



Implementation example: **VolumMess** in compact version with process connection grooved flange according to DIN 11864-2 Form A
VolumMess in separated version with housing and fastening

FEATURES

- **FLEXIBLE PROCESS INTEGRATION THROUGH CONNECTION ADAPTERS**
- **MEASURING RANGE FROM 30 L/H ... 280 m³/H FOR MEASURING FLOW AND VOLUME OF CONDUCTIVE FLUIDS WITH HIGH ACCURACY**
- **MEASURING TUBE DIAMETER = PROCESS TUBE DIAMETER, NO PRESSURE LOSS
>> HYGIENIC DESIGN IN DETAIL**
- **RESISTANCE TO ACIDS + LYES DUE TO PFA LINING MATERIAL**
- **VACUUM RESISTANCE OF THE MEASURING TUBE CONSTRUCTION EVEN AT HIGHER MEDIA TEMPERATURES**
- **SUITABLE FOR DOSING TASKS + FILLING APPLICATIONS**
- **COMPACT DESIGN WITH STAINLESS STEEL ELECTRONICS HOUSING**
- **COMPACT AND SEPARATE VERSIONS AVAILABLE**

DESCRIPTION

The **VolumMess** electromagnetic flowmeter is designed for measuring/dosing the flow and volume of all conductive liquids above 5 $\mu\text{S}/\text{cm}$ with high hygienic requirements. With its compact, reduced and effective design, made entirely of stainless steel, as well as its electrical features, the **VolumMess** meets the demands of modern flow measurement at a high level.

A standard integrated and rotatable display not only ensures that the measured values and therefore the process can be monitored at all times during the commissioning phase, but also that the device can be operated quickly and easily without opening it.

As the **VolumMess** has no moving parts, there is no risk of mechanical wear, with the exception of regular replacement of the process seals for hygienic and preventive reasons.

Flexible process integration thanks to a range of standardized and manufacturer-specific connection adapters as well as various additional functions are convincing when used on site and support reduced warehousing and the desired compatibility at all times. The construction according to the criteria of hygienic design is not only realized in the standard aseptic process connection, but also applies to the construction of the piggable sensor: process tube diameter equals measuring tube diameter, which also ensures that no pressure loss occurs.

Resistance to all cleaning processes and the media used, such as lyes and acids, is ensured by the overall stainless steel design; this also applies to the PFA lining material. The measuring tube design also reliably withstands negative pressure, even at high temperatures, and also tolerates excesses of the nominal flow rate, e.g. in CIP processes.

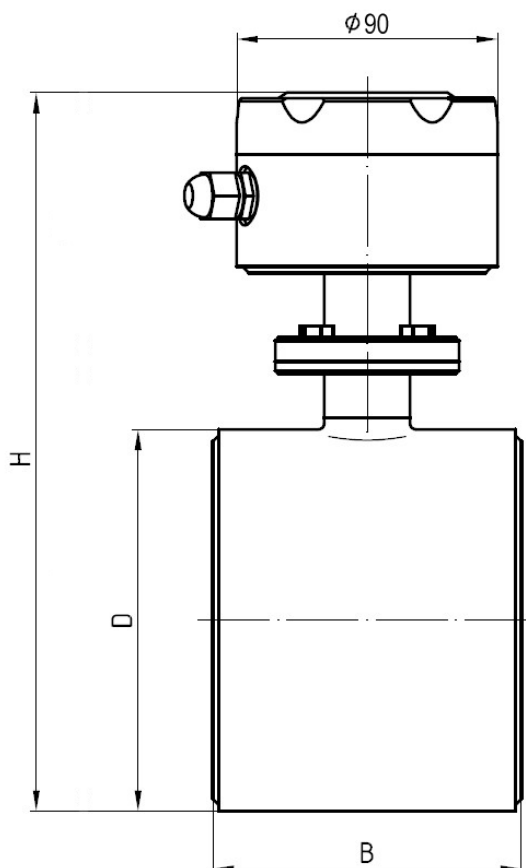
The **VolumMess** is available as a compact version as well as a separate version and enables applications at process temperatures of up to 160°C in the separate version.

An active analog output and a pulse output are available as standard. The counter can be reset via the pulse input (optional).

