

PROMAG

ELECTROMAGNETIC FLOW SENSOR

DIEHL
Metering



APPLICATION

PROMAG is an electromagnetic flowmeter designed for measuring heating water or any other type of conductive liquids used in air conditioning systems. It is characterized by high measuring accuracy and extended measuring range. Free of any moving parts, PROMAG offers a wide range of original technical solutions to suit various applications, such as glycol water measurement at -40°C to overheated water at $+130^{\circ}\text{C}$.

Combined with a CALEC ST II or SCYLAR INT 8 calculator, PROMAG is, all year round, the ideal hydraulic part of energy measurement.

FEATURES

- ▶ All liquids measurement with a conductivity $> 50 \mu\text{S}/\text{cm}$
- ▶ No mechanical moving part
- ▶ Process temperature range: -40°C to $+130^{\circ}\text{C}$
- ▶ Very low pressure drop
- ▶ Pulse output and analogue output 4 ... 20 mA

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GENERAL

PROMAG	
Application	Heating / cooling
Measuring accuracy	% +/- 0.5
Ambient temperature	°C -20 ... +60
Power supply	85 to 260 V AC 45 to 65 Hz
Mounting position	Any position
Degree of protection	IP67
Pulse output	30 V DC max. duration 2 s. max freq. 100 Hz max intensity 250 mA
Current output	4 ... 20 mA R _c < 700 Ω HART protocol compatible
Status output	Error message or flow direction recognition
Minimal conductivity	μS/cm 50
Power consumption	<12 VA
Galvanic isolation	All circuits for inputs, outputs and power supply are galvanically insulated from each other
Electromagnetic compatibility (EMC)	According to EN61326 and NAMUR NE21
Data storage	Data are stored in an EEPROM
Parameters adjustment	On display

TECHNICAL DATA FLOW SENSOR

Nominal diameter	DN	mm	25	32	40	50	65	80	100	125
Maximal flowrate	q _s	m ³ /h	18	30	42	66	120	180	282	450
Minimal flowrate	q _i	m ³ /h	0.54	0.9	1.5	2.1	3.6	5.4	8.7	13.2
Pulse weight		l/pulse	1	1	1	1	10	10	10	100

Nominal diameter	DN	mm	150	200	250	300	350	400	500
Maximal flowrate	q _s	m ³ /h	600	1,100	1,700	2,400	3,300	4,200	6,600
Minimal flowrate	q _i	m ³ /h	20	35	55	80	110	140	220
Pulse weight		l/pulse	100	100	100	100	100	1,000	1,000

HOT APPLICATION (PROMAG 10P) ACS CERTIFIED

Nominal diameter	DN	mm	25	32	40	50	65	80	100	125
Coating PTFE - T. -40°C to +130°C - compact version - Raised face flanges	PN	bar	40	40	40	40	16	16	16	16

Nominal diameter	DN	mm	150	200	250	300	350	400	500
Coating PTFE - T. -40°C to +130°C - compact version - Raised face flanges	PN	bar	16	10	10	10	10	10	10

HOT APPLICATION (PROMAG 10L) NON ACS

Nominal diameter	DN	mm	25	32	40	50	65	80	100	125
Coating PTFE - T. -20°C to +90°C - compact version - blind rotary flanges	PN	bar	16	16	16	16	16	16	16	16

Nominal diameter	DN	mm	150	200	250	300	350	400	500
Coating PTFE - T. -20°C to +90°C - compact version - blind rotary flanges	PN	bar	16	10	10	10	-	-	-

