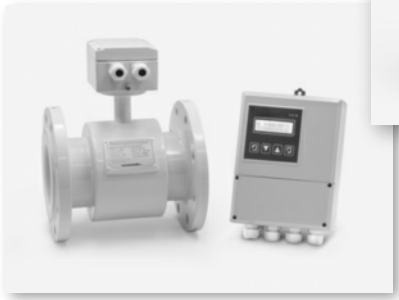
Klinger LDG-Pro

Magnetic Inductive flowmeter



Klinger LDG-Pro 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.

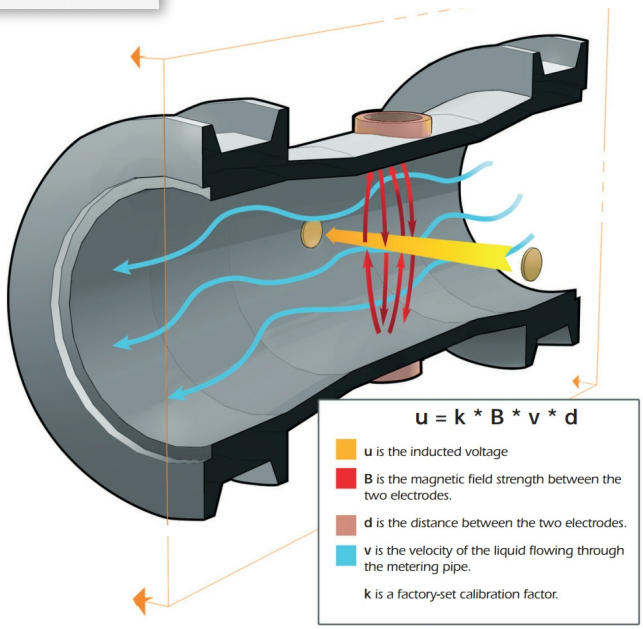
The Pro series is the universal flow meter, where several liner and electrode materials, a selection of different connections, and advanced software functions make it easy to adapt the meter to most industrial measuring tasks.

The sensor part is fully welded, and very stable at the same time as it is insensitive to interference.
The construction is supplemented with a newly developed transmitter with advanced digital signal processing, which i.a. allows for advanced signal analysis in difficult applications.

With Klinger LDG-Pro 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 come with calibration certificate, as standard.



Klinger LDG-Pro your next flowmter:

- Installation dimensions that comply with ISO 13359.
- Pipe sizes DN 15 to DN 3.000mm
- Choose among 5 liner- and 6 different electrodematerials
- Compact or Separate versions - IP65, IP67 or IP68
- Easy setting of measuring range and output signals - without the use of special tools / programs.
- Backlit LCD display, which can be read even during difficult conditions.
- Supplied with Danish and English operating instructions

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Tekniske data

Diameter / Liner

Neoprene (standard)	DN15…DN3000
PTFE	DN15…DN1000
Polyurethane	DN15…DN300
PFA	DN15…DN250
PFA / reinforced	DN80…DN250
Tefzel	DN15…DN250
Tefzel / reinforced	DN80…DN250

NB - Reinforced liner are used for Vacuum

Process Connection

Flange EN 1092-1, ANSI 16.5 eller Wafer

Working Pressure (P nominel)

DN10 … DN80	≤ 40 bar
DN100…DN150	≤ 16 bar
DN200…DN700	≤ 10 bar
DN800…DN3000	≤ 6 bar

Media

Liquid, Conductivity > 5 uS/cm
Solids Content < 30%

Liner / Media temperature

	Standard	Option
Compact		
Neopren	80°C	120°C
PTFE	80°C	120°C
Polyurethan	80°C	
PFA	80°C	120°C
Tefzel	80°C	
Separate		
Neopren	80°C	120°C
PTFE	80°C	120°C or 180°C
Polyurethan	80°C	
PFA	80°C	120°C
Tefzel	80°C	

