

# Insertion Electromagnetic Flow Meter



## Overview

The measuring principle of electromagnetic flow meter is based on Faraday's law of electromagnetic induction.

Insertion electromagnetic flow meter is used to measure the flow of conductive liquids. It is available for use in pipes ranging in size from DN100 to DN3000. It can configure thread or flange ball valve to be hot-tapped, which allows sensor to be installed and retracted from process piping without shutting down the process. It's an economic alternative when installed in large pipeline no matter in cost and delivery compared with full bore magnetic flow meter.

We provides wide range of electromagnetic flow meters, all fulfilling the highest demands in terms of accuracy and reliability in industries such as water and waste water, food and beverage, mining, pulp and paper.

## Features

- Applicable sizes 150~3000mm
- Operating pressure:  $\leq 1.6\text{MPa}$ (230psi)
- More economical option for large pipelines flow measurement
- No moving parts, no pressure loss and require very less maintenance
- Hot-tap sensor can be installed and retracted process piping  
conductivity of measured medium:  $\geq 50\mu\text{ s/cm}$
- Electrode materials: SUS316L, Hastelloy B, Hastelloy C, Ta, Ti, etc.
- The max. distance between sensor and converter:  $\leq 50\text{m}$  (165feet)

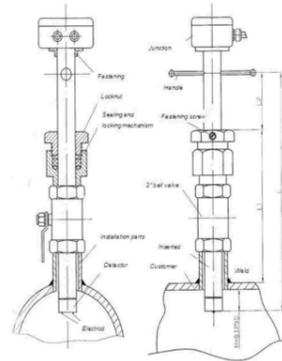
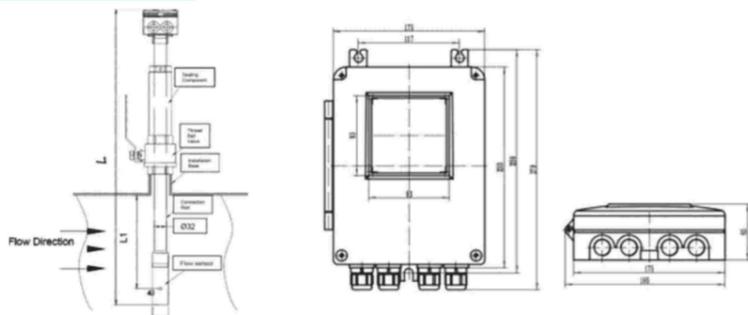


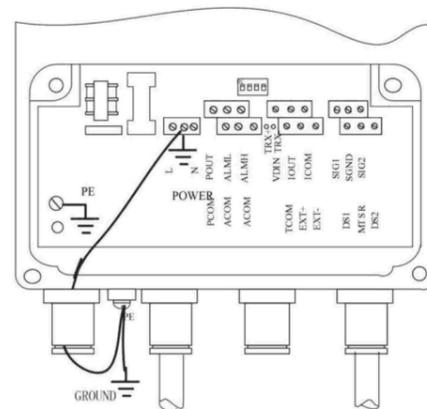
Fig.1. The whole structure drawing of sensor with ball valve

## Dimensions



Specifications		
Pipe Size	Length (L)	Insertion Length L1
DN $\leq$ 200	480 mm	1/2 DN
400 $\geq$ DN250	580 mm	
1200 $\geq$ DN > 400	680 mm	1/4 DN
2000 $\geq$ DN > 1400	880 mm	

## Wiring



## Parameters

Size	DN100-DN3000 (4"-120" )	
Accuracy	$\pm 1.5\%$ of reading at flow velocity $\geq 0.5\text{m/s}$	
Velocity	0.1~15 m/s	
Repeatability	$\leq 0.17\%$	
Structure	Compact / remote, cable length 10m standard, 100m max	
Conductivity	$> 5\ \mu\text{S/cm}$ , demineralized water $> 20\ \mu\text{S/cm}$	
Protection Grade	Transmitter: IP65 standard, IP67 optional Sensor: IP65 standard, IP68 (submersible, only available for remote type)	
Electrode	SS316L, Hastelloy C, Hastelloy B, Titanium, Tantalum, Platinoiridium	
Power Supply	85~250 VAC (50/60 Hz), 8~36 VDC (Optional)	
Power Consumption	$< 20\text{W}$	
Signal Output	Analog	4~20mA ( load resistor 0~750 $\Omega$ )
	Frequency	Forward & reverse flow output with a frequency range of 1~5000Hz
	Alarm	Two isolated open collector transistor (OCT)
Communication	RS485 MODBUS standard, HART, GPRS, PROFIBUS optional	
Display	LCD Display, 128X128mm, three lines, 4 buttons	
Ambient Temperature	$-20^{\circ}\text{C} \sim 60^{\circ}\text{C}$	
Fluid Temperature	$-20^{\circ}\text{C} \sim 80^{\circ}\text{C}$	
Process connection	G2" thread ball valve	
	DN50 flange ball valve	
Sensor material	Probe material: ABS standard, Polypropylene optional	
	Valve: Ss316	
	Pole: Ss304	
Transmitter Material	Aluminium alloy with epoxy painting	
Nominal Pressure	1.6 Mpa	
Display	Instantaneous flow, total flow, flow velocity	
Function	High and low alarm, empty pipe alarm, exciting alarm, self-diagnosis	
Totalizer	Three built-in totalizers: forward flow, reverse flow and net flow	
Display Unit	L/s, L/m, L/h, m <sup>3</sup> /s, m <sup>3</sup> /m, m <sup>3</sup> /h, UKG, USG, gal/s, gal/m, gal/h, kg/s, kg/m, kg/h, t/s, t/m, t/h	
Language	English, Chinese, Italian, Portuguese, French, Spanish, Korean	

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Perubahan DATA TEKNIS dapat dilakukan tanpa pemberitahuan.

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