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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

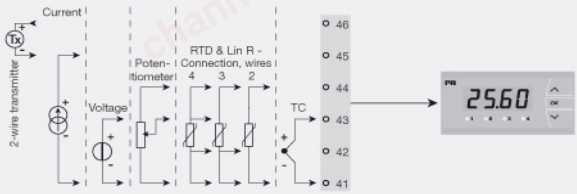
- 4-digit LED indicator with 13.8 mm 14-segment characters. Max. display readout -1999...9999 with programmable decimal point and relay ON / OFF indication.
- All standard operational parameters can be adjusted to any application by way of the front function keys. When programming is carried out by way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

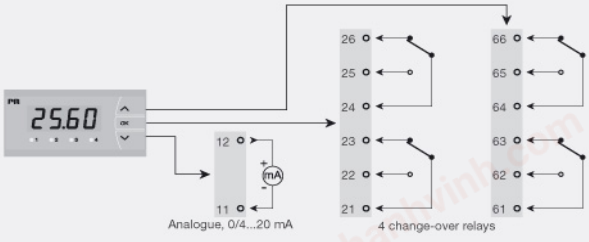
- To be mounted in panel front. The included rubber packing must be mounted between the panel cutout hole and the display front to obtain a protection degree of IP65 (type 4X). For extra protection in extreme environments, PR5715 can be delivered with a specially designed splash-proof cover as accessory.

Applications

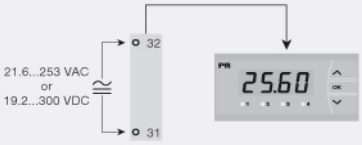
Input signals:



Output signals:



Supply:



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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

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

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)
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