

GEMÜ 8500

Electrically operated pilot solenoid valve



Features

- Optional installation position
- Standard manual override
- Rotatable solenoid coil
- Suitable for activating single or double acting pneumatic actuators
- Available with NAMUR connection as an option

Description

The GEMÜ 8500 servo assisted 3/2 or 5/2-way pilot solenoid valve is indirectly controlled. The body is made of aluminium. The plastic encapsulated coil is detachable. The piston valve has a soft elastomer seal.

Technical specifications

- **Media temperature :** -10 to 60 °C
- **Ambient temperature:** -10 to 60 °C
- **Operating pressure :** 2.5 to 10 bar
- **Nominal size:** DN 7
- **Electrical connection types:** Plug, design B
- **Supply voltages:** 110 V AC, 50/60 Hz | 12 V DC | 230 V AC, 50/60 Hz | 24 V AC, 50/60 Hz | 24 V DC
- **Connection types:** thread
- **Body materials:** Aluminium
- **Conformities:** ATEX | FMEDA

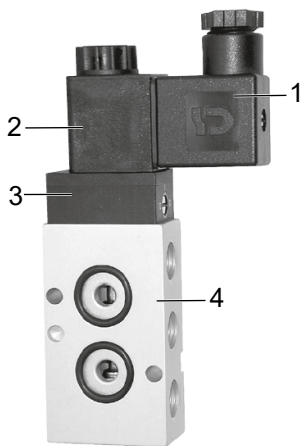
Technical data depends on the respective configuration



Product line

						
	GEMÜ 0322	GEMÜ 0324	GEMÜ 0326	GEMÜ 8303	GEMÜ 8500	GEMÜ 8506
Media temperature	-10 to 50 °C	-10 to 50 °C	-10 to 50 °C	-10 to 60 °C	-10 to 60 °C	-10 to 50 °C
Ambient temperature	-10 to 50 °C	-10 to 50 °C	-10 to 50 °C	-10 to 60 °C	-10 to 60 °C	-10 to 50 °C
Operating pressure	0 to 10 bar	0 to 10 bar	0 to 10 bar	1 to 10 bar	2,5 to 10 bar	2 to 8 bar
Nominal sizes	DN 2	DN 2	DN 2	DN 2	DN 7	DN 6
Electrical connection type						
M12 connector	-	●	-	-	-	-
Plug, design A	●	●	●	●	-	●
Plug, design B	-	-	-	-	●	-
M12 plug	●	-	●	-	-	-
Voltage						
110 V AC, 50 Hz	-	-	-	●	-	●
110 V AC, 50/60 Hz	-	-	-	-	●	-
12 V DC	-	-	-	-	●	-
120 V AC, 50/60 Hz	●	●	●	-	-	-
230 V AC, 50 Hz	-	-	-	●	-	●
230 V AC, 50/60 Hz	●	●	●	-	●	-
24 V AC, 50 Hz	-	-	-	●	-	●
24 V AC, 50/60 Hz	●	●	●	-	●	-
24 V DC	●	●	●	●	●	●
Connection types						
thread	●	●	●	●	●	●
Body material						
1.4581	-	-	-	●	-	-
Aluminium	-	-	-	●	●	●
PA	●	●	●	-	-	-
Conformities						
ATEX	●	●	●	●	●	-
EAC	●	●	●	●	-	●
FMEDA	●	●	●	-	●	-
IECEX	-	-	-	-	●	-

Product description



Item	Name	Materials
1	Plug	PA
2	Coil housing	PA
3	Pilot head	PA
4	Valve body	(AlCuMgSn)
	Seal materials	NBR

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
Pilot valve	8500
2 Way version	Code
3/2-way	32
5/2-way	52
3 NAMUR	Code
Flex plate	F
NAMUR	N
Thread	
4 DN	Code
DN 7	7
5 Body configuration	Code
Multi-port design	M
6 Connection type	Code
G 1/4, threaded socket, DIN ISO 228	G2
7 Valve body material	Code
AA-2015, AlCuMgSn	14
8 Seal material	Code
NBR	2

