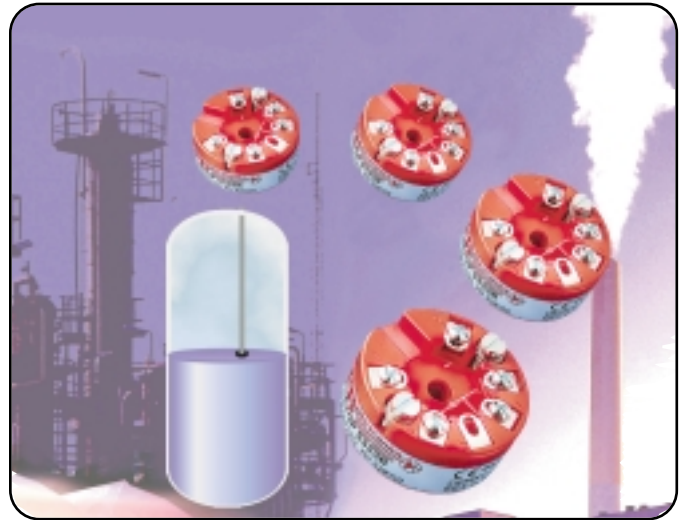


2-WIRE LEVEL TRANSMITTER



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



Application:

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

Technical characteristics:

- The unit is built around a microprocessor core with an efficient program operation.
- Basic calibration data and present set-up are stored in an EEPROM, so that the data are not lost or changed at power off.
- The transmitter is protected against polarity reversal.
- Sensor error detection is programmable for different output values, e.g. values acc. to NAMUR NE43 can be selected directly.
- The response time is programmable.

Set-up:

- By use of a PC and the communications interface Loop Link 5905 the transmitter is configured to the current task. Loop Link 5905 features all required equipment, incl. supply voltage for PRelevel for the communication between PC and PRelevel.
- The communications interface is Ex-approved and galvanically isolated which both protects the PC and acts as a barrier to the hazardous area.

- As communication is two-way the transmitter set-up can be retrieved to the PC, or the PC set-up screen can be submitted to the transmitter.
- To service customers who wish not to perform the set-up, PRelevel 5343 can be configured acc. to specifications - input type, measurement range, and sensor error detection.

Safety instructions:

- For a safe installation of 5343B in hazardous area the following must be observed. The module must only be installed by qualified personnel who are familiar with the national and international laws, directives and standards that apply to this area. For further information, please see EN 60 079-14 Electrical installations in hazardous areas (other than mines).

Output:

- Analogue 2-wire current output of 4...20 mA. Output can be reversed to a 20...4 mA signal or set up to supply a fixed mA signal (input is disabled). Max. load is dependent on the supply voltage, as $R \text{ load} = (V_{\text{supp}} - 8) / 0.023 [\Omega]$.

Electrical specifications:**Specifications range:**

-40 to +85°C

Common specifications:**Supply voltage DC:**

Standard..... 8.0...35 V
 Ex version..... 8.0...28 V
 Internal consumption 25 mW...0.8 W
 Voltage drop 8 VDC
 Warm-up time..... 5 min.
 Communications interface Loop Link 5905
 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
All	$\leq \pm 0.1\%$ of span	$\leq \pm 0.01\%$ of span / °C

Basic values		
Input type	Basic accuracy	Temperature coefficient
Lin.R	$\leq \pm 1 \Omega$	$\leq \pm 0.1 \Omega / ^\circ\text{C}$

EMC Immunity influence $< \pm 0.5\%$ of span

Effect of supply voltage change $\leq 0.005\%$ 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 mm²
 Air humidity $< 95\%$ RH (non cond.)
 Dimensions..... Ø 44 x 20.2 mm
 Tightness (enclosure/terminal) IP68 / IP00
 Weight 50 g

Electrical specifications:**Input types:****Linear resistance input:**

Measurement range 0...100 k Ω
 Min. measurement range (span) 1 k Ω
 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 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 $\leq (V_{\text{sup.}} - 8) / 0.023 [\Omega]$
 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
 Off Not defined

Ex data:

U_i 28 VDC
 I_i 120 mADC
 P_i 0.84 W
 L_i $\leq 10 \mu\text{H}$
 C_i $\leq 1 \text{ nF}$

EEx approval CENELEC:

DEMCO 99 ATEX 127088
 ATEX 0539 **Ex** II 1 G
 EEx ia IIC T1...T6

Max. amb. temperature for T1...T4 85°C
 Max. amb. temperature for T5 and T6 60°C
 Applicable in zone 0, 1 or 2

Observed authority requirements: Standard:

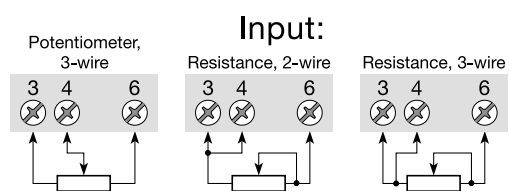
EMC 89/336/EEC, Emission EN 50 081-1, EN 50 081-2
 Immunity EN 50 082-2, EN 50 082-1
 ATEX 94/9/EC EN 50014 and EN 50020

