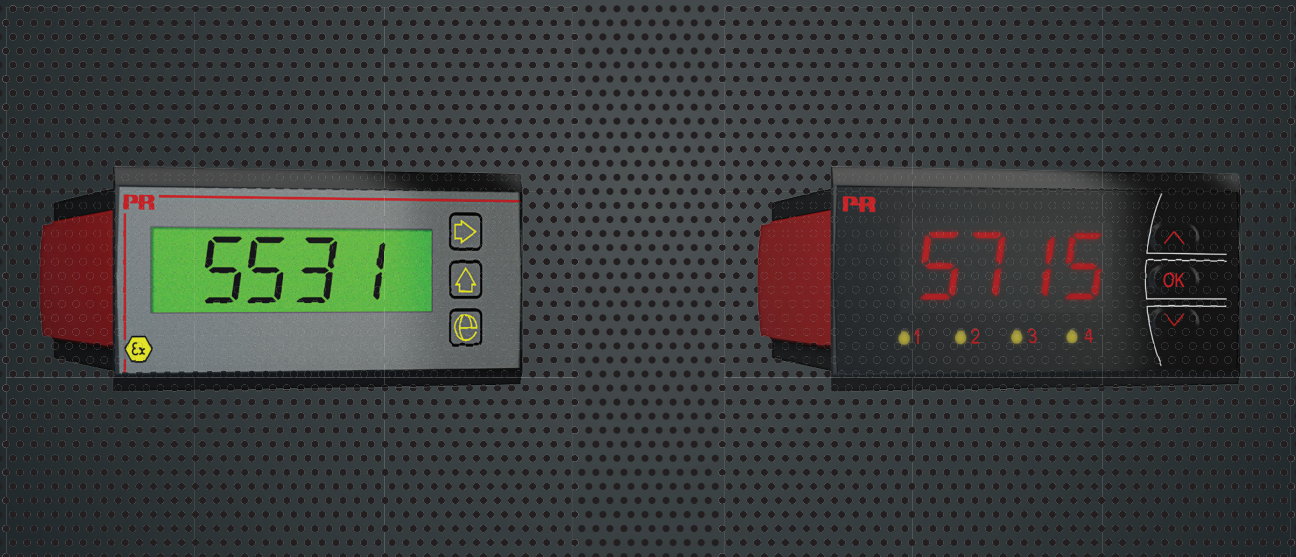


## Complete range of panel meters

Our display range is characterized by its flexibility and stability. The devices meet nearly every demand for display readout of process signals and have universal input and power supply capabilities. They provide a real-time measurement of your process value no matter the industry and are engineered to provide a user-friendly and reliable relay of information, even in demanding environments.



# Displays



5531A - Loop-powered LCD indicator	F.2
5531B - Loop-powered LCD indicator	F.4
5714 - Programmable LED indicator	F.6
5715 - Programmable LED indicator	F.8
5725 - Programmable frequency indicator	F.10

## Loop-powered LCD indicator

### 5531



- 4 digit 1/8 DIN (48 x 96 mm) loop-powered LCD display
- Easy push-button configuration
- Backlit LCD display is readable in low light conditions
- Display can be mounted in the safe area or in I.S. / Ex zone 2



#### Application

- The 5531 indicator is powered by the 4 to 20 mA current loop and is easily scaled to display the correct process value.
- Because it does not require separate power wiring, the 5531 is perfect for remote display of process loops.
- The 5531A display can be panel mounted in the safe area or I.S. / Ex Zone 2 (gas).

#### Technical characteristics

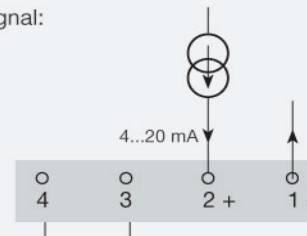
- With a full measurement range of 3.6 to 23 mA, the 5531 is NAMUR NE43 compliant.
- The display can be push-button scaled to any range between -9999 to 9999, and reverse display action is possible.
- The LCD backlight can be set to half or full intensity for easy viewing in low light conditions.
- The display only requires 1.5 VDC, (75 Ω loop load), with the backlight turned off.
- The input is HART® transparent.
- The front push-buttons can be disabled to prevent unauthorized adjustment.

