

# Conductivity Meter Type 2436

- ✓ 2 current outputs
- ✓ 2 limit contacts
- ✓ Externally configurable
- ✓ Programmable
- ✓ Temperature compensation



## Technical description

The M2436 conductivity meter is mounted in +/- 180° turnable, water resistant, polypropylen case. Any commercially available conductivity cells, K-factor 0.01, 0.1, 1.0 and 10.0, which cover a dynamic range from 0.01 $\mu$ S to 20mS full scale can be used. The cell is simply assembled to the desired measuring unit and directly attached to the M2436.

The conductivity meter is suitable for water, waste water or ultrapure water conditioning in continuous or batch-type operating modes, for liquid chromatography or for general chemical process monitoring.

Temperature coefficient of the cell is compensated either manually or automatically by a Pt-100 platinum probe within the range of 0°C to 130°C.

The 8x2 LCD character display shows the currently measured conductivity and the process temperature.

These values are available at two galvanic isolated outputs of 0...20mA or 4...20mA.

The M2436 is powered by either 24VAC or DC.

Optionally, all measuring ranges are externally selectable with digital control wires during the measurement process. Two isolated, free limit contacts are also optionally available to control valves or other control elements.

Supply lines and all other lines, either from or to the conductivity meter, are protected by internal noise filters against HF-noise. A cable of either 2m or 5m is used to connect the M2436si signals and power supply.

## Technical data

Measuring ranges:	0...2.000µS (K = 0.1, K = 0.01) 0...20.00µS (K = 1.0, K = 0.1, K = 0.01) 0...200.00µS (K = 1.0, K = 0.1) 0...2.000mS (K = 1.0) 0...20.00mS (K = 1.0, K = 10.0) 0...200.0mS (K = 10.0)
Display:	8x2 character LCD display with grey characters and a yellow back light Viewing area: 36.0mm x16.00mm, character size: 2.945mm x 5.545mm
Working temperature range:	-5 to +45°C
Accuracy:	1.0%
Reproducibility:	<0.2%
Measuring amplitude:	70/150mV, conductive cell only
Step response:	Time between a conductivity change from 0% to 100% or reverse measured between 10% and 90% = 4 seconds
Input protection:	Virtual zero, protected by diodes
Temperature compensation:	Manual from 0 to 130°C Automatic by an external Pt-100-platinum sensor, 3-wire
Temperature slope:	0.00%/°C (without compensation) to 8.00%/°C. Selectable in all measuring ranges
Conductivity of water:	The self conductivity of ultrapure water is measured and temperature compensated
Reference temperature:	25°C
Cell connection:	The cell is directly assembled to the M2436 over a temperature restraining, +/-180° rotatable polyamide tube
Option current output:	2 x 0/4...20mA, galvanically isolated
Max. load:	500Ω
Output impedance:	>1MΩ typical
Device settings:	With push buttons, see operating manual
Options:	Measuring ranges, cells K-factor, temperature slope, current outputs
Power supply:	24VAC/DC
Power supply load:	1.5 to 2.5W at 24VDC
CE-conformity:	fulfilled
Connection cable::	PVC cable Length: 2m, 5m or other sizes on request
Thread:	¾" cylindrical gas, with O-Ring, adapters on request
Case:	Splash water proof, in polypropylen
Weight:	320g
Warranty:	2 years
Compatible cells:	type M8836s, M8836s10, M8836s01, M9836c1, others on request
Options:	-Customer specified functions -Customer specified cells -Other power supply/ output signal -2 limit contacts -Externally configurable measuring ranges

## Terminals

Terminal description standard version (without limit contacts and externally configurable measurement range):

Waterproof 5-pin connector St1:	1 = current output (-) for pin 2 and 3 (brown)
	2 = conductivity current output (+) (white)
	3 = temperature current output (+) (blue)
	4 = supply voltage: AC~/DC(-) (black)
	5 = supply voltage: AC~/DC(+) (grey)