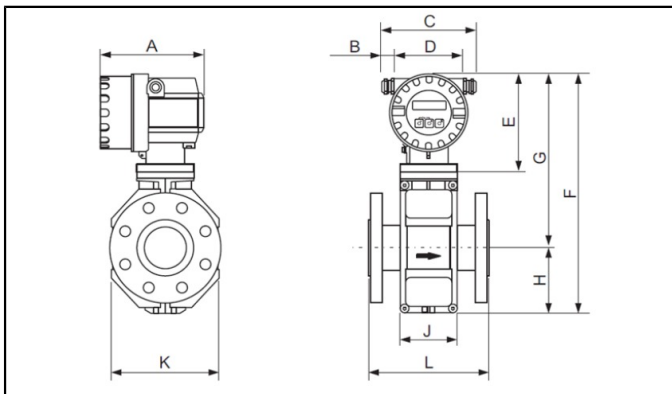
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ELECTROMAGNETIC FLOW SENSOR

COLD APPLICATION (PROMAG 10L) ACS CERTIFIED

Nominal diameter	DN	mm	25	32	40	50	65	80	100	125
Coating PU - T. -20°C to +50°C - compact version - blind rotary flanges	PN	bar	16	16	16	16	16	16	16	16
Nominal diameter	DN	mm	150	200	250	300	350	400	500	
Coating PU - T. -20°C to +50°C - compact version - blind rotary flanges	PN	bar	16	10	10	10	10	10	10	10

PROMAG 10P: DIMENSIONS, WEIGHT AND CONNECTIONS



Compact version

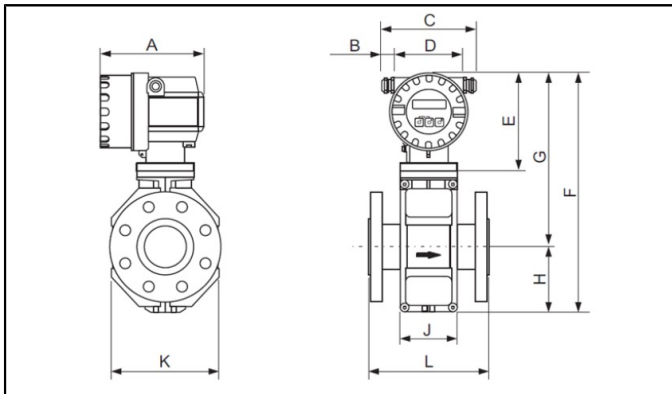
Flange connection EN1092-1 (DIN 2501), DN ≤ 300 type A ; DN ≥ 350 type B (DN25 PN16 only according to EN1092-1).

Nominal diameter	DN	mm	25	32	40	50	65	80	100	125
L		mm	200	200	200	200	200	200	250	250
K		mm	120	120	120	120	180	180	180	260
A		mm	178	178	178	178	178	178	178	178
B		mm	20...30	20...30	20...30	20...30	20...30	20...30	20...30	20...30
C		mm	161...181	161...181	161...181	161...181	161...181	161...181	161...181	161...181
D		mm	113	113	113	113	113	113	113	113
E		mm	150	150	150	150	150	150	150	150
F		mm	341	341	341	341	391	391	391	472
G		mm	257	257	257	257	282	282	282	322
Weight		Kg	7.3	8	9.4	10.6	12	14	16	21.5
Nominal diameter	DN	mm	150	200	250	300	350	400	500	
L		mm	300	350	450	500	550	600	650	
K		mm	260	324	400	460	564	616	717	
A		mm	178	178	178	178	178	178	178	
B		mm	20...30	20...30	20...30	20...30	20...30	20...30	20...30	
C		mm	161...181	161...181	161...181	161...181	161...181	161...181	161...181	
D		mm	113	113	113	113	113	113	113	
E		mm	150	150	150	150	150	150	150	
F		mm	472	527	577	627	738.5	790.5	891.5	
G		mm	322	347	372	397	456.5	482.5	533.5	
Weight		Kg	25.5	45	65	70	115	135	175	

