

GEMÜ 205

Electrically operated solenoid valve



Features

- Hermetic separation between medium and actuator
- In case of power failure operation possible by manual override
- Standard integral optical position indicator

Description

The GEMÜ 205 directly controlled 2/2-way plastic solenoid valve has a high performance coil. It is hermetically separated from the medium by means of a flexible PTFE bush. The armature is sealed by a bellows made of PTFE backed by an additional safety diaphragm. The plug has a rectifier for use with an AC supply. A manual override and an optical position indicator are integrated as standard.

Technical specifications

- **Media temperature:** -20 to 60 °C
- **Ambient temperature:** 10 to 40 °C
- **Operating pressure:** 0 to 6 bar
- **Nominal sizes:** DN 10 to 50
- **Connection types:** Solvent cement socket | Spigot | Threaded connection | Union end
- **Connection standards:** DIN | ISO
- **Body materials:** PVC-U, grey | PVDF
- **Supply voltages:** 120 V AC, 50/60 Hz | 230 V AC, 50/60 Hz | 24 V AC, 50/60 Hz | 24 V DC

Technical data depends on the respective configuration



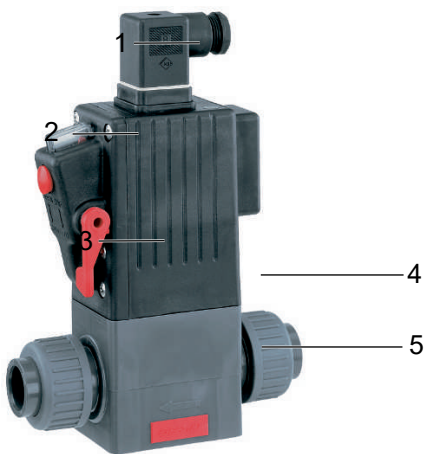
Product line



	GEMÜ 52	GEMÜ 102	GEMÜ 202	GEMÜ 205	GEMÜ 225
Nominal sizes	DN 2 to 6	DN 6 to 10	DN 10 to 15	DN 10 to 50	DN 15 to 50
Voltage					
12 V DC	●	●	●	-	-
120 V AC, 50/60 Hz	●	●	●	●	●
230 V AC, 50/60 Hz	●	●	●	●	●
24 V AC, 50/60 Hz	●	●	●	●	●
24 V DC	●	●	●	●	●
Media temperature *	-20 to 100 °C	-20 to 100 °C	-20 to 100 °C	-20 to 60 °C	-20 to 60 °C
Operating pressure *	0 to 6 bar	0 to 4 bar	0 to 2 bar	0 to 6 bar	0 to 6 bar
Connection types					
Solvent cement socket	-	●	●	●	-
Spigot	-	-	-	●	●
Threaded connection	●	●	●	●	-
Union end	-	-	-	●	●
Body material					
PVC-U	-	-	-	-	●
PVC-U, grey	●	●	●	●	-
PVDF	●	●	●	●	-

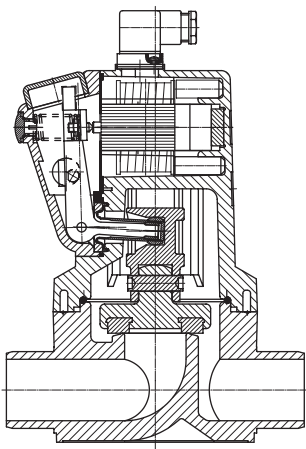
* depending on version and/or operating parameters

Product description



Item	Name	Materials
1	Plug	PA
2	Optical position indicator	PVC
3	Manual override	PBT
4	Valve housing	PBT
5	Valve body	PVC-U, grey or PVDF
	Seal materials	FKM, PTFE or EPDM

Sectional view



Availability

Material Code ¹⁾	Connection Code ²⁾	DN 10	DN 15	DN 20	DN 25	DN 32	DN 40	DN 50
1	0	-	X	X	X	X	X	X
	1	X	-	-	-	-	-	-
	2	X	-	-	-	-	-	-
	7	X	X	X	-	-	-	-
	30	-	X	X	X	-	-	-
	31	X	-	-	-	-	-	-
20	7	X	X	X	-	-	-	-