#### Mounting / installation

- Once panel mounted with the included gasket, the 5531 provides IP65 ingress protection.

#### Connections

Input signal:



**Order:**

Type	Input signal area classification	Field enclosure
5531A	4...20 mA from safe and zone 2	No

**Environmental Conditions**

Specifications range.....	-20°C to +60°C
Storage temperature.....	-20°C to +60°C
Calibration temperature.....	20...28°C
Relative humidity.....	< 95% RH (non-cond.)
Protection degree.....	IP65, from front

**Mechanical specifications**

Dimensions (HxWxD).....	48 x 96 x 120 mm
Cut out dimensions.....	44.5 x 91.5 mm
Weight approx.....	200 g
Wire size, connector terminal	
1 - 4.....	0.13...2.08 mm <sup>2</sup> / AWG 26...14 stranded wire
Screw terminal torque.....	0.5 Nm
Cable glands and cable diameter.....	M16 x 1.5 / Ø 5...8 mm

**Common specifications**

Supply voltage.....	Input loop-powered
Signal / noise ratio.....	> 60 dB
Response time (0...90%, 100...10%).....	< 1 s
Updating time.....	500 ms
EMC immunity influence.....	< ±0.5% of span

**Input specifications**

Input range.....	4...20 mA
Measurement range.....	3.6...23 mA
Input voltage drop, without backlight.....	< 1.5 V @ 20 mA
Input voltage drop, with full backlight.....	< 10.5 V @ 20 mA
Loop error detection, 4...20 mA: Low.....	~ < 3 mA
Loop error detection, 4...20 mA: High.....	~ > 24 mA

**Approvals**

LVD 2006/95/EC.....	EN 61010-1
EMC.....	EN 61326-1
ATEX 2004/108/EC.....	KEMA 05ATEX1044 X (5531A/B1)
EAC TR-CU 020/2011.....	EN 61326-1

**Output specifications**

Display readout.....	± 9999 (4 digits)
Digit height.....	16 mm

## Loop-powered LCD indicator

### 5531B



- 4 digit 1/8 DIN (48 x 96 mm) loop-powered LCD display
- Easy push-button configuration
- Backlit LCD display is readable in low light conditions
- Display can be mounted in the safe area or in I.S. / Ex zone



#### Application

- The 5531 indicator is powered by the 4 to 20 mA current loop and is easily scaled to display the correct process value.
- Because it does not require separate power wiring, the 5531 is perfect for remote display of process loops.
- The 5531B can be mounted in Ex Zone 1.

#### Technical characteristics

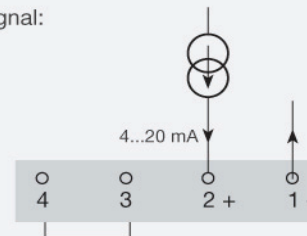
- With a full measurement range of 3.6 to 23 mA, the 5531 is NAMUR NE43 compliant.
- The display can be push-button scaled to any range between -9999 to 9999, and reverse display action is possible.
- The LCD backlight can be set to half or full intensity for easy viewing in low light conditions.
- The display only requires 1.5 VDC, (75  $\Omega$  loop load), with the backlight turned off.
- The input is HART<sup>®</sup> transparent.
- The front push-buttons can be disabled to prevent unauthorized adjustment.

#### Mounting / installation

- Once panel mounted with the included gasket, the 5531 provides IP65 ingress protection.

#### Connections

Input signal:



**Order:**

Type	Input signal area classification	Field enclosure
5531B1	4...20 mA from safe, zone 2 and 22	Yes
5531B	4...20 mA from zone 0	No
5531B2	4...20 mA from zone 0 and 20	Yes

**Environmental Conditions**

Specifications range.....	-20°C to +60°C
Storage temperature.....	-20°C to +60°C
Calibration temperature.....	20...28°C
Relative humidity.....	< 95% RH (non-cond.)
Protection degree.....	IP65, from front

**Mechanical specifications**

Dimensions (HxWxD).....	48 x 96 x 120 mm
Cut out dimensions.....	44.5 x 91.5 mm
Weight approx.....	200 g
Cable glands and cable diameter.....	M16 x 1.5 / Ø 5...8 mm
Wire size, connector terminal	
1 - 4.....	0.13...2.08 mm <sup>2</sup> / AWG
	26...14 stranded wire