9 Control function	Code
Combined spring return	1
Pneumatic spring (ATEX)	A
10 Voltage/Frequency	Code
12 V DC	B1
24 V DC	C1
24 V/50–60 Hz	C4
48 V DC	D1
110 V/50–60 Hz	E4
230 V/50–60 Hz	L4
11 Special version	Code
Without	
180° rotation	R
12 Special version	Code
Without	
UL approval	U
ATEX version	X
13 Additional function	Code
Without	
Distance plate G3/8",G1/2" included	Z

Order example

Ordering option	Code	Description
1 Type	8500	Pilot valve
2 Way version	32	3/2-way
3 NAMUR	N	NAMUR
4 DN	7	DN 7
5 Body configuration	M	Multi-port design
6 Connection type	G2	G 1/4, threaded socket, DIN ISO 228
7 Valve body material	14	AA-2015, AlCuMgSn
8 Seal material	2	NBR
9 Control function	1	Combined spring return
10 Voltage/Frequency	C1	24 V DC
11 Special version		Without
12 Special version		Without
13 Additional function		Without

Technical data

Medium

Working medium: Filtered, lubricated or unlubricated compressed air which has no negative impact on the physical and chemical properties of the valve body and seal material.
Air quality acc. to ISO 8573-1:2010:7-4-4 for particles, water and oil

Temperature

Media temperature: AC operation: -10 to 50 °C
DC operation: -10 to 60 °C

Pressure

Operating pressure: 2.5 – 10 bar

Flow rate: 1250 NI/min

Product compliance

Machinery Directive: 2006/42/EC

EMC Directive: 2014/30/EU

Explosion protection: Special version X order code

ATEX marking: Gas:  II 2G Ex mb IIC T4/T5 Gb
Dust:  II 2D Ex mb tb IIIC T95°C, T130°C Db

Mechanical data

Protection class: IP 65

Installation position: Optional

Weight: 3/2-way standard: 0.21 kg
5/2-way standard: 0.25 kg
3/2-way and 5/2-way: 0.26 kg
NAMUR:

Electrical data

Power consumption: AC operation: 5 VA
DC operation: 3 W

Switching times: 20 ms ± 4 ms

Permissible voltage tolerance: ±10 % to VDE 0580

Duty cycle: Continuous duty

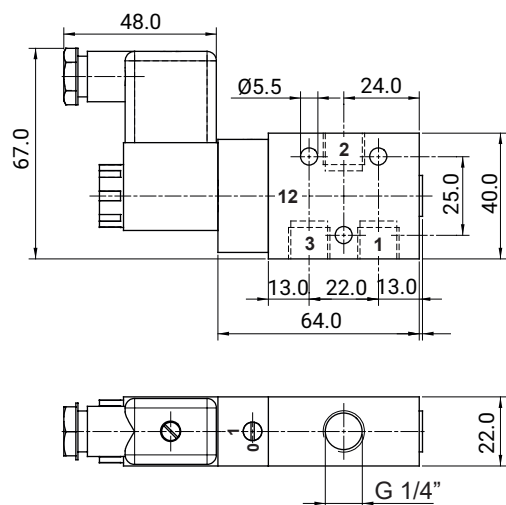
Electrical connection type: Plug, design B
Optional: ATEX version with 3 m cable (H05V2V2-F 3G1, external Ø 7 mm)

Wiring note: Special wiring on request. When using electronic switches and additional wiring, carefully design out any potential residual currents upon installation.

