

# GEMÜ 102

## Electrically operated solenoid valve



### Features

- Good cleanability
- Hermetic separation between medium and actuator
- The solenoid can be replaced without removing the valve body from the piping

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### Description

The GEMÜ 102 directly controlled 2/2-way solenoid valve has a completely plastic encapsulated coil. The armature is sealed by a bellows made of PTFE backed by an additional safety diaphragm. The valve body is available in various materials and with a straight through or angle valve body design.

### Technical specifications

- Nominal sizes\*: DN 6 to 10
- Operating pressure\*: 0 to 4 bar
- Media temperature: -20 to 100 °C
- Supply voltages: 12 V DC | 120 V, 50/60 Hz | 230 V AC, 50/60 Hz | 24 V AC, 50/60 Hz | 24 V DC
- Valve body materials: PVC-U | PVDF

\* depending on version and/or operating parameters



## Product line



Nominal sizes	DN 2 to 6	DN 6 to 10	DN 10 to 15	DN 10 to 50	DN 15 to 50
<b>Voltage</b>					
12 V DC	●	●	●	-	-
120 V, 50/60 Hz	●	●	●	●	●
230 V AC, 50/60 Hz	●	●	●	●	●
24 V AC, 50/60 Hz	●	●	●	●	●
24 V DC	●	●	●	●	●
<b>Media temperature</b>	-20 to 100 °C	-20 to 100 °C	-20 to 100 °C	-20 to 60 °C	-20 to 60 °C
<b>Operating pressure</b>	0 to 6 bar	0 to 4 bar	0 to 2 bar	0 to 6 bar	0 to 6 bar
<b>Connection types</b>					
Solvent cement socket	●	●	●	●	-
Solvent cement spigot	-	-	-	●	●
Spigot	-	-	-	●	●
Threaded socket	●	●	●	●	-
Union end	-	-	-	●	●

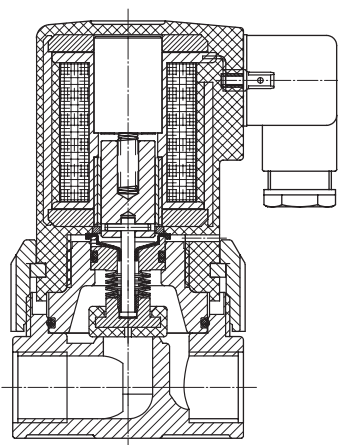
\* depending on version and/or operating parameters

## Product description



Item	Name	Materials
1	Plug	PA
2	Coil housing	PP
3	Union of valve housing	PVC-U, grey or PVDF
4	Valve body	PVC-U, grey or PVDF
	Seal materials	FPM, PTFE or EPDM

## Sectional view



## 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:**

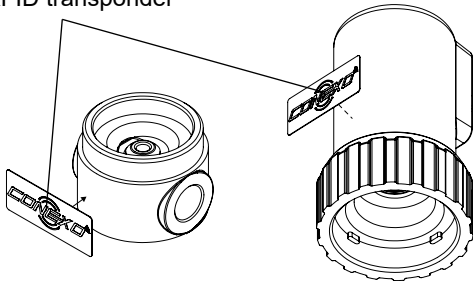
[www.gemu-group.com/conexo](http://www.gemu-group.com/conexo)

### Ordering

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

### Installing the RFID transponder

RFID transponder



## Availability

### Voltage/Frequency

	Standard	UL approval
24 V 50/60 Hz	X	X
120 V 50/60 Hz	X	-
230 V 50/60 Hz	X	-
12 V DC	X	X
24 V DC	X	X

### Valve body material

	PVC-U	PVDF
Threaded socket	X	X
Solvent cement socket	X	-

## Order data

The order data provide an overview of standard configurations.

