

## INSTRUCTION MANUAL

### 2-WIRE PROGRAMMABLE TRANSMITTER

### 5333A



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*Read the recommendations and warnings in this manual before the instrument is installed. For personal safety, optimal use and maintenance, these instructions should be studied carefully.*

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## 2-WIRE PROGRAMMABLE TRANSMITTER - KLAY 5333A

- RTD or Ohm input
- High measurement accuracy
- 3-wire connection
- Programmable sensor error value
- For DIN form B sensor head mounting

### Application:

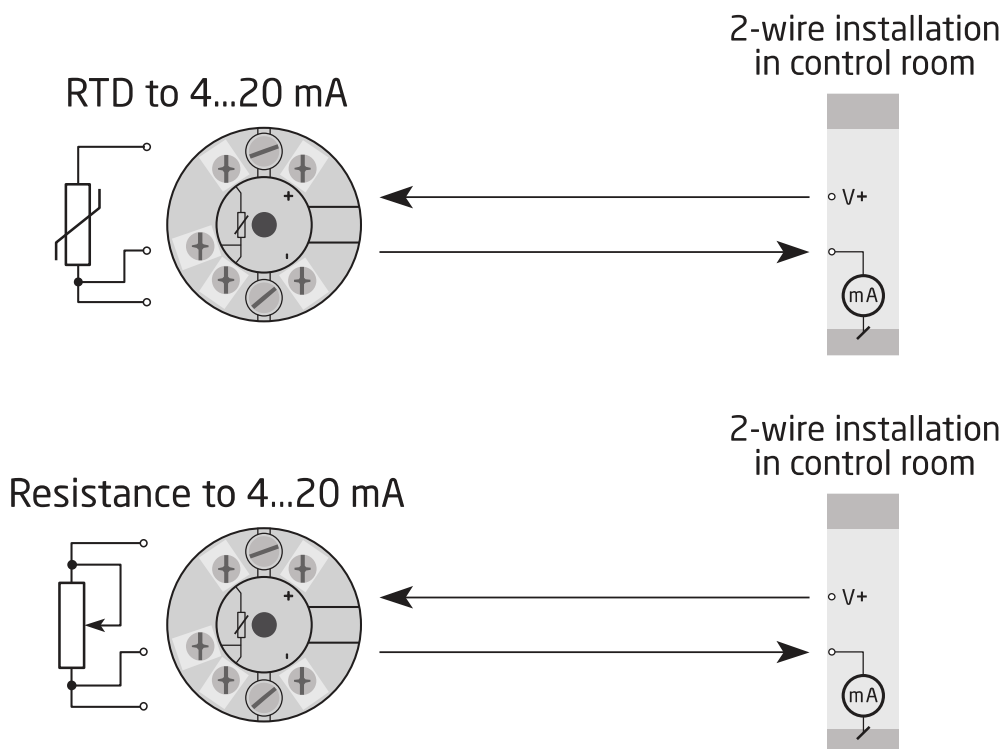
- Linearized temperature measurement with Pt100...Pt1000 or Ni100...Ni1000 sensor.
- Conversion of linear resistance variation to a standard analogue current signal, for instance from valves or O ohm level sensors.

### Technical characteristics:

- Within a few seconds the user can program KLAY 5333A to measure temperatures within all RTD ranges defined by the norms.
- The RTD and resistance inputs have cable compensation for 3-wire connection.

