

ECOFLUX Electromagnetic Flowmeter

...economical

...ecological

...standard setting



- Flangeless 'sandwich' design, easy and quick to install
- For accurate measurements, no waste
- High-grade KROHNE Teflon®-PFA liner and Hastelloy electrodes, maintenance-free

Variable area flowmeters

Vortex flowmeters

Flow controllers

Electromagnetic flowmeters

Ultrasonic flowmeters

Mass flowmeters

Level measuring instruments

Communications technology

Engineering systems & solutions

Switches, counters, displays and recorders

Heat metering

Pressure and temperature



ECOFLUX Electromagnetic Flowmeter

- ...economical
- ...ecological
- ...standard setting

ECOFLUX flowmeters

measure the volumetric flowrate of electrically conductive liquids.

Fields of application

- agriculture:
precise dosing of liquid fodder,
liquid fertilizers,
measurement of liquid manure,
sprinkler irrigation systems
- fire-fighting vehicles, fire extinguishing
systems:
foam mixing, control of sprinkler systems
- machinery and apparatus construction:
heat counters, energy allocation to
buildings and workshops
- swimming pools and recreational facilities:
water recirculation and treatment
- abrasion resistance:
very good
- chemical resistance (limited by electrode
material):
alkaline solutions (e.g. NaOH) up to
70% at 20°C
acids (e.g. HNO₃) up to 65% at 20°C

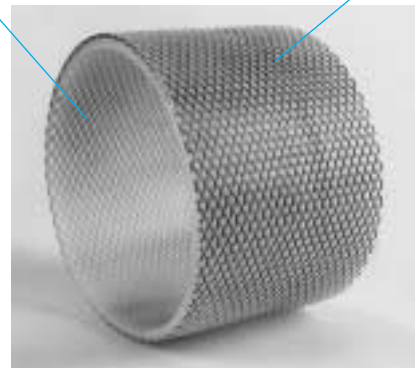
Calibrated on EN 17 025

accredited calibration rigs,
accuracy of calibration better
than 99.97% of the measured value.



High-grade KROHNE Teflon®-PFA liner with
stainless steel mesh reinforcement

Meter sizes DN 10-150 and 3/8"-6"



Economical: low investment and follow-on costs
Ecological: accurate measurements, no waste

Can be operated
together with all
KROHNE signal
converters, as integral
device (K) or remote
system (F and E)



Flangeless 'sandwich'
design

Easy and quick to install

The responsibility as to the suitability, intended use and corrosion-resistance of the materials used in their construction rests solely with the purchaser.

ECOFLUX IFS 1000 Primary head

Meter sizes	DN10 - 150 and 3/8" - 6"	
Pipe flanges to DIN 2501 (= BS 4504) to ANSI B 16.5 to JIS	DN15 - 150 / PN16 1/2" - 6" / 150lb / RF DN10 - 150 / 10k and 20k	
Electrical conductivity	≥ 20 μS/cm	
Temperatures Compact systems	Ambient temperature -25 to +50 °C/-13 to +122 °F -25 to +40 °C/-13 to +104 °F	Process temperature -25 to +60 °C/-13 to +140 °F -25 to +120 °C/-13 to +248 °F
IFS 1000 F (remote)	-25 to +60 °C/-13 to +140 °F	-25 to ≤ +120 °C/-13 to +248 °F
In storage	-25 to +60 °C/-13 to +140 °F	-
Operating pressure with pipe flanges to DIN 2501 to ANSI B 16.5 to JIS 10 K to JIS 20 K	≤ 16 bar/230 psig ≤ 16 bar/230 psig ≤ 10 bar/145 psig ≤ 16 bar/230 psig	
Vacuum load	0 mbar abs / 0 psia	
Insulation class of field coils	E	
Electrode design	pin electrodes	
Protection category (EN 60 529 / IEC 529)	IP 67, equivalent to NEMA 6	
Humidity rating to DIN 50 016, DIN / IEC 68	R, relative humidity < 90% annual mean	
Items included with supply	<u>Standard</u>	<u>Option</u>
Centering sleeves	yes (number dependent on meter size)	-
Stud bolts	no	yes
Grounding rings	DN10 - 15 3/8" - 1/2"	DN25 - 150 1" - 6"
Gaskets	no	no
Materials	virgin Teflon®-PFA	
Measuring section	virgin Teflon®-PFA	
Electrodes	Hastelloy C4	
Housing (enamelled): DN10 - 40 / 3/8" - 1 1/2" DN50 - 150 / 2" - 6"	malleable cast iron GTW S 38 steel St37.2, paint finish	
Grounding rings	stainless steel 1.4571/SS 316 Ti-AISI (option for DN25 - 150 / 1" - 6")	
Centering material	rubber sleeves	
Stud bolts (option)	steel, electrogalvanized (as option stainless steel 1.4301/SS 304-AISI)	
Gaskets between measuring tube (or grounding rings) and pipe flanges	not included with flowmeter, use Teflon-type gaskets to DIN2690 / ANSI B 16.21, deformable under pressure 8 - 16N/mm ² / 1160 - 2320 psi	

