# Programmable LED Indicator

Model 5714

- 4-Digit, 14-Segment LED Indicator
- Input for RTD, TC, mA, V, and Potentiometer
- Universal Supply Voltage
- Front Key Programmable
- Available with Optional 2 Relays and Analog Output


| Model No. | Optional Features |
|---|---|
| 5714A | Base Model |
| 5714B | Two (2) Relays |
| 5714C | Analog Output |
| 5714D | Analog Output & Two (2) Relays |

### Application:

- Display for digital readout of temperature, current, voltage or 3-wire potentiometer signals.
- Process control with 2 potential-free relays and / or analog output.

### Technical Characteristics:

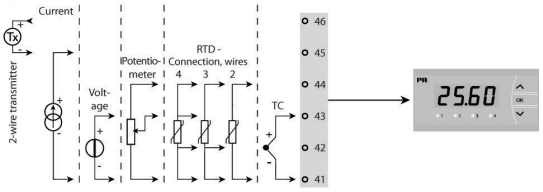
- 4-digit LED indicator with 13.8 mm 14- segment characters. Max. display readout -1999...9999 with programmable decimal point, relay ON/OFF indication.
- Operational parameters can be adjusted via the front panel keypad.
- Help text in eight languages can be selected via front panel.
- Preview 5714 is available fully-configured from the factory or can be field programmed.
- 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:

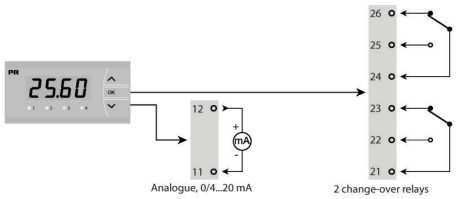
- Front Panel Mount.
- Rubber Gasket (mounted between panel cutout hole and display front panel provides IP65 (NEMA4) rating.
- Optional splash proof cover available for additional protection in extremely wet environments.

Applications:

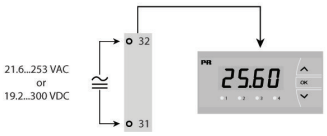
Input signals:




Output signals:




Supply:

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# Electrical Specifications

## Specifications Range:

• -20°C to + 60°C

## Common Specifications:

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

## Consumption:

| Type | Internal Consumption | Max. Consumption |
|---|---|---|
| 5714A | 2.2 W | 2.5 W |
| 5714B | 2.7 W | 3.0 W |
| 5714C | 2.7 W | 3.0 W |
| 5714D | 3.2 W | 3.5 W |

Isolation voltage test/operation ..... 2.3 kVAC / 250 VAC
Signal / noise ratio ..... Min. 60 dB (0...100 kHz)
Response time (0...90 %, 100...10 %), programmable:
Temperature input ..... 1...60 s
Current / voltage input ..... 0.4...60 s
Calibration temperature ..... 20...28°C
Accuracy, the greater of general and basic values:

| General Values | | |
|---|---|---|
| Input Type | Absolute Accuracy | Temperature Coefficient |
| All | ≤ ±0.1% of reading | ≤ ±0.01% of reading / °C |

| Basic Values | | |
|---|---|---|
| Input Type | Basic Accuracy | Temperature Coefficient |
| mA | ≤ ±4 µA | ≤ ± 0.4 µA/°C |
| Volt | ≤ ±20 µV | ≤ ±2 µV/°C |
| Potentiometer | ≤ ±0.1 Ω | ≤ ± 0.01 Ω/°C |
| Pt100 | ≤ ±0.2°C | ≤ ±0.02°C/°C |
| Ni100 | ≤ ±0.3°C | ≤ ±0.03°C/°C |
| TC type: E, J, K, L, N, T, U | ≤ ±1°C | ≤ ±0.05°C/°C |
| TC type: B, R, S, W3, W5, LR | ≤ ±2°C | ≤ ±0.2°C/°C |

