

Solenoid Valve, Plastic

Construction

The GEMÜ 205 directly controlled 2/2-way plastic solenoid valve has a high performance coil which is hermetically separated from the medium by means of a flexible PTFE bush. The valve seal is carried in a pendulum bearing. The electrical connection is made via a plug complying with DIN EN 175301-803 form A. The DC design includes a rectifier in the terminal enclosure, so that the valve can be used with an AC supply. The valve has a manual override and an optical position indicator as standard.

Features

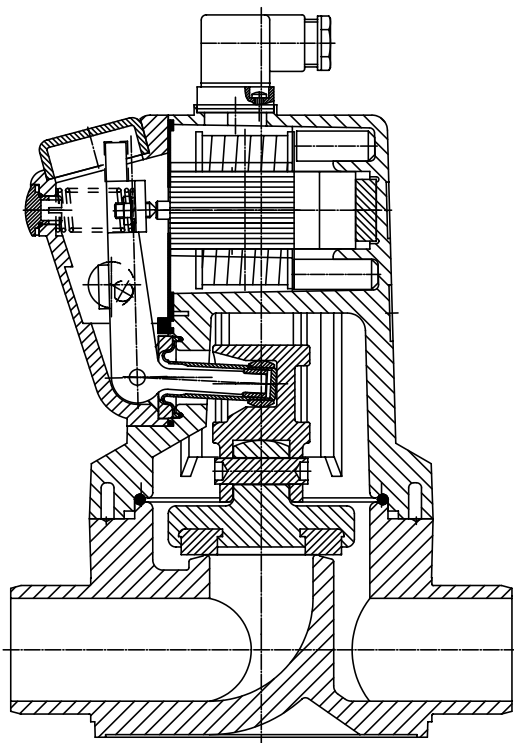
- Suitable for inert and corrosive* liquids and gases
- Corrosion-resistant, therefore suitable for water treatment plants, washing and cleaning installations, the food and foodstuffs industries, the chemical industry, electroplating, titration equipment, for the photographic industry and for laboratory, analytical and medical apparatus.

Advantages

- Hermetic separation of medium and actuator
- Manual override allows the valve to be opened and closed during a power failure
- Optical position indicator

* see information on working medium on page 2

Sectional drawing [mm]



Technical data

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.

Perm. temperature of working medium	
PVC-U (Code 1)	10 ... 60 °C
PVDF (Code 20)	-20 ... 60 °C

General information

Protection class to EN 60529	IP 65
Rating	Continuously rated
Max. permissible ambient temperature	40 °C

Directives

EC low voltage	2006/95/EG
EMV directive	2004/108/EG

Conformities

148,5 kHz...30 MHz	EN 55014: 1993
150,0 kHz...30 MHz	EN 55011: 1993

Electrical data

Power supply*

Supply voltage (±10 %)

24 V AC	50/60 Hz
120 V AC	50/60 Hz
230 V AC	50/60 Hz
24 V DC	-

Mains frequency

Power consumption

AC voltage

DN 10 - 20	Pull-in power 125 VA	Hold-in power 12 VA
DN 25 - 50	400 VA	30 VA

DC voltage

DN 10 - 20	35 W	7 W
DN 25 - 50	70 W	18 W

* perm. voltage tolerance according to VDE 0580

Pressure / temperature correlation for plastic

Temperature in °C (plastic body)		-20	-10	±0	5	10	20	25	30	40	50	60
Valve body material		permissible operating pressure in bar										
PVC-U	Code 1	-	-	-	-	6.0	6.0	6.0	4.8	3.6	2.1	0.9
PVDF	Code 20	6.0	6.0	6.0	6.0	6.0	6.0	6.0	5.4	4.8	4.3	3.8

Data for extended temperature ranges on request. Please note that the ambient temperature and medium temperature generate a combined temperature at the valve body which must not exceed the above values.

Nominal size*	Operating pressure	K _V -value	Weight
DN	[bar]	[m³/h]	[kg]
10	0 - 6.0	0.8	0.85
15	0 - 2.0	1.8	0.90
20	0 - 1.0	2.3	0.90
25	0 - 1.0	6.0	2.80
32	0 - 1.0**	7.5	2.80
40	0 - 0.2	9.5	3.60
50	0 - 0.2	12.5	3.60

* Nominal size corresponds to valve seat diameter All pressures are given as gauge values.

** 24 V DC: 0 - 0.5 bar

Notes

Installation note

Caution: DC solenoids are designed for unsmoothed voltages, e.g. as obtained from a bridge rectifier.