1) **Valve body material**

Code 1: PVC-U, grey

Code 20: PVDF

2) **Connection type**

Code 0: Spigot DIN

Code 1: Threaded socket DIN ISO 228

Code 2: Solvent cement socket DIN

Code 7: Union end with insert (socket) – DIN

Code 30: Spigot - inch, for welding or solvent cementing, dependent on body material

Code 31: Threaded socket NPT

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, optical position indicator, manual override	205

2 DN	Code
DN 10	10
DN 15	15
DN 20	20
DN 25	25
DN 32	32
DN 40	40
DN 50	50

3 Body configuration	Code
2/2-way body	D

4 Connection type	Code
Spigot DIN	0
Threaded socket DIN ISO 228	1
Solvent cement socket DIN	2
Union end with insert (socket) – DIN	7
Spigot - inch, for welding or solvent cementing, dependent on body material	30

4 Connection type	Code
Threaded socket NPT	31

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

6 Seal material	Code
FKM	4
PTFE	5
EPDM	14

7 Control function	Code
Normally closed (NC)	1

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

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

Order example

Ordering option	Code	Description
1 Type	205	Solenoid valve, directly controlled, optical position indicator, manual override
2 DN	15	DN 15
3 Body configuration	D	2/2-way body
4 Connection type	0	Spigot DIN
5 Valve body material	1	PVC-U, grey
6 Seal material	5	PTFE
7 Control function	1	Normally closed (NC)
8 Voltage	230	230 V
9 Frequency	50/60	50 - 60 Hz

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 – 40 °C

Storage temperature: 0 – 40 °C

Pressure

Operating pressure:	DN 10	DN 15	DN 20	DN 25	DN 32*	DN 40	DN 50
	0 - 6.0	0 - 2.0	0 - 1.0	0 - 1.0	0 - 1.0	0 - 0.2	0 - 0.2

* 24 V DC: 0 – 0.5 bar

All pressures are gauge pressures.

Nominal size corresponds to valve seat diameter.

Kv values:	DN 10	DN 15	DN 20	DN 25	DN 32	DN 40	DN 50
	0.8	1.8	2.3	6.0	7.5	9.5	12.5

Kv values in m³/h

Leakage rate:	Seat seal	Standard	Test procedure	Leakage rate	Test medium
	EPDM, FKM, PTFE	DIN EN 12266-1	P12	A	Air

Product compliance

Machinery Directive: 2006/42/EC

Low Voltage Directive: 2014/35/EU

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

Mechanical data

Protection class: IP 65

Weight:	DN 10	DN 15	DN 20	DN 25	DN 32	DN 40	DN 50
	0.85	0.9	0.9	2.8	2.8	3.6	3.6

Weights in kg

Electrical data

Power consumption:

AC operation		
Pull in	DN 10 - 20	125 VA
	DN 25 - 50	400 VA
Hold in	DN 10 - 20	12 VA
	DN 25 - 50	30 VA
DC operation		
Pull in	DN 10 - 20	35 W
	DN 25 - 50	70 W
Hold in	DN 10 - 20	7 W
	DN 25 - 50	18 W

