

## GEMÜ B52

### Motorized ball valve



### Features

- Suitable for vacuum applications
- Low maintenance and reliable spindle sealing
- Antistatic device unit

### Description

The GEMÜ B52 3-piece 2/2-way metal ball valve is motorized. It has a plastic actuator housing. A manual override and an optical position indicator are integrated as standard. The seat seal is made of PTFE.

### Technical specifications

- **Media temperature:** -4 to 356 °F
- **Ambient temperature:** -4 to 140 °F
- **Operating pressure:** 0 to 914 psi
- **Nominal sizes:** 1/4" (DN 8) to 4" (DN 100)
- **Body configurations:** 2/2-way body
- **Ball configurations:** Control ball
- **Connection types:** Flange | Spigot | Threaded connection
- **Connection standards:** ASME | DIN | EN | ISO | NPT
- **Body materials:** 1.4408, investment casting material
- **Seal materials:** PTFE
- **Conformities:** ASME GEMÜ B31.3 | ATEX | EAC | FDA | Oxygen | Reg. (EU) No. 10/2011 | Regulation (EC) No. 1935/2004 | Regulation (EC) No. 2023/2006 | TA Luft (German Clean Air Act)

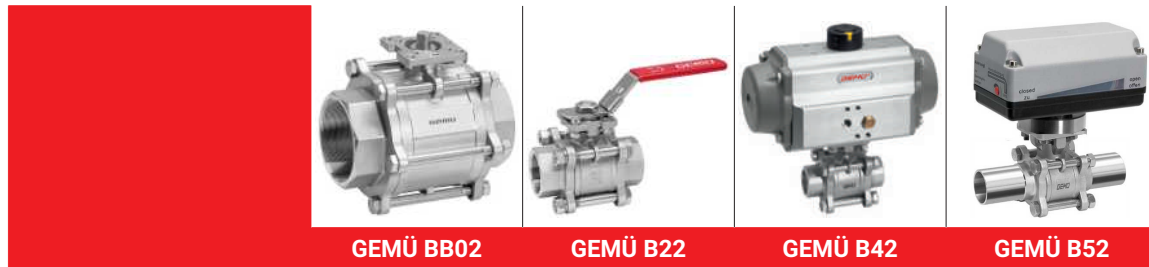
Technical data depends on the respective configuration



further information  
webcode: GW-B52






## Product line



	GEMÜ BB02	GEMÜ B22	GEMÜ B42	GEMÜ B52
<b>Operation</b>				
With bare shaft	●	-	-	-
Manual	-	●	-	-
pneumatic	-	-	●	-
Motorized	-	-	-	●
<b>Nominal sizes</b>	1/4" (DN 8) to 4" (DN 100)	1/4" (DN 8) to 4" (DN 100)	1/4" (DN 8) to 4" (DN 100)	1/4" (DN 8) to 4" (DN 100)
<b>Media temperature</b>	-4 to 356 °F	-4 to 356 °F	-4 to 356 °F	-4 to 356 °F
<b>Operating pressure</b>	0 to 914 psi	0 to 914 psi	0 to 914 psi	0 to 914 psi
<b>Connection types</b>				
Flange	●	●	●	●
Spigot	●	●	●	●
Threaded connection	●	●	●	●
<b>Conformities</b>				
ASME GEMÜ B31.3	●	●	●	●
ATEX	●	●	●	●
EAC	●	●	●	●
FDA	●	●	●	●
Functional safety	●	-	-	-
Oxygen	●	●	●	●
Reg. (EU) No. 10/2011	●	●	●	●
Regulation (EC) No. 1935/2004	●	●	●	●
Regulation (EC) No. 2023/2006	●	●	●	●
TA Luft (German Clean Air Act)	●	●	●	●

