

signo 722

DIN-size tachometer with limit values

Special features:

- Large, 5-digit, 14 mm-high LED display
- Prescaler
- 2 variable limit values
- Relay outputs with changeover contacts
- Connection for all international voltage ranges
- Degree of protection IP 54
- Particularly easy to use with large input keys
- Plug-in screw terminals
- Frame mounting
- Designed to meet safety specifications of VDE 0411, IEC 801

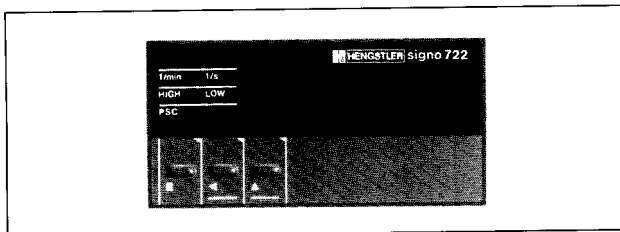
General

The signo 722 is a programmable tachometer with 2 variable control signals, operating on the principle of period measurement. It is characterized by ease of use and the wide frequency range of 1/min to 10,000/sec. Its heart is a mask-programmed microprocessor, reflecting the knowledge of many years of experience in industrial-grade measuring instruments and counters. The signo 722 can be set and placed in operation by a user with no specialist knowledge.

- The main applications are: Display of rotational speeds, frequencies, production rates, circumferential velocities and feed rates and many similar, time-dependent processes

Display

The display has 5 digits with suppression of leading zeros, and has a freely selectable decimal point in one of the last three positions. When the pulse generator is idle, the value "0" is displayed, if the maximum possible display value of "99999" is exceeded, the middle segments of all 5 digits appear.



Located in the left part of the display is the indicator area, this indicates the various program steps to the user, as well as the display units in 1/min or 1/sec during operation, and the status of output signals.

Prescaler (pulse weighting factor)

The signo 722 has a freely selectable prescaler for the range 0.001 to 9.999. The incoming pulses at the input stage are multiplied by the set value in order to display them in "standardized units".



Example 1 The spooling rate on a spooling frame is to be indicated in m/min. The yarn is routed over a measuring roll with a circumference of 38 mm, producing one pulse per revolution at the tachometer.

Solution: 1 pulse = 0.038 m. Prescaler setting: 0.038 or Required indication in inch/min: 1 pulse = 0.038 m = 1.496 inches. Prescaler setting: 1.496

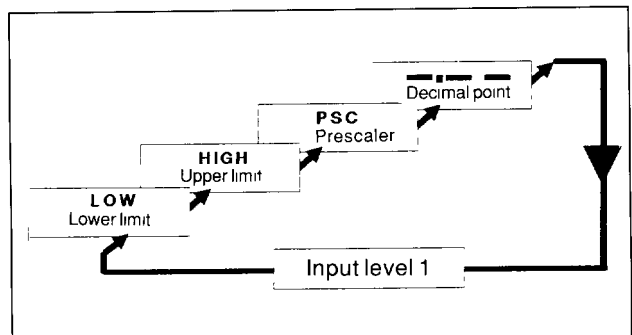
Example 2 A flow meter produces 1 pulse/45 cm³ flow. The flow rate is to be indicated in litres/min.

1 pulse = 45 cm³ = 0.045 litres. Prescaler setting: 0.045
Note: Only integer values appear on the display.

The limit values and the prescaler can be locked out with the „Keylock“ control input to prevent unauthorized reprogramming. In this case the values entered can only be displayed with the E key.

Programming

Programming the signo 722 is arranged via two appropriate and practical input levels. The three large keys at the front serve for input level 1. At this input level, the user can access the program steps in which numerical values are entered or retrieved. The individual program steps are run through in the order indicated below by pressing the E key, and appear on LED indicators in the display.