**Common specifications**

EMC immunity influence.....	< ±0.5% of span
Supply voltage.....	Input loop-powered
Signal / noise ratio.....	> 60 dB
Response time (0...90%, 100...10%).....	< 1 s
Updating time.....	500 ms

**Input specifications**

Current input: Measurement range.....	3.6...23 mA
Input voltage drop, without backlight.....	< 1.5 V @ 20 mA
Input voltage drop, with full backlight.....	< 10.5 V @ 20 mA
Loop error detection, 4...20 mA: Low.....	~ < 3 mA
Loop error detection, 4...20 mA: High.....	~ > 24 mA

**Output specifications**

Display readout.....	± 9999 (4 digits)
Digit height.....	16 mm

**Approvals**

EMC.....	EN 61326-1
ATEX 2004/108/EC.....	KEMA 05ATEX1044 X (5531A/B1)
ATEX 2004/108/EC.....	KEMA 05ATEX1105 X (5531B/B2)
EAC TR-CU 020/2011.....	EN 61326-1
EAC Ex TR-CU 012/2011.....	RU C-DK.GB08.V.00410

## Programmable LED indicator

### 5714



- 4-digit 14-segment LED display
- Input for mA, V, Ohm, RTD, TC and potentiometer
- 2 relays and analog output
- Universal supply
- Front key programmable



#### Application

- Display for digital readout of current / voltage / resistance / temperature or potentiometer signals.
- Process control with 2 potential-free relays and / or analog output.
- For local readout in extremely wet atmospheres with a specially designed splash-proof cover.

#### Technical characteristics

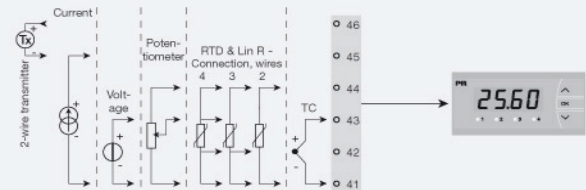
- 4-digit LED indicator with 13.8 mm 14-segment characters. Max. display readout -1999...9999 with programmable decimal point and relay ON / OFF indication.
- All standard operational parameters can be adjusted to any application by way of the front function keys.
- Help texts in eight languages can be selected via a menu item.
- PR5714 is available fully-configured according to specifications ready for process control and visualization.
- In versions with relay outputs the user can minimize the installation test time by activating / deactivating each relay independently of the input signal.

#### Mounting / installation

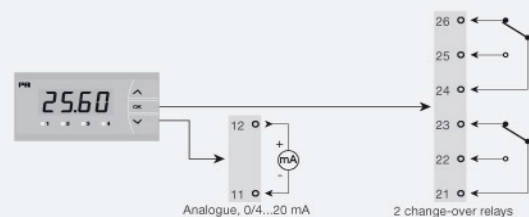
- To be mounted in panel front. The included rubber packing must be mounted between the panel cutout hole and the display front to obtain a protection degree of IP65 (type 4X). For extra protection in extreme environments, PR5714 can be delivered with a specially designed splash-proof cover as accessory.

#### Connections

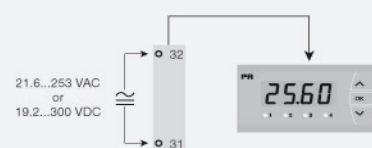
##### Input signals:



##### Output signals:



##### Supply:



**Order:**

Type	Version
5714	Standard : A
	2 relays : B
	Analog output : C
	Analog output and 2 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.....	230 g
Wire size, pin 41-46 (max.).....	1 x 1.5 mm <sup>2</sup> stranded wire
Wire size, others, max.....	1 x 2.5 mm <sup>2</sup> stranded wire
Vibration.....	IEC 60068-2-6 : 2007
Vibration: 2...25 Hz.....	±1.6 mm
Vibration: 25...100 Hz.....	±4 g