TECHNICAL DATA

General information	
Device type	VolumMess magnetic-inductive flowmeter for liquid media
Input	
Measuring range	0,1...10 m/s
Flow range	30 l/h...280 m³/h (depending on nominal diameter)
Pressure range	PN 16
Control input (optional)	9...24 V DC
Output	
Flow rate output	4...20 mA, active, load max. 500 Ω
Pulse output (volume)	1x optocoupler, 24 V / 20 mA, max. 1 kHz
Measuring accuracy	
Accuracy acc. DIN EN 29104	± 0,5% FS ± 2 mm/s
Conditions of use	
Media temperature	compact: 0...100°C continuous temperature, 130°C max. for 30 min. separated: 0...165°C continuous temperature
Ambient temperature	-25 ...+ 60°C
Storage temperature	-25 ...+ 60°C
Minimum conductivity of medium	Compact Version ≥ 5 µS/cm (demineralized water > 20 µS/cm)
Run-in distance	≥ 5 x DN
Run-out-distance	≥ 3 x DN
Protection class	IP 67 according EN 60529
Electromagnetic compatibility	according to EMC Directive 2014 / 30 / EU
Construction	
Process connection	Modular connection system with aseptic collar flange DIN 11864-2 Form A
Process connection adapter	Welding sockets for pipes to DIN 11850 (grooved flange to DIN 11864-2 Form A for welding to pipes to DIN 11866 - Series A), threaded sockets and tapered sockets with grooved union nut to DIN 11851, clamp to DIN 32676, etc.
Materials for compact and separate version	Housing: AISI 304 Wetted: AISI 316L Measuring tube lining PFA (FDA-compliant) Sealing: on process side EPDM (FDA-compliant)
Nominal widths	DN 10...DN 100
Electrical connection	M12 circular connector, 5 pin
Connection cable for separate version	Coil cable: 2x 0,5 mm², shielded Electrode cable: 4x 0,5 mm², shielded
Display	Graphic LC display 46x23mm, backlit, 4x 90° rotatable
Auxiliary energy	
Supply voltage	24 V DC ± 10%
Power consumption	3 W

Please check the compatibility of the seals with the medium for each application!

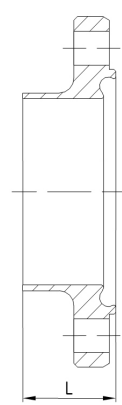
TECHNICAL DRAWINGS (Dimensions in mm)
Compact Version
 (without process connection adapter)


Nominal diameter	B [mm]	H [mm]	D [mm]	Measuring range [L/h]	Weight [kg]
					Compact Design
DN 10	104	190	90	30...3.000	4
DN 15	104	190	90	70...7.000	4
DN 25	104	190	90	180...18.000	4
DN 32	104	205	105	300...30.000	5
DN 40	104	205	105	450...45.000	5
DN 50	104	230	130	700...70.000	6
DN 65	160	230	130	1.200...120.000	6
DN 80	160	255	155	1.800...180.000	10
DN 100	200	270	170	2.800...280.000	15

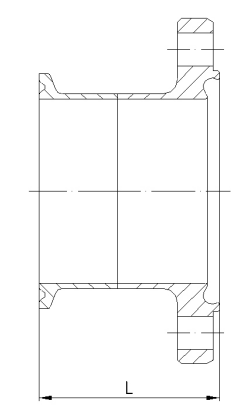
TECHNICAL DRAWINGS

Grooved flange to DIN 11864-2 Form A for
Welding to pipes according to DIN 11866 - Series A

Clamp to DIN 32676



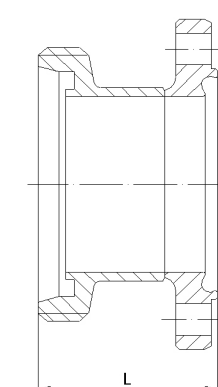
Nominal diameter	L [mm]
DN 10	25,5
DN 15	25,5
DN 25	25,5
DN 32	25,5
DN 40	25,5
DN 50	25,5
DN 65	25,5
DN 80	27,5
DN 100	27,5



