

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

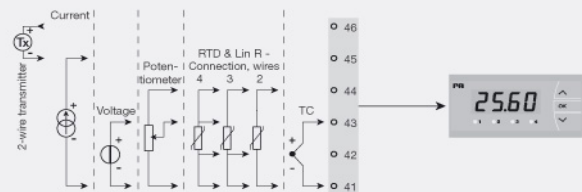
- 4-digit LED indicator with 13.8 mm 14-segment characters. Max. display readout -1999...9999 with programmable decimal point and relay ON / OFF indication.
- All standard operational parameters can be adjusted to any application by way of the front function keys. When programming is carried out by way of a PC and the configuration program PRReset, 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.
- 2.3 kVAC galvanic isolation between input, output and supply.

Mounting / installation

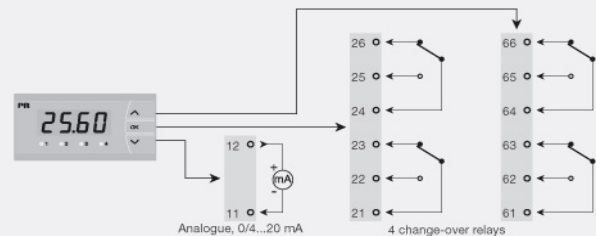
- To be mounted in panel front. The included rubber packing must be mounted between the panel cutout hole and the display front to obtain a protection degree of IP65 (type 4X). For extra protection in extreme environments, PR 5715 can be delivered with a specially designed splash-proof cover as accessory.

Applications

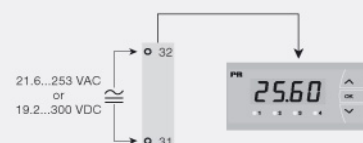
Input signals:



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 |
|--|--------------------|

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)..... | > 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) |
| 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 & UK SI 2016/1091 |
| LVD..... | 2014/35/EU & UK SI 2016/1101 |
| RoHS..... | 2011/65/EU & UK SI 2012/3032 |
| EAC..... | TR-CU 020/2011 |
| EAC LVD..... | TR-CU 004/2011 |

Approvals

| | |
|-----------------------------|------------|
| c UL us, UL 508..... | E248256 |
| EU RO MR Type Approval..... | MRA000000Z |