

Conductivity sensor series type M3936



- ✓ Two electrode stainless steel probe
- ✓ Frequency, voltage or signal current output
- ✓ Galvanically separated conductivity circuit
- ✓ Internal high precision temperature compensation
- ✓ Different sensor materials on request
- ✓ IP67 protected

Technical description

The M3936 conductivity low cost sensor series suitable for water, waste water or pure water conditioning in continuous or batch-type operating modes, to control concentration water quality or for general chemical process monitoring.

The actual measuring value is sent out on either the frequency or the voltage / current output. The unit is powered with 24VDC.

The instrument comes with a 2 way galvanic separation power supply to maintain galvanic separation between the electrode path and the output signals. Therefore, ground loops between the output signal and the electrode path via the measured media are completely eliminated.

The units can be ordered with or without temperature compensation. If set to manual mode, the customer can define the internal manual temperature which is then factory programmed.

If ordered with fast mounting shaft, the unit can be mounted into a low cost standard 5/8" T piece which makes an installation easy. Since the transmitter electronics with the microcontroller sits within the sensor housing, the cable length is no longer a problem.

Typical applications are ultra-pure water monitoring in cleaning or hydrogen production applications, monitoring of desalination cartridges, general low cost conductivity measurements.

Technical data

Possible measuring ranges:	0...20.00µS 0...200.00µS 0...2.000mS 0...5.000mS
Accuracy:	0...20.00µS, 3.0% of range 0...200.00µS, 3.0% of range 0...2.000mS, 3.0% of range 0...5.000mS, 5.0% of range
Cell constant:	C= 0.6
Temperature range:	0...60°C
Temperature range @ 2.25%/°C:	0...60°C
Long-term stability:	+/- 0.3% after 3 months
Temperature drift:	Max. 100µV/°C
Temperature compensation:	Manual from 0 to 60°C. Automatic with internal temperature measurement
Max. water pressure @ 20°C	¼" thread 10bar, ½" thread 10bar, ¾" thread 10bar, FMS 10bar
Max. water pressure @ 60°C	¼" thread 8bar, ½" thread 5bar, ¾" thread 5bar, FMS 5bar
Warranty:	2 years
Programming functions:	Various setting options via software during factory setting. Can be requested when ordering the unit. -Manual temperature in °C -Temperature slope in %/°C -Integration time of measuring signal, 1...100s -Output range: Example 0...10uS equals 5 ...10V
Signal current output: - Max load: - Output impedance:	0/4...20mA <700Ω Typ. >1MΩ
Signal voltage output: - Max output current: - Output impedance:	0/2...10VDC 20mA 500Ω
Signal frequency output: - Output voltage: - Max output impedance: - Output impedance:	0...2000Hz. Supply voltage $U_b - 1V$. Example: supply 24VDC → output high = 24V - 1V = 23V 11kΩ 20Ω
CE-conformity:	Full filled
ROHS / REACH	RL2011/65/EU + RL 2015/863/EU(ROHS) EC No 1907/2006(REACH)
Other options:	- special measuring range / signal output / temperatures - calibrated to 1.5% accuracy including test protocol (max. up to 2mS) - PVDF plastic for higher temperature ranges - Custom specific fittings according to your needs

Accessories:

- Tee union 2 x 5/8" to 1/4" for FMS mounting type adapters
- Reduction 5/8" to 1/4" for the M3936 tee union



Part numbers / Purchase order numbers

Part number	Description
M3936-F-1/4"	M3936 with 1/4" cylindrical gas thread and frequency output
M3936-F-1/2"	M3936 with 1/2" cylindrical gas thread and frequency output
M3936-F-3/4"	M3936 with 3/4" cylindrical gas thread and frequency output
M3936-F-FMS	M3936 with 5/8" fast mount shaft and frequency output
M3936-I-1/4"	M3936 with 1/4" cylindrical gas thread and current output
M3936-I-1/2"	M3936 with 1/2" cylindrical gas thread and current output
M3936-I-3/4"	M3936 with 3/4" cylindrical gas thread and current output
M3936-I-FMS	M3936 with 5/8" fast mount shaft and current output
M3936-U-1/4"	M3936 with 1/4" cylindrical gas thread and voltage output
M3936-U-1/2"	M3936 with 1/2" cylindrical gas thread and voltage output
M3936-U-3/4"	M3936 with 3/4" cylindrical gas thread and voltage output
M3936-U-FMS	M3936 with 5/8" fast mount shaft and voltage output
M3936-Tee	M3636 5/8" to 1/4" tee union for FMS sensors
M3936-Reduction	M3936 5/8" to 1/4" reduction for M3936-Tee

Ordering examples

M3936-F-1/4" 0.0 ... 20.00uS equals 10 ... 2000Hz, auto temperature compensation, 2.25%/°C

