



OPTIFLUX 5000

Technical Datasheet

Electromagnetic Flow Sensor

- Excellent long-term stability and accuracy
- For most aggressive and abrasive fluids
- Fully vacuum-resistant
- High-tech ceramics liner



KROHNE

Solution with high-tech ceramics

The OPTIFLUX 5000 electromagnetic flow sensor is the standard in accuracy. OPTIFLUX 5000 is highly resistant against abrasion.



- ① Flange design
- ② Ceramic liner
- ③ Cermet electrodes

Highlights

- Excellent long-term stability and accuracy
- For most aggressive and abrasive fluids
- Fully vacuum-resistant
- High-tech ceramics liner
- Insensitive against temperature shocks

Industries

- Chemicals
- Pulp & Paper
- Water
- Wastewater
- Minerals & Mining

Applications

- Dosing and batching
- Electrolyte measurement for battery filling
- Dosing control
- Chemical injection
- Wastewater treatment

Electromagnetic product range

OPTIFLUX converters: All converters fit to all sensors



①



②

① IFC 300 High-performance solution

② IFC 010 Economical solution

OPTIFLUX sensors



①



②



③



④



⑤

① OPTIFLUX 1000 Economical solution

② OPTIFLUX 2000 Solution for the water and wastewater industry

③ OPTIFLUX 4000 Standard solution for the process industry

④ OPTIFLUX 5000 Solution with high-tech ceramics

⑤ OPTIFLUX 6000 Sanitary and hygienic solution

Special-purpose flowmeters



①



②



③



④



⑤

① WATERFLUX 2070 Battery powered watermeter solution

② OPTIFLUX 4040 C 2-wire solution

③ TIDALFLUX 4110 PF Solution for partially filled pipelines

④ BATCHFLUX 5015 C Solution for volumetric filling

⑤ OPTIFLUX 7300 C Electrode-free solution

Technical Data

Nominal diameter	VN24						VN20		
ASME [inch]	1/2"	1"	1 1/2"	2"	3"	4"	6"	8"	10"
DIN [mm]	15	25	40	50	80	100	150	200	250

Nominal flange pressure

EN 1092-1 - PN40	■									
EN 1092-1 - PN16						■				
EN 1092-1 - PN10								■		
ASME B16.5 - 150lbs	■									
ASME B16.5 - 300lbs	■									

Measuring tube

Ceramic	■								
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Electrodes

Cermet	■								
Stainless steel AISI 316Ti (1.4571)							■		
Platinum							■		
HC4							■		
Low noise (basis HC4, Ta, Ti)							■		

Rings | gaskets

PTFE (integrated) no gasket required	■								
Stainless steel AISI 316L (1.4404) Viton							■		
Hastelloy C4 Viton							■		

Flanges

Stainless steel AISI 316 (1.4408)	■								
Steel 37 - C22							■		

Materials

Flow sensor housing (PU coated)									
- stainless steel AISI 316 (1.4408)	■								
- sheet steel							■		
Flow converter housing (compact design)									
- die-cast aluminium (PU coated)	■								
- stainless steel AISI 304 (1.4306)	■								
Connection box (separate design)									
- die-cast aluminium (PU coated)	■								
- stainless steel AISI 304 (1.4306)	■								
	other materials on request								

Protection category

IP 66 / 67 eq. NEMA 4/4X / 6	■								
IP 68 field eq. NEMA 6P	■								
IP 68 factory eq. NEMA 6P	■								
	IP 68 only available with stainless steel connection box								

Nominal diameter	VN24						VN20		
ASME [inch]	1/2"	1"	1 1/2"	2"	3"	4"	6"	8"	10"
DIN [mm]	15	25	40	50	80	100	150	200	250

Approvals

Non-Ex	■									
EEx - zone 1 2	■									
FM - class I div. 1 / 2	■									
CSA - GP class I div. 1 / 2	■									
	Please note the approvals are for flow sensors only									

Versions

Compact + IFC 300 C	■									
Separate + IFC 300 F W R	■									
Compact + IFC 010 C	■									
Separate + IFC 010 W	■									

Vacuum load

0mbar 0psi absolute	■								
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Conductivity

≥ 1 µS/cm [non-water]		■							
≥ 5 µS/cm [non-water]	■								
≥ 20 µS/cm [demineralised cold water]	■								

■ standard ■ optional □ on request

Dimensions and Weights

Nominal size		Dimensions [mm]						Approx.
DN	PN	L	H	W	T			weight
[mm]	[bar]				box	010	300	[kg]

DN2.5...100

15	40	150	127	95	205	232	282	3
25	40	150	143	115	221	248	298	4
40	40	150	168	150	246	273	323	6
50	40	200	184	165	262	289	339	9
80	40	200	217	200	295	322	372	15
100	16	250	248	235	326	353	403	21

DN150...250

150	16	265	355	283	426	-	-	37
200	10	315	396	342	467	-	-	53
250	10	365	458	395	529	-	-	87

