



Features

- Digital programmable transmitter
- Suitable for installation in connecting heads in accordance with DIN, form B
- Input for resistance thermometer and resistance
- Can be configured by PC
- Output signal: 4...20 mA invertible, 2-wire technology
- Programmable output signal for sensor breakage and sensor short circuit
- Power supply: 8...35 V DC
8...30 V DC (Ex)
- Increased ambient temperature

Options

- Explosion protection for gases and dust
- Configuration per PC

Application area

- Food/pharmaceutical/biotechnology
- Chemicals/petrochemicals
- Maschinen- und Anlagenbau

Techn. Data

Mechanical design

case material plastic Valox 815
 type of protection:
 case IP 68
 terminals IP 00

Mounting

borings for mounting in connection heads per DIN form B or larger

Connections

terminal screws for wire or flexible lead
 $\leq 1.5 \text{ mm}^2$

Housing temperature

operation and storage: $-40 \dots +85 \text{ }^\circ\text{C}$

Auxiliary energy supply

function range: 8...35 V DC
8...30 V DC (Ex)
 internal consumption: 25 mW...0.8 W

Influence of the supply voltage on the output signal

$\leq 0.005 \%$ of span/V

Signal input

- resistance thermometer (RTD) 2- or 3-wire technology
Pt100...Pt1000, Ni100...Ni1000
 - resistance input (Lin.R) 2- or 3-wire technology 0...10 k Ω
- sensor current: $> 0.2 \text{ mA}$, $< 0.4 \text{ mA}$
 cable resistance: max. 10 Ω per wire

Measuring ranges/measuring spans

type	min-value	max-value	min-span
Pt 100	-200 $^\circ\text{C}$	+850 $^\circ\text{C}$	25 K
Ni 100	- 60 $^\circ\text{C}$	+250 $^\circ\text{C}$	25 K
Lin. R	0 Ω	10 k Ω	30 Ω

offset: 50 % of selec. max. value

Output signal

signal range: 4...20 mA/20...4 mA
 RTD: temperature linear
 Lin.R: resistance linear
 updating time: 135 ms

Burden

$\leq (\text{Uvers.}-8\text{V}) / 0.023 \text{ A}$

Burden influence

$< 0.01 \%$ of span /100 Ω

Sensor error

sensor breakage and sensor short circuit programmable: 3.5...23 mA
 NAMUR NE43 upscale: 23 mA
 NAMUR NE43 downscale: 3.5 mA

Accuracy

accuracy, the greater of general and basis values:

general values		
input type	absolute accuracy	temperature coefficient
all	$\leq \pm 0.1 \%$ of span	$\leq \pm 0.1 \%$ of span/ $^\circ\text{C}$
basic values		
input type	basic accuracy	temperature coefficient
RTD	$\leq \pm 0.3 \text{ }^\circ\text{C}$	$\leq \pm 0.01 \text{ }^\circ\text{C}/^\circ\text{C}$
Lin.R	$\leq \pm 0.2 \text{ } \Omega$	$\leq \pm 20 \text{ m } \Omega / ^\circ\text{C}$
EMC immunity influence.....		$\leq \pm 0.5 \%$ of span
response time (programmable)		0.33...60s
warm-up time		5 min

Certificates/tests

EMC directives 2014/30/EC
 Noise immunity EN 61000
 EN 61326
 Interference emission EN 55011
 ATEX directive 2014/34/EC

Explosion protection
 (PR electronics A/S, Type 5333D)

Ex approval

KEMA 03 ATEX 1535
 Ex II 1G Ex ia IIC T4/T6 (gas)
 Ex II 1D Ex iaD 20 T105 $^\circ\text{C}$ / T80 $^\circ\text{C}$ (dust)
 Ambient temperature max.:
 85 $^\circ\text{C}$ for T4 and T105 $^\circ\text{C}$
 60 $^\circ\text{C}$ for T6 and T 80 $^\circ\text{C}$
 Zones 0, 1, 2, 20, 21, 22
 U_i: 30 V DC
 I_i: 120 mA DC
 P_i: 0.84 W
 C_j: 1.0 nF
 L_i: 10 μH

