

## HART 7 4-20mA IN-HEAD TRANSMITTER

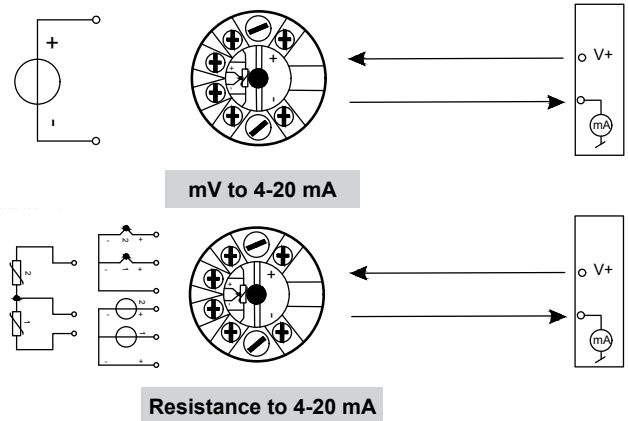
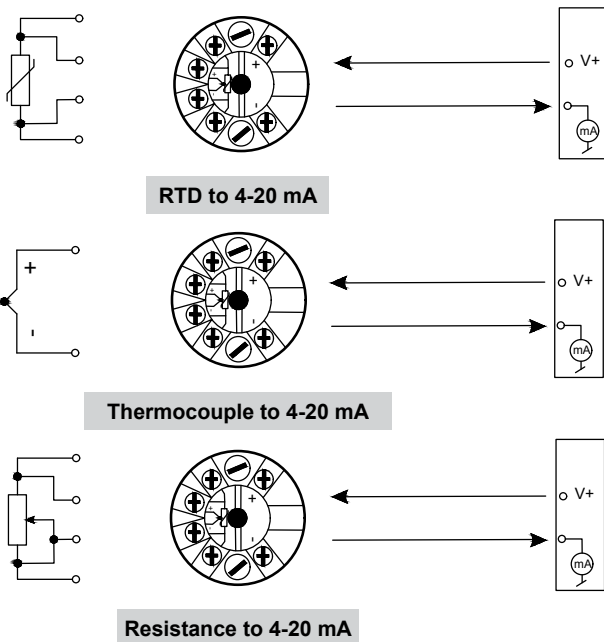


TCX-5337D

### FEATURES / BENEFITS

- 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

**ORDER YOUR TRANSMITTER:** Use the part number: **TCX-5337D**



TRANSMITTERS

## HART 7 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  | 8.0...30 VDC                            |
| Isolation voltage, test / working                     | 1.5 kVAC / 50 VAC                       |
| Response time (programmable)                          | 1...60 s                                |
| Voltage drop  | 8.0 VDC                                 |
| Programming   | Loop Link & HART                        |
| Signal / noise ratio                                  | > 60 dB                                 |
| Accuracy  | Better than 0.05% of selected range     |
| Signal dynamics, input                                | 22 bit                                  |
| Signal dynamics, output                               | 16 bit                                  |
| 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                        | Pt50/100/200/500/1000;<br>Ni50/100/120/1000                                  |
| 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  |
| TC input types                  | B, E, J, K, L, N, R, S, T, U, W3, W5, LR                                     |
| Cold junction compensation      | Constant, internal or external via a Pt100 or Ni100 sensor                   |
| Sensor error detection          | Yes  |
| 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)         | ≤ (V <sub>supply</sub> - 8) / 0.023 [Ω]                                      |
| Sensor error indication         | Programmable 3.5...23 mA   |
| NAMUR NE43 Upscale/Downscale    | 23 mA / 3.5 mA   |
| Updating time                   | 440 ms   |
| HART protocol revisions         | HART 7 and HART 5  |
| 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  |