

# Klinger MiniMag

Magnetic Inductive flowmeter

Klinger MiniMag is a magnetic inductive flow meter for measuring flow on liquids with electrical conductivity.

The measurement principle is based on Faradays law on magnetic induction, it says, that an electrical voltage will be induced, when a conductor passes a magnetic field.

In the magnetic inductive flow meter is the liquid the electrical conductor, and the induced voltage directly proportional to the velocity of the liquid.

The program is primarily for application in the refrigeration and energy sector, but can also used within a large number of industrial tasks.

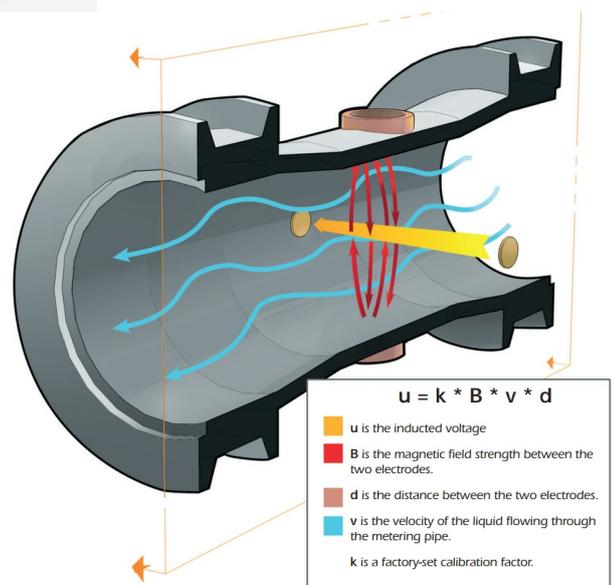
The sensor part is based on a measuring tube in PEEK, with Stainless Steel connections.

The construction is supplemented with a transmitter housing in aluminum, with a large backlit display and several standard signal for electrical communication.

With Klinger Minimag we offer you:

- High measurement accuracy in a large measuring range
- A maintenance-free measurement without moving parts
- A measurement that is independent of temperature, density, viscosity, concentration and conductivity.

The meter is available in both separate and compact versions - both versions are delivered with calibration certificate, by default.



## Klinger MiniMag for low flow applications:

- Dimension DN 3 ... DN 20mm.
- Accuracy better than +/- 0,5%.
- Compact or remote version
- Easy adjustment of range and output signal . Without special tools
- Informative backlit display

## Technical data

A magnetic flow meter is made of a piece of pipe of a non-magnetic material. The tube is lined with a lining of non-conductive material.

In the measuring tube, the two measuring electrodes are placed so that they pass through the liner.

Lining and electrodes are thus the only parts into contact with the medium, and when choosing, it must be taken into account that these can handle:

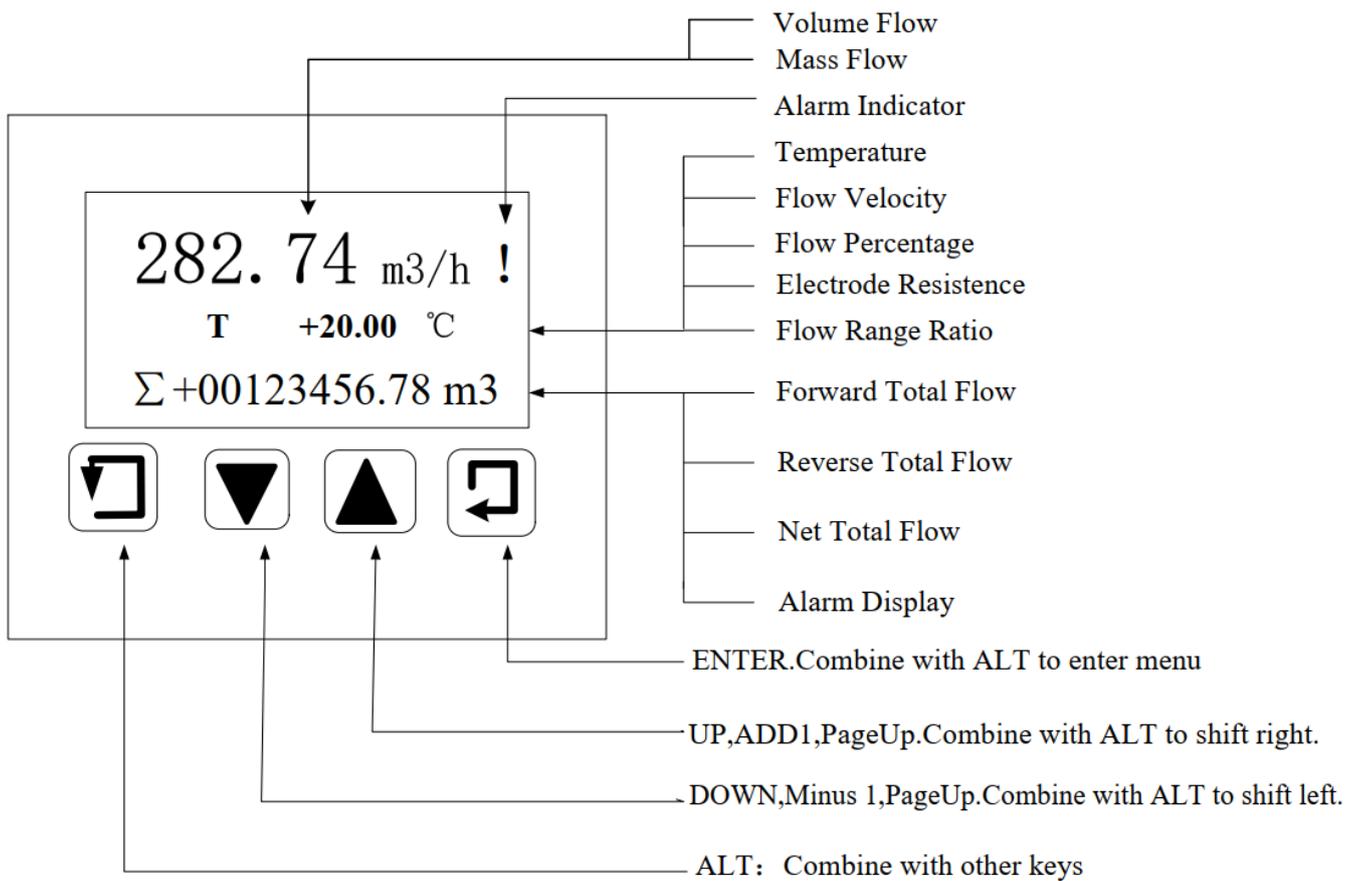
- Aggressiveness of the medium
- Pressure
- Temperature
- Temperature shock



