

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

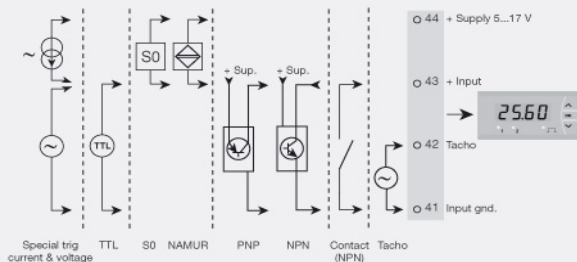
- 4-digit display with 13.8 mm high, 14-segment LED digits and adjustable decimal point.
- Indicator is scalable from -1999 to 9999.
- Scrolling help text makes programming easy.
- Customizable trigger levels allow measurement of nearly any pulse sensor.
- Built-in excitation source for measuring NPN,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

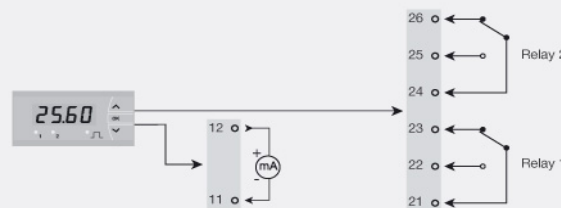
- Easy to mount 1/8 DIN (48x96 mm) panel meter with IP65 (type 4X) sealing.
- Approved for marine applications.
- Fully push-button programmable.
- Password-protected.

Connection

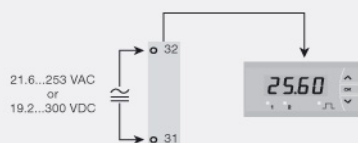
Input signals:



Output signals:



Supply:



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 category 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 ² / AWG 30...16 stranded wire
Wire size, others, max.....	1 x 2.5 mm ² / AWG 30...12 stranded wire
Terminal connection.....	Spring-cage

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
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 signal 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 detection, 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.....	EN 61010-1
GOST R.....	Yes
DNV Marine.....	Stand. f. Certific. No. 2.4
UL.....	UL 508