PERFORMANCE MADE SMARTER

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

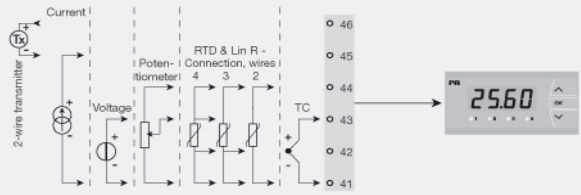
- 4-digit LED indicator with 13.8 mm 14-segment characters. Max. display readout -1999...9999 with programmable decimal point and relay ON / OFF indication.
- All standard operational parameters can be adjusted to any application by way of the front function keys. When programming is carried out by way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

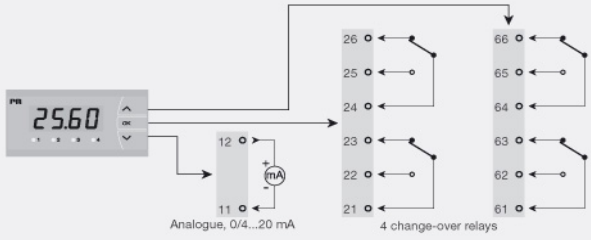
- To be mounted in panel front. The included rubber packing must be mounted between the panel cutout hole and the display front to obtain a protection degree of IP65 (type 4X). For extra protection in extreme environments, PR5715 can be delivered with a specially designed splash-proof cover as accessory.

Connection

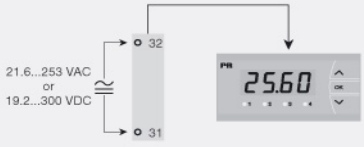
Input signals:



Output signals:



Supply:



Environmental Conditions

Specifications range	-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 mm2 stranded wire
Wire size, others, max.	1 x 2.5 mm2 stranded wire

Common specifications

Supply voltage, universal	21.6...253 VAC, 50...60 Hz or 19.2...300 VDC
Max. power consumption	3.3 W (5715B)
Max. power consumption	3.8 W (5715D)
Internal consumption	3.0 W (5715B)
Internal consumption	3.5 W (5715D)
Isolation voltage, test / working	2.3 kVAC / 250 VAC
Signal / noise ratio	Min. 60 dB (0...100 kHz)
Communications interface	USB Loop Link
Response time (0...90%, 100...10%): Temperature input	≤ 1 s
Response time (0...90%, 100...10%): mA / V input	≤ 400 ms
Auxiliary supply: 2-wire supply (pin 46...45)	25...15 VDC / 0...20 mA
EMC immunity influence	< ±0.5% of readout

Input specifications

RTD input	Pt10, Pt20, Pt50, Pt100, Pt200, Pt250, Pt300, Pt400, Pt500, Pt1000 Ni50, Ni100, Ni120, Ni1000, Cu10, Cu20, Cu50, Cu100
RTD input	Linear resistance
RTD input	Potentiometer
Cable resistance per wire (max.), RTD	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: 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 temperature-ambient temperature
Sensor error detection, TC	Yes
Sensor error current - when detecting / else	Nom. 2 µA / 0 µA
Current input: Measurement range	0...20 mA
Current input: Programmable measurement ranges	0...20 and 4...20 mA
Input resistance, current input	Nom. 20 Ω + PTC 25 Ω
Sensor error detection, current	Loop break 4...20 mA
Voltage input: Measurement range	0...12 VDC
Programmable measurement ranges, VDC	0/0.2...1; 0/2...10 VDC
Input resistance, voltage input	Nom. 10 MΩ

Output specifications

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 and 20...4 mA
Load (max.)	20 mA / 800 Ω / 16 VDC
Load stability, current output	≤0.01% of span/100 Ω
Sensor error detection, current output	0 / 3.5 / 23 mA / none
NAMUR NE 43 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

Approvals

EMC	EN 61326-1
LVD	EN 61010-1
GOST R	Yes
DNV Marine	Stand. f. Certific. No. 2.4
UL	UL 508