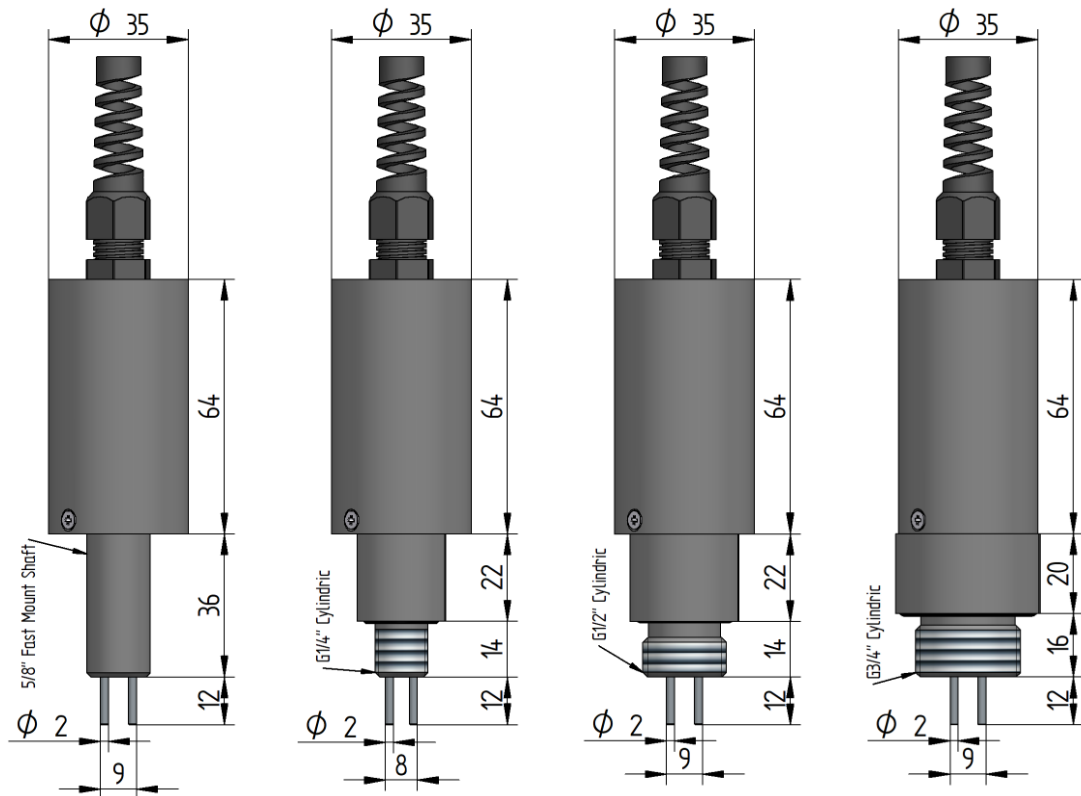
M3936-I-FMS 0.0 ... 200uS equals 4 ... 20mA, manual temperature setting to 25°C

M3836-U-FMS 50 ... 500uS equals 0.5 ... 5V, auto temperature compensation,
2.25%/°C, integration time maximum

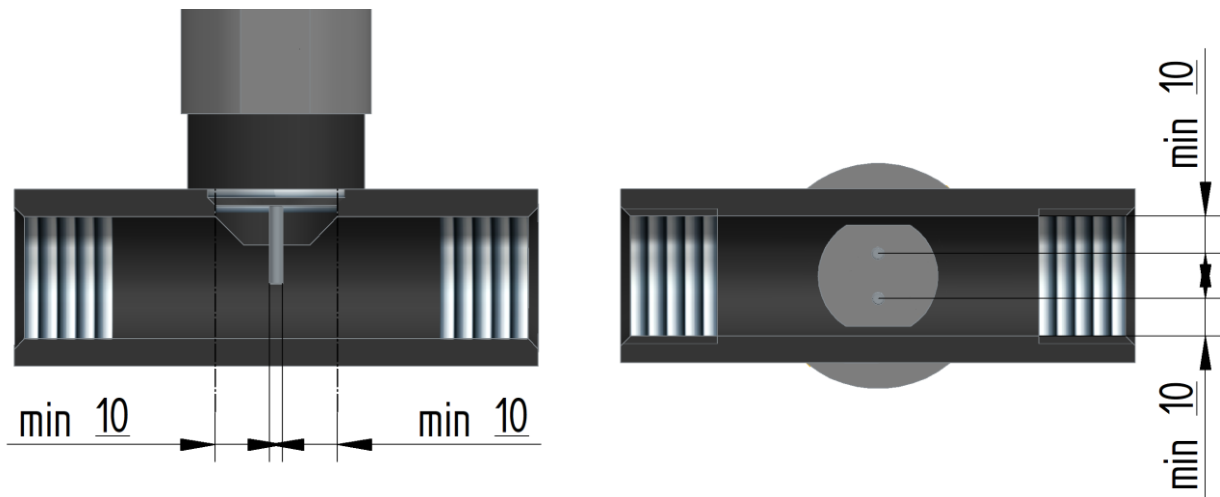
Cable connection

Shield: Connect to protective earth as short as possible
Brown: signal
Red: power supply 24VDC
Black: ground of power supply and signal

Dimensions



Mounting instructions



Distance between electrodes and tee at least 10mm all around