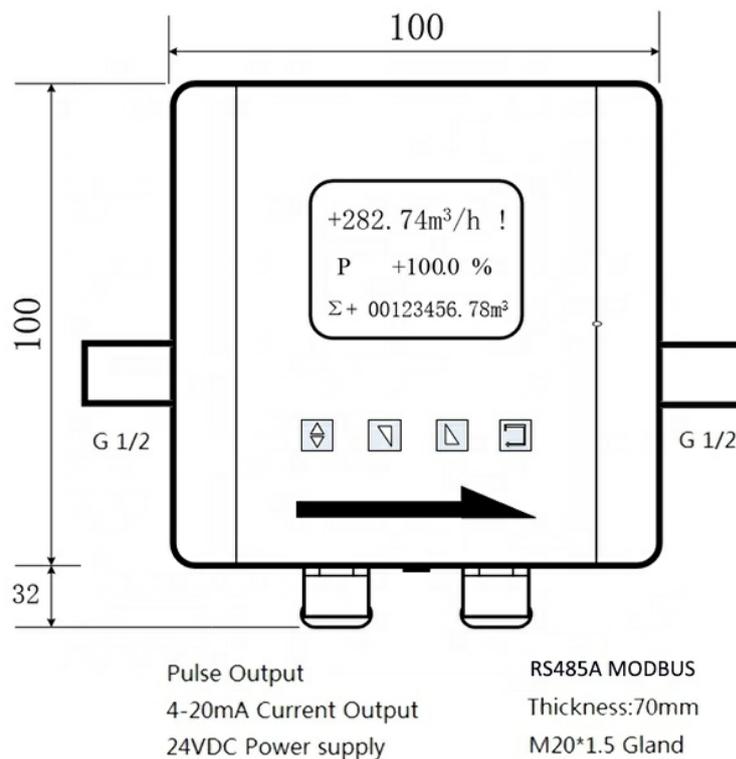
<b>Diameter</b>	DN 03, 06, 08, 10, 15 or 20 mm
<b>Connection</b>	Thread G 1/2" or G 3/4"
<b>Working pressure (P nominal)</b>	Maks. 16 bar
<b>Media</b>	Conductive liquids > 10uS/cm Gas content < 5% Particle content < 30%
<b>Liner materials / temperature range</b>	PEEK / -10 ...+90 °C
<b>Elektrode material</b>	SS 316
<b>Flow ranges</b>	0.3-10m/s
<b>Repeatability</b>	±0.1%
<b>Accuracy</b>	± 0,5 % MV (>0,6m/s) ±3 mm/s (<0,5m/s)
<b>Flow direction</b>	Two ways (positive/negative)
<b>Ambient conditions</b>	-20 ...+60 °C / 5%-95% RH
<b>Transmitter</b>	Compact w. display Remote incl. 10m cable (other: on demand)
<b>Output</b>	4...20mA / scaled pulse / 2x relay Communication: Modbus RS485
<b>Power Supply</b>	24 VDC (20...26 VDC)
<b>Power Consumption</b>	<150 mA



## Display/Programming



## Dimensions



## Electrical connections

CONNECTOR LABEL	CABLE COLOR	CABLE DEFINITION	CABLE DESCRIPTION
7	Gray	+24V <sub>DC</sub>	The external 24V <sub>DC</sub> Power +
8	Blue	COM	Common Ground
6	White	P+	Pulse +
5	Brown	I+	4-20mA Current Output +
3	Green	NO1	Relay NO Contact 1
4	Black	NO2	Relay NO Contact 2
1	Red	A	RS485 A
2	Yellow	B	RS485 B

## Product type

Model	Suffix Code	Description
MiniMag		Electromagnetic Flowmeter
Diameter	XXXX	Stand for diameter 0004: DN4; 0020: DN20
Structure	S	Compact Type with local display
	L	Remote Type; 10 meters cable default
Electrode Mat.	M	SS316L
Signal Output	1	4-20mA / Pulse
Liner Material	P	PEEK
Power Supply	1	24V DC (20-36V DC)
Communication	1	Modbus RS485
Sensor Grounding	2	Grounding Electrode

### Sample Product:

Compact meter DN15 / Stainless Steel electrodes / PEEK liner / 4...20mA output / 24VDC Power supply

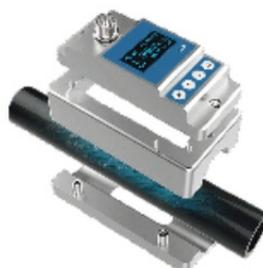
**Product type: MiniMag-0015-S-M-1-P-1-1-2**

## Other flowmeters

LDG - Magnetic flowmeter



ST - Compact ultrasonic meter



LUGB - Vortex flowmeter



Klinger MiniMag UK 0522.pdf