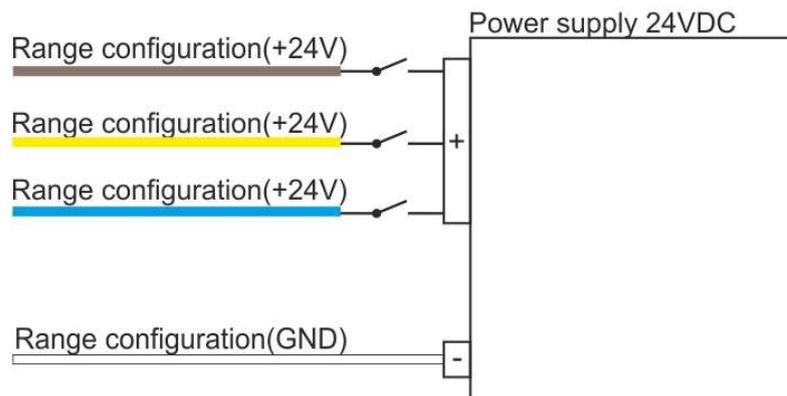
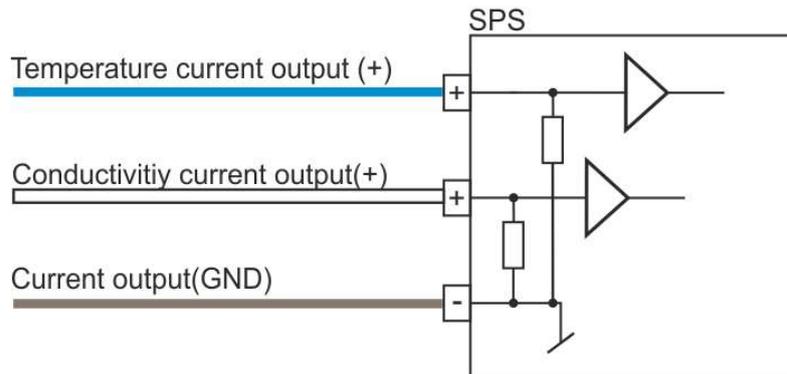
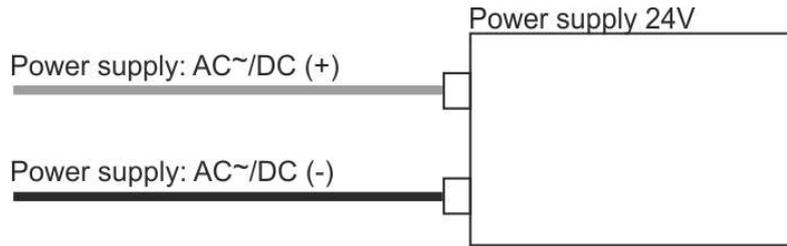
Terminal description for version with 2 limit contacts and externally configurable measurement range:

Waterproof 8-pin connector St1: c.o. = change over n.o. = normally open n.c. = normally closed	1 = conductivity current output (+) (white)	5 = supply voltage: AC~/DC(+) (grey)
	2 = current output (-) (brown)	6 = limit contact 1 c.o. (red)
	3 = limit contact 1 n.o. (green)	7 = temperature current output (+) (blue)
	4 = supply voltage: AC~/DC(+) (yellow)	8 = limit contact 1 n.c. (pink)
Waterproof 8-pin connector St2:	1 = range configuration (GND) (white)	5 = n.c. (gray)
	2 = range configuration (+24V) (brown)	6 = limit contact 2 c.o. (red)
	3 = limit contact 2 n.o. (green)	7 = range configuration (+24V) (blue)
	4 = range configuration (+24V) (yellow)	8 = limit contact 2 n.c. (pink)

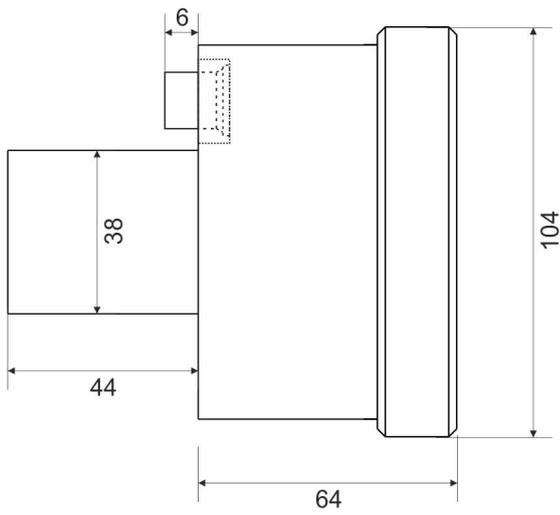
Setting the range by external control wires:

<u>St2(white)</u>	<u>St2(brown)</u>	<u>St2(yellow)</u>	<u>St2(blue)</u>	<u>Range conductive</u>	<u>Range inductive</u>
GND	0V	0V	0V	intern	intern
GND	+24V	+24V	+24V	2µS	2mS
GND	0V	+24V	+24V	20µS	20mS
GND	+24V	0V	+24V	200µS	200mS
GND	0V	0V	+24V	2mS	2S
GND	+24V	+24V	0V	20mS	---
GND	0V	+24V	0V	200mS	---

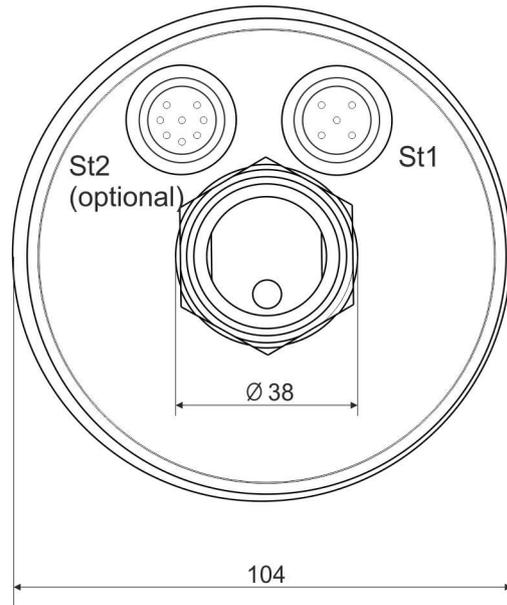
## Wiring



## Dimensions



Side view



Bottom view



Front view

## Available cells