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ELECTROMAGNETIC FLOW SENSOR

PROMAG 10L: DIMENSIONS, WEIGHT AND CONNECTIONS



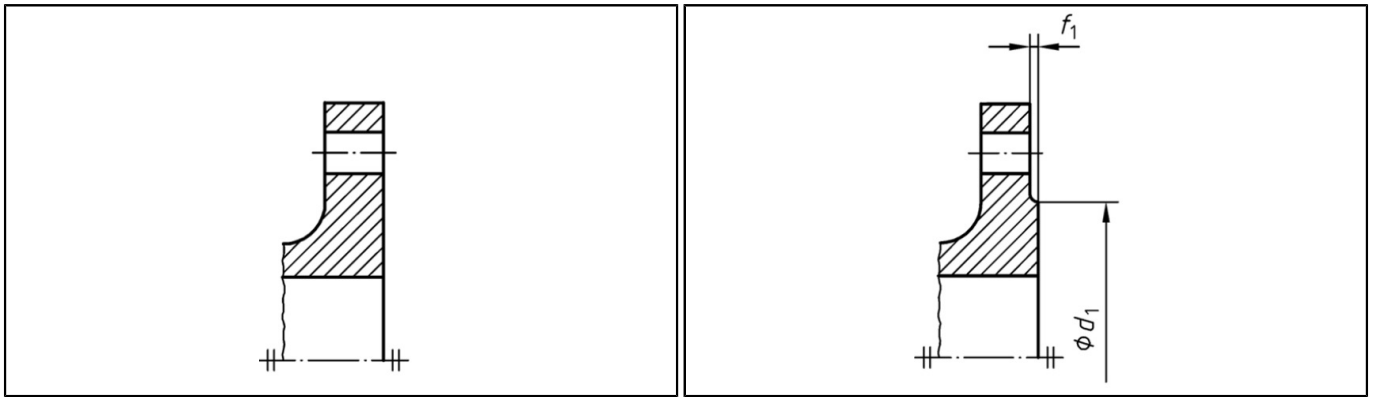
Compact version

PROMAG 10L: Flange connection EN1092-1 (DIN 2501) (DN25 PN16 only according to EN1092-1).

Nominal diameter	DN	mm	25	32	40	50	65	80	100	125
L		mm	200	200	200	200	200	200	250	250
K		mm	120	120	120	120	180	180	180	260
A		mm	178	178	178	178	178	178	178	178
B		mm	20...30	20...30	20...30	20 ... 30	20...30	20...30	20...30	20...30
C		mm	161...181	161...181	161...181	161 ... 181	153...168	153...168	153...168	153...172
D		mm	113	113	113	121	121	121	121	121
E		mm	150	150	150	150	150	150	150	150
F		mm	341	341	341	341	391	391	391	472
G		mm	257	257	257	257	282	282	282	322
Weight		Kg	5.7	6.4	7.8	9	10.4	12.4	14.4	19.9

Nominal diameter	DN	mm	150	200	250	300	350	400	500
L		mm	300	350	450	500	550	600	650
K		mm	260	324	400	460	564	616	717
A		mm	178	178	178	178	178	178	178
B		mm	20...30	20...30	20...30	20...30	20...30	20...30	20...30
C		mm	153..173	153...174	153...175	153...176	161...181	161...181	161...181
D		mm	121	121	121	121	113	113	113
E		mm	150	150	150	150	150	150	150
F		mm	472	527	577	627	738.5	790.5	891.5
G		mm	322	347	372	397	456.5	790.5	891.5
Weight		Kg	23.9	43.4	63.4	68.4	105	120	156

DIMENSIONS: FLANGES ACCORDING TO EN1092-1



Type A: flat face

Type B: raised face

Nominal diameter	DN	mm	25	32	40	50	65	80	100	125
d1		mm	-	-	-	-	-	-	-	-
f1		mm	-	-	-	-	-	-	-	-
Nominal diameter	DN	mm	150	200	250	300	350	400	500	
d1		mm	-	-	-	-	430	482	585	
f1		mm	-	-	-	-	4	4	4	