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

## Order codes

1 Type	Code
Solenoid valve, directly controlled	102

2 DN	Code
DN 6	6
DN 8	8
DN 10	10

3 Body configuration	Code
2/2-way body	D
Angle valve body	E

4 Connection type	Code
Threaded socket DIN ISO 228	1
Solvent cement socket DIN	2

5 Valve body material	Code
PVC-U, grey	1
PVDF	20

6 Seal material	Code
FPM	4
PTFE	5

6 Seal material	Code
EPDM	14

7 Control function	Code
Normally closed (NC)	1

8 Voltage	Code
12 V	12
24 V	24
120 V	120
230 V	230

9 Frequency	Code
DC	DC
50 - 60 Hz	50/60

10 Special specification	Code
UL approval	U
Without	

11 CONEXO	Code
Integrated RFID chip for electronic identification and traceability	C

## Order example

Order option	Code	Description
1 Type	102	Solenoid valve, directly controlled
2 DN	6	DN 6
3 Body configuration	D	2/2-way body
4 Connection type	1	Threaded socket DIN ISO 228
5 Valve body material	1	PVC-U, grey
6 Seal material	4	FPM
7 Control function	1	Normally closed (NC)
8 Voltage	230	230 V
9 Frequency	50/60	50 - 60 Hz
10 Special specification		Without
11 CONEXO	C	Integrated RFID chip for electronic identification and traceability

## Technical data

### Medium

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

### Temperature

**Media temperature:** PVC-U, grey (code 1): 10 to 60 °C  
 PVDF (code 20): -20 to 100 °C

**Ambient temperature:** 10 to 40 °C

**Storage temperature:** 0 to 40 °C

### Product compliance

**Machinery Directive:** 2006/42/EC

**Pressure Equipment Directive:** 2014/68/EU

**Low Voltage Directive:** 2014/35/EU

**EMC Directive:** 2014/30/EU  
 EN 55011:1991 (150 kHz to 30 MHz)  
 EN 55014:1993 (148.5 kHz to 30 MHz)

**Approvals:** UL approval, UR (recognized) Y10Z2  
 Only for 24 V 50/60 Hz, 230 V 50/60 Hz, 12 V DC and 24 V DC

## Mechanical data

Protection class:	IP 65
Weight:	0.21 kg
Cable gland:	PG 11

## Pressure

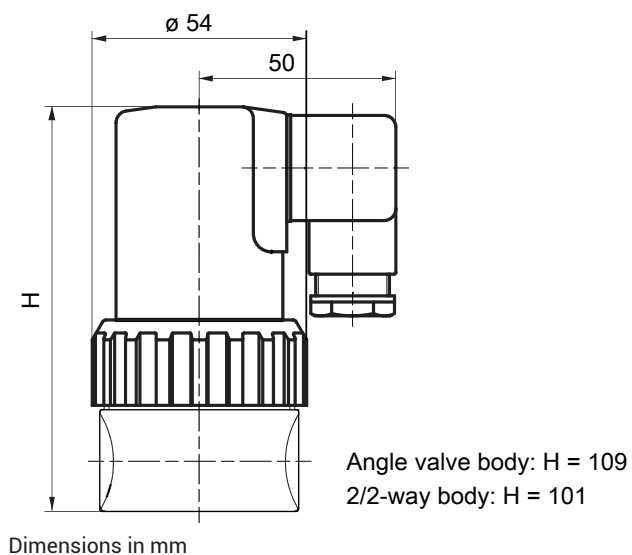
Operating pressure:	DN 6: 0 to 4.0 bar DN 8: 0 to 2.0 bar DN 10: 0 to 1.0 bar
Kv values:	DN 6: 0.75 m <sup>3</sup> /h DN 8: 0.90 m <sup>3</sup> /h DN 10: 1.10 m <sup>3</sup> /h

## Electrical data

Power consumption:	Pull in / Hold in AC and DC voltage: 9.0 W / 8.45 W (with UL approval)
Permissible voltage tolerance:	±10 % to VDE 0580
Duty cycle:	Continuous duty
Wiring note:	Special wiring on request. When using electronic switches and additional wiring, carefully design out any potential residual currents upon installation.
Installation note:	Please note: A plug with an integrated bridge rectifier must be used for the AC design (provided in the scope of delivery).

