

## **GEMÜ 0322**

### *Electrically operated pilot solenoid valve*



#### **Features**

- Robust design
- Coil easy to replace
- Option: integrated LED (M12 version)
- Multi-functional application possibilities due to various designs
- Modular battery mounting

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#### **Description**

The GEMÜ 0322 directly controlled 3/2-way pilot solenoid valve is designed for direct mounting or for modular battery mounting by using clips. The body is made of plastic. The coil is plastic encapsulated.









#### **Technical specifications**

- **Media temperature :** -10 to 50 °C
- **Ambient temperature:** -10 to 50 °C
- **Operating pressure :** 0 to 10 bar
- **Nominal size:** DN 2
- **Electrical connection types:** Plug, design A | M12 plug
- **Supply voltages:** 120 V AC, 50/60 Hz | 230 V AC, 50/60 Hz | 24 V AC, 50/60 Hz | 24 V DC
- **Connection types:** Threaded connection
- **Body materials:** PA
- **Conformities:** ATEX | EAC | Functional safety

Technical data depends on the respective configuration



## Product line

								
	GEMÜ 0322	GEMÜ 0324	GEMÜ 0326	GEMÜ 8303	GEMÜ 8357	GEMÜ 8458	GEMÜ 8500	GEMÜ 8506
<b>Media temperature</b>	-10 to 50 °C	-10 to 50 °C	-10 to 50 °C	-10 to 60 °C	-10 to 60 °C	-10 to 50 °C	-10 to 60 °C	-10 to 50 °C
<b>Ambient temperature</b>	-10 to 50 °C	-10 to 50 °C	-10 to 50 °C	-10 to 60 °C	-10 to 60 °C	-10 to 50 °C	-10 to 60 °C	-10 to 50 °C
<b>Operating pressure</b>	0 to 10 bar	0 to 10 bar	0 to 10 bar	1 to 10 bar	1 to 10 bar	1 to 10 bar	2,5 to 10 bar	2 to 8 bar
<b>Nominal sizes</b>	DN 2	DN 2	DN 2	DN 2	DN 6	DN 6	DN 7	DN 6
<b>Electrical connection type</b>								
Plug, design A	●	●	●	●	●	-	-	●
Plug, design B	-	-	-	-	-	-	●	-
M12 plug	●	●	●	-	-	-	-	-
<b>Voltage</b>								
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	●	●	●	●	●	●	●	●
<b>Connection types</b>								
Threaded connection	●	●	●	●	●	●	●	●
<b>Body material</b>								
1.4581	-	-	-	●	-	-	-	-
Aluminium	-	-	-	●	●	●	●	●
PA	●	●	●	-	-	-	-	-
<b>Conformities</b>								
ATEX	●	●	●	●	-	-	●	-
EAC	●	●	●	●	●	●	-	●
Functional safety	●	●	●	-	-	-	●	-

## Product description



Item	Name	Materials
1	Plug	PA
2	Coil housing	Standard: PA 6 M12 connection: Duroplast (Epoxyd NU463) ATEX version: PPS
3	Valve body	PBT
	Seal materials	FPM

## 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.

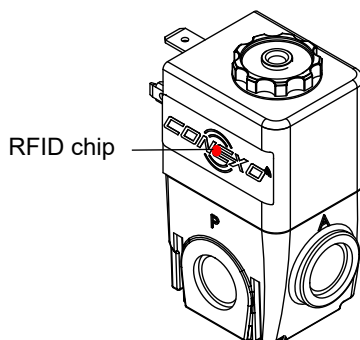
**For further information on GEMÜ CONEXO please visit:**

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

### Ordering

GEMÜ Conexo must be ordered separately with the ordering option "CONEXO".

### Installing the RFID chip



## Availability

Electrical connection Code <sup>1)</sup>	Voltage/Frequency Code <sup>2)</sup>				Control function Code <sup>3)</sup>	
	C1	C4	G4	L4	1	2
<b>00</b>	X	X	X	X	-	X
<b>01</b>	X	X	X	X	X	X
<b>02</b>	X	-	-	-	X	-
<b>03</b>	X	-	-	-	X	-
<b>05</b>	X	X	X	X	X	X
<b>09</b>	X	-	-	-	X	X

### 1) Electrical connection

Code 00: Plug design A

Code 01: Plug design A, with cable socket, without cable

Code 02: M12 plug, (only NC and 24V DC version)