Electrode Materials

316L Stainless Steel (standard)	DN15…DN3000
Hastelloy – C22	DN15…DN1000
Hastelloy – B10	DN15…DN1000
Titanium	DN15…DN250
Tantalum	DN15…DN250
Platinium/iridium	DN15…DN250
316L w. tungsten carbide coating	DN15…DN600

Ranges

0.3-12m/s (see table page 3)

Repatibility

Better than ±0.1%

Accuracy

±0.5% of actual value (V > 0,6m/s)
Option: ±0.2% of range (V > 1,0m/s)

Ambient conditions

-25 …+55 ºC / 5%-90% RH

Transmitter

Compact w. Display
Separate incl. 10m cable (other on request)

Input/Output

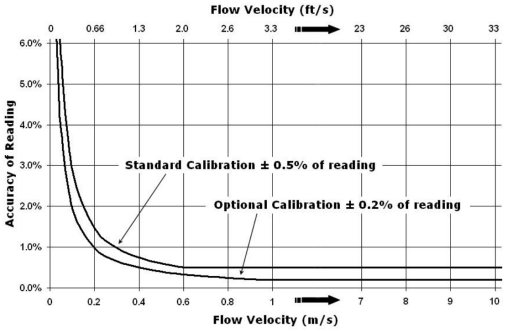
4...20mA / 2 x Contact (status/alarm)
Frequency 0…5.000Hz
Scaled pulse (0,001 to 1,0 m3/puls)
1 x Digitale input
CommuniCation (Option): HART, Modbus RS485, Profibus

Power Supply

85…265 VAC or 24 VDC (16…36 VDC)

Ranges

Our magnetic flow meter can be set to measurement ranges from 0.3 m/s up to 12 m/s - when dimensioning, it is recommended to choose a maximum flow between 4 and 6 m/s.



Accuracy shown acc. to conditions defined in JB/T9248 - 1999

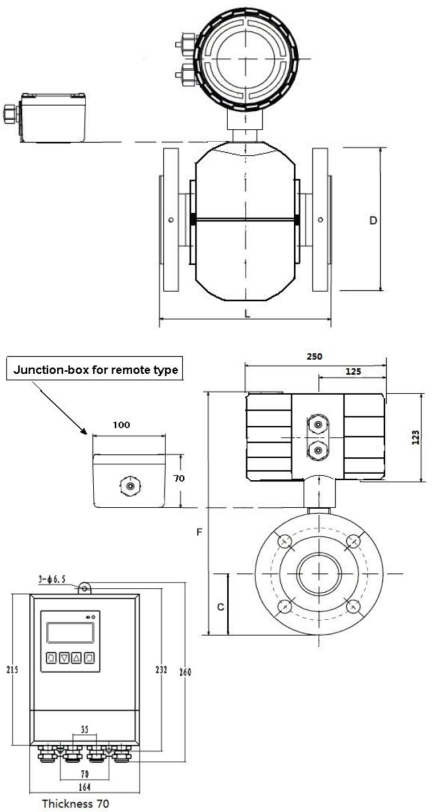
Nominal Diameter		Full scale flow (m3/h)		
mm	Inches	v=0.3 m/s Min	v=1.0 m/s	v =15m/s Max
15	½	0.1909	0.6362	9.543
20	¾	0.3393	1.131	16.96
25	1	0.5301	1.767	26.51
32	1½	0.8686	2.895	43.43
40	1½	1.357	4.524	67.86
50	2	2.121	7.069	106.0
65	2½	3.584	11.95	179.2
80	3	5.429	18.10	271.4
100	4	8.482	28.27	424.1
125	5	13.25	44.18	662.7
150	6	19.09	63.62	954.3
200	8	33.93	113.1	1696
250	10	53.01	176.7	2651
300	12	76.34	254.5	3817
350	14	103.9	346.4	5195
400	16	135.7	452.4	6786
450	18	171.8	572.6	8588
500	20	212.1	706.9	10603
600	24	305.4	1018	15268

LDG-Pro can be delivered up to size DN 3.000mm - ask for ranges if not given in above table

Dimensions

All flange-mounted Klinger LDG flow meters are built so that the installation dimensions are in accordance with ISO 13359.