Wiring note

Special wiring on request. When using electronic switches and additional wiring avoid inadmissible residual currents by proper design.

Order data

Body configuration	Code
2/2-way body	D

Control function	Code
Normally closed	1

Connections	Code
Solvent cement spigots, DIN	0
Threaded sockets DIN ISO 228	1
Solvent cement sockets, DIN	2
Union ends with DIN insert (socket)	7
Solvent cement spigots, inch	30
Threaded sockets NPT	31

Supply voltage	Code
24 V AC	24
120 V AC	120
230 V AC	230
24 V DC	24

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

Mains frequency	Code
50/60 Hz	50/60
-	DC

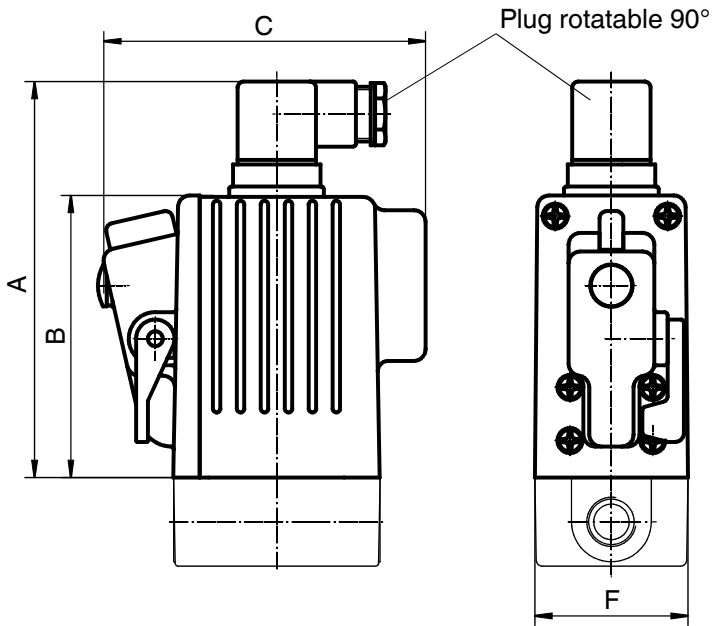
Seal material	Code
FPM	4
PTFE	5
EPDM	14

Order example	205	15	D	0	1	5	1	230	50/60
Type	205								
Nominal size		15							
Body configuration (code)			D						
Connections (code)				0					
Valve body material (code)					1				
Seal material (code)						5			
Control function (code)							1		
Supply voltage (code)								230	
Frequency (code)									50/60

Order information: Suitable plug acc. to DIN EN 175301-803 form A, loose plug: type GEMÜ 1220/1221

Voltage / Frequency availability	
AC: 24 V, 120 V, 230 V	50/60 Hz
DC: 24 V	DC
Other voltages on request	

Actuator dimensions [mm]

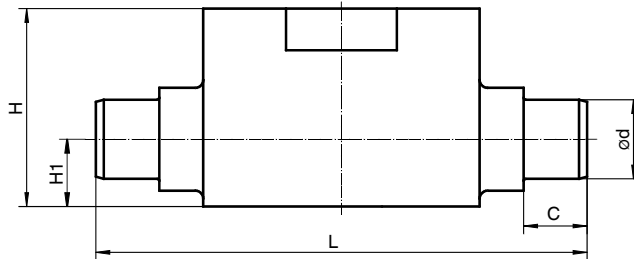


DN	A	B	C	F
10	134	100	110	52
15	134	100	110	52
20	134	100	110	52
25	167	128	144	88
32	167	128	144	88
40	196	157	158	110
50	196	157	158	110

Body dimensions [mm]

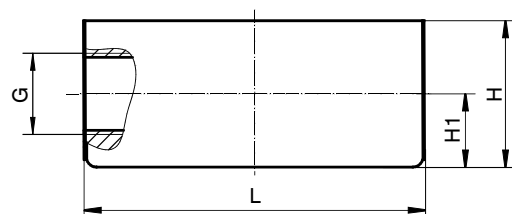
Solvent cement spigots - Connection code 0, 30; Valve body material: PVC-U (code 1)

DN	C	ød		H	H1	L
		Code 0	Code 30			
15	16	20	21.34	50	17	124
20	19	25	26.67	50	17	144
25	22	32	33.40	72	24	154
32	26	40	-	72	24	174
40	31	50	-	85	34	194
50	39	63	-	85	34	224

