

## 2-WIRE LEVEL TRANSMITTER



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



### Application:

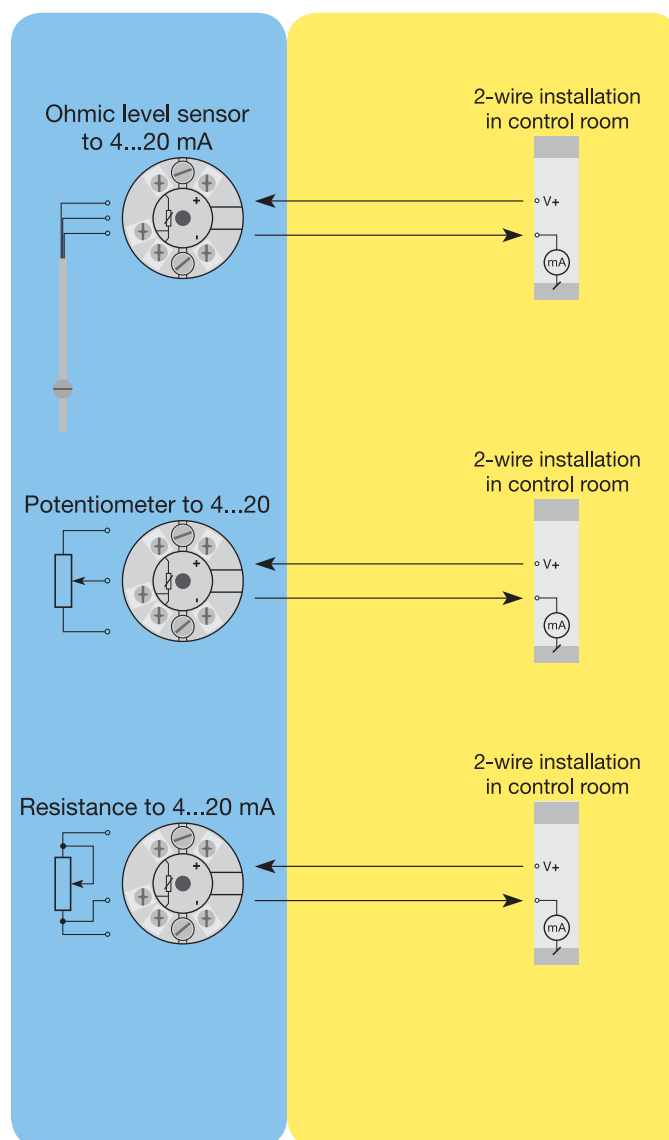
- Conversion of resistance variation to standard analogue current signals, e.g. from Ohmic level sensors or valve positions.
- User-defined linearisation function can be activated.

### Technical characteristics:

- Within a few seconds the user can program PR5343B to measure within the defined Ohmic values.
- Continuous check of vital stored data for safety reasons.
- The transmitter is protected against polarity reversal.
- PR5343B is configured to the current task by way of a PC, the PRelevel software and the communications interface Loop Link 5905A.
- The PRelevel 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 linearisation function for volume linear output from horizontal cylindrical tanks.

### Mounting / installation:

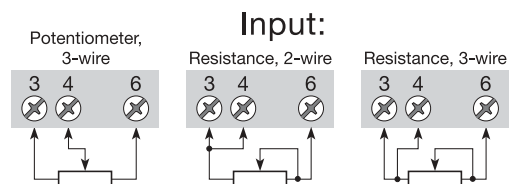
- For DIN form B sensor head mounting.
- NB: As Ex barrier for 5343B we recommend 5104B, 5111B or 5114B.



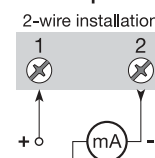
Order: 5343B

Type
5343B

## Connections:



## Output:



### Electrical specifications:

#### Specifications range:

-40°C to +85°C

#### Common specifications:

Supply voltage	8.0...28 VDC
Internal consumption	25 mW...0.8 W
Voltage drop	8 VDC
Warm-up time	5 min.
Communications interface	Loop Link 5905A
Signal / noise ratio	Min. 60 dB
Response time (programmable)	0.33...60 s
Signal dynamics, input	19 bit
Signal dynamics, output	16 bit
Calibration temperature	20...28°C

Accuracy, the greater of the general and basic values:

General values		
Input type	Absolute accuracy	Temperature coefficient
Lin. R	$\leq \pm 0.1\%$ of span	$\leq \pm 0.01\%$ of span / °C

Basic values		
Input type	Basic accuracy	Temperature coefficient
Lin. R	$\leq \pm 0.05 \Omega$	$\leq \pm 0.002 \Omega / ^\circ\text{C}$

EMC immunity influence	$< \pm 0.5\%$ of span
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Effect of supply voltage change	$< 0.005\%$ of span / VDC
Vibration	IEC 68-2-6 Test FC
Lloyd's specification no. 1	4 g / 2...100 Hz
Max. wire size	1 x 1.5 mm <sup>2</sup>
Humidity	$< 95\%$ RH (non cond.)
Dimensions	Ø 44 x 20.2 mm
Tightness (enclosure / terminal)	IP68 / IP00
Weight	50 g

### Electrical specifications, input:

#### Linear resistance input:

Measurement range	0...100 kΩ
Min. measurement range (span)	1 kΩ
Max. offset	50% of selec. max. value
Cable resistance per wire (max.)	100 Ω
Sensor current	$> 25 \mu\text{A}$ , $< 120 \mu\text{A}$
Effect of sensor cable resistance (3-wire)	$< 0.002 \Omega / \Omega$
Sensor error detection	Yes

#### Output:

##### Current output:

Signal range	4...20 mA
Min. signal range	16 mA
Updating time	135 ms
Load resistance	$< (V_{\text{supply}} - 8) / 0.023 [\Omega]$
Load stability	$< \pm 0.01\%$ of span/100 Ω

#### Sensor error detection:

Programmable	3.5...23 mA
NAMUR NE43 Upscale	23 mA
NAMUR NE43 Downscale	3.5 mA

#### Ex data:

U <sub>i</sub>	: 28 VDC
I <sub>j</sub>	: 120 mADC
P <sub>i</sub>	: 0.84 W
L <sub>i</sub>	: 10 μH
C <sub>j</sub>	: 1.0 nF

#### EEx / I.S. approval:

KEMA 03 ATEX 1538	EEx ia IIC T1...T6
Max. ambient temp. for T1...T4	85°C
Max. ambient temp. for T5 and T6	60°C
Applicable in zone	0, 1, 2, 20, 21 or 22

#### Observed authority requirements: Standard:

EMC 89/336/EEC, Emission	EN 50 081-1, EN 50 081-2
Immunity	EN 50 082-2, EN 50 082-1
Emission and immunity	EN 61 326
ATEX 94/9/EC	EN 50 014, EN 50 020, EN 50 281-1-1 and EN 50 284

Of span = Of the presently selected range