Permissible voltage tolerance: $\pm 10\%$ to VDE 0580

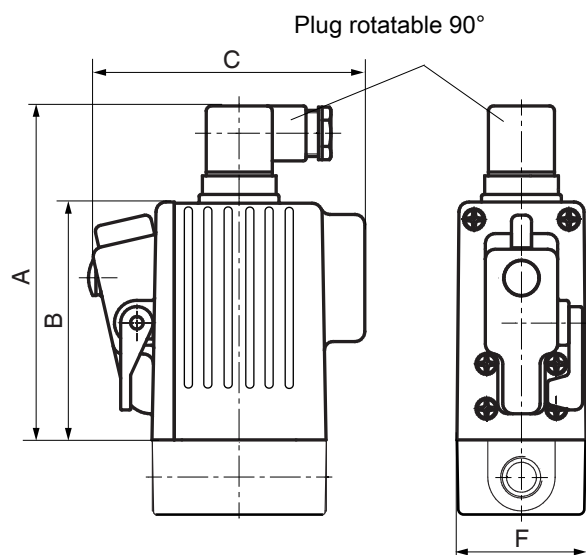
Duty cycle: Continuous duty

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: The DC solenoid is designed for unsmoothed voltages, e.g. as obtained from a bridge rectifier.

Dimensions

Actuator

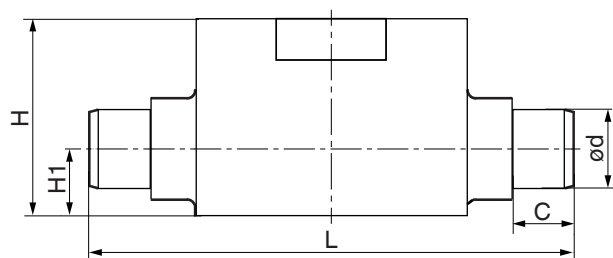


	DN 10	DN 15	DN 20	DN 25	DN 32	DN 40	DN 50
A	134	134	134	167	167	196	196
B	100	100	100	128	128	157	157
C	110	110	110	144	144	158	158
F	52	52	52	88	88	110	110

Dimensions in mm

Body dimensions

Solvent cement spigot (code 0, 30)



	Connection Code ¹⁾	DN 15	DN 20	DN 25	DN 32	DN 40	DN 50
C		16.0	19.0	22.0	26.0	31.0	39.0
ød	0	20.0	25.0	32.0	40.0	50.0	63.0
	30	21.3	26.7	33.4	-	-	-
H		50.0	50.0	72.0	72.0	85.0	85.0
H1		17.0	17.0	24.0	24.0	34.0	34.0
L		124.0	144.0	154.0	174.0	194.0	224.0

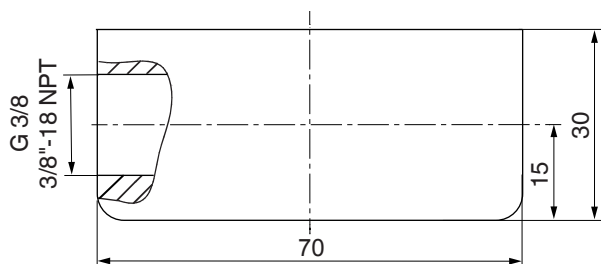
Dimensions in mm

1) Connection type

Code 0: Spigot DIN

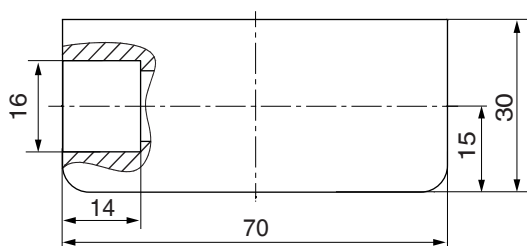
Code 30: Spigot - inch, for welding or solvent cementing, dependent on body material

Threaded socket (code 1, 31)

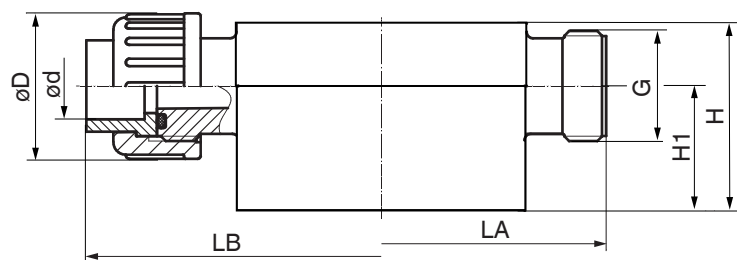


Dimensions in mm

Solvent cement socket (code 2)