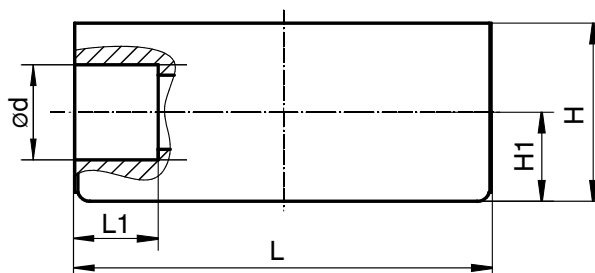


Threaded sockets - Connection code 1, 31; Valve body material: PVC-U (code 1)

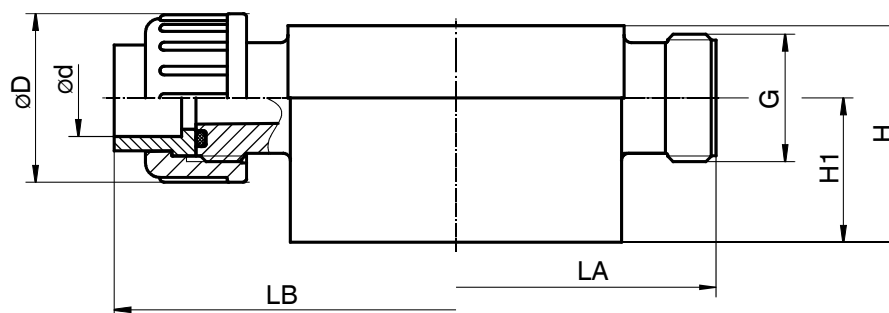
DN	G		H	H1	L
	Code 1	Code 31			
10	G 3/8	3/8" - 18 NPT	30	15	70



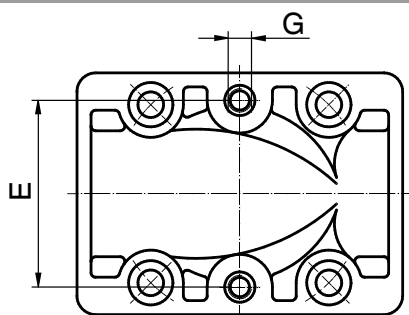
Solvent cement sockets - Connection code 2; Valve body material: PVC-U (code 1)					
DN	ød	H	H1	L	L1
10	16	30	15	70	14



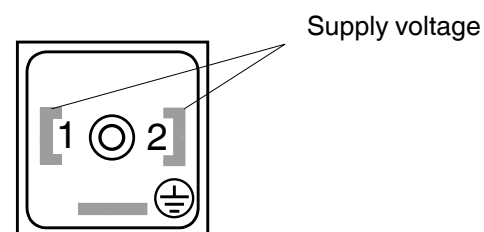
Union ends with insert - Connection code 7 [mm] Valve body material: PVC-U (code 1), PVDF (code 20)										
DN	øD		ø d	H	H1	LA		LB		G
	Material code 1	Material code 20				Material code 1	Material code 20	Material code 1	Material code 20	
10	35	34	16	45	30	108	106	142	142	G 3/4
15	43	47	20	63	30	108	106	146	144	G 1
20	53	57	25	63	30	108	106	152	148	G 1 1/4



Mounting dimensions [mm]



Connection diagram for plug Form A (DIN EN 175301-803)



DN	E	G	
		Connection code 0, 1, 2, 7	Connection code 30, 31
10	40,0	M5	8 - 36 UNF
15	40,0	M5	10 - 32 UNF
20	40,0	M5	10 - 32 UNF
25	44,5	M8	5/16" - 32 UNF
32	44,5	M8	-
40	44,5	M8	-
50	44,5	M8	-

The GEMÜ 1220 plug (with light) or GEMÜ 1221 (without light) is available as a spare part.

Overview of valve bodies for GEMÜ 205

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

Other GEMÜ plastic solenoid valves



GEMÜ 52, 102, 202
DN 2 - 15 (0 - 6 bar)



GEMÜ 105
DN 6 and 10 (0 - 6 bar)



GEMÜ 225
DN 15 - 50 (0 - 6 bar)

Other GEMÜ brass or stainless steel solenoid valves



GEMÜ 8253
DN 8 - 50 (0 - 10 bar)



GEMÜ 8257
DN 10 (0 - 10 bar)



GEMÜ 8258
DN 8 - 50 (0,1 - 16 bar)



GEMÜ 8259
DN 2 - 5 (0 - 20 bar)

For other solenoid valves, accessories and other products,
please see our Product Range catalogue and Price List.
Contact GEMÜ.

GEMÜ® VALVES, MEASUREMENT
AND CONTROL SYSTEMS