**GEMÜ, J+J motorized actuators**

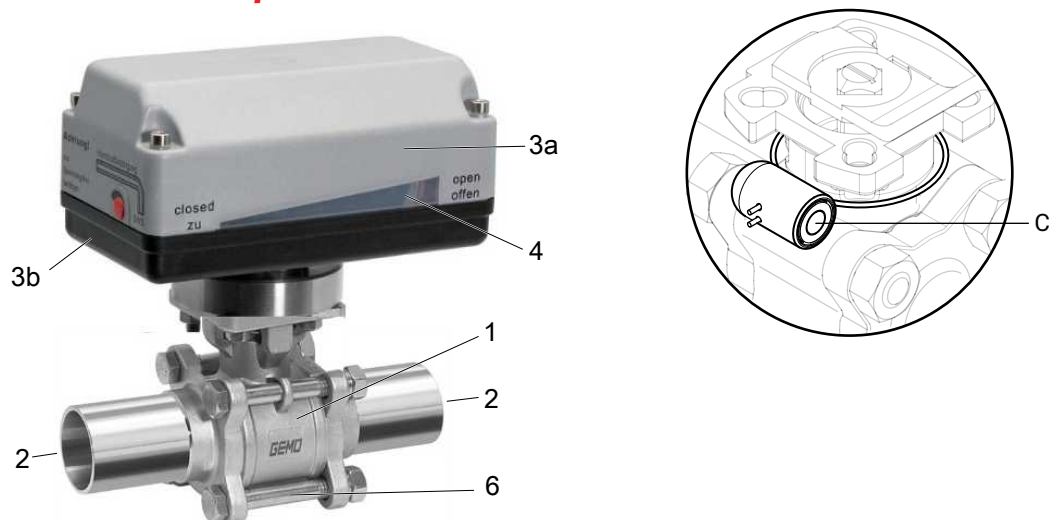
			
	<b>GEMÜ 9428</b>	<b>GEMÜ 9468</b>	<b>GEMÜ J4C</b>
<b>Manufacturer</b>	GEMÜ	GEMÜ	J+J
<b>Manufacturer type</b>	9428	9468	J4C
<b>Torques</b>	6 to 55 Nm	70 to 200 Nm	20 to 300 Nm
<b>Duty cycle</b>	100 %	30 % (ON/OFF actuator) 50 % (control actuator)	75 %
<b>Heating</b>	No	No	Yes
<b>Voltage</b>			
12 V AC, 50/60 Hz	●	-	-
12 V DC	●	-	●
24 - 240 V AC/DC	-	-	●
24 V AC, 50/60 Hz	●	-	-
24 V DC	●	●	-
<b>Protection class</b>	IP 65, IP 67	IP 65	IP 67
<b>Ambient temperature</b>	-10 to 60 °C	-10 to 60 °C	-20 to 70 °C
<b>Housing materials</b>			
ABS	-	●	-
Aluminium	-	●	-
Polyamide (PA6)	-	-	●
PP	●	-	-
<b>Versions</b>			
Limit switches	●	●	●
ON/OFF actuator	●	●	-
Optional battery pack	-	-	●
Optional positioner	-	-	●
Optional positioning actuator	-	●	●
Optional potentiometer	-	●	-
Optionally 3 positions	-	-	●

## Comparison of areas of application for GEMÜ, J+J actuators



	GEMÜ 9428	GEMÜ 9468	GEMÜ J4C
<b>Range of functions</b>			
Use in non-aggressive environment (up to C3)	●	●	●
Use in aggressive environment (C5)	●	●	●
Use in protected outdoor areas	●	●	●
Use in unprotected outdoor areas	●	●	●
Applications with many/frequent cycle duties	●	●	●
Fail-safe option	●	●	●
Positioning application	●	●	●
<b>Industrial sectors</b>			
Chemical processes	●	●	●
Surface finishing	●	●	●
Water treatment	●	●	●
Mechanical engineering	●	●	●
Power generation and environmental systems	●	●	●
Food processing technology	●	●	●
Semiconductor	●	●	●
Medical systems	●	●	●
Pharmaceutical industry	●	●	●

## Product description

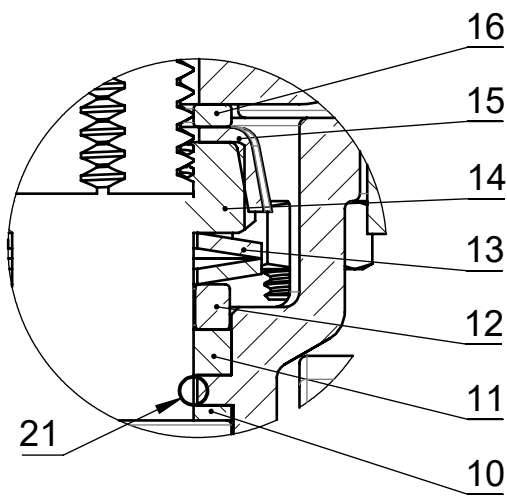


Item	Name	Materials
1	Ball valve body	1.4408 / CF8M
2	Pipe connections	1.4408 / CF8M, 1.4409 / CF3M butt weld connections
3a	Actuator housing cover Actuator version 1006,1015 Actuator version 2070 Actuator version 4100, 4200	PPO (10% glass fibre reinforced) ABS Aluminium
3b	Actuator housing base Actuator version 1006, 1015 Actuator version 2070 Actuator version 4100, 4200	PP (30% glass fibre reinforced) ABS Aluminium
4	Optical position indicator	PP-R natural
6	Bolts	A2 70
	Seal	PTFE
C	CONEXO RFID chip	

