



ENGLISH

Datasheet

RS PRO 2-Wire Transmitter with HART Protocol

Stock No: 192-6539



- RTD, TC, Ohm, or mV input
- Extremely high measurement accuracy
- HART 5 protocol
- Galvanic isolation

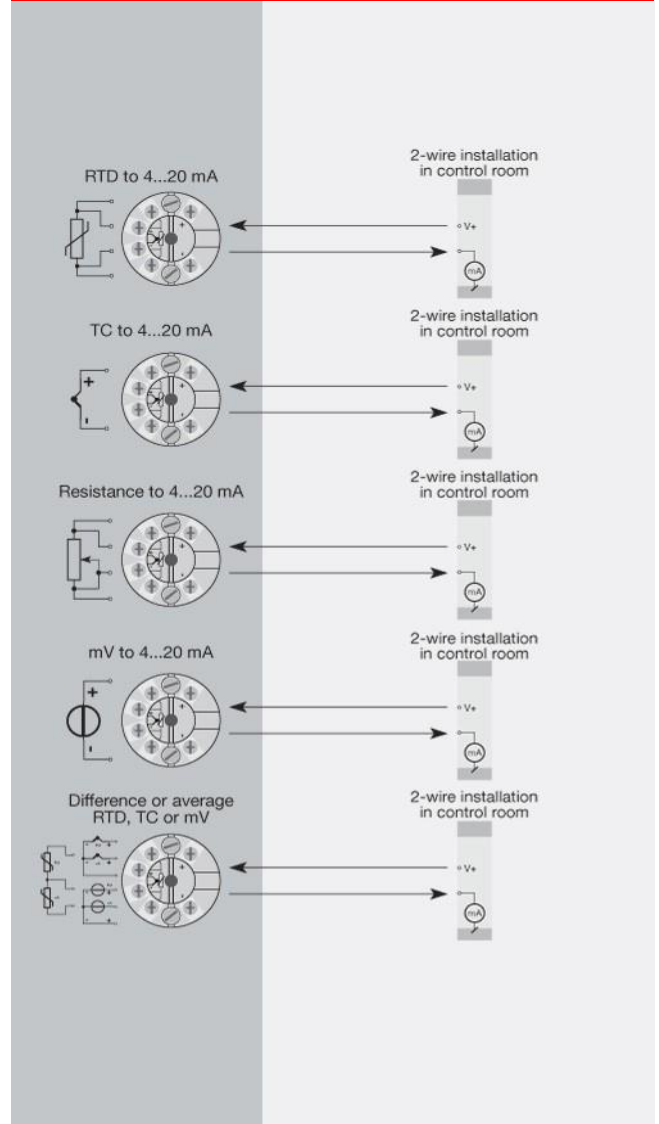
Application

- Linearized temperature measurement with Pt100...Pt1000, Ni100...Ni1000, or TC sensor.
- Difference or average temperature measurement of 2 resistance or TC sensors.
- Conversion of linear resistance variation to a standard analog current signal, for instance from valves or Ohmic level sensors.
- Amplification of a bipolar mV signal to a standard 4...20 mA current signal.
- Connection of up to 15 transmitters to a digital 2-wire signal with HART communication.

Technical characteristics

- Within a few seconds the user can program 1926539 to measure temperatures within all ranges defined by the norms.
- The RTD and resistance inputs have cable compensation for 2-, 3- and 4-wire connection.
- The 1926539 has been designed according to strict safety requirements and is therefore suitable for application in SIL installations.
- Continuous check of vital stored data for safety reasons.
- Sensor error detection according to the guidelines in NAMUR NE89.

Applications



Order:

Type

1926539

Environmental Conditions

Operating temperature..... -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 mm² 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**

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
 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**Common input specifications**

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

RTD input

RTD type..... Pt100, Ni100, lin. R
 Cable resistance per wire..... 5 Ω (up to 50 Ω per wire is
 possible with reduced
 measurement accuracy)
 Sensor current..... Nom. 0.2 mA
 Effect of sensor cable resistance
 (3-/4-wire)..... < 0.002 Ω / Ω
 Sensor error detection..... Yes

TC input

Thermocouple type..... B, E, J, K, L, N, R, S, T, U,
 W3, W5

Cold junction compensation

(CJC)..... < ±1.0°C
 Sensor error detection..... Yes
 Sensor error current: When
 detecting / else..... Nom. 33 µA / 0 µA

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)..... ≤ (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

I.S. / Ex marking

ATEX..... II 1 G Ex ia IIC T4...T6 Ga, II 1
 D Ex ia IIC Da, I M1 Ex ia Ma
 IECEx..... Ex ia IIC T4...T6 Ga, Ex ia IIC
 Da, Ex ia I Ma
 FM, US..... Cl. I, Div. 1, Gp. A, B, C, D
 T4/T6; Cl. I Zone 0, AEx ia IIC
 T4/T6; Cl. 1, Div. 2, Gp. A, B,
 C, D, T4/T6
 CSA..... Cl. I, Div. 1, Gp. A, B, C, D Ex
 ia IIC, Ga
 INMETRO..... Ex ia IIC T6...T4 Ga, Ex ia IIC
 Da

Observed authority requirements

EMC..... 2014/30/EU
 ATEX..... 2014/34/EU
 RoHS..... 2011/65/EU
 EAC..... TR-CU 020/2011
 Ex..... TR-CU 012/2011

Approvals

DNV-GL Marine..... TAA0000101
 ATEX..... KEMA 06ATEX0062X
 IECEx..... DEK 13.0035X
 FM..... FM17US0013X
 CSA..... 1125003
 INMETRO..... DEKRA 16.0013 X
 EAC Ex..... RU C-DK.HA65.B.00355/19
 SIL..... Hardware assessed for use
 In SIL applicatins

