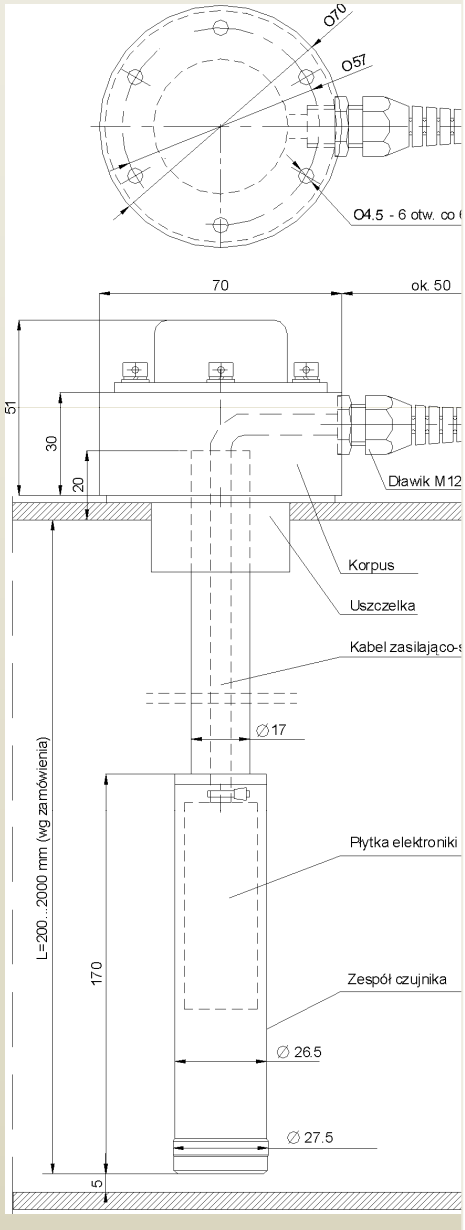
Fuel Level Probe
Type CS-27/RS/U

- ✓ **Measuring range 0÷800 mm H_2O**
- ✓ **Ministry of Transport Type Approval**
  Certificate No.
  E20 10R-03 25 17



Function

The CS-27 Fuel level probe is used to measure fuel level in the tanks of motor vehicles, working-machines and locomotives. The probes have been officially approved by the Ministry of Transport.

Structure and Operation

The measurement of fuel level with the CS-27 probe is performed with the use of a simple relation between the height of liquid column and the produced hydrostatic pressure. The probe is composed of two parts: the sensing element and the electronic element, placed inside a steel rod, and aluminum housing. The steel rod is fixed to an aluminum housing which may be sealed. The measuring element is a piezoresistive sensor, separated from the medium by a separating membrane. Pressure measuring is performed at the membrane of the submerged probe (5 mm above tank bottom). Depending on the type of tank (pressurized or non-pressurized tank), pressure measuring is related either to atmospheric pressure or pressure inside the tank.

Assembly and Usage

The CS-27 probe is mounted to the tank cover. A detailed description of assembly is presented in Technical Documentation.
The probe is designed to be connected to the following recording devices:

- analog input data recorder – current or voltage (current or voltage analog output probe).
- recorder or PC computer equipped with a serial RS-232C port (digital output probe).

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Technical Specification

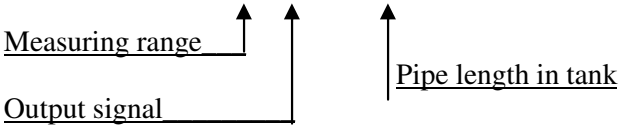
Measuring range	0÷800mm H_2O (special ver. 0...200÷2000mm H_2O)
Pipe length L in tank	800mm (special ver. L=200÷2000mm)
Maximum overload	≤ 100kPa
Basic error	≤ 0.16%
Hysteresis, replicability	≤ 0.05%
Long-term stability	≤ 0.1% for two years
Working temperature range	-25 ÷ 80°C
Compensation temperature range	-25 ÷ 40°C
Output signal	0 ÷ 10V ; 0 ÷ 5V, 0 ÷ 4.5V, 0 ÷ 2.5V 100 ÷ 3800 bit
Power supply	12 ÷ 36V for output = 0 ÷ 10V 8 ÷ 36V for output = 0 ÷ 5V 8 ÷ 36V for output = 0 ÷ 4.5V 3.3±0,1V for output = 0 ÷ 2,5V 3.3±0,1V for RS-232 output (RXD, TXD: range 0...3,3V) 6.0 ÷ 36V for RS-232 output (RXD, TXD: range 0...3,3V) 6.0 ÷ 36V for RS-485 output (A,B: range -7V...+12V)
Power voltage fluctuation error	0.05%
Housing protection degree	IP 68
Temperature fluctuation error	0.3% / 10°C

Ordering

Standard versions:
CS-27/RS/U – measuring range: 0÷800mm H_2O, output signal: 0÷10V, pipe length in tank L=800mm
CS-27/RS-232 - measuring range: 0÷800mm H_2O, output signal: 100÷3800 bit in standard RS-232, pipe length in tank L=800mm
CS-27/RS-485 - measuring range: 0÷800mm H_2O, output signal: 100÷3800 bit in standard RS-485, pipe length in tank L=800mm

Special versions:

CS-27/RS/U / __ / __ / L= ... mm



Example 1:
Fuel level probe CS-26 standard version (measuring range 0÷800mm H_2O, pipe length in tank L=800mm) with voltage output 0÷5V
CS-27/RS/U/0...800/0÷5V/L=800mm

Example 2:
Fuel level probe CS-26 special version (measuring range 0÷1000mm H_2O, pipe length in tank L=1000mm) with RS ÷ 232 output
CS-27/RS-232/0...1000/100...3800/L=1000mm

Example 3:
Fuel level probe CS-25 special version (measuring range 0÷1000mm H_2O, pipe length in tank L=1000mm) with RS-485t output
CS-27/RS-485/0...1000/100...3800/L=1000mm

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