PERFORMANCE MADE SMARTER

2-wire level transmitter

5343A

- Potentiometer or Ohmic input
- Programmable sensor error value
- High measurement accuracy
- Unique process calibration function
- Programmable via standard PC

Application

- Conversion of resistance variation to standard analog current signals, e.g. from Ohmic level sensors or valve positions.
- User-defined linearization function can be activated.

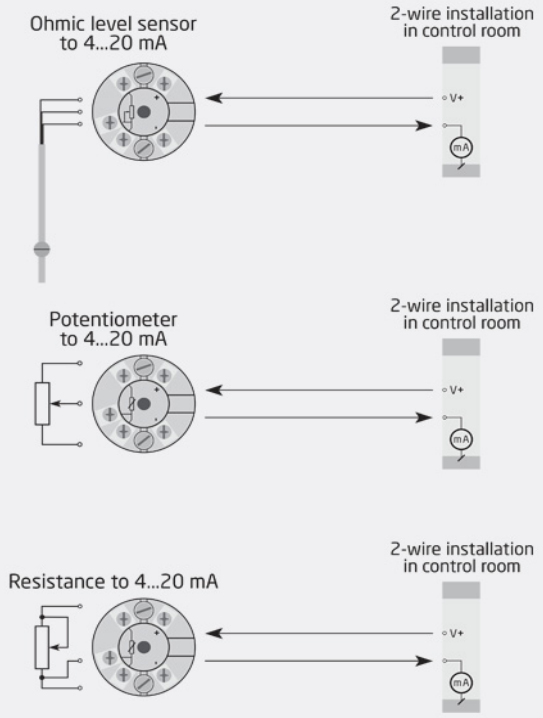
Technical characteristics

- Within a few seconds the user can program PR5343A to measure within the defined Ohmic values.
- Continuous check of vital stored data for safety reasons.
- The transmitter is protected against polarity reversal.
- PR5343A is configured to the current task by way of a PC, the PReset software and the communications interface Loop Link.
- The PRelevel configuration tool included in the PReset software has been developed specifically for the configuration of level applications. Among other things, it contains a function for "on line" measurement of input span as well as a linearization function for volume linear output from horizontal cylindrical tanks.

Mounting / installation

- For DIN form B sensor head or DIN rail mounting with a special fitting.

Applications



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Order

Type	Version	
5343	Zone 2 / Div. 2	: A

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 mm^2 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...35 VDC
Internal power dissipation..... 25 mW…0.8 W

Response time

Response time (programmable)..... 0.33...60 s
Voltage drop..... 8.0 VDC
Warm-up time..... 5 min.
Programming..... Loop Link
Signal / noise ratio..... Min. 60 dB
Accuracy..... Better than 0.1% of sel. range
Signal dynamics, input..... 19 bit
Signal dynamics, output..... 16 bit
Effect of supply voltage change..... < 0.005% of span / VDC
EMC immunity influence..... < ±0.5% of span

Input specifications

Common input specifications

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

Linear resistance input

Measurement range / min. range (span)..... 0...100 kΩ / 1 kΩ
Cable resistance per wire (max.)..... 100 Ω
Sensor current..... > 25 µA, < 120 µA
Effect of sensor cable resistance (3-wire)..... < 0.002 Ω / Ω
Sensor error detection..... Yes
Min. measurement range..... 1 kΩ

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

Common output specifications

Updating time..... 135 ms
of span..... = of the presently selected range

I.S. / Ex marking

ATEX..... II 3 G Ex nA [ic] IIC T6...T4 Gc, II 3 G Ex ec [ic] IIC T6...T4 Gc, II 3 G Ex ic IIC T6...T4 Gc, II 3 D Ex ic IIIC Dc
IECEx..... Ex nA [ic] IIC T6…T4 Gc, Ex ec [ic] IIC T6…T4 Gc, Ex ic IIC T6…T4 Gc, Ex ic IIIC Dc
INMETRO..... Ex nA [ic] IIC T6...T4 Gc, Ex ic IIC T6...T4 Gc, Ex ic IIIC Dc

Observed authority requirements

EMC..... 2014/30/EU & UK SI 2016/1091
ATEX..... 2014/34/EU & UK SI 2016/1107
RoHS..... 2011/65/EU & UK SI 2012/3032
EAC..... TR-CU 020/2011
EAC Ex..... TR-CU 012/2011

Approvals

ATEX..... DEKRA 20ATEX0106X
IECEx..... DEK 20.0062X
INMETRO..... DEKRA 16.0014 X
EAC Ex..... RU C-DK.HA65.B.00355/19
DNV Marine..... TAA0000101