

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

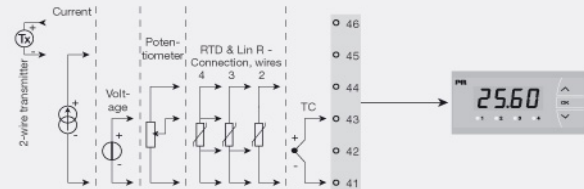
- 4-digit LED indicator with 13.8 mm 14-segment characters. Max. display readout -1999...9999 with programmable decimal point and relay ON / OFF indication.
- All standard operational parameters can be adjusted to any application by way of the front function keys.
- Help texts in eight languages can be selected via a menu item.
- PR 5714 is available fully-configured according to specifications ready for process control and visualization.
- 2.3 kVAC galvanic isolation between input, output and supply.
- 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

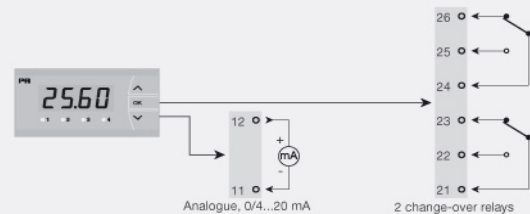
- To be mounted in panel front. The included rubber packing must be mounted between the panel cutout hole and the display front to obtain a protection degree of IP65 (type 4X). For extra protection in extreme environments, PR5714 can be delivered with a specially designed splash-proof cover as accessory.

Applications

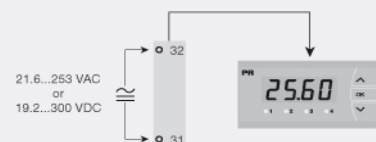
Input signals:



Output signals:



Supply:



Order:

Type	Version
5714	Standard : A
	2 relays : B
	Analog output : C
	Analog output and 2 relays : D

Environmental Conditions

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

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.).....	0.05...1.31 mm ² AWG 30...16 stranded wire
Wire size, others, max.....	0.05...3.31 mm ² / AWG 30...12 stranded wire
Vibration.....	IEC 60068-2-6
2...13.2 Hz.....	±1 mm
13.2...100 Hz.....	±0.7 g

Common specifications**Supply**

Supply voltage, universal.....	21.6...253 VAC, 50...60 Hz or 19.2...300 VDC
Max. required power.....	2.5 W (5714A)
Max. required power.....	3.0 W (5714B/C)
Max. required power.....	3.5 W (5714D)
Internal power dissipation.....	2.2 W (5714A)
Internal power dissipation.....	2.7 W (5714B/C)
Internal power dissipation.....	3.2 W (5714D)

Isolation voltage

Isolation voltage, test / working.....	2.3 kVAC / 250 VAC
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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).....	> 15 VDC @ 0...20 mA
Programming.....	Front-programmable
Signal / noise ratio.....	Min. 60 dB (0...100 kHz)
Accuracy.....	Better than 0.1% of sel. range
EMC immunity influence.....	< ±0.5% of readout

Input specifications**RTD input**

RTD type.....	Pt10/20/50/100/200/250; Pt300/400/500/1000; Ni50/100/120/1000; Cu10/20/50/100
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Cable resistance per wire.....	50 Ω (max.)
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
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Potentiometer input

Potentiometer min....max.....	10 Ω...100 kΩ
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TC input

Thermocouple type.....	B, E, J, K, L, N, R, S, T, U, W3, W5, LR
CJC via int. mounted sensor.....	±(2.0°C + 0.4°C * Δt)
Sensor error detection.....	Yes
Sensor error current: When detecting / else.....	Nom. 2 μA / 0 μA

Current input

Measurement range.....	0...23 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...23 mA
Programmable signal ranges.....	0...20/4...20/20...0/20...4 mA
Load (@ current output).....	$\leq 800 \Omega$
Load stability.....	$\leq 0.01\%$ of span / 100 Ω
Sensor error indication.....	0 / 3.5 / 23 mA / none
NAMUR NE43 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 VAC / VDC
Max. current.....	2 A
Max. AC power.....	500 VA
Max. DC current, resistive load > 30 VDC.....	See manual for details

Observed authority requirements

EMC.....	2014/30/EU
LVD.....	2014/35/EU
RoHS.....	2011/65/EU
EAC.....	TR-CU 020/2011
EAC LVD.....	TR-CU 004/2011

Approvals

c UL us, UL 508.....	E248256
EU RO MR Type Approval.....	MRA000000Z

For pricing or any further information, please contact Omni Instruments Ltd.



Measurement and data acquisition solutions

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