The table below shows the measurements for the different dimensions for these (if you need a different dimension, ask)



Nominal Size	Nominal Pressure Class	Dimensions			Bolt information						OD of flange (D)		Approximate weight	
					Diameter of Bolt Circle (K)		Diameter of Bolt Holes (A)		Number of bolts (n)					
GB,DIN		L	C	F	1.6	4.0	1.6	4.0	1.6	4.0	1.6	4.0	1.6	4.0
mm	MPa	mm	mm	mm	mm	mm	mm	mm	n	n	mm	mm	kg	kg
15	1.6 or 4.0	200	48	315	65	65	14	14	4	4	95	95	7	7
20		200	53	325	75	75	14	14	4	4	105	105	9	9
25		200	58	330	85	85	14	14	4	4	115	115	11	11
32		200	70	380	100	100	18	18	4	4	140	140	12	12
40		200	75	380	110	110	18	18	4	4	150	150	13	13
50		200	83	385	125	125	18	18	4	4	165	165	14	14
65		200	93	405	145	145	18	18	4	8	185	185	22	23
80		200	100	420	160	160	18	18	8	8	200	200	26	28
100		250	118	455	180	190	18	22	8	8	235	235	28	32
125		250	135	500	210	220	18	26	8	8	270	270	35	41
150		300	150	500	240	250	22	26	8	8	300	300	38	44
200	1.0 or 1.6	350	170	540	295	295	22	22	8	12	340	340	45	46
250		450	203	600	350	355	22	26	12	12	395	405	67	71
300		500	230	660	400	410	22	26	12	12	445	460	94	103
350		550	260	720	460	470	22	26	16	16	505	520	145	158
400		600	290	780	515	525	26	30	16	16	565	580	180	197
450		600	320	840	565	585	26	30	20	20	615	640	215	242
500		600	358	915	620	650	26	33	20	20	670	715	245	293
600		600	420	1040	725	770	30	36	20	20	780	840	335	418

Order Code

Model	Suffix Code	Description
	LDG	Electromagnetic Flowmeter
Type	P	Professionel type
Diameter	XXXX	Indicate diameter 0004: DN4; 0015: DN15 0100: DN100; 3000: DN3000
Model	S	Compact Type w. local Display
	L	Remote Type; 10 meters Cable incl.
Electrode Materials	M	SS316L
	HB	Hastelloy Alloy B10
	HC	Hastelloy Alloy C22
	D	Tantalum
	X	Andet (Indicate Separately)
Signal Output	0	Without
	1	4-20mA / Pulse
Liner Materials	N	Neoprene
	F	PTFE
	A	PFA
	X	Other (Indicate Separately)
Power Supply	-0	110-240V AC
	-1	24V DC (20-36V DC)
Communication	0	No Communication
	1	Modbus RS485
	2	HART
	X	Other (Indicate Separately)
Sensor Grounding	0	Without
	1	Grounding Ring
	2	Grounding Electrode
Connection	DXX	D16:DIN PN16 Flange ; D25: DIN PN25 Flange...
	AXX	A15: ANSI150# Flange; A30: ANSI 300# Flange...
	WXX	W16: DIN PN16; W40: DIN PN40
	XXX	Other (Indicate Separately)
Housing Materials	CS	Carbon Steel
	S4	Stainless Steel 304
	S6	Stainless Steel 316

Ordering Example:

Compact meter DN50 / Staunless Steel electrodes / PTFE liner / 4…20mA output / 220V supply
Order Code: LDG-P-0050-S-M-1-F-0-0-2-D16-CS

Other flowmeters

Minimag - Magnetic flowmeter

W-Mass - Coriolis massflowmeter

LUGB - Vortex flowmeter

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