DN150...250: Total fitting length: L + 2x 3mm + 2x gasket thickness (flowmeter with separate rings)

Nominal size		Dimensions [inch]						Approx. Weight
DN	PN	L	H	W	T			
[inch]	[psi]				box	010	300	[lbs]

DN 1/2" ...4"

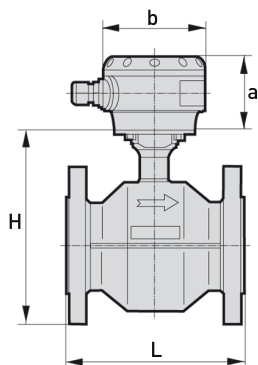
1/2"	580	5.91	5	3.74	8.07	9.13	11.1	1,36
1"	580	5.91	5.63	4.53	8.7	9.76	11.73	1,81
1 1/2"	580	5.91	6.61	5.91	9.69	10.75	12.72	2,72
2"	580	7.87	7.24	6.5	10.31	11.38	13.35	4,08
3"	580	7.87	8.54	7.87	11.61	12.68	14.65	6,8
4"	232	9.84	9.76	9.25	12.83	13.9	15.87	9,52

DN 6" ...10"

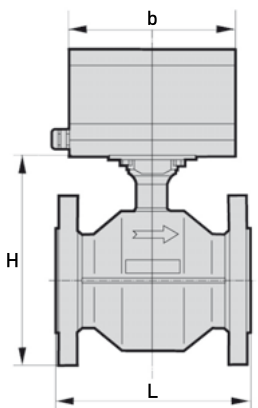
6"	232	10.43	13.98	11.14	16.77	-	-	16,78
8"	145	12.4	15.59	13.46	18.39	-	-	24,03
10"	145	14.37	18.03	15.55	20.83	-	-	39,45

DN 6" ...10": Total fitting length: L + 2x 0.12" + 2x gasket thickness (flowmeter with separate rings)

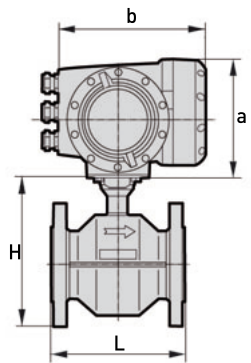
Frontview OPTIFLUX 5000 F



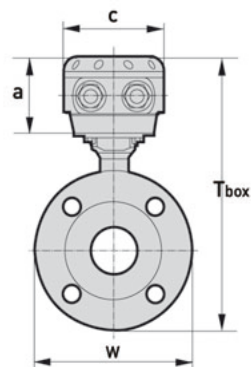
Frontview OPTIFLUX 5010 C



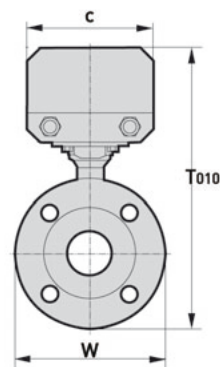
Frontview OPTIFLUX 5300 C



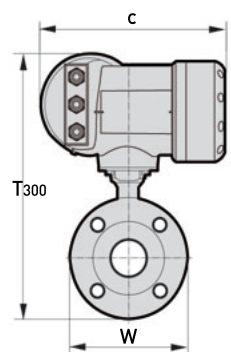
Sideview OPTIFLUX 5000 F



Sideview OPTIFLUX 5010 C



Sideview OPTIFLUX 5300 C



Dimensions housings

Type	dimension a		dimension b		dimension c	
	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]
Connection box	77	3.1	111	4.4	106	4.2
IFC 010 converter	105	4.2	160	6.3	106	4.2
IFC 300 converter	155	6.1	202	7.8	260	10.2

Temperature range

Temperature range	Process [°C]		Ambient [°C]		Process [°F]		Ambient [°F]	
	min.	max.	min.	max.	min.	max.	min.	max.

DN2,5...100

Separate flow sensor	-60	180	-40	65	-76	356	-40	149
Compact + IFC 300 C	-60	140	-40	65	-76	284	-40	149
Compact + IFC 010 C	-25	120	-25	60	-13	248	-13	140

DN150...250

Separate flow sensor	-60	120	-25	60	-76	248	-13	140
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Temperature change	10 minutes [°C]		sudden change [°C]		10 minutes [°F]		sudden change [°F]	
	rising	falling	rising	falling	rising	falling	rising	falling
DN15...100	150	100	120	80	302	212	248	176
DN150...250	150	80	100	60	302	176	212	140







KROHNE Overview

- Electromagnetic flowmeters
- Variable area flowmeters
- Mass flowmeters
- Ultrasonic flowmeters
- Vortex flowmeters
- Flow controllers
- Level measuring instruments
- Pressure gauges
- Temperature measuring instruments
- Water solutions & analysis
- Oil and gas turnkey solutions

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