**Pressure-relief hole**



**The spindle seal system**



Item	Name	Material
10	Seal	PTFE
11	V-ring	PTFE
12	Stainless steel sleeve	SS304-1.4301
13	Spring washer	SS304-1.4301
14	Spindle nut	A2 70
15	Cap	SS304-1.4301
16	Washer	SS304-1.4301
21	O-ring (spindle seal)	Viton

**Long service life due to triple spindle seal**

**- Conical spindle seal:**

The seal 10 arranged at an angle of 45° effectively prevents the leakage of media when operating the spindle

**- O-ring:**

Stabilising spindle seal 21 with low wear and long service life

**- Pretensioned self-adjusting spindle seal:**

The spindle packing consists of several V-rings 11, a spring washer 13 and a stainless steel sleeve 12. The spring washer 13 is pretensioned via the spindle nut 14. The pretension force is distributed to the V-rings 11 via the stainless steel sleeve 12, thereby preventing the leakage of media. The pretension provides low maintenance and reliable spindle sealing even after a long service life.

## ***Application***

- Heating systems
- Beverage industry
- Foodstuff industry
- Chemical industry
- Drinking water installations
- Processing industry
- HVAC

## Availabilities

Connection types <sup>1)</sup>	Body materials <sup>2)</sup>	
	Code 37	Code C7
<b>Spigot (code 17, 19, 59, 60)</b>	-	X
<b>Threaded socket (code 1, 31)</b>	X	-
<b>Flange (code 8, 11)</b>	X	-

**1) Connection type**

Code 1: Threaded socket DIN ISO 228

Code 31: NPT female thread

Code 8: Flange EN 1092, PN 16, form B, face-to-face dimension FTF EN 558 series 1, ISO 5752, basic series 1

Code 11: Flange EN 1092, PN 40, form B, face-to-face dimension FTF EN 558 series 1, ISO 5752, basic series 1

Code 17: Spigot EN 10357 series A/DIN 11866 series A formerly DIN 11850 series 2

Code 19: Spigot DIN EN 12627

Code 59: Spigot ASME BPE/DIN EN 10357 series C (from 2022 edition)/DIN 11866 series C

Code 60: Spigot ISO 1127/DIN EN 10357 series C (2014 edition)/DIN 11866 series B

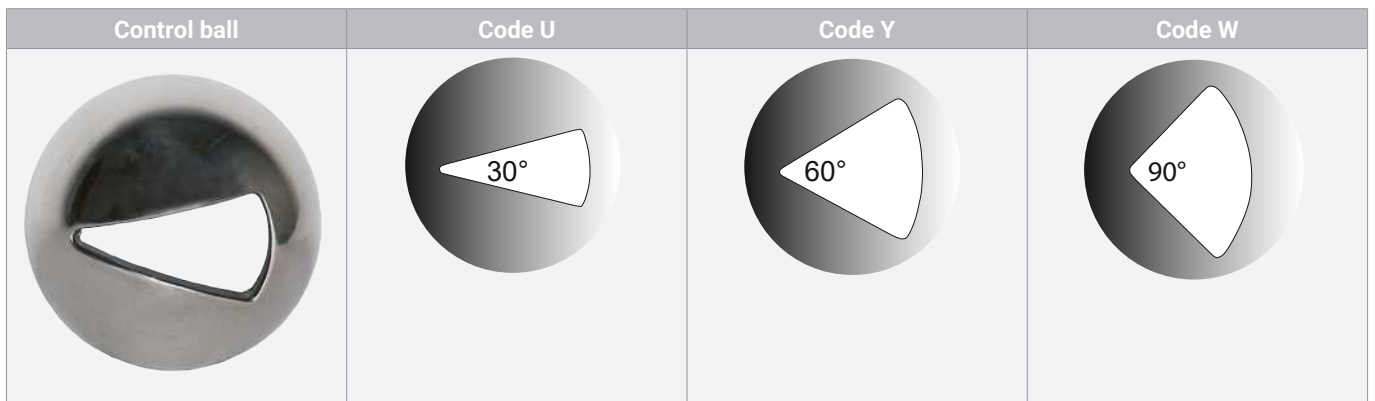
**2) Ball valve material**

Code 37: 1.4408 / CF8M (body, connection), 1.4401 / SS316 (ball, shaft)

