

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

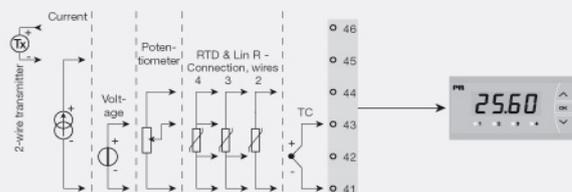
- 4-digit LED indicator with 13.8 mm 14-segment characters. Max. display readout -1999...9999 with programmable decimal point and relay ON / OFF indication.
- All standard operational parameters can be adjusted to any application by way of the front function keys.
- Help texts in eight languages can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

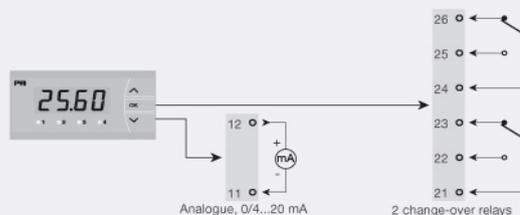
- To be mounted in panel front. The included rubber packing must be mounted between the panel cutout hole and the display front to obtain a protection degree of IP65 (type 4X). For extra protection in extreme environments, PR5714 can be delivered with a specially designed splash-proof cover as accessory.

Applications

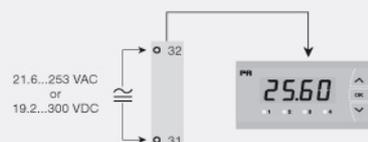
Input signals:



Output signals:



Supply:



Order:

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

Environmental Conditions

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, 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
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).....	25...15 VDC / 0...20 mA
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.....	Pt10/20/50/100/200/250; Pt300/400/500/1000; Ni50/100/120/1000; Cu10/20/50/100
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 temp.-ambient temp.
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...0/20...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 VRMS
Max. current.....	2 AAC
Max. AC power.....	500 VA
Max. load at 24 VDC.....	1 A

Observed authority requirements

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

Approvals

DNV-GL Marine.....	Stand. f. Certific. No. 2.4
EU RO Mutual Recognition Type Approval.....	MRA000000Z
UL.....	UL 508 / C22.2 no. 14

Programmable LED indicator

5715



- 4-digit 14-segment LED display
- Input for mA, V, Ohm, RTD, TC and potentiometer
- 4 relays and analog output
- Universal supply
- Programmable via front keys and PC



Application

- Display for digital readout of current / voltage / resistance / temperature or 3-wire potentiometer signals.
- Process control with 4 pairs of potential-free change-over relays and analog output.
- For tank level control, with the possibility of customer linearization ensuring correct level measurement and control in non-linear tanks.

Technical characteristics

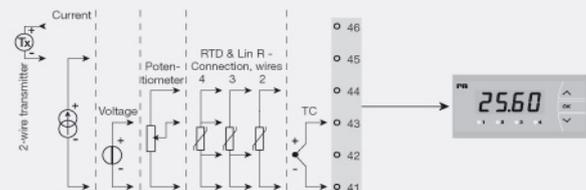
- 4-digit LED indicator with 13.8 mm 14-segment characters. Max. display readout -1999...9999 with programmable decimal point and relay ON / OFF indication.
- All standard operational parameters can be adjusted to any application by way of the front function keys. When programming is carried out by way of a PC and the configuration program PReset, additional configuration options are available, such as customer-defined linearization and special input signals.
- Help texts in eight languages can be selected via a menu item.
- A menu item allows the user to minimize the installation test time for the relay outputs by activating / deactivating each relay independently of the input signal.

Mounting / installation

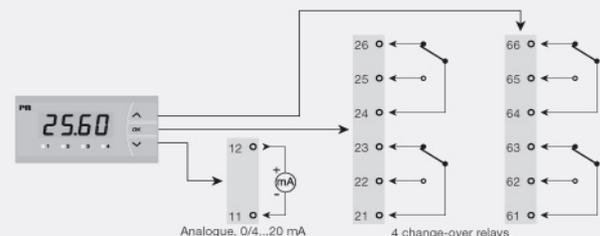
- To be mounted in panel front. The included rubber packing must be mounted between the panel cutout hole and the display front to obtain a protection degree of IP65 (type 4X). For extra protection in extreme environments, PR5715 can be delivered with a specially designed splash-proof cover as accessory.

