

Inductive Conductivity Cell Type M8836Si



Technical description

The inductive conductivity cell M8836s measures the ohmic value of a liquid without exposing any metallic parts to that measured liquid. That means, the measuring system has no galvanic connection to the liquid.

An integrated transmission coil induces an electric current in the liquid which also flows through a receiving coil to detect the current flow. This current is now proportional to the conductivity of the liquid. The current is low in high ohmic media and high in low impedance liquids.

Because all exposed parts are non metallic, the cell has no polarization effects at all. The media is only in contact with plastic parts and therefore the cell is highly insensitive to moisture and deposits. Cleaning can be done by simple mechanical means, e.g brushing.

A build in Pt-100 platinum temperature sensor in 3-wire connection is used to compensate the temperature coefficient of the media. The cell housing is made in grey PVC, the thread is cylindrical and 1/4" gas with O-ring gasket.

The electronic board is housed in a splash proof aluminum case on top of the cell. The cell generates an output signal of 0...0,5mA for 0...2S, 0...200mS, 0...20mS, or 0...2mS. All four ranges are remote controlled and the supply is 24VDC at ca. 0.6Watt.

Application: Chemical industries, biology, hydrology (surface waters), water desalination, processing of cooling water (steam generators), waste water treatment, mining etc.

Technical Data:

Type:	M8836si
Measurement range:	0...2S, 0...200mS, 0...20mS or 0...2mS at 25°C
Output signal:	0...0.5mA for 0...2S, 0...200mS, 0...20mS or 0...2mS at 25°C
Cell constant (K-Factor):	4.331 ±2% (*)
Output dynamic:	0... 1.2mA
Output impedance:	>1M
Accuracy:	±1% @ gain 1
Temperature probe:	Pt-100, 3-wire
Gain remote control:	V =1, V=1/10, V=1/100 and V=1/1000, driven by active zero, 2-bit binary
Working temperature range:	0...+45°C
Supply:	24VDC ±10%, max. output ripple 3%
Supply load:	ca. 0,6 Watt (=ca. 25mA)
Case:	aluminum
Protection:	leak proof, IP67
Cell plug:	Mostec No. 3071-3070-3072
Cable plug at the controller:	9-p D-SUB male recommended
Max. length of cable:	100m
recommended cable:	8-wire shielded, 8 x 0.25mm ² (**)
Controllers:	Mostec M8836 or M9836 or process controller with calculate option
CE-Conformity:	fulfilled
Dimensions:	160mm (incl. connector) x 64mm x 122mm
Probe depth:	73mm
Thread:	1¼" gas, with O-ring, wrench size = 50mm
Weight:	580g
Warranty:	2 years

Cell connector, pin description:	No.	Name	Color(**)
	1	Protective earth, PE	Shield
	2	GND 24VDC	blue
	3	+24VDC	red
	4	Pt-100, signal (A)	yellow
	5	Pt-100, ground (B)	brown
	6	Gain J2 (***)	white (****)
	7	Gain J1 (***)	pink (****)
	8	Output current signal	green
	9	Pt-100, sense (C)	grey

(***) Cell gain:

	J1	J2
2mS	open	open
20mS	ground	open
200mS	open	ground
2S	ground	ground

(*) Example: 46.6mS in water (=21) = electrical 92.93

(**) Cable, Mostec No. 3089 or Elektromaterial No. B3308/0.25

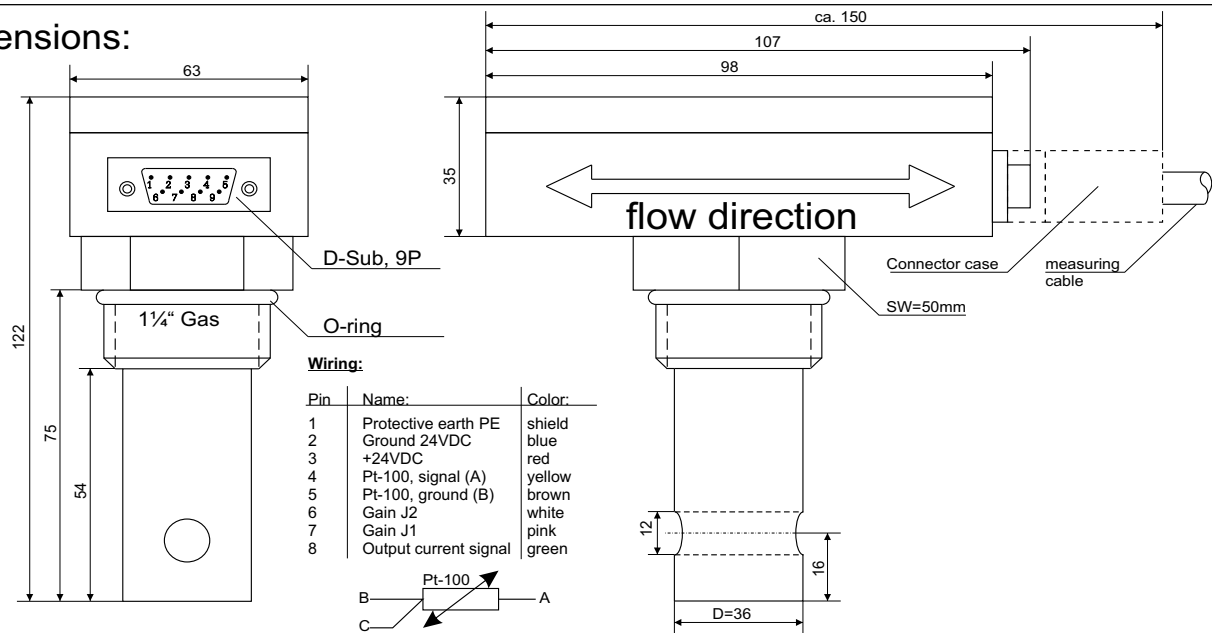
(***) Gain: 1: J1=open, J2=open 0.1: J1=ground, J2=open

0.01: J1=open, J2=ground 0.001: J1=ground, J2=ground

(****) active when connected to ground, pin 2

Pull-up internal 10k to +15V

Dimensions:



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