PERFORMANCE
MADE
SMARTER

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

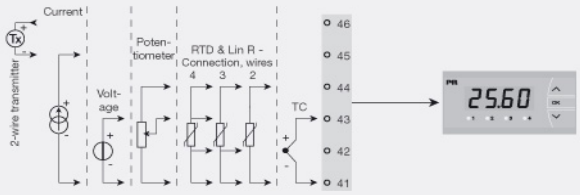
- 4-digit LED indicator with 13.8 mm 14-segment characters. Max. display readout -1999...9999 with programmable decimal point and relay ON / OFF indication.
- All standard operational parameters can be adjusted to any application by way of the front function keys.
- Help texts in eight languages can 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

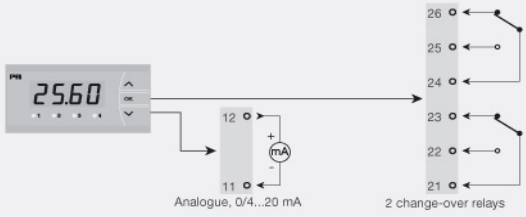
- To be mounted in panel front. The included rubber packing must be mounted between the panel cutout hole and the display front to obtain a protection degree of IP65 (type 4X). For extra protection in extreme environments, PR5714 can be delivered with a specially designed splash-proof cover as accessory.

Applications

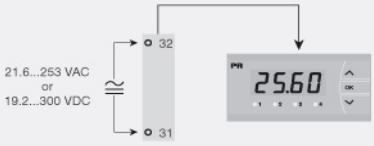
Input signals:



Output signals:



Supply:



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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

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
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
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

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 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)	≤ 800 Ω
Load stability	≤ 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 & UK SI 2016/1091
LVD	2014/35/EU & UK SI 2016/1101
RoHS	2011/65/EU & UK SI 2012/3032
EAC	TR-CU 020/2011
EAC LVD	TR-CU 004/2011

Approvals

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