Code C7: 1.4408 / CF8M (body), 1.4409 / CF3M (connection), 1.4401 / SS316 (ball, shaft)

## Control ball

### DN 15 to DN 100



Note: The control ball cannot be retrofitted to standard 2/2-way bodies at a later date.



## Actuator assignment

### GEMÜ actuator

GEMÜ type	Actuator version (code)	Control module (code) <sup>1)</sup>	Voltage/Frequency			
			12 V DC (code B1)	12 V AC (code B4)	24 V DC (code C1)	24 V AC (code C4)
9428	1006	A0, AE	X	X	X	X
	1015		X	-	X	-
9468	2070	00, 0E, 0P	-	-	X	-
	4100		-	-	X	-
	4200		-	-	X	-

#### 1) Control module

Code 00: ON/OFF actuator, relay, not reversible

Code 0E: ON/OFF actuator, 2 additional potential-free limit switches, relay, not reversible

Code 0P: ON/OFF actuator, potentiometer output, relay, not reversible

Code A0: ON/OFF actuator

Code AE: ON/OFF actuator, 2 additional potential-free limit switches, Class A (EN15714-2)

DN	NPS	Actuator version (code)				
		1006	1015	2070	4100	4200
8	1/4"	X	X	-	-	-
10	3/8"	X	X	-	-	-
15	1/2"	X	X	-	-	-
20	3/4"	-	X	-	-	-
25	1"	-	X	-	-	-
32	1¼"	-	-	X	-	-
40	1½"	-	-	X	-	-
50	2"	-	-	X	-	-
65	2½"	-	-	-	X	-
80	3"	-	-	-	X	-
100	4"	-	-	-	-	X

**J+J actuator****J+J - Voltage/Frequency**

Voltage/Fre- quency	Code	Actuator version (code)				
		J4C20	J4C35	J4C55	J4C85	J4C14
12 V DV	B1	X	X	X	X	X
24 – 240 V AC/ DC	U5	X	X	X	X	X

**J+J - Control module**

Control module	Code <sup>1)</sup>	Actuator version (code)				
		J4C20	J4C35	J4C55	J4C14	J4C30
Open/close	A3	X	X	X	X	X
	AE	X	X	X	X	X
	AE1	X	X	X	X	X
	AE2	X	X	X	X	X
	AP	X	X	X	X	X
	AP1	X	X	X	-	-
Positioner	E1	X	X	X	X	X
	E11	X	X	X	-	-
	E2	X	X	X	X	X
	E22	X	X	X	-	-

**1) Control module**

Code A3: ON/OFF actuator, 3-position actuator, additional potential-free limit switches

Code AE: ON/OFF actuator, 2 additional potential-free limit switches, Class A (EN15714-2)

Code AE1: ON/OFF actuator, 2 additional potential-free limit switches, BSR battery pack (NC)

Code AE2: ON/OFF actuator, 2 additional potential-free limit switches, BSR battery pack (NO)

Code AP: ON/OFF actuator, potentiometer output, Class A (EN15714-2)

Code AP1: ON/OFF actuator, 2 additional potential-free limit switches, potentiometer output 5 kOhm, Failsafe battery pack (NC), preferred direction adjustable

Code E1: Control actuator, external set value 0-10 VDC

Code E11: Positioner DPS, external set value 0-10V, BSR battery pack (NC)

Code E2: Control actuator, external set value 0/4-20 mA

Code E22: Positioner DPS, external set value 4-20mA, BSR battery pack (NO)

DN	NPS	Actuator version (code)				
		J4C20	J4C35	J4C55	J4C85	J4C14
8	1/4"	X	-	-	-	-
10	3/8"	X	-	-	-	-
15	1/2"	X	-	-	-	-
20	3/4"	X	-	-	-	-
25	1"	X	-	-	-	-
32	1¼"	X	-	-	-	-
40	1½"	-	X	-	-	-
50	2"	-	-	X	-	-
65	2½"	-	-	-	X	-
80	3"	-	-	-	-	X
100	4"	-	-	-	-	X

## Order data

### Ball valve with GEMÜ 9428, 9468 actuator

The order data provide an overview of standard configurations.

