GEMÜ 3020

Flow transmitter, turbine

Features

- Very low pressure loss
- Short inlet/outlet distances
- Precise volume flow measurement
- Integrated flow rectifier

Description

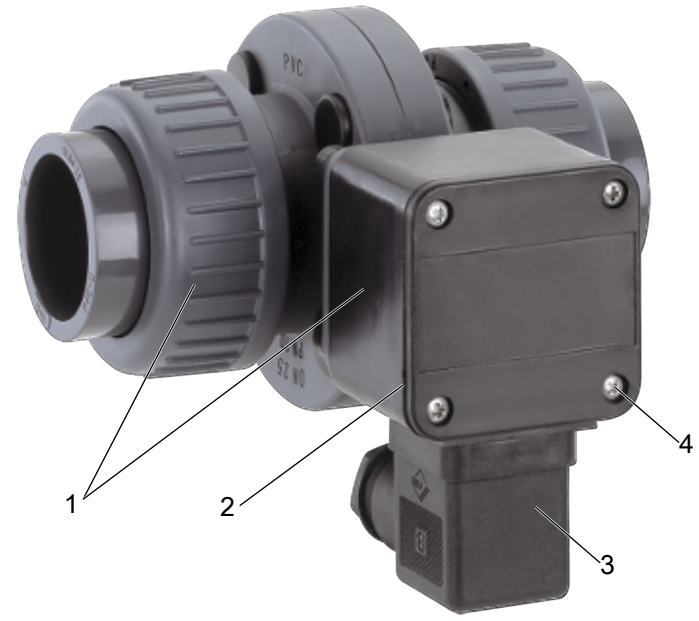
GEMÜ 3020 is a turbine flow transmitter. The measuring transducer is separated from the medium flowing through the measurement unit. It has integrated flow rectifiers. The measuring transducer uses industrial standard measurement signals and is works calibrated.

Technical specifications

- Detection range: 120 to 25000
- Media temperature: -20 to 80 °C
- Operating pressure: 0 to 10 bar
- Nominal sizes: DN 25 and DN 50
- Connection types: Union end
- Metering tube materials : PVC-U l PVDF
- Electrical connection type: Plug, design A
- Supply voltages: 24 V DC
- Conformities: EAC

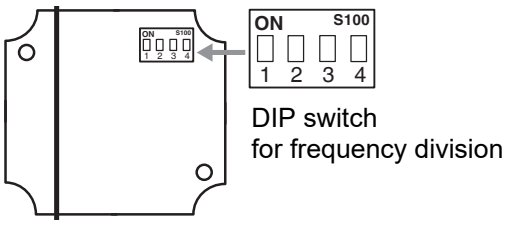
further information
webcode: GW-3020

Product description



Item	Name	Materials
1	Measuring transducer housing	PP
2	Housing seal	NBR
3	Plug	PA6
4	Housing screw	1.4303
Media wetted parts		
	Internal turbine components	PVDF
	Body	PVC-U/PVDF
	Bearing /axis	Sapphire/ceramics (AI203)
	Seals	FPM, EPDM

Operating elements - Frequency output transducer



DIP switch
for frequency division

GEMÜ CONEXO

The interaction of valve components that are equipped with RFID chips and an associated IT infrastructure actively increase process reliability.

Thanks to serialization, every valve and every relevant valve component such as the body, actuator or diaphragm, and even automation components, can be clearly traced and read using the CONEXO pen RFID reader. The CONEXO app, which can be installed on mobile devices, not only facilitates and improves the "installation qualification" process, but also makes the maintenance process much more transparent and easier to document. The app actively guides the maintenance technician through the maintenance schedule and directly provides him with all the information assigned to the valve, such as test reports, testing documentation and maintenance histories. The CONEXO portal acts as a central element, helping to collect, manage and process all data.

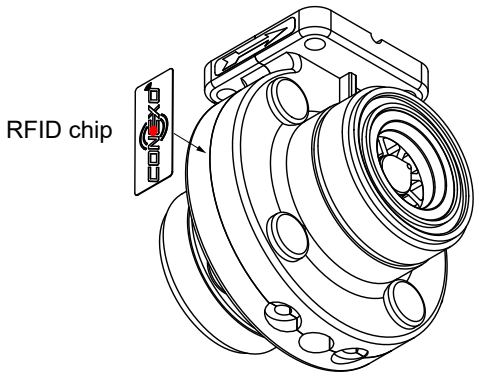
For further information on GEMÜ CONEXO please visit:

www.gemu-group.com/conexo

Ordering

GEMÜ Conexo must be ordered separately with the ordering option "CONEXO" (see order data).