Code 03: M12 plug, with cable socket, without cable, (only NC and 24V DC version)

Code 05: Plug design A, with cable socket, 3 m cable, encapsulated (only ATEX version)

Code 09: Plug design A with cable socket, without cable, green LED, suppressor diode, (only for 24V DC version)

### 2) Voltage/Frequency

Code C1: 24 V DC

Code C4: 24 V/50 - 60 Hz

Code G4: 120 V/50 - 60 Hz

Code L4: 230 V/50 - 60 Hz

### 3) Control function

Code 1: Normally closed (NC)

Code 2: Normally open (NO)

Control function	Option	
	ATEX versions <sup>1)</sup> Code 01, 04, 05, 07, 11	Without ATEX approval <sup>2)</sup> Code 00, 02, 03, 06, 08, 09
Normally closed (code 1)	X	X
Normally open (code 2)	-	X

### 1) ATEX versions

#### Option

Code 01: ATEX

Code 04: ATEX, manual override

Code 05: ATEX silencer

Code 07: ATEX, manual override, silencer

Code 11: ATEX, manual override, silencer with exhaust air throttle

### 2) Without ATEX approval

#### Option

Code 00: Without

Code 02: Manual override

Code 03: Silencer

Code 06: Manual override, silencer

Code 08: Manual override, silencer with exhaust air throttle

Code 09: Silencer with exhaust air throttle

## 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 solenoid valve, directly controlled, single mounting/battery mounting	0322
2 DN	Code
DN 2	2
3 Body configuration	Code
Multi-port design	M
4 Connection type	Code
Threaded socket DIN ISO 228	1
5 Valve body/solenoid material	Code
PA, polyamide	74
6 Seal material	Code
FKM	4
7 Control function	Code
Normally closed (NC)	1
Normally open (NO)	2
8 Voltage/Frequency	Code
24 V DC	C1
24 V/50 - 60 Hz	C4
120 V/50 - 60 Hz	G4
230 V/50 - 60 Hz	L4
9 Electrical connection	Code
Plug design A	00
Plug design A, with cable socket, without cable	01
M12 plug, (only NC and 24V DC version)	02
M12 plug, with cable socket, without cable, (only NC and 24V DC version)	03
Plug design A, with cable socket, 3 m cable, encapsulated (only ATEX version)	05
Plug design A with cable socket, without cable, green LED, suppressor diode, (only for 24V DC version)	09

10 Option	Code
Without	00
ATEX (only electrical connection 05, only control function normally closed)	01
Manual override (only control function 1, normally closed)	02
Silencer (only control function 1, normally closed)	03
ATEX, manual override (only electrical connection 05 and for control function 1, normally closed)	04
ATEX silencer (only electrical connection 05 and for control function 1, normally closed)	05
Manual override, silencer (only control function 1, normally closed)	06
ATEX, manual override, silencer (only electrical connection 05 and for control function 1, normally closed)	07
Manual override, silencer with exhaust air throttle (only control function 1, normally closed)	08
Silencer with exhaust air throttle (only control function 1, normally closed)	09
ATEX, manual override, silencer with exhaust air throttle (only electrical connection 05 and for control function 1, normally closed)	11
11 Maximum operating pressure	Code
10 bar	10
12 Type of design	Code
Without	
Media wetted area cleaned to ensure suitability for paint applications, parts sealed in plastic bag	0101
13 CONEXO	Code
Without	
Integrated RFID chip for electronic identification and traceability	C

## Order example

Ordering option	Code	Description
1 Type	0322	Pilot solenoid valve, directly controlled, single mounting/battery mounting
2 DN	2	DN 2

Ordering option	Code	Description
3 Body configuration	M	Multi-port design
4 Connection type	1	Threaded socket DIN ISO 228
5 Valve body/solenoid material	74	PA, polyamide
6 Seal material	4	FKM
7 Control function	1	Normally closed (NC)
8 Voltage/Frequency	C1	24 V DC
9 Electrical connection	01	Plug design A, with cable socket, without cable
10 Option	00	Without
11 Maximum operating pressure	10	10 bar
12 Type of design		Without
13 CONEXO		Without

## Technical data

### Medium

<b>Working medium:</b>	Quality classes to DIN ISO 8573-1
<b>Dust content:</b>	Class 4, max. particle size 15 µm, max. particle density 8 mg/m <sup>3</sup>
<b>Oil content:</b>	Class 4, max. oil concentration 5 mg/m <sup>3</sup>
<b>Pressure dew point:</b>	Class 4, max. pressure dew point +3 °C