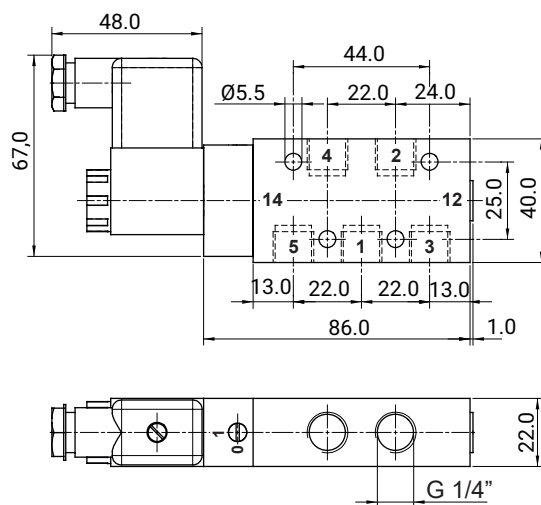
Dimensions

Thread

3/2-way version



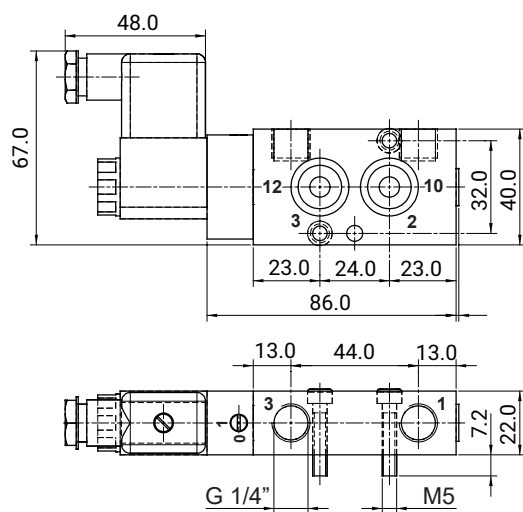
5/2-way version



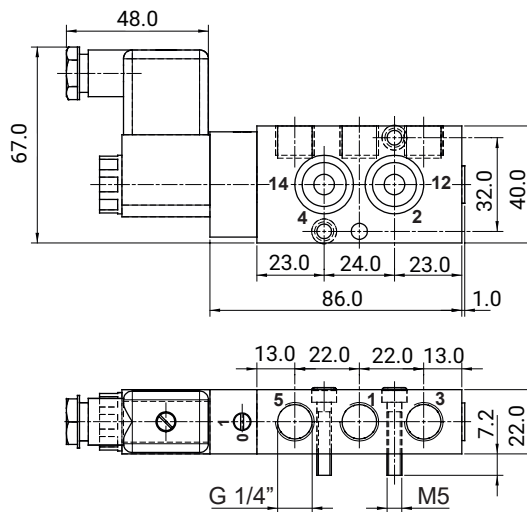
Dimensions in mm

NAMUR version

3/2-way version



5/2-way version

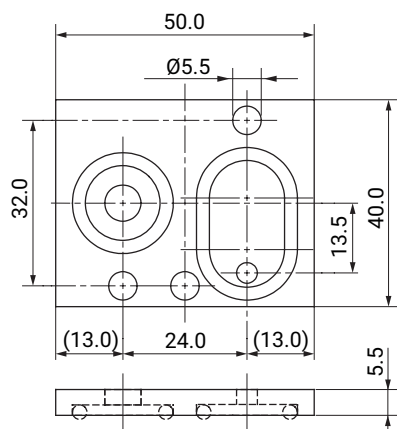


Dimensions in mm

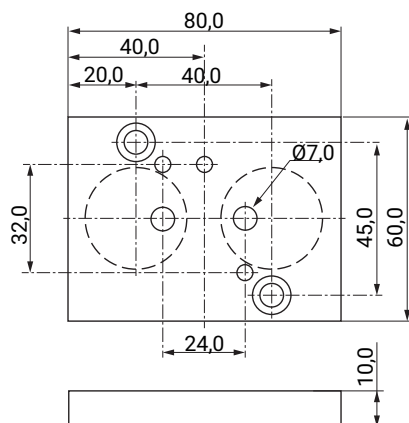
NAMUR flex plate

For 5/2-way design (code 52), NAMUR standard 1/4"

By adding this flex plate, the valve becomes a 3/2-way NAMUR valve with spring chamber ventilation.