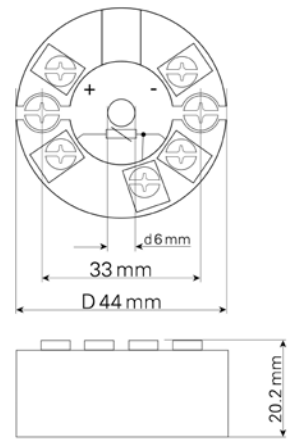
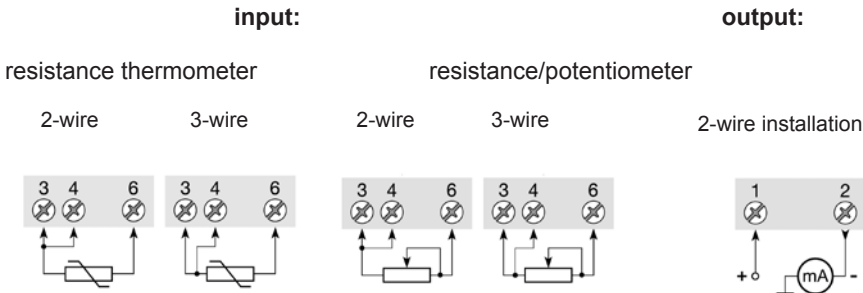
Vibration: IEC 68-2-6 Test FC
 Lloyd's specification No. 1: 4g/2...100 Hz

Weight

approx. 50 g

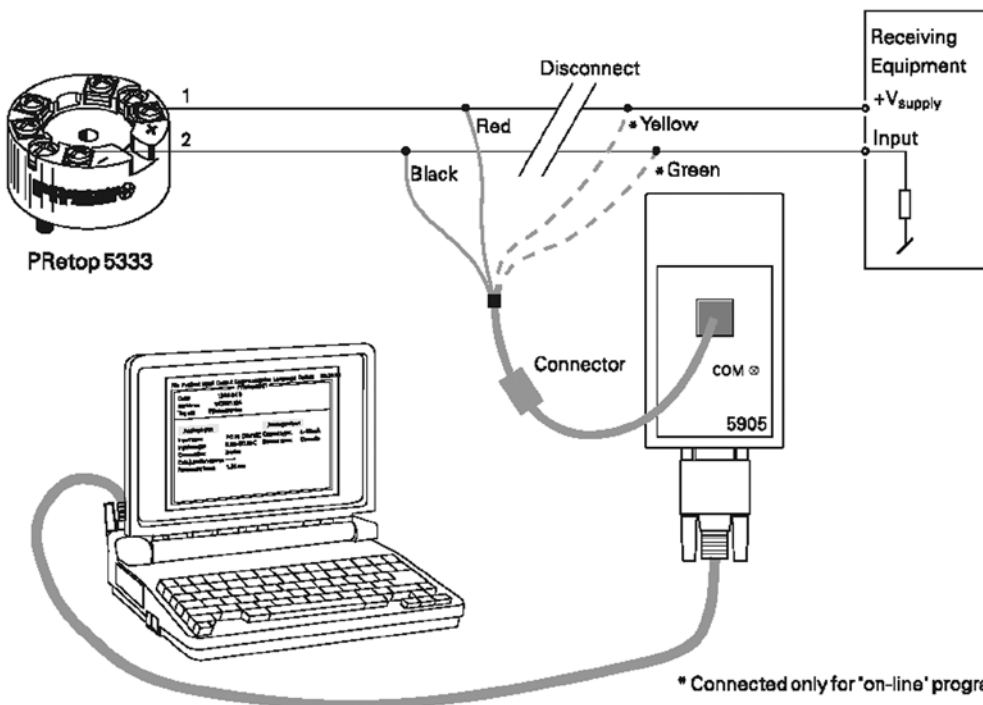
Connection diagram

Dimensions



Programming

- Loop Link is a battery-powered communications interface that is needed for programming PA 2250/51 (internal software art.-no. PRetop 5333)
- For programming please refer to the drawing below and the help functions in PReset.



Order Details - please give additional specifications for models not listed -

Transmitter for temperature head mounting programmable			
design	· standard	PA2250	
	· Ex II 1G Ex ia IIC T4/T6, II 1D Ex iaD 20 T105 °C / T80 °C (PR electronics A/S Type 5333D)	PA2251	
without configuration ¹			F11
per customer choice			F12
	signal input		
	measuring range		
	output		
	sensor break		
	response time (damping)		
order code (example)		PA2250	F11

Accessory

program "Loop Link 5905"	MC1070
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- ¹ adjusted at factory:
- signal input Pt 100, 3-wire
 - measuring range 0...150 °C
 - output 4...20 mA
 - sensor break 23 mA
 - response time (damping) 1 s