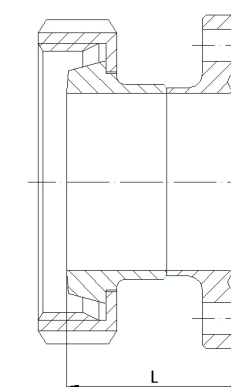
Nominal diameter	L [mm]
DN 10	49,5
DN 15	49,5
DN 25	49,5
DN 32	49,5
DN 40	49,5
DN 50	49,5
DN 65	49,5
DN 80	49,5
DN 100	71,5

Threaded connection according to DIN 11851

Tapered spigot with grooved union nut to DIN 11851

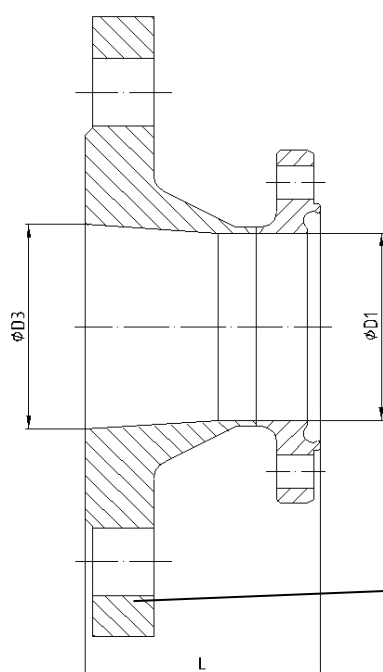


Nominal diameter	L [mm]
DN 10	49,5
DN 15	49,5
DN 25	49,5
DN 32	49,5
DN 40	49,5
DN 50	49,5
DN 65	49,5
DN 80	49,5
DN 100	71,5



Nominal diameter	L [mm]
DN 10	49,5
DN 15	49,5
DN 25	49,5
DN 32	49,5
DN 40	49,5
DN 50	49,5
DN 65	49,5
DN 80	49,5
DN 100	71,5

Flange according to DIN EN ISO 1092-1



Nominal diameter	L [mm]
DN 10	49,5
DN 15	49,5
DN 25	49,5
DN 32	49,5
DN 40	49,5
DN 50	49,5
DN 65	49,5
DN 80	49,5
DN 100	71,5

Threaded holes on the device side

Nominal diameter	Number	Nominal thread diameter
DN 10	4	M8
DN 15	4	M8
DN 25	4	M8
DN 32	4	M8
DN 40	4	M8
DN 50	4	M8
DN 65	8	M8
DN 80	8	M10
DN 100	8	M10

all non-dimensioned dimensions
according to DIN EN 1092-1
PN16, Type 11, form B (DN10 - 100)

Further dimensional drawings on request.

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ORDER INFORMATION VolumMess

Version	
K	Compact version: Transmitter directly connected to sensor
G	Separate version: Connection of the transducer by cable, 5m (standard)

Auxiliary energy	
DC	24 V DC

Electronics	
DIS	Display

Nominal diameter	
B	DN 10
C	DN 15
D	DN 25
E	DN 32
F	DN 40
G	DN 50
H	DN 65
I	DN 80
K	DN 100

VolumMess_ _ **DC** _ **DIS** _

ORDER INFORMATIONEN PROCESS CONNECTION ADAPTER**Process connection adapter**

FES	Grooved flange to DIN 11864-2 Form A for welding to pipes to DIN 11866 - Series A
FAF	FG Hygiene Flange
FMN	Tapered spigot with grooved union nut to DIN 11851
FMG	Threaded connection according to DIN 11851
FCL	Clamp acc. DIN 32676
FVA	VARIVENT® Type N
FFB	Flange to DIN EN 1092-1, type 11, form B, PN 10

Nominal diameter	
B	DN 10
C	DN 15
D	DN 25
E	DN 32
F	DN 40
G	DN 50
H	DN 65
I	DN 80
K	DN 100

FVLT

Notes on the document:

This document provides all technical data relating to the device. The texts and illustrations have been compiled with the utmost care. Nevertheless, incorrect information cannot be ruled out. The plant operator is responsible for ensuring material compatibility with the process conditions and peripherals. The devices are not suitable for use in potentially explosive atmospheres or safety-relevant plant components (SIL). Our devices are subject to continuous development, so changes are reserved.