

## 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 21.6...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

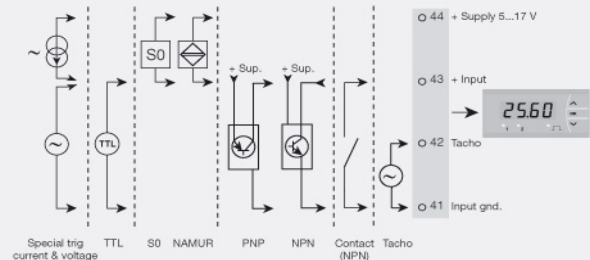
- 4-digit display with 13.8 mm high, 14-segment LED digits and adjustable decimal point.
- Indicator is scalable from -1999 to 9999.
- Scrolling help text makes programming easy.
- Customizable trigger levels allow measurement of nearly any pulse sensor.
- Built-in excitation source for measuring NPN, 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

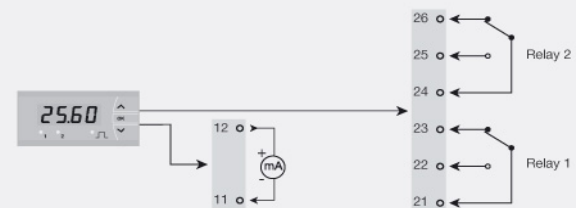
- Easy to mount 1/8 DIN (48x96 mm) panel meter with IP65 (type 4X) sealing.
- Approved for marine applications.
- Fully push-button programmable.
- Password-protected.

#### Applications

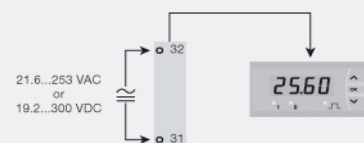
##### Input signals:



##### Output signals:



##### Supply:



**Order:**

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

**Environmental Conditions**

Operating temperature.....	-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
Installation in.....	Pollution degree 2 & meas. / 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
2...13.2 Hz.....	±1 mm
13.2...100 Hz.....	±0.7 g

**Common specifications**

<b>Supply</b>	
Supply voltage, universal.....	21.6...253 VAC, 50...60 Hz or 19.2...300 VDC
Max. required power.....	< 2.8 W (5725A)
Max. required power.....	< 3.6 W (5725D)

**Isolation voltage**

Isolation voltage, test / working.....	2.3 kVAC / 250 VAC
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**Response time**

Response time (0...90%, 100...10%).....	< 1 period + 100 ms
Signal / noise ratio.....	> 60 dB
Accuracy.....	Better than 0.05% of selected range
EMC immunity influence.....	< ±0.5% of span
Extended EMC immunity: NAMUR NE21, 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**

Display readout.....	-1999...9999 (4 digits)
Decimal point.....	Programmable
Digit height.....	13.8 mm
Display updating.....	2.2 times / s
Display response time, programmable.....	0.0...60.0 s
Input outside input range is indicated by.....	Explanatory text

**Current output**

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
Current limit.....	≤ 28 mA
Sensor error indication.....	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 VAC / VDC
Max. current.....	2 A
Max. AC power.....	500 VA
Max. DC current, resistive load ≤ 30 VDC.....	2 ADC
Max. DC current, resistive load > 30 VDC.....	See manual for details

**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
EU RO Mutual Recognition Type Approval.....	MRA000000Z
UL.....	UL 508 / C22.2 no. 14