### Temperature

<b>Ambient temperature:</b>	-10 – 50 °C
<b>Media temperature:</b>	-10 – 50 °C

### Pressure

<b>Operating pressure:</b>	0 – 10 bar
<b>Flow rate:</b>	<b>Control function:</b>
	Normally closed (code 1): 70 l/min
	Normally open (code 2): 40 l/min

### Product compliance

<b>Explosion protection:</b>	ATEX (2014/34/EU), order code Option	
<b>ATEX marking:</b>	Gas:  II 2G Ex mb II T4 Dust:  II 2D Ex tD A21 IP65 T130°C Type examination certificate: PTB 03 ATEX 2018 X	
<b>SIL:</b>	<b>Product description:</b>	3/2-way pilot solenoid valve GEMÜ 0322
	<b>Device type:</b>	A
	<b>Safety function:</b>	Due to the safety function, the valve is placed in the closed position. For this, the solenoid valve is closed when de-energized (switch position a1).
	<b>HFT (Hardware Fault Tolerance):</b>	0
	<b>MTTR (Mean Time To Restoration):</b>	24 hours

### Mechanical data

<b>Weight:</b>	150 g
<b>Corrosion resistance class:</b>	KBK 2
<b>Isolation class:</b>	F
<b>Protection class:</b>	IP 65
<b>Max. switching frequency:</b>	5 Hz
<b>Switching times:</b>	On: 11 ms Off: 20 ms



**Electrical data**

**Supply voltage:** AC operation: 24 V, 120 V, 230 V  
 DC operation: 24 V

**Power consumption:**

AC operation	
Normally closed (NC)	Pull in: 11.5 W Hold in: 8.5 W
Normally open (NO)	6.8 W
DC operation	
Normally closed (NC)	4.5 W
Normally open (NO)	6.8 W

**Permissible voltage tolerance:** ±10 % to VDE 0580

**Duty cycle:** Continuous duty

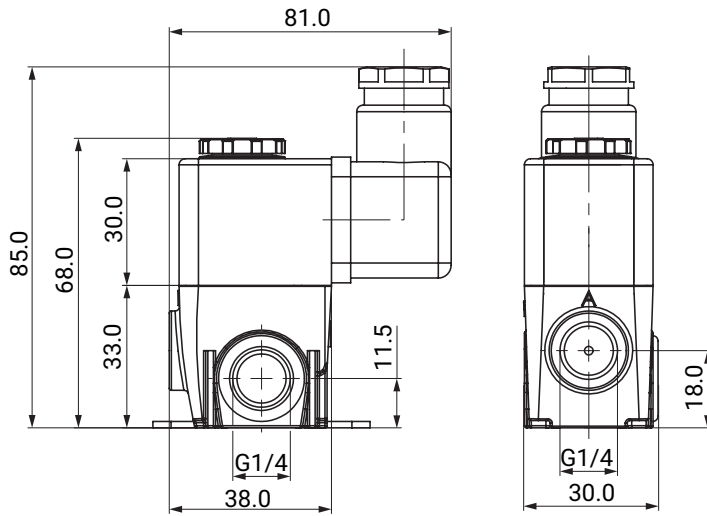
**Max. perm. ripple:** 20 %

**Electrical connection type:** Plug design A  
 Cable diameter: 8 to 10 mm  
 Optional: M12 plug, cable socket  
 Optional: ATEX version with 3 m cable (H05V2V2-F 3G1, external Ø 7 mm)

**Note:** DC coils are used for the AC version of normally open (NO) solenoid valves. For these AC applications with normally open (NO) valves a plug with an integrated bridge rectifier must be used (e.g. GEMÜ 1221 000 Z 0012 230 50/60).