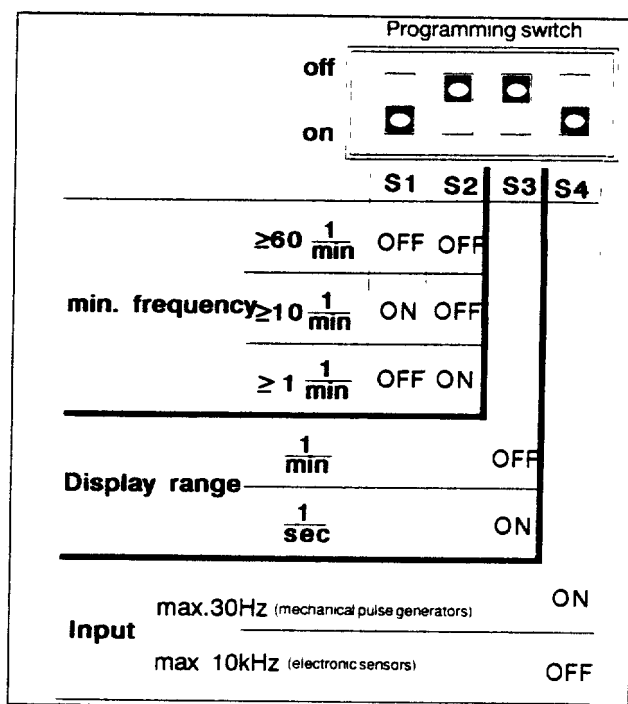


This menu is reached by pressing the **E** key for the first time. The indication then changes from static to flashing, and the individual steps are also displayed with flashing indicators, with their corresponding numerical value. In this state, the numerical values can be changed with the two cursor keys **◀** and **▶**. If neither the **▶** nor the **◀** key is pressed within 15 seconds of pressing the **E** key, input level 1 is automatically exited and the current measured value appears again on the display. New values entered are only activated by confirming with the **E** key or after 15 seconds when input level 1 is automatically exited. During start-up of the tachometer, the parameters to be set once are programmed on DIL switches in input level 2. This switch is situated at the rear, next to the strip connector. The diagram below shows which parameters must be set.

min. frequency: Switches S1 and S2 are set for the lowest input frequency to be acquired. This is associated with the refresh time of the display.

Display range: S3 is set for the measured value unit: 1/min. or 1/sec.

Input: S4 is set for the maximum input frequency for driving the tachometer. ≤ 30 Hz or ≥ 10 kHz.



Technical data

Display	7-segment LED display + indicators
Data retention	min. 10 years, nonvolatile RAM
Supply planning	see Ordering codes
Safety class	II
General design	DIN VDE 0411
Noise immunity	severity 3/IEC 801
Permissible ambient temp.	-10°C to +50°C in operation -20°C to +70°C in storage
Degree of protection	IP 54 (front side)
Dimensions (W x H x D)	48 x 96 x 100 mm
Mounting	with frame
Terminals	plug-in screw terminals
Sensor supply	24 VDC in AC operation V _{in} -2 V in DC operation I _{max} 60 mA

Pulse and control inputs

Amplitude	≥ 8 V and ≤ 2 V +/-40 V max
Switching edges	positive-going
Pulse shape	any
Input impedance	approx. 22 kOhm

Pulse input

Max. input frequency or debounced	10 kHz 30 Hz
Control inputs	keylock, display memory

Outputs

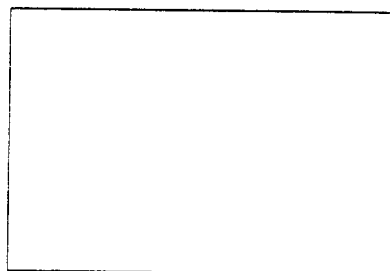
Relay outputs for LOW and HIGH limits	changeover contact with suppressor circuit 50 VDC/250 VAC, 1 A
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Ordering codes: signo 722

Version/supply voltage	Ordering code
signo 722 tachometer with 2 limit values 12 to 24 VDC	0 722 101
signo 722 tachometer with 2 limit values 100 to 240 VAC	0 722 102

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