Mounting plate for air connectors 3/8" and 1/2"



Pilot valve with mounting plate for air connectors 3/8" and 1/2"

The G112 set includes the 1/4" valve + the mounting plate ADPL G1/2 G1/4 10

Type	Designation	Item number
850032N 7M G214 21C1 Z	3/2 NAMUR pilot valve	88859708
850032N 7M G214 21L4 Z	3/2 NAMUR pilot valve	88859709
850052N 7M G214 21C1 Z	5/2 NAMUR pilot valve	88859710
850052N 7M G214 21L4 Z	5/2 NAMUR pilot valve	88859711

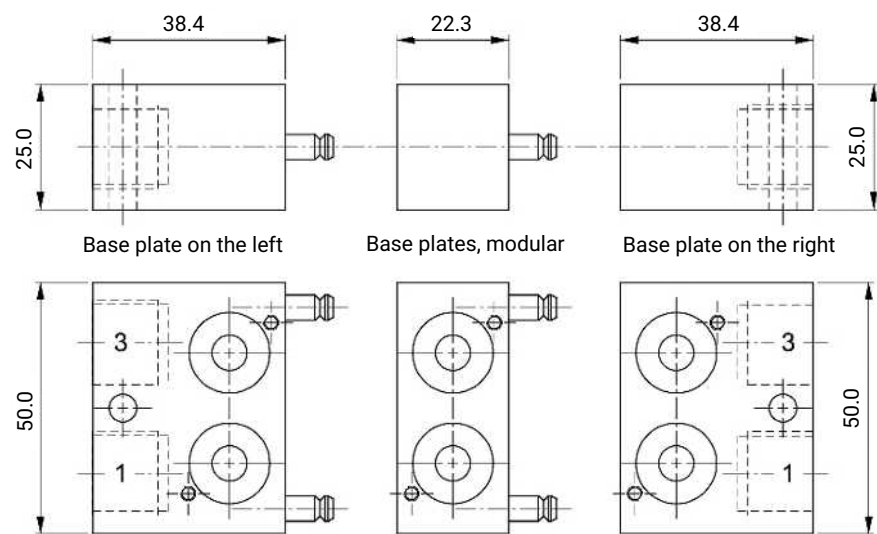
Mounting plate ADPL

Type	Designation	Item number
ADPL G1/2 G1/4 10	ZPN 6-10	88416005

Interlinking system

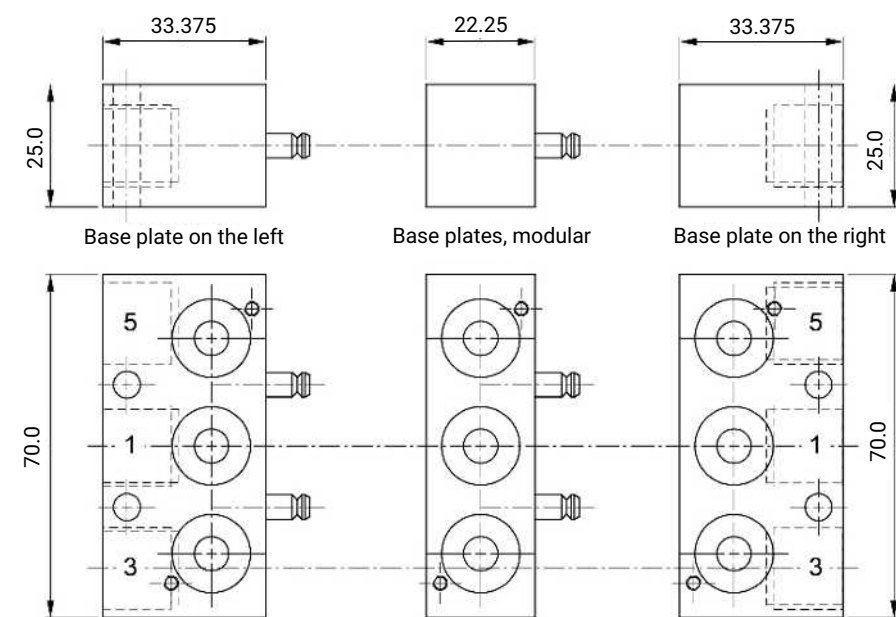
Individual parts

3/2-way design



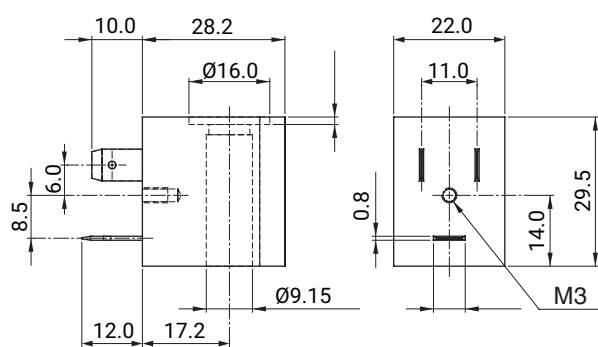
Dimensions in mm

5/2-way design



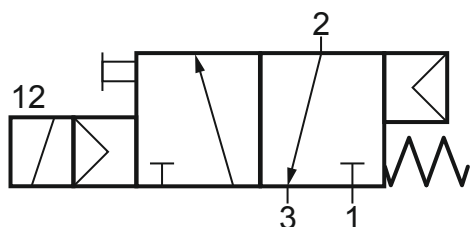
Dimensions in mm

Solenoid

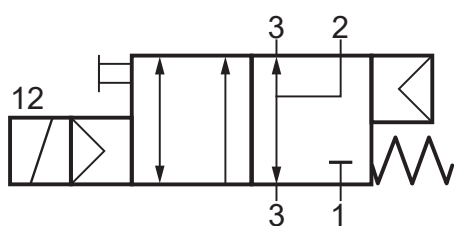


Circuit diagram

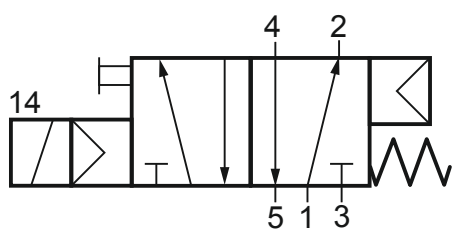
3/2-way standard



3/2-way NAMUR

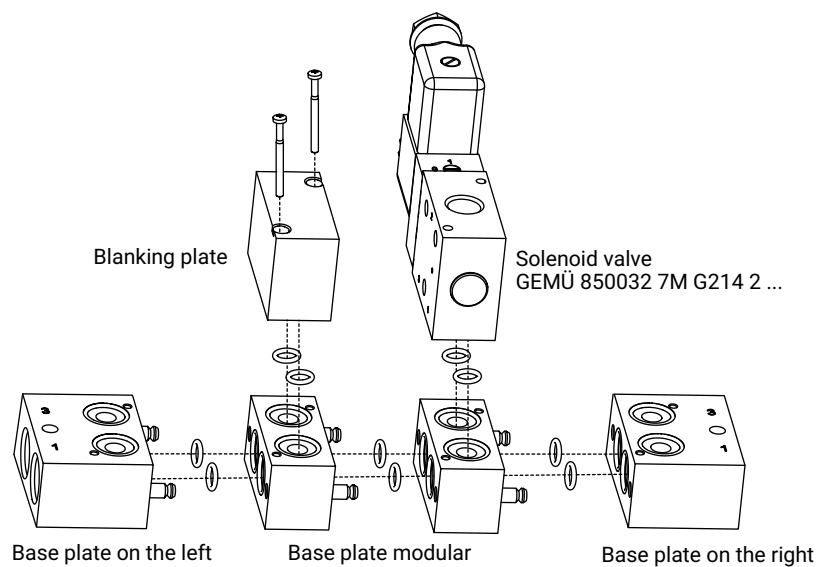


5/2-way standard and NAMUR



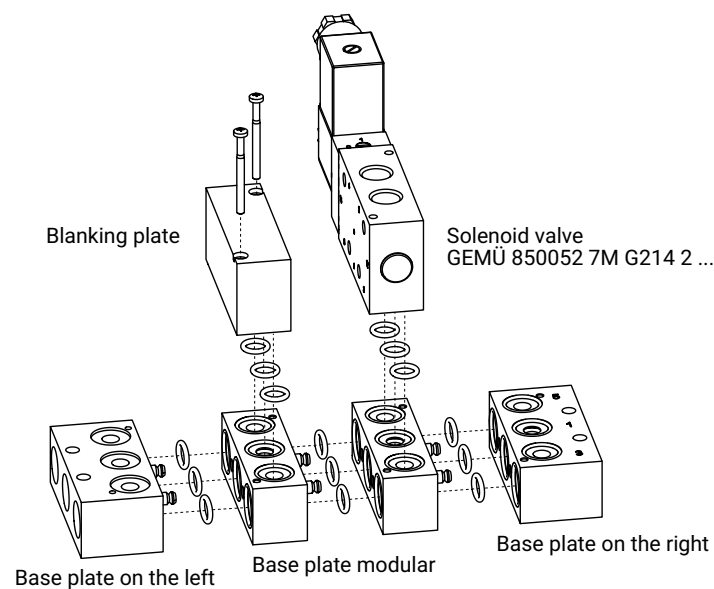
Interlinking system

3/2-way design



Designation	Item
Base plate on the right, 3/2-way	99115411
Base plate on the left, 3/2-way	99115412