**Common specifications**

Supply voltage, universal.....	21.6...253 VAC, 50...60 Hz or 19.2...300 VDC
Max. power consumption.....	2.5 W (5714A)
Max. power consumption.....	3.0 W (5714B/C)
Max. power consumption.....	3.5 W (5714D)
Internal consumption.....	2.2 W (5714A)
Internal consumption.....	2.7 W (5714B/C)
Internal consumption.....	3.2 W (5714D)
Isolation voltage, test / working.....	2.3 kVAC / 250 VAC
Signal / noise ratio.....	Min. 60 dB (0...100 kHz)
Accuracy.....	Better than 0.1% of selected range
Response time (0...90%, 100...10%):	
Temperature input (programmable).....	1...60 s
mA / V input (programmable).....	0.4...60 s
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 input.....	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 current 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 indication, 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 2006/95/EC.....	EN 61010-1
EAC TR-CU 020/2011.....	EN 61326-1
DNV Marine.....	Stand. f. Certific. No. 2.4
UL.....	UL 508



## 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

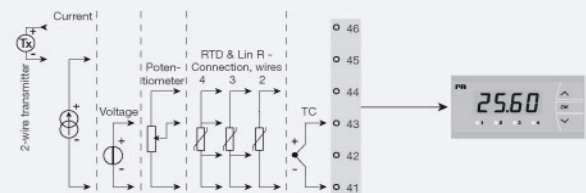
- 4-digit LED indicator with 13.8 mm 14-segment characters. Max. display readout -1999...9999 with programmable decimal point and relay ON / OFF indication.
- All standard operational parameters can be adjusted to any application by way of the front function keys. When programming is carried out by way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

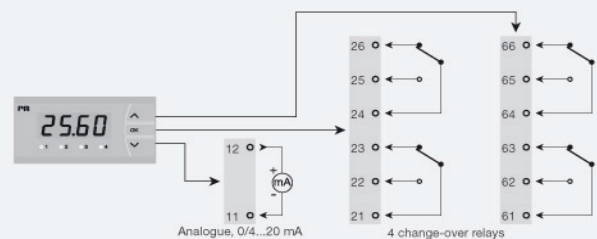
- To be mounted in panel front. The included rubber packing must be mounted between the panel cutout hole and the display front to obtain a protection degree of IP65 (type 4X). For extra protection in extreme environments, PR5715 can be delivered with a specially designed splash-proof cover as accessory.

#### Connections

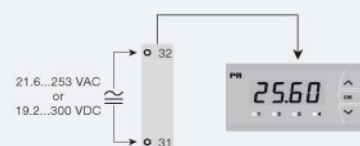
##### Input signals:



##### Output signals:



##### Supply:



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

**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)
Accuracy.....	Better than 0.1% of selected range
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 input.....	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 current 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 indication, 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 2006/95/EC.....	EN 61010-1
EAC TR-CU 020/2011.....	EN 61326-1
DNV Marine.....	Stand. f. Certific. No. 2.4
UL.....	UL 508

## Programmable frequency indicator

### 5725



- Measures NPN, PNP, Contact, NAMUR, S0, Tacho and TTL sensors
- Programmable frequency input span of 0.001 Hz to 50 kHz
- The 5725D has two SPDT relays and one analog output
- Easy to read 4-digit, 14-segment LED display with scrolling help text
- Universally powered by 21.5...253 VAC or 19.2... 300 VDC



#### Application

- The 5725 measures, scales, and displays frequency signals found in many process speed and flow rate applications.
- The indicator can measure the period of the frequency, useful for displaying the elapsed time between events.
- The 5725D has two SPDT setpoint contacts and a 0/4...20 mA output for process control.
- The installed display provides IP65 environmental sealing, and additional protection is provided by the optional 8335 splash proof cover.

#### Technical characteristics

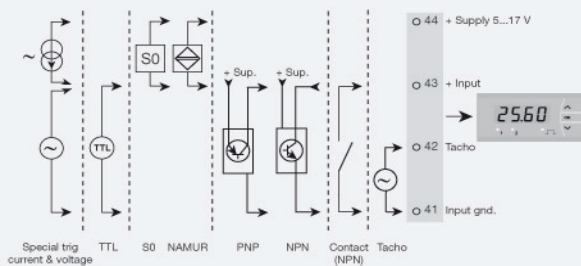
- 4-digit display with 13.8 mm high, 14-segment LED digits and adjustable decimal point.
- Indicator is scalable from -1999 to 9999.
- Scrolling help text makes programming easy.
- Customizable trigger levels allow measurement of nearly any pulse sensor.
- Built-in excitation source for measuring NPN, PNP, NAMUR and S0 sensors.
- Fast response time of 1 cycle + 100 ms, and excellent accuracy of better than 0.05% of selected range.
- The analog output current on the 5725D can be dampened from 0.1 to 60 seconds, and can handle up to 800 Ohms loop load.
- The 5725 meets NAMUR NE21 recommendations for high performance in harsh EMC environments.
- High 2.3 kVAC galvanic isolation, and an excellent signal/noise ratio of > 60dB.

