 [Ω]}\)
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 7 and HART 5

Observed authority requirements
EMC: 2014/30/EU
Approved standards:
ATEX 2014/34/EU: KEMA 09ATEX0148
IECEx: DEK 11.0084X
FM: FM17US0013X
CSA: 1125003
EAC Ex TR-CU 012/2011: RU C-DK.GB08.V.00410
SIL: Hardware assessed for use in SIL applications

Order:
<table>
<thead>
<tr>
<th>Type</th>
<th>Galvanic isolation</th>
<th>Channels</th>
</tr>
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<tbody>
<tr>
<td>6337D</td>
<td>1500 VAC</td>
<td>2 A</td>
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*NB! Please remember to order CJC connectors type 5910Ex (channel 1) and 5910Ex (channel 2) for TC inputs with an internal CJC.*