Base plate modular, 3/2-way	99115413
Blanking plate	99115653

5/2-way design



Designation	Item
Base plate on the right, 5/2-way	99115408
Base plate on the left, 5/2-way	99115409
Base plate modular, 5/2-way	99115410
Blanking plate	99115652

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

Type	Item number	Application
2026000ZBIM16 GOS2 2C1	88668472	Plug design B, IND



GEMÜ 1750

Silencer

The GEMÜ 1750 silencer can be used to reduce the noise caused by leaking compressed air. It is available either in brass or plastic.

Type	Item number	Order description
1750*	88387920	1750 000 ZA 214K0K1

* 2 x required for 5/2-way design



GEMÜ 2022

Throttle valve

The GEMÜ 2022 throttle valves are available as throttle valve, throttle check valve and dual throttle check valve. In pneumatic actuators they are used to regulate the compressed air depending on the function for the supply or exhaust air and can be set independently of each other in the case of dual throttle check valves.

Type	Item number	Order designation
2022*	88011501	2022 000 ZA 214K000D100CG3

* x2 required for 5/2-way design. The throttle valve GEMÜ 2022 cannot be used as a throttle with a combination of a NAMUR and a single-acting actuator; for this combination, use the throttle plate GEMÜ 8500DRN.



GEMÜ 8500DRN

Throttle plate

Throttle plates can be used to continuously adjust the travel times of pneumatic quarter turn actuators in both the "OPEN" and "CLOSED" directions independently of one another. They are installed between the NAMUR valve and the quarter turn actuator.

Designation	Item number	Application
850032NDRN 3 601	88712394	3/2-way NAMUR throttle plate, knurled screw
850032NDRN 3 611	88712395	3/2-way NAMUR throttle plate, slotted screw
850052NDRN 5 601	88712396	5/2-way NAMUR throttle plate, knurled screw

**GEMÜ 8500DRN****Throttle plate**

Throttle plates can be used to continuously adjust the travel times of pneumatic quarter turn actuators in both the "OPEN" and "CLOSED" directions independently of one another. They are installed between the NAMUR valve and the quarter turn actuator.

Designation	Item number	Application
850052NDRN 5 611	88712397	5/2-way NAMUR throttle plate, slotted screw



GEMÜ Gebr. Müller Apparatebau GmbH & Co. KG
Gert-Müller-Platz 1, 74635 Kupferzell, Germany
Phone +49 (0) 7940 1230 · info@gemue.de
www.gemu-group.com