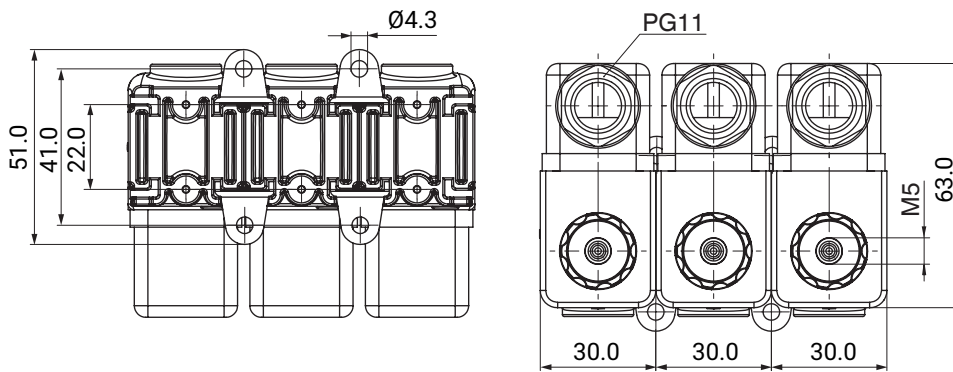
## Dimensions

### Single valve for direct mounting



Dimensions in mm

### Battery mounting

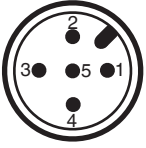


Dimensions in mm

## Electrical connection

### M12 plug (code 02, 03)

#### Pin assignment



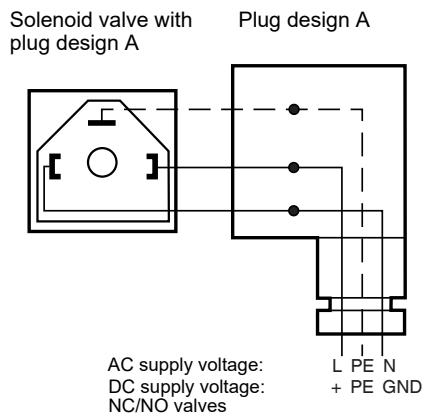
Plug assignment X1 (A-coded)

Pin	Signal name
1	n.c.
2	n.c.
3	Uv, GND
4	Uv, 24 V DC supply voltage
5	n.c.

### Plug design A (code 00, 01, 05, 06, 09, 10)

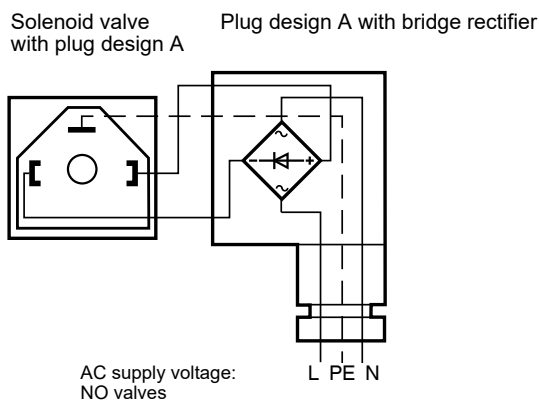
#### Without bridge rectifier

Control function 1 (NC), AC/DC voltage  
control function 2 (NO), DC voltage

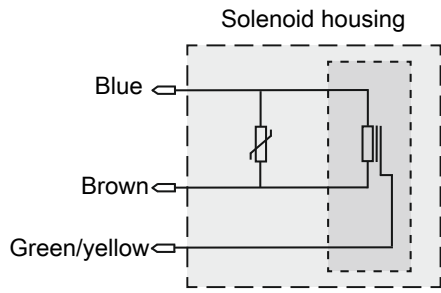


#### With bridge rectifier

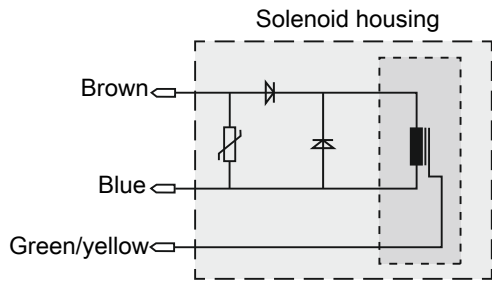
Control function 2 (NO), AC voltage



**ATEX version (DC version)**



**ATEX version (AC version)**



## Accessories



### GEMÜ 1050

#### Mounting plate

GEMÜ 1050 is a mounting set for mounting pilot valves on a DIN rail.

#### Ordering information

Type	Order designation	Item number
1050	1050 000 Z 01	88355703



### GEMÜ 0322 MS

#### Mounting kit

Mounting kit for battery design

#### Ordering information

Order designation	Contents	Item number
0322000ZMS 4	Sealing plug G1/4", 2 x fixing piece, O-ring	88317618



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