EMC immunity influence ..... < ±0.5% of reading

Auxiliary supplies:
2 wire supply (pin 46...45) ..... 25...15 VDC / 0...20 mA
Wire size, pin 41-46 (max.) ..... 1 x 1.5 mm² (16 AWG) stranded wire
Wire size, others (max.) ..... 1 x 2.5 mm² (12 AWG) stranded wire
Relative Humidity ..... < 95% RH (non-cond.)
Dimensions (HxWxD) ..... 48 x 96 x 120 mm
Cutout dimensions ..... 44.5 x 91.5 mm
Tightness (mounted in panel) ..... IP65
Weight ..... 230 g

## RTD and Potentiometer Input:

| RTD Type | Min. Value | Max. Value | Standard |
|---|---|---|---|
| Pt100 | -200°C | +850°C | IEC 60751 |
| Ni100 | -60°C | +250°C | DIN 43760 |
| Potentiometer | 10 Ω | 100 kΩ | ------ |

Input for RTD types:
Pt10, Pt20, Pt50, Pt100, Pt200, Pt250, Pt300, Pt400, Pt500, Pt1000
Ni50, Ni100, Ni120, Ni1000
Cable resistance pr. wire, RTD (max.) ..... 50 Ω
Sensor current, RTD ..... Nom. 0.2 mA
Effect of sensor cable resistance
(3- /4- wire), RTD ..... < 0.002 Ω / Ω
Sensor error detection, RTD ..... Yes
Short circuit detection, RTD ..... < 15 Ω

## TC Input:

| Type | Min. Value | Max. Value | Standard |
|---|---|---|---|
| B | +400°C | +1820°C | IEC 60584-1 |
| E | -100°C | +1000°C | IEC 60584-1 |
| J | -100°C | +1200°C | IEC 60584-1 |
| K | -180°C | +1372°C | IEC 60584-1 |
| L | -200°C | +900°C | DIN 43710 |
| N | -180°C | +1300°C | IEC 60584-1 |
| R | -50°C | +1760°C | IEC 60584-1 |
| S | -50°C | +1760°C | IEC 60584-1 |
| T | -200°C | +400°C | IEC 60584-1 |
| U | -200°C | +600°C | DIN 43710 |
| W3 | 0°C | +2300°C | ASTM E988-90 |
| W5 | 0°C | +2300°C | ASTM E988-90 |
| LR | -200°C | +800°C | GOST 3044-84 |

Cold junction compensation(CJC) ..... < ±1.0°C
via internally mounted sensor ..... < ± 1.0 °C
Sensor error detection, all TC types ..... Yes
Sensor error current:
when detecting ..... Nom. 2 µA
else ..... 0 µA

## Current Input:

Measurement range ..... -1...25 mA
Program measurement ranges ..... 0...20 and 4...20mA
Input resistance ..... Nom. 20 Ω + PTC 25 Ω
Sensor error detection:
loop break 4...20 mA ..... Yes

## Voltage Input:

Measure range ..... -20 mV...12 VDC
Program measurement ranges ..... 0...1 / 0,2...1/ 0...10 / 2...10 VDC
Input resistance ..... Nom. 10 MΩ

## Outputs:

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

## Relay Outputs:

Relay function ..... Setpoint
Hysteresis, in % / display counts ..... 0.1...25% / 1...2999
On and Off delay ..... 0...3600 s
Sensor error detection ..... Make / Break / Hold
Max. voltage ..... 250 VRMS
Max. current ..... 2 A / AC
Max. AC power ..... 500 VA
Max. current at 24 VDC ..... 1 A

## Marine Approval*:

Det Norske Veritas, Ships & Offshore ..... Stand. for Certific. No. 2.4

**GOST R Approval*:** ..... Certificate available upon request.

**Observed Authority Requirements:** **Standard:**
EMC 2004/108/EC
Emission and immunity ..... EN 61326-1
LVD 73/23/EEC ..... EN 61010-1
UL, Standard for Safety ..... UL 508

**Of Span** = Of the presently selected range

*The transmitter is manufactured by PR electronics. All approvals listed are recognized under the PR name.

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