GEMÜ®

Flow Transmitter

Construction

In the GEMÜ 3020 flow transmitter the measuring transducer is separated from the medium flowing through the measurement unit. It has integrated flow rectifiers.
The medium wetted parts are made of plastic and ceramics. The measuring transducer uses industrial standard measurement signals and is works calibrated.

Features

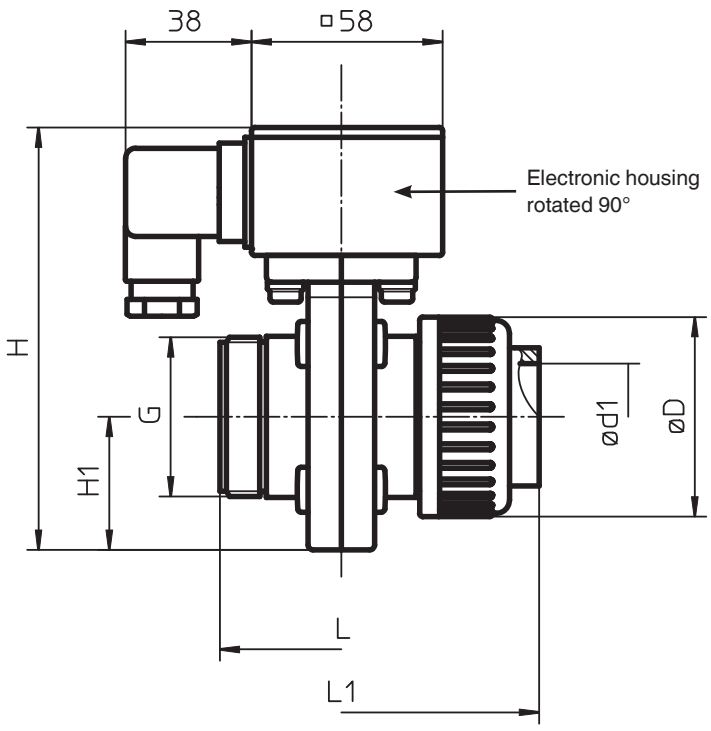
- Suitable for inert, corrosive* aqueous liquids
- High-resolution turbine measuring principle
- Linear output characteristic

Advantages

- Extremely low pressure loss
- Optional mounting position and quick mounting by means of unions
- Short inlet and outlet distances
- Precise volume flow measurement

* see information on working medium on page 2

Dimensions - GEMÜ 3020 [mm]



DN	L	L1	H1	ød1	øD	G	H
25	73	123	40	32	60	G 1 1/2	127
50	105	187	63	63	103	G 2 3/4	176

GEMÜ® 3020

Technical data

Working medium

Liquid inert or corrosive aqueous media which have no negative impact on the physical and chemical properties of the body and seal material.

Operating conditions

Storage temperature:	-20° to +60° C
Operating temperature:	-20° to +60° C
Medium temperature with body material:	
PVC (Code 1)	+10 to +60° C
PVDF (Code 20)	-20 to +80° C
Type of medium	liquid ≤ 120 mm^2/s (120cSt)

The permissible operating pressure depends on the working medium temperature, see table below.

Electrical data

Power supply		
Power supply	U_v = 24V DC ± 15 %	
Power consumption	typ. 0.6 W	
Current consumption	typ. 25 mA	
Reverse battery protection	yes	
Output signals		
Current output		
Current signal	4-20 mA	
Max. resolution	< 23 µA	
Load resistor	max. 550 Ω	
Reverse battery protection	yes	
Short-circuit proof	yes	
Frequency output		
Signal	PNP, U_v - U_{Drop}	
Max. output frequency	1.2 kHz adjustable via divider (divider ratio 1-16)	
Max. output current	0.7 A	
Max. voltage drop	U_{Drop} = 1.7 V	
Reverse battery protection	yes	
Short-circuit proof	yes	
Electrical connection		
Power and output signals		
Plug, type A, DIN EN 175301-803		
Measurement data		
Measuring range	DN 25	120 L/h - 3600 L/h
	DN 50	500 L/h - 25000 L/h
Start-up	DN 25	≥ 80 L/h
	DN 50	≥ 500 L/h
Pressure loss	DN 25	0.1 bar at 3600 L/h
	DN 50	0.2 bar at 25000 L/h
Accuracy / Repeatability		
Accuracy	± 1%	
Temperature error	typ. 0.2% / 10K	