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

Products ordered with **bold marked ordering options** are so-called preferred series. Depending on the nominal size, these are available more quickly.

### Order codes

1 Type	Code
Ball valve, metal, electrically operated, three-piece body, low-maintenance spindle seal and blow-out proof shaft, with anti-static unit	B52

2 DN	Code
DN 8	8
DN 10	10
DN 15	15
DN 20	20
DN 25	25
DN 32	32
DN 40	40
DN 50	50
DN 65	65
DN 80	80
DN 100	100

3 Body/ball configuration	Code
<b>2/2-way body</b>	<b>D</b>
2/2-way body, V-ball 30° (for Kv value see datasheet)	U
2/2-way body, V-ball 90° (for Kv value see datasheet)	W
2/2-way body, V-ball 60° (for Kv value see datasheet)	Y

4 Connection type	Code
<b>Spigot</b>	
Spigot EN 10357 series A/DIN 11866 series A formerly DIN 11850 series 2	17
<b>Spigot DIN EN 12627</b>	<b>19</b>
Spigot ASME BPE/DIN EN 10357 series C (from 2022 edition)/DIN 11866 series C	59
<b>Spigot ISO 1127/DIN EN 10357 series C (2014 edition)/DIN 11866 series B</b>	<b>60</b>
<b>Threaded socket</b>	
<b>Threaded socket DIN ISO 228</b>	<b>1</b>
NPT female thread	31
<b>Flange</b>	
Flange EN 1092, PN 16, form B, face-to-face dimension FTF EN 558 series 1, ISO 5752, basic series 1	8
<b>Flange EN 1092, PN 40, form B, face-to-face dimension FTF EN 558 series 1, ISO 5752, basic series 1</b>	<b>11</b>

5 Ball valve material	Code
<b>1.4408 / CF8M (body, connection), 1.4401 / SS316 (ball, shaft)</b>	<b>37</b>
1.4408 / CF8M (body), 1.4409 / CF3M (connection), 1.4401 / SS316 (ball, shaft)	C7

6 Seal material	Code
<b>PTFE</b>	<b>5</b>

7 Voltage/Frequency	Code
12 VDC	B1
12 V 50/60 Hz	B4
24 VDC	C1
24 V 50/60 Hz	C4

8 Control module	Code
ON/OFF actuator, relay, not reversible	00
ON/OFF actuator, 2 additional potential-free limit switches, relay, not reversible	0E
ON/OFF actuator, potentiometer output, relay, not reversible	0P
ON/OFF actuator	A0
ON/OFF actuator, 2 additional potential-free limit switches, Class A (EN15714-2)	AE

9 Actuator version	Code
Actuator, motorized, operating time 4s, torque 6Nm, GEMUE, size 1 supply voltage B1, C1, B4, C4	1006
Actuator, motorized, operating time 11s, torque 15Nm, GEMUE, size 1 supply voltage B1, C1	1015
Actuator, motorized, operating time 15s, torque 70Nm, GEMUE, size 2 supply voltage C1	2070
Actuator, motorized, operating time 20s, torque 100Nm, GEMUE, size 4 supply voltage C1	4100
Actuator, motorized, operating time 16s, torque 200Nm, GEMUE, size 4 supply voltage C1	4200

10 Type of design	Code
Standard	
Media wetted area cleaned to ensure suitability for paint applications, parts sealed in plastic bag	0101

Ball valve with GEMÜ 9428, 9468 actuator

10 Type of design	Code
Valve free of oil and grease, media wetted area cleaned and packed in PE bag	0107
Thermal separation between actuator and valve body via mounting kit	5222
Thermal separation between actuator and valve body via mounting kit, mounting kit and mounting parts made from stainless steel	5227
K-no. 0101, K-no. 5227, 0101 - Media wetted area cleaned to ensure suitability for paint applications, 5227 - Thermal separation via mounting kit	5238
K-no. 0107, K-no. 5227, 0107 - Media wetted area cleaned to ensure suitability for paint applications, 5227 - Thermal separation via mounting kit	5239

11