#### Mounting / installation / programming

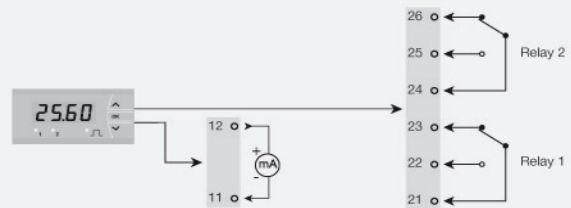
- Easy to mount 1/8 DIN (48x96 mm) panel meter with IP65 (type 4X) sealing.
- Approved for marine applications.
- Fully push-button programmable.
- Password-protected.

#### Connections

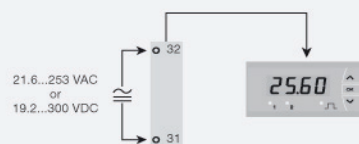
##### Input signals:



##### Output signals:



##### Supply:



**Order:**

Type	Version
5725	Standard : A
	Analog output and 2 relays : D

**Environmental Conditions**

Specifications range.....	-20°C to +60°C
Storage temperature.....	-40°C to +85°C
Calibration temperature.....	20...28°C
Relative humidity.....	< 95% RH (non-cond.)
Protection degree.....	IP20
Protection degree (mounted in panel).....	IP65 / Type 4X, UL50E
Installation in.....	Pollution degree 2 & measurement / overvoltage cat. II

**Mechanical specifications**

Dimensions (HxWxD).....	48 x 96 x 120 mm
Cut out dimensions.....	44.5 x 91.5 mm
Weight approx.....	230 g
Wire size, pin 11-12 & 41-44, max.....	1 x 1.5 mm <sup>2</sup> / AWG 30...16 stranded wire
Wire size, others, max.....	1 x 2.5 mm <sup>2</sup> / AWG 30...12 stranded wire
Terminal connection.....	Spring-cage
Vibration.....	IEC 60068-2-6 : 2007
Vibration: 2...25 Hz.....	±1.6 mm
Vibration: 25...100 Hz.....	±4 g

**Common specifications**

Supply voltage, universal.....	21.6...253 VAC, 50...60 Hz or 19.2...300 VDC
Max. power consumption.....	< 2.8 W (5725A)
Max. power consumption.....	< 3.6 W (5725D)
Isolation voltage, test / working.....	2.3 kVAC / 250 VAC
Signal / noise ratio.....	> 60 dB
Accuracy.....	Better than 0.05% of selected range
Response time (0...90%, 100...10%).....	< 1 period + 100 ms
EMC immunity influence.....	< ±0.5% of span
Extended EMC immunity: NAMUR NE 21, A criterion, burst.....	< ±1% of span

**Input specifications**

Frequency range, f/I conversion function.....	0.001 Hz to 50 kHz
Low cut-off frequency.....	0.0009 Hz (default value)
Max. frequency, with input filter ON.....	50 Hz
Time range, period time function.....	999.9 s to 20 µs
Low cut off period time (time-out).....	1111 s
Min. period time with input filter ON.....	20 ms
Input types.....	NAMUR acc. to EN 60947-5-6
Input types.....	Tacho
Input types.....	NPN / PNP
Input types.....	TTL
Input types.....	S0 acc. to DIN 43864
Input types.....	Special voltage
Input types.....	Special current

**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
Programmable current 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
Current limit.....	≤ 28 mA
Sensor error indication, current output.....	0 / 3.5 / 23 mA / none
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
Relay output: Relay functions.....	Setpoint
Hysteresis, in % / display counts.....	0...100% / 0...9999
ON and OFF delay.....	0...3600 s
Power On delay.....	0...60 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 2006/95/EC.....	EN 61010-1
EAC TR-CU 020/2011.....	EN 61326-1
DNV Marine.....	Stand. f. Certific. No. 2.4
UL.....	UL 508