### Mounting / installation:

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



## Electrical specifications:

### Specifications range:

-40°C to +85°C

### Common specifications:

Supply voltage, DC	
Standard .....	8...35 V
Internal consumption .....	25 mW...0.8 W
Voltage drop .....	8 VDC
Warm-up time .....	5 min.
Communications interface .....	Loop Link
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 .....	≤ 0.1% of span
Effect of supply voltage variation .....	≤ 0,005% of span / VDC
Vibration .....	IEC 60068-2-6 Test FC
Lloyd's specification no. 1 .....	4 g / 2...100 Hz
Max. wire size .....	1 x 1.5 mm <sup>2</sup> stranded wire
Humidity .....	< 95% RH (non-cond.)
Dimensions .....	Ø 44 x 20.2 mm
Tightness (enclosure / terminal) .....	IP68 / IP00
Weight .....	50 g

### Electrical specifications, input:

#### RTD and linear resistance input:

RTD type	Min. value	Max. value	Min. span	Standard
Pt100	-200°C	+850°C	25°C	IEC 60751
Ni100	-60°C	+250°C	25°C	DIN 43760
Lin. R	0 ^	10000 ^	30 ^	----

## Output:

### Current output:

Signal range	4...20 mA
Min. signal range	16 mA
Updating time	135 ms
Load resistance	≤ (Vsupply- 8) / 0.023 [Ω]
Load stability	< ±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

### Marine Approval:

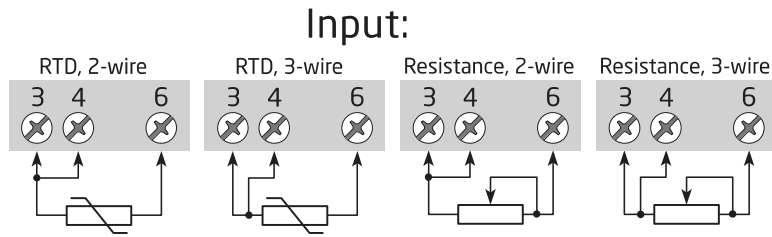
Det Norske Veritas, Ships & Offshore Standard for Certification No. 2.4

### Observed authority requirements:Standard:

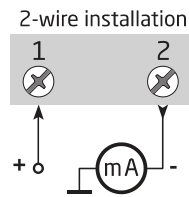
EMC 2004/108/EC

Emission and immunity	EN 61326
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**Connections:**

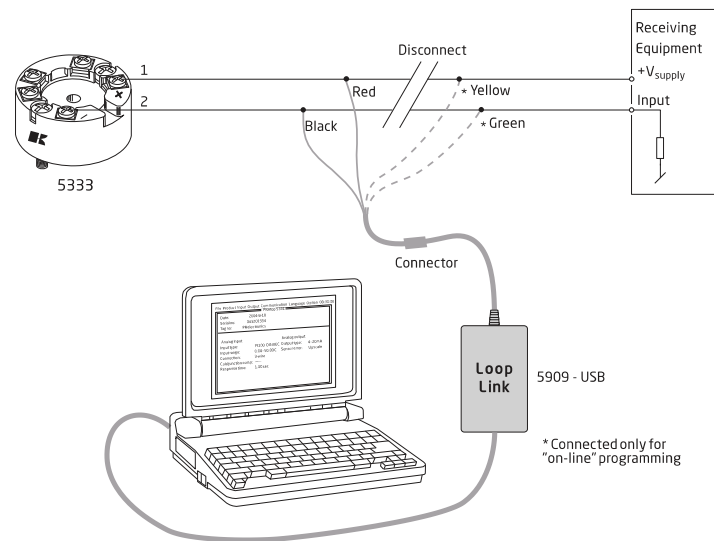


**Output:**

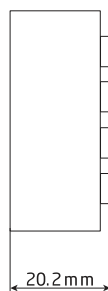
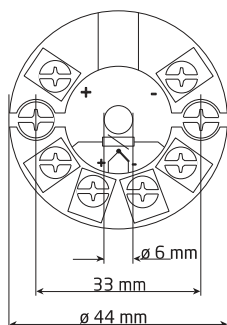


**Programming tools: Loop Link and software "KLAY 8444" (option):**

- Loop Link is a communications interface that is needed for programming KLAY 5333A.
- For programming please refer to the drawing below and the help functions in KLAY 8444.



**Mechanical specifications:**



**Mounting of sensor wires:**

