

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

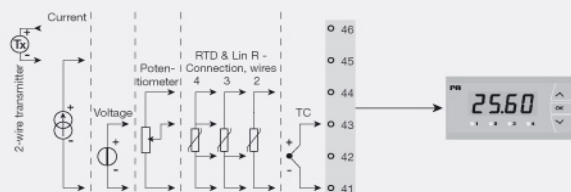
- 4-digit LED indicator with 13.8 mm 14-segment characters. Max. display readout -1999...9999 with programmable decimal point and relay ON / OFF indication.
- All standard operational parameters can be adjusted to any application by way of the front function keys. When programming is carried out by way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

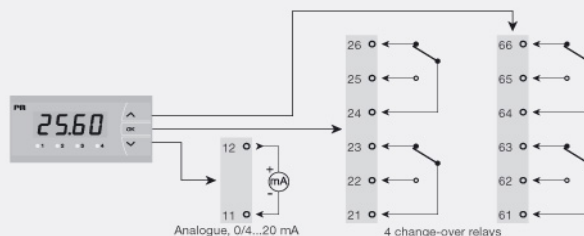
- To be mounted in panel front. The included rubber packing must be mounted between the panel cutout hole and the display front to obtain a protection degree of IP65 (type 4X). For extra protection in extreme environments, PR5715 can be delivered with a specially designed splash-proof cover as accessory.

Applications

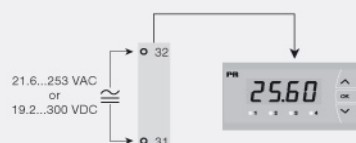
Input signals:



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

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.).....	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.....	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
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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 sel. 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.....	50 Ω (max.)
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
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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)

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