*Teflon® is a registered trademark of DuPont.

Dimensions and weights

PLEASE NOTE !

The **total dimension for the height** is obtained from **dimension b** (see table) **plus the height** of the terminal box or the signal converter, see drawings.

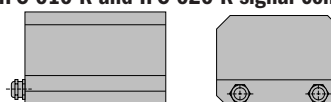
The **total weight** is made up of the weight of the signal converter (see table) **plus** the weight of the terminal box or signal converter, see drawings on the right.

Terminal box



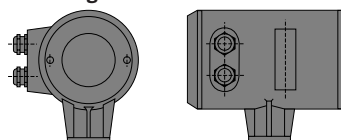
Weight approx. 0.5 kg (1.1 lb)

IFC 010 K and IFC 020 K signal converter



Weight approx. 1.6 kg (3.6 lb)

IFC 090 K signal converter



Weight approx. 2.3 kg (5.1 lb)

Meter size			Dimensions in mm (inches)								Approx. weight 1)	
DN	mm	inches	a	b	1)	c	d	e			in kg	(lb)
DN 10	10	3/8	68 (2.68)	137 (5.39)	52 (2.05)	67 (2.64)	47 (1.85)	1.7 (3.7)				
DN 15	15	1/2	68 (2.68)	137 (5.39)	52 (2.05)	67 (2.64)	47 (1.85)	1.7 (3.7)				
DN 25	25	1	54 (2.13)	147 (5.79)	52 (2.05)	62 (2.44)	66 (2.60)	1.7 (3.7)				
DN 40	40	1 1/2	78 (3.07)	162 (6.38)	76 (2.99)	70 (2.76)	82 (3.23)	2.6 (5.7)				
DN 50	50	2	100 (3.94)	151 (5.94)	98 (3.86)	50 (2.58)	101 (3.98)	4.2 (9.3)				
DN 80	80	3	150 (5.91)	180 (7.09)	146 (5.75)	65 (3.15)	130 (5.12)	5.7 (12.6)				
DN 100	100	4	200 (7.87)	207 (8.15)	196 (7.72)	78 (3.66)	156 (6.14)	10.5 (23.1)				
DN 150	150	6	200 (7.87)	271 (10.67)	196 (7.72)	110 (4.90)	219 (8.62)	15.0 (33.1)				

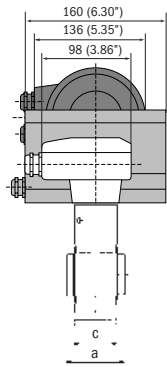
Necessary distance between flanges

DN 10 – 15 / 3/8" – 1/2"	(flowmeter supplied with grounding rings)	Dimension a + 2 x gasket thickness (2)
DN 25 – 150 / 1" – 6"	without grounding rings:	Dimension a only (no gaskets required)
	with grounding rings:	Dimension a + 2 x gasket thickness (2) + 2 x 3 mm or 2 x 0.12" (thickness of grounding rings)

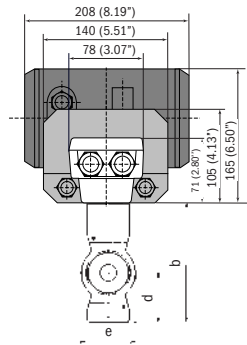
- 1)** Overall height "b" and approx. weight without mounted terminal box or signal converter
- 2)** Teflon-type gaskets to DIN 2690/ANSI B 16.21, deformable under pressure 8 – 16 N/mm² /1160 – 2320 psi, to be provided by customer.