General information

Protection class to EN 60529	IP 65	
Weight	DN 25	500 g
	DN 50	1400 g
Dimensions	see page 1	
Mounting position	optional	
Mounting note	Inlet/outlet distances 5 x DN	
Directives		
EC EMC Directive	89/336/EEC	
Emission of interference	EN 61000-6-4	
Immunity to interference	EN 61000-6-2	
EC Low voltage directive	72/23/EEC	

Materials

Medium wetted parts :	
Inner turbine components:	PVDF
Body:	PVC-U/PVDF
Bearing / shaft:	Sapphire/Ceramics (Al203)
Seals:	FPM, EPDM
Measuring transducer:	
Housing:	PP
Housing seal:	NBR
Housing bolt:	1.4303

Pressure / temperature correlation for PN 10

Temperature in °C		-20	-10	±0	5	10	20	25	30	40	50	60	70	80
Housing material		permissible operating pressure in bar												
PVC	Code 1	-	-	-	-	10.0	10.0	10.0	8.0	6.0	3.5	1.5	-	-
PVDF	Code 20	10.0	10.0	10.0	10.0	10.0	10.0	10.0	9.0	8.0	7.1	6.3	5.4	4.7

Note

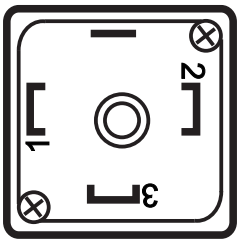
Measuring certificate with calibration data is included. Calibration with water 20° C.

To prevent blockage of the rotor due to particles contained in the medium, an upstream dirt filter (mesh width 100 µm) should be installed!

Technical data

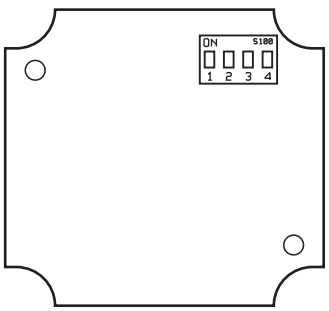
Table: Switch position - Frequency divider (see operating elements)				
S100:1	**S100:2**	**S100:3**	**S100:4**	**Divider**
OFF	OFF	OFF	OFF	1
ON	OFF	OFF	OFF	2
OFF	ON	OFF	OFF	3
ON	ON	OFF	OFF	4
OFF	OFF	ON	OFF	5
ON	OFF	ON	OFF	6
OFF	ON	ON	OFF	7
ON	ON	ON	OFF	8
OFF	OFF	OFF	ON	9
ON	OFF	OFF	ON	10
OFF	ON	OFF	ON	11
ON	ON	OFF	ON	12
OFF	OFF	ON	ON	13
ON	OFF	ON	ON	14
OFF	ON	ON	ON	15
ON	ON	ON	ON	16

Electrical connection



PIN	Signal name
1	I- / f-, GND
2	Uv, 24V DC supply voltage
3	I+, current output / f+, frequency output

Operating elements - Frequency output transducer



DIP- switch
for frequency division

Switch positions see table above

Order data

Nominal size	Code
DN 25	25
DN 50	50

Seal material	Code
FPM	4
EPDM	14

Body configuration	Code
2/2 way body	D

Position of display	Code
Without	P

Connection	Code
Union ends with DIN solvent cement sockets	7
Union ends with Inch solvent cement sockets	33*
Unions ends with DIN spigot (IR butt welding)	78
* only body material (code 1)	

Transducer		Code
Frequency output		002
Analogue output	4 - 20 mA	523

Flow rate	Code
max. flow 3600 l/h (DN 25)	3600
max. flow 25000 l/h (DN 50)	25000

Material	Code
Housing PVC grey, inner parts PVDF	1
Housing PVDF, inner parts PVDF	20

Order example	3020	25	D	7	1	4	P	002	3600
Type	3020								
Nominal size (code)		25							
Body configuration (code)			D						
Connection (code)				7					
Material (code)					1				
Seal material (code)						4			
Position of display (code)							P		
Transducer (code)								002	
Flow rate (code)									3600

For further products and accessories, please see our Product Range catalogue and Price list.
Contact GEMÜ.

TÜV CERT DIN EN ISO 9001 Zertifikat: 09 100 4136

GEMÜ® VALVES, MEASUREMENT AND CONTROL SYSTEMS

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