Installing the RFID chip



Availability

DN	Connection type code [1]							
	7		7R		33		78	
	Material code [2]							
	1	20	1	20	1	20	1	20
25	X	X	X	-	X	-	X	X
50	X	X	X	-	X	-	X	X

1) **Connection type**
Code 7: Union end with DIN insert (socket)
Code 7R: Union end with Rp threaded socket insert
Code 33: Union end with inch insert - BS (socket)
Code 78: Union end with DIN insert (for IR butt welding)

2) **Material**
Code 1: Body PVC-U grey, internal components PVDF
Code 20: Body PVDF, internal components PVDF

Order data

The order data provide an overview of standard configurations.

Please check the availability before ordering. Other configurations available on request.

Note: A valve specific mounting kit is required for assembly. For designing the mounting kit, the valve type, nominal size, control function and actuator size must be stated.

Order codes

1 Type	Code
Turbine flow transmitter	3020

2 DN	Code
DN 25	25
DN 50	50

3 Body configuration	Code
2/2-way body	D

4 Connection type	Code
Union end with DIN insert (socket)	7
Union end with Rp threaded socket insert	7R
Union end with inch insert - BS (socket)	33
Union end with DIN insert (for IR butt welding)	78

5 Material	Code
Body PVC-U grey, internal components PVDF	1
Body PVDF, internal components PVDF	20

6 Seal material	Code
EPDM	14
FPM	4

7 Display position	Code
Without display	P

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

9 Flow rate	Code
Maximum flow rate 3600 l/h	3600
Maximum flow rate 25,000 l/h	25000

10 CONEXO	Code
without	
Integrated RFID chip for electronic identification and traceability	C

Order example

Order option	Code	Description
1 Type	3020	Turbine flow transmitter
2 DN	25	DN 25
3 Body configuration	D	2/2-way body
4 Connection type	7	Union end with DIN insert (socket)
5 Material	1	Body PVC-U grey, internal components PVDF
6 Seal material	4	FPM
7 Display position	P	Without display
8 Transducer	002	Frequency output
9 Flow rate	3600	Maximum flow rate 3600 l/h
10 CONEXO		without

Technical data

Medium

Working medium: Corrosive, inert, liquid media which have no negative impact on the physical and chemical properties of the body and seal material.

Max. permissible viscosity: liquid ≤ 120 mm²/s (120cSt)

Temperature

Media temperature:
PVC-U, grey (code 1): 10 to 60 °C
PVDF (code 20): -20 to 80 °C

Storage temperature: 0 to 40 °C

Pressure/temperature correlation

Material	Code	Temperature												
		-20	-10	0	5	10	20	25	30	40	50	60	70	80
		Permissible operating pressure												
PVC-U	**1**	-	-	-	-	10.0	10.0	10.0	8.0	6.0	3.5	1.5	-	-
PVDF	**20**	-	10.0	10.0	10.0	10.0	10.0	10.0	9.0	8.0	7.0	6.3	5.4	4.7

Permissible operating pressure in bar
Temperatures in °C

Product compliance

Low Voltage Directive: 72/23/EEC

EMC Directive:
Interference emission: EN 61000-6-4
Interference resistance: EN 61000-6-2
2014/30/EU

Mechanical data

Installation position: Optional

Protection class: IP 65 acc. to EN 60529

Weight:
DN 25: 500 g
DN 50: 1400 g

Installation note: Inlet/outlet distances 5 x DN

Measured data:

DN	Measuring range	Start-up	Pressure loss
25	120 - 3600 l/h	≥ 80 l/h	0.1 bar at 3600 l/h
50	500 - 25000 l/h	≥ 500 l/h	0.2 bar at 25000 l/h

Accuracy: ± 1.0 % FS (FS = full scale)

Temperature error: typically 0.2 % / 10 K

Note: Measuring certificate with calibration data is provided in the scope of delivery. 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!

Electrical data

Power supply

Supply voltage:	24 V DC ± 15 %
Power consumption:	typically 0.6 W
Current consumption:	typically 25 mA
Reverse battery protection:	Yes
Electrical connection type:	Plug design A, DIN EN 175301-803

Output signals

Current output

Current signal:	4 - 20 mA
Resolution:	max. 23 µA
Load resistor:	max. 550 Ω
Reverse battery protection:	Yes
Short-circuit proof:	Yes