Dimensions in mm (inches)

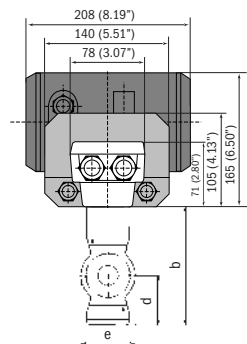
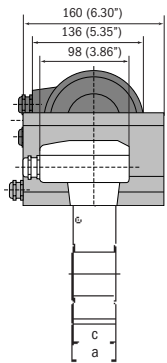
DN10 - 15 / 3/8" - 1/2"



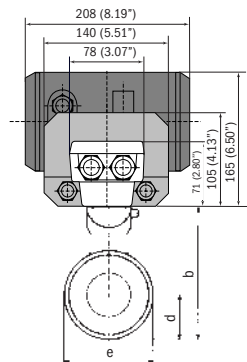
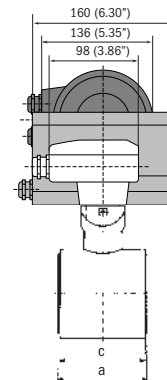
Dimension "a" with fitted grounding rings (standard)



DN25 - 40 / 1" - 1 1/2"



DN50 - 150 / 2" - 6"



Ordering Code

ECOFLUX IFS 1000 Electromagnetic flowmeter (primary head)

Code		Primary head				
V313	0	1	IFS 1000 DN 10 / 3/8" (for flanges DN 15 / 1/2") incl. grounding rings made of st. Steel 316 Ti and Viton gaskets			
		2	IFS 1000 DN 15 / 1/2" incl. grounding rings made of st. Steel 316 Ti and Viton gaskets			
		4	IFS 1000 DN 25 / 1"			
		6	IFS 1000 DN 40 / 1 1/2"			
		7	IFS 1000 DN 50 / 2"			
		A	IFS 1000 DN 80 / 3"			
		B	IFS 1000 DN 100 / 4"			
		D	IFS 1000 DN 150 / 6"			
Pressure rating						
		3	PN 16 DIN 2501 (DN 100 - DN 150) [max. working pressure 16 bar]			
		5	PN 40 DIN 2501 (DN 10 - DN 80) [max. working pressure 16 bar]			
		A	150 lb ANSI RF (3/8" - 6") [max. working pressure 232 psi]			
		B	300 lb ANSI RF (3/8" - 4") [max. working pressure 232 psi]			
		M	JIS 20 K (DN 10 - DN 100) [max. working pressure 16 bar]			
		N	JIS 10 K (DN 150) [max. working pressure 10 bar]			
Mounting material						
		1	Steel, galv. / Rubber sleeves			
		2	st. Steel A2 / Rubber sleeves			
		3	Rubber sleeves			
Version / Signal converter						
		1	IFS 1000 F (without converter)			
		2	IFS 1000 (modular) separate version without connection box			
		4	IFC 1010 K (for IFC 010 K)			
		5	IFC 1010 F (for IFC 010 F)			
		7	IFM 1080 K (for IFC 090 K)			
		8	IFM 1080 F (for IFC 090 F)			
		A	IFM 1110 F (for IFC 110 F)			
		E	IFM 1020 K (for IFC 020 K)			
		F	IFM 1020 F (for IFC 020 F)			
		G	IFM 1020 E (for IFC 020 E)			
		R	IFM 1210 E (for IFC 210 E)			
		U	IFM 1080 K (for IFC 090 K) Ex nA			
		V	IFM 1080 F (for IFC 090 F) Ex nA			
		W	IFM 1080 K (for IFC 090 K) Div 2			
		X	IFM 1080 F (for IFC 090 F) Div 2			
Language Operating manual			Cable connection			
		1 D	2 GB	3 US	4 F	PG 13,5
		5 D	6 GB	7 US	8 F	1/2" NPT
		A D	B GB	C US	D F	PF 1/2
		E D	F GB	G US	H F	modular/compact
Calibration						
		0	standard (incl. converter)			
		5	GK + GKL (for IFC 010, IFC 020, IFC 090, IFC 110, IFC 210)			
V313	0	1	2	4	5	Complete ordering code