

Programmable LED indicator

5714



- 4-digit 14-segment LED display
- Input for mA, V, Ohm, RTD, TC and potentiometer
- 2 relays and analog output
- Universal supply
- Front key programmable



Application

- Display for digital readout of current / voltage / resistance / temperature or potentiometer signals.
- Process control with 2 potential-free relays and / or analog output.
- For local readout in extremely wet atmospheres with a specially designed splash-proof cover.

Technical characteristics

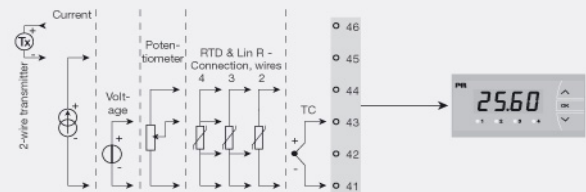
- 4-digit LED indicator with 13.8 mm 14-segment characters. Max. display readout -1999...9999 with programmable decimal point and relay ON / OFF indication.
- All standard operational parameters can be adjusted to any application by way of the front function keys.
- Help texts in eight languages can be selected via a menu item.
- PR5714 is available fully-configured according to specifications ready for process control and visualization.
- In versions with relay outputs the user can minimize the installation test time by activating / deactivating each relay independently of the input signal.

Mounting / installation

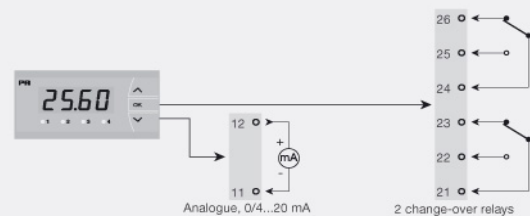
- To be mounted in panel front. The included rubber packing must be mounted between the panel cutout hole and the display front to obtain a protection degree of IP65 (type 4X). For extra protection in extreme environments, PR5714 can be delivered with a specially designed splash-proof cover as accessory.

Connections

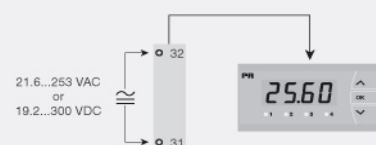
Input signals:



Output signals:



Supply:



Order:

| Type | Version |
|-------|--------------------------------|
| 57 14 | Standard : A |
| | 2 relays : B |
| | Analog output : C |
| | Analog output and 2 relays : D |

Environmental Conditions

| | |
|---|-----------------------|
| Specifications range..... | -20°C to +60°C |
| Calibration temperature..... | 20...28°C |
| Relative humidity..... | < 95% RH (non-cond.) |
| Protection degree (mounted in panel)..... | IP65 / Type 4X, UL50E |

Mechanical specifications

| | |
|----------------------------------|---------------------------------------|
| Dimensions (HxWxD)..... | 48 x 96 x 120 mm |
| Cut out dimensions..... | 44.5 x 91.5 mm |
| Weight approx..... | 230 g |
| Wire size, pin 41-46 (max.)..... | 1 x 1.5 mm ² stranded wire |
| Wire size, others, max..... | 1 x 2.5 mm ² stranded wire |
| Vibration..... | IEC 60068-2-6 : 2007 |
| Vibration: 2...25 Hz..... | ±1.6 mm |
| Vibration: 25...100 Hz..... | ±4 g |

Common specifications

| | |
|--------------------------------|--|
| Supply | |
| Supply voltage, universal..... | 21.6...253 VAC, 50...60 Hz or 19.2...300 VDC |

Isolation voltage

| | |
|--|--------------------|
| Isolation voltage, test / working..... | 2.3 kVAC / 250 VAC |
|--|--------------------|

Response time

| | |
|---|------------|
| Temperature input, programmable (0...90%, 100...10%)..... | 1...60 s |
| mA / V input (programmable)..... | 0.4...60 s |

