

Conductivity Meter with two alarm contacts

available cells:



Technical description

The M2136 conductivity meter is suitable for water, waste water or pure 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 an external Pt-100 platinum probe within the range of 0°C to 120°C.

Commercially available conductivity cells - K-factor 0.01, 0.1 and 1.0 cover a dynamic range from 0.01µS to 20mS full scale. An internal synchronous rectifier eliminates the capacitive error currents induced by the cell cable.

Optionally, a galvanic isolated and in the range of 0...20mA programmable output signal for the conductivity signal or temperature is available. By an external 24V signal, the current output can be switched between conductivity- and temperature measuring.

Two floating limit or alarm contacts can be set over the entire range. Each is defined as a normally open or as a normally closed contact.

Supply lines and all other lines, either from or to the conductivity meter, are protected by internal noise limiters against HF-noise.

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...200.0µS (K=1.0, K=0.1, K=0.01)
 0...2.000mS (K=1.0, K=0.1)
 0...20.00mS (K=1.0)
 0...200.0mS (K=10.0)

Range display: 2 red LED-Lamps
Display: Red LED-display 4-digit, character high 10mm
Accuracy: 0.5%
Reproducibility: <0.2%
Measuring frequency: 80Hz and 10kHz
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 form 0 to 120°C, automatic by an external Pt-100 platinum sensor, 2 or 3-wire. The unit calculates with 25°C when the Pt-100 sensor wires are broken. 0.00%/°C (=without compensation) to 8.00%/°C. The conductivity of water is measured and temperature compensated.

Temperature slope: 25°C
Conductivity of water: Cable capacity is compensated automatically. The max. capacity must be <0.02µF.
Reference temperature: Two floating change-over contacts may be adjusted over the full range. Each can be defined as a normally open or normally closed contact by an internal slide switch.

Maximum length of cell cable: two red LED-Lamps
Limit contacts: adjustable, the factory setting is ±5 digit
Status: 1A with resistive load / 230VAC
Hysteresis: 100'000 operations at max. load
Contacts rating: 10'000'000 operation mechanically, without load
Contact live: programmable in the range of 0...20mA, galvanically isolated
Option current output: By a external 24V signal, the current output can be switched between conductivity- and temperature measuring. Conductivity measuring (terminal 14 & 15 open): Current output in depending of conductivity measuring
 Temperature measuring (terminal 14=0V, 15=24V): Current output in depending of temperature measuring

Max. load: 500Ω
Output impedance: >1MΩ typical
Device settings: with bush buttons behind the front panel, see operating manual
change options: measuring ranges, cells K-factor, temperature slope, temperature, limit contacts: operating mode, hysteresis, status of the LED-Lamps

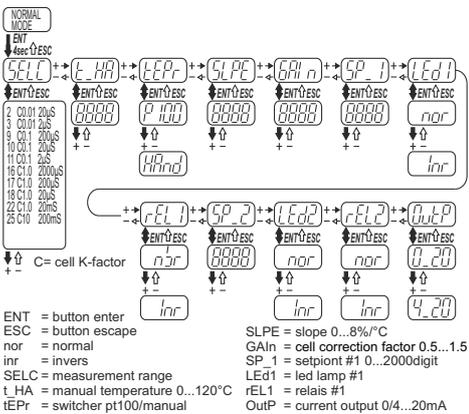
Power supply: 20 to 253VAC or DC
Power supply load: 4.5 to 7.0W at 230VAC
CE-conformity: fulfilled
Terminals: 3 x 6-pole plug-in screw terminals
Terminal description:

1 = supply voltage: AC~/DC(+)	2 = supply voltage: AC~/DC(-)
3 = supply voltage: PE	4 = signal output PE
5 = signal output (+)	6 = signal output (-)
7 = alarm contact 1, c.o. contact	8 = alarm contact 1, n.c. contact
9 = alarm contact 1, n.o. contact	10 = alarm contact 1, c.o. contact
11 = alarm contact 2, n.c. contact	12 = alarm contact 2, n.o. contact
15 = Switch signal for current output (+24V)	14 = Switch signal for current output (0V)
19 = Pt-100 sensor +	20 = Pt-100 sensor -
21 = Pt-100 sensor sense -	22 = conductivity cell PE
23 = conductivity cell +	24 = conductivity cell -

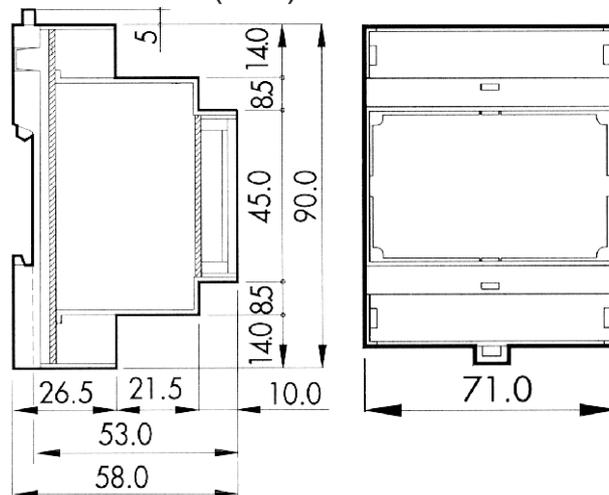
Mounting: 35mm mounting rail, EN50022-35
Weight: 200g
Warranty: 2 years
Options: - conductivity cell type M8836s and M8836si
 - customer specified functions

c.o.= change over
 n.o.= normally open
 d.c.= normally closed

M2136 Menu Diagramm:



Dimensions (mm):



Cell connecting diagram :