Applications

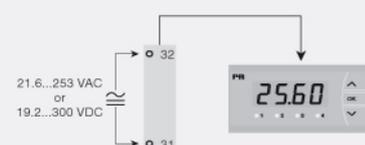
Input signals:



Output signals:



Supply:



Order:

Type	Version
5715	4 relays : B Analog output and 4 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, UL50E

Mechanical specifications

Dimensions (HxWxD).....	48 x 96 x 120 mm
Cut out dimensions.....	44.5 x 91.5 mm
Weight approx.....	260 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
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.....	3.3 W (5715B)
Max. required power.....	3.8 W (5715D)
Internal power dissipation.....	3.0 W (5715B)
Internal power dissipation.....	3.5 W (5715D)

Isolation voltage

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

Response time

Temperature input (0...90%, 100...10%).....	≤ 1 s
mA / V input (0...90%, 100...10%).....	≤ 400 ms

Auxiliary supplies

2-wire supply (pin 46...45).....	25...15 VDC / 0...20 mA
Signal / noise ratio.....	Min. 60 dB (0...100 kHz)
Accuracy.....	Better than 0.1% of selected range
Programming.....	Loop Link
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 (max.).....	50 Ω
Sensor current.....	Nom. 0.2 mA
Effect of sensor cable resistance (3-/4-wire).....	< 0.002 Ω / Ω
Sensor error detection.....	Yes
Short circuit detection.....	< 15 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
------------------------	--

C/JC via internally mounted sensor.....	±(2.0°C + 0.4°C * Δt)
Δt =	Internal temp.-ambient temp.
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...0/20...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 VRMS
Max. current.....	2 AAC
Max. AC power.....	500 VA
Max. load at 24 VDC.....	1 A

Observed authority requirements

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

Approvals

DNV-GL Marine.....	Stand. f. Certific. No. 2.4
UL.....	UL 508 / C22.2 no. 14

Loop-powered LCD indicator

5531A



- 4 digit 1/8 DIN (48 x 96 mm) loop-powered LCD display
- Easy push-button configuration
- Backlit LCD display is readable in low light conditions
- Display can be mounted in the safe area or in I.S. / Ex zone 2



Application

- The 5531 indicator is powered by the 4 to 20 mA current loop and is easily scaled to display the correct process value.
- Because it does not require separate power wiring, the 5531 is perfect for remote display of process loops.
- The 5531A display can be panel mounted in the safe area or I.S. / Ex Zone 2 (gas).

Technical characteristics

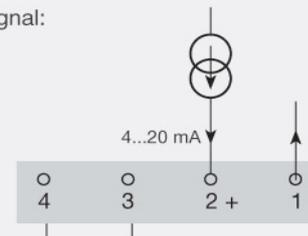
- With a full measurement range of 3.6 to 23 mA, the 5531 is NAMUR NE43 compliant.
- The display can be push-button scaled to any range between -9999 to 9999, and reverse display action is possible.
- The LCD backlight can be set to half or full intensity for easy viewing in low light conditions.
- The display only requires 1.5 VDC, (75 Ω loop load), with the backlight turned off.
- The input is HART transparent.
- The front push-buttons can be disabled to prevent unauthorized adjustment.

Mounting / installation

- Once panel mounted with the included gasket, the 5531 provides IP65 ingress protection.

Applications

Input signal:



Order:

Type	Input signal area classification	Field enclosure
5531A	4...20 mA from safe and zone 2	No

Environmental Conditions

Operating temperature..... -20°C to +60°C
Storage temperature..... -20°C to +60°C
Calibration temperature..... 20...28°C
Relative humidity..... < 95% RH (non-cond.)
Protection degree..... IP65, from front

Mechanical specifications

Dimensions (HxWxD)..... 48 x 96 x 120 mm
Cut out dimensions..... 44.5 x 91.5 mm
Weight approx..... 200 g
Wire size, connector terminal
1 - 4..... 0.13...2.08 mm² / AWG
26...14 stranded wire
Screw terminal torque..... 0.5 Nm
Cable glands and cable diameter..... M16 x 1.5 / Ø 5...8 mm

Common specifications

Supply

Supply voltage..... Input loop-powered

Response time

Response time (0...90%, 100...10%)..... < 1 s
Signal / noise ratio..... > 60 dB
Updating time..... 500 ms
EMC immunity influence..... < ±0.5% of span

Input specifications

Current input

Loop error detection, 4...20
mA: Low..... ~ < 3 mA
Loop error detection, 4...20
mA: High..... ~ > 24 mA
Input range..... 4...20 mA
Measurement range..... 3.6...23 mA
Input voltage drop, without
backlight..... < 1.5 V @ 20 mA
Input voltage drop, with full
backlight..... < 10.5 V @ 20 mA

Observed authority requirements

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

Output specifications

Display

Display readout..... ± 9999 (4 digits)
Digit height..... 16 mm

Approvals

ATEX 2014/34/EU..... KEMA 05ATEX1044 X
(5531A/B1)