Auxiliary supplies

| | |
|----------------------------------|------------------------------------|
| 2-wire supply (pin 46...45)..... | 25...15 VDC / 0...20 mA |
| Max. power consumption..... | 2.5 W (5714A) |
| Max. power consumption..... | 3.0 W (5714B/C) |
| Max. power consumption..... | 3.5 W (5714D) |
| Internal consumption..... | 2.2 W (5714A) |
| Internal consumption..... | 2.7 W (5714B/C) |
| Internal consumption..... | 3.2 W (5714D) |
| Signal / noise ratio..... | Min. 60 dB (0...100 kHz) |
| Accuracy..... | Better than 0.1% of selected range |
| EMC immunity influence..... | < ±0.5% of readout |

Input specifications**RTD input**

| | |
|---------------|--|
| RTD type..... | Pt10, Pt20, Pt50, Pt100, Pt200, Pt250, Pt300, Pt400, Pt500, Pt1000 Ni50, Ni100, Ni120, Ni1000, Cu10, Cu20, Cu50, Cu100 |
|---------------|--|

| | |
|--|---------------|
| Cable resistance per wire (max.)..... | 50 Ω |
| Sensor current..... | Nom. 0.2 mA |
| Effect of sensor cable resistance (3-/4-wire)..... | < 0.002 Ω / Ω |

Linear resistance input

| | |
|----------------------------------|---------------|
| Linear resistance min...max..... | 0 Ω...10000 Ω |
|----------------------------------|---------------|

Potentiometer input

| | |
|------------------------------|---------------|
| Potentiometer min...max..... | 10 Ω...100 kΩ |
|------------------------------|---------------|

TC input

| | |
|------------------------|--|
| Thermocouple type..... | B, E, J, K, L, N, R, S, T, U, W3, W5, LR |
|------------------------|--|

| | |
|--|--|
| CJC via internally mounted sensor..... | ±(2.0°C + 0.4°C * Δt) |
| Δt = | Internal temperature-ambient temperature |
| Sensor error detection..... | Yes |
| Sensor error current: When detecting / else..... | Nom. 2 μA / 0 μA |

Current input

| | |
|--------------------------------------|----------------------|
| Measurement range..... | 0...20 mA |
| Programmable measurement ranges..... | 0...20 and 4...20 mA |
| Input resistance..... | Nom. 20 Ω + PTC 25 Ω |
| Sensor error detection..... | Loop break 4...20 mA |

Voltage input

| | |
|--------------------------------------|-------------------------|
| Measurement range..... | 0...12 VDC |
| Programmable measurement ranges..... | 0/0.2...1; 0/2...10 VDC |
| Input resistance..... | Nom. 10 MΩ |

Output specifications**Display:**

| | |
|--|-------------------------|
| Display readout..... | -1999...9999 (4 digits) |
| Decimal point..... | Programmable |
| Digit height..... | 13.8 mm |
| Display updating..... | 2.2 times / s |
| Input outside input range is indicated by..... | Explanatory text |

Current output

| | |
|---|--|
| Signal range..... | 0...20 mA |
| Programmable signal ranges..... | 0...20 / 4...20 / 20...0 and 20...4 mA |
| Load (max.)..... | 20 mA/800 Ω/16 VDC |
| Load stability..... | ≤0.01% of span / 100 Ω |
| Sensor error indication..... | 0 / 3.5 / 23 mA / none |
| NAMUR NE 43 Upscale/Downscale..... | 23 mA / 3.5 mA |
| Output limitation, on 4...20 and 20...4 mA signals..... | 3.8...20.5 mA |
| Output limitation, on 0...20 and 20...0 mA signals..... | 0...20.5 mA |
| Current limit..... | ≤ 28 mA |

Relay output

| | |
|----------------------------|---------------------|
| Relay functions..... | Setpoint |
| Hysteresis..... | 0...100% |
| ON and OFF delay..... | 0...3600 s |
| Sensor error reaction..... | Break / Make / Hold |
| Max. voltage..... | 250 VRMS |
| Max. current..... | 2 AAC |
| Max. AC power..... | 500 VA |
| Max. load at 24 VDC..... | 1 A |

Approvals

| | |
|-----------------|-----------------------------|
| EMC..... | 2004/108/EC |
| LVD..... | 2006/95/EC |
| EAC..... | TR-CU 020/2011 |
| DNV Marine..... | Stand. f. Certific. No. 2.4 |
| UL..... | UL 508 |