## Dimensions

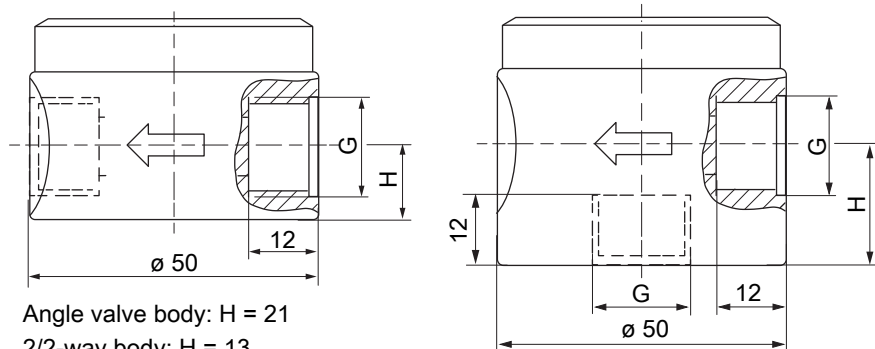
### Actuator dimensions





## Body dimensions

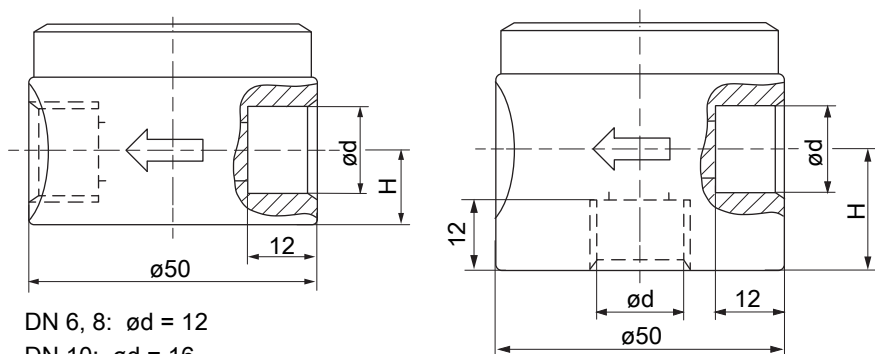
### Threaded socket (code 1)



Angle valve body:  $H = 21$   
 2/2-way body:  $H = 13$   
 DN 6, 8:  $G = G1/4$   
 DN 10:  $G = G3/8$

Dimensions in mm

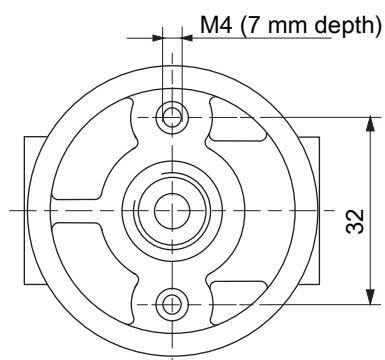
### Solvent cement socket (code 2)



DN 6, 8:  $\varnothing d = 12$   
 DN 10:  $\varnothing d = 16$   
 Angle valve body  $H = 21$   
 2/2-way body  $H = 13$

Dimensions in mm

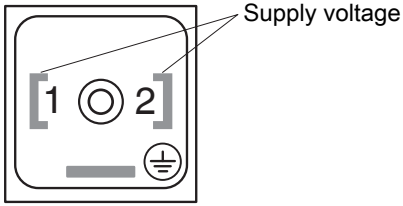
## Mounting dimensions



Dimensions in mm

## Electrical connection

### Connection diagram for plug



## Accessories



### GEMÜ 1220

#### Plug

GEMÜ 1220 is a plug complying with DIN EN 175301-803 design A with a light and with or without interference suppressor. Various versions available. The DC voltage version with a bridge rectifier has a plug with reverse battery protection.

#### Ordering information

For ordering information see datasheet GEMÜ 1220



### GEMÜ 1221

#### Plug

GEMÜ 1221 is a plug complying with DIN EN 175301-803 design A without light and with or without interference suppressor. Various versions available. The DC voltage version with a bridge rectifier has a plug with reverse battery protection.

#### Ordering information

Type	Voltage/Frequency	Item number
1220	24 V DC	88397314
	230 V AC	88004447



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