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

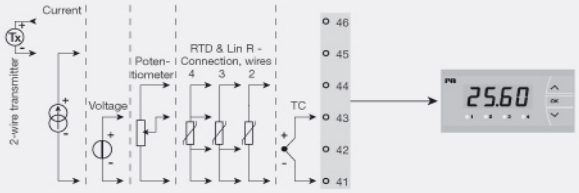
- 4-digit LED indicator with 13.8 mm 14-segment characters. Max. display readout -1999...9999 with programmable decimal point and relay ON / OFF indication.
- All standard operational parameters can be adjusted to any application by way of the front function keys. When programming is carried out by way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

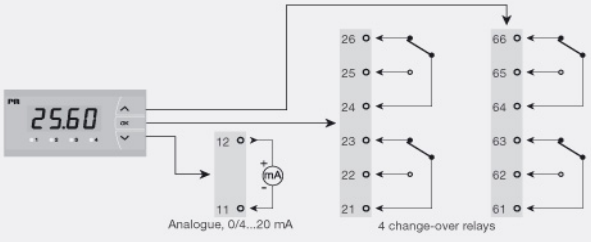
- To be mounted in panel front. The included rubber packing must be mounted between the panel cutout hole and the display front to obtain a protection degree of IP65 (type 4X). For extra protection in extreme environments, PR5715 can be delivered with a specially designed splash-proof cover as accessory.

Connections

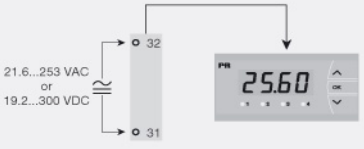
Input signals:



Output signals:



Supply:



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Order:

Type	Version	
5715	4 relays	: B
	Analog output and 4 relays	: D

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 mm^2 stranded wire
Wire size, others, max..... 1 x 2.5 mm^2 stranded wire
Vibration..... IEC 60068-2-6 : 2007
Vibration: 2...25 Hz..... ±1.6 mm
Vibration: 25...100 Hz..... ±4 g

Common specifications

Supply
Supply voltage, universal..... 21.6...253 VAC, 50...60 Hz or 19.2...300 VDC

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

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)
Signal / noise ratio..... Min. 60 dB (0...100 kHz)
Accuracy..... Better than 0.1% of selected range
Communications interface..... USB Loop Link
EMC immunity influence..... < ±0.5% of readout

Input specifications

RTD input
RTD type..... Pt10, Pt20, Pt50, Pt100, Pt200, Pt250, Pt300, Pt400, Pt500, Pt1000 Ni50, Ni100, Ni120, Ni1000, Cu10, Cu20, Cu50, Cu100
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
CJC via internally mounted sensor..... ±(2.0°C + 0.4°C * Δt)
Δt =..... Internal temperature-ambient temperature
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 and 20...4 mA
Load (max.)..... 20 mA/800 Ω/16 VDC
Load stability..... ≤0.01% of span / 100 Ω
Sensor error indication..... 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..... 2004/108/EC
LVD..... 2006/95/EC
EAC..... TR-CU 020/2011
DNV Marine..... Stand. f. Certific. No. 2.4
UL..... UL 508