Dimensions in mm

Union end with insert (code 7)

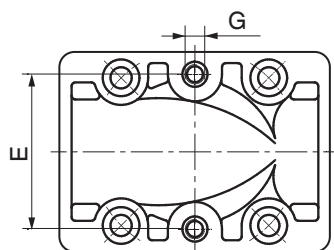
	Material Code ¹⁾	DN 10	DN 15	DN 20
$\varnothing d$		16.0	20.0	25.0
G		G 3/4	G 1	G 1 1/4
H		45.0	63.0	63.0
H1		30.0	30.0	30.0
$\varnothing D$	1	35.0	43.0	53.0
LA		108.0	108.0	108.0
LB		142.0	146.0	152.0
$\varnothing D$	20	34.0	47.0	57.0
LA		106.0	106.0	106.0
LB		142.0	144.0	148.0

Dimensions in mm

1) Valve body material

Code 1: PVC-U, grey

Code 20: PVDF

Mounting dimensions

	Connection Code ¹⁾	DN 10	DN 15	DN 20	DN 25	DN 32	DN 40	DN 50
E		40.0	40.0	40.0	44.5	44.5	44.5	44.5
G	0,1,2,7	M5	M5	M5	M8	M8	M8	M8
	30,31	8 - 36 UNF	10 - 32 UNF	10 - 32 UNF	5/16" - 32 UNF	-	-	-

Dimensions in mm

1) Connection type

Code 0: Spigot DIN

Code 1: Threaded socket DIN ISO 228

Code 2: Solvent cement socket DIN

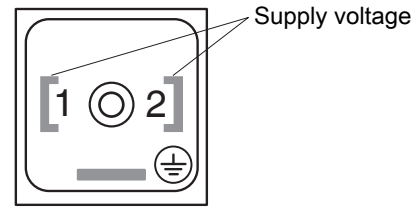
Code 7: Union end with insert (socket) – DIN

Code 30: Spigot - inch, for welding or solvent cementing, dependent on body material

Code 31: Threaded socket NPT

Electrical connection

Connection diagram for plug



Accessories



GEMÜ 2026

Plug

GEMÜ 2026 are plugs with lights, with or without interference suppression. Various versions available. The DC voltage version with a bridge rectifier has a plug with reverse battery protection. The scope of supply comprises a gasket made from NBR and a M3x35 central screw

Ordering information

Designation 1	Design	Item
2026000Z AM1600S2 2C1	24V DC, M16, suppressor diode, 2-pin	88668463
2026000Z AM16G0S2 2C1	24V DC, M16, green LED, suppressor diode, 2-pin	88668468
2026000Z AM16GBV2 2C1	24V DC, M16, green LED, bridge rectifier, varistor, 2-pin	88668469
2026000Z AM16GBS2 2C1	24V DC, M16, green LED, bridge rectifier, suppressor diode, 2-pin	88668470
2026000Z AM16G002 2C1	24V DC, M16, green LED, 2-pin	88668471
2026000Z AM16G0V2 2C1	24V DC, M16, varistor, green LED, 2-pin	88668473
2026000Z AM160BV2 2L4	230V 50/60Hz, M16, bridge rectifier, varistor, 2-pin	88668464
2026000Z AM160002 2L4	230V 50/60Hz, M16, 2-pin	88668465
2026000Z AM160003 2L4	230V 50/60Hz, M16, 3-pin	88668466
2026000Z AM160002 2L42M	230V 50/60Hz, M16, 2-pin, 2 m cable	88668474
2026000Z AM160002 2L45M	230V 50/60Hz, M16, 2-pin, 5 m cable	88668475
2026000Z AM16Y002 2L4	230V 50/60Hz, M16, yellow LED, 2-pin	88668476
2026000Z AM16Y0S2 2L4	230V 50/60Hz, M16, yellow LED, suppressor diode, 2-pin	88668477

Design dependent on selected product configuration. Contact GEMÜ.



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