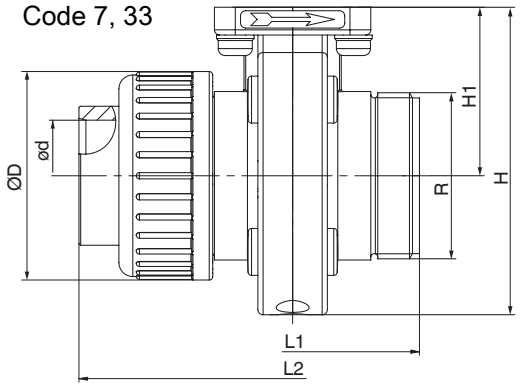
Frequency output

Type of contact:	PNP (U_v-U_{Drop}) Signal adjustable via frequency divider 1 - 16 The output signals may vary. (See correction values in device-specific calibration records)
Output frequency:	DN 25 (for 3600 l) typically 500 Hz / 500 pulses/l DN 50 (for 25000 l) typically 350 Hz / 50 pulses/l
Output current:	max. 0.7 A
Voltage drop:	max. U_{Drop} = 1.7 V
Reverse battery protection:	Yes
Short-circuit proof:	Yes

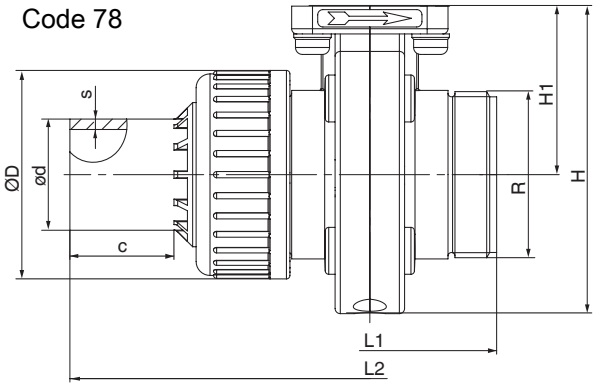
Dimensions

Measuring turbine

Code 7, 33



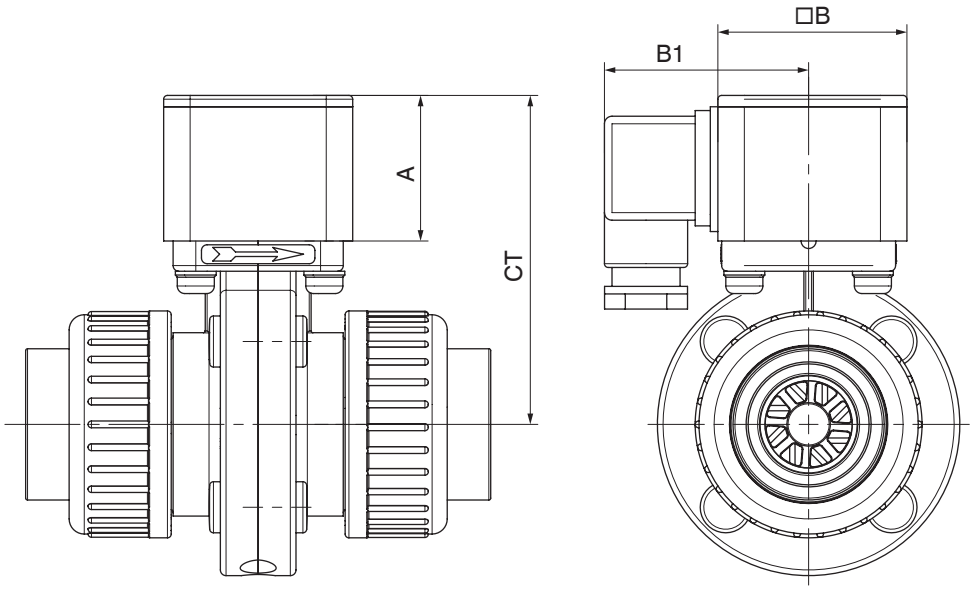
Code 78



DN	Connection code													
	7, 33, 78					7		33		78				
	Material													
	PVC-U, PVDF					PVC-U	PVDF	PVC-U, PVDF						
	L1	H	H1	øD	R	L2		ød	L2	ød	L2	ød	s	c
25	73	89	49	60	G 1½	123	119	32	123	33.6	191	32	2.4	39
50	105	137	74	103	G 2¾	187	169	63	187	60.3	241	62	3.0	43

Dimensions in mm

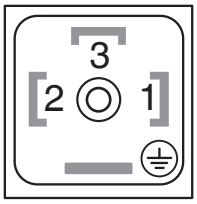
Measuring transducer



DN	A	B	B1	CT
25	39	50	55	88
50	39	50	55	113

Dimensions in mm

Electrical connection



Pin	Description
1	I- / f-, GND
2	Uv, 24 V DC supply voltage
3	I+, current output / f+, frequency output

TÜVRheinland® CERT ISO 14001

TÜVRheinland® CERT ISO 9001

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