Of span = Of the presently selected range

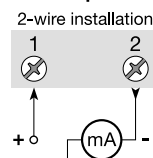
Order: 5343

Type	Version
5343	Standard : A EEx : B

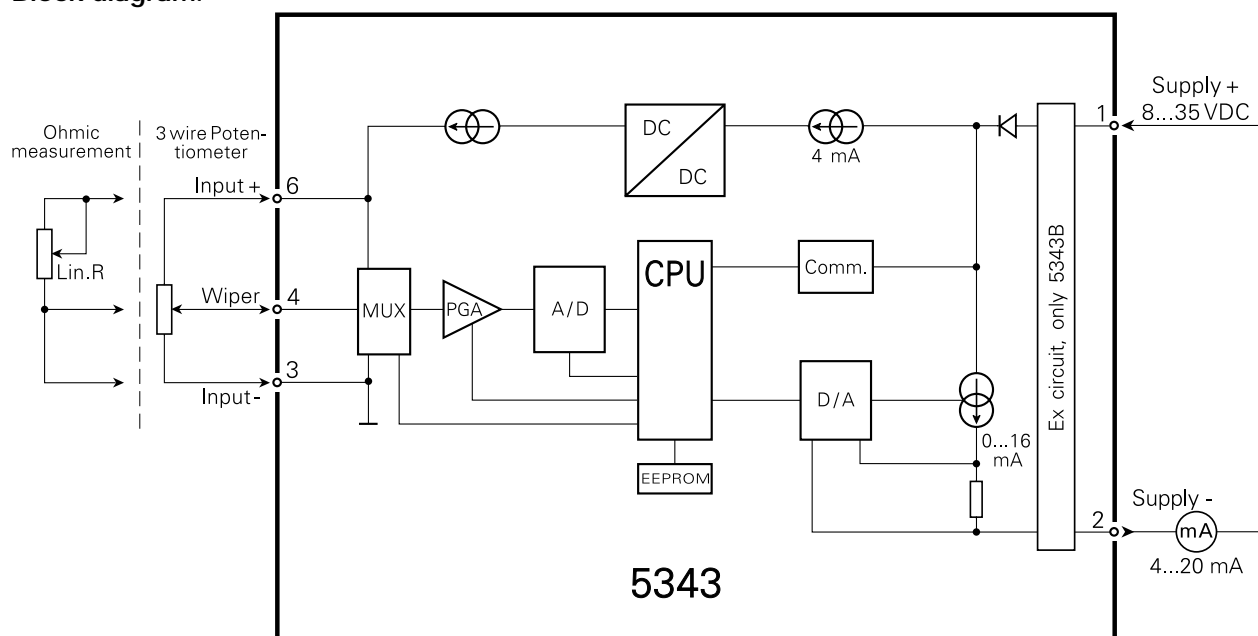
Connections:



Output:



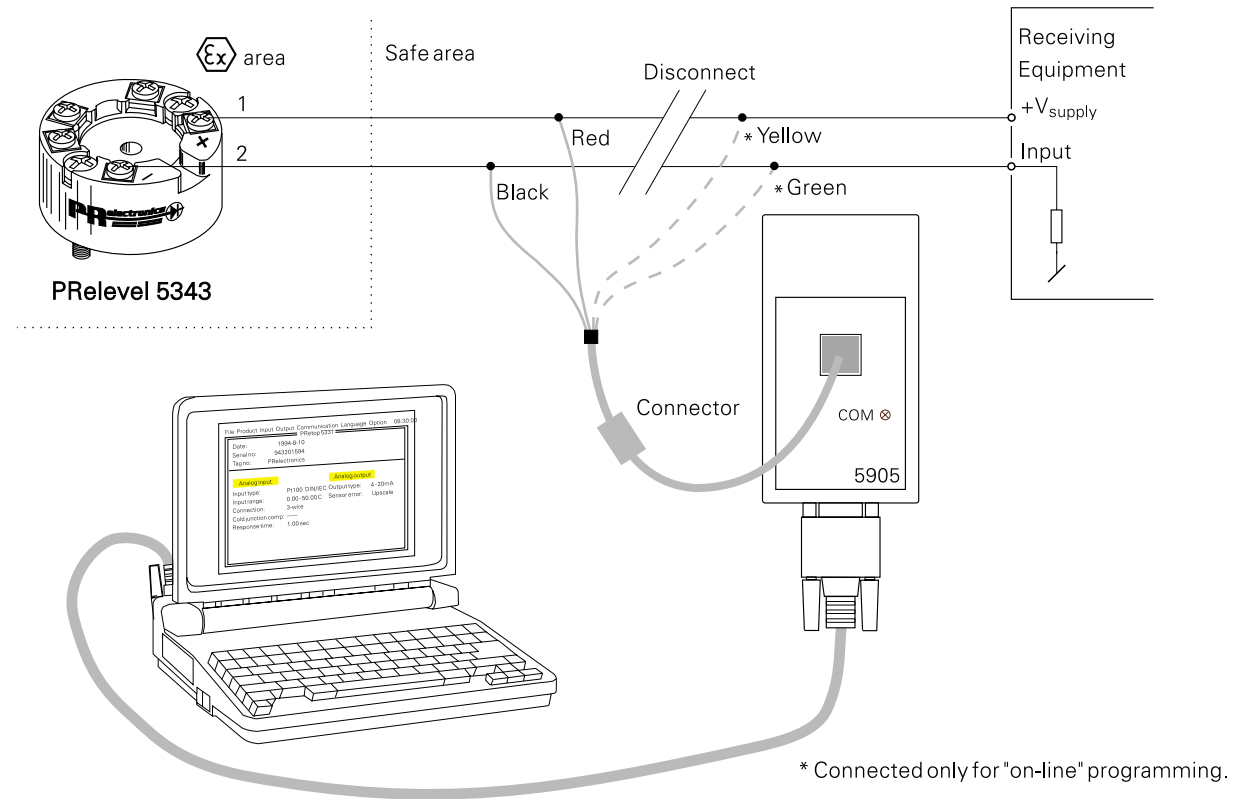
Block diagram:



Programming:

- Loop Link 5905 is a battery-powered communications interface necessary for programming PRelevel 5343.
- For programming please refer to the drawing below and the help function in the PRelevel program.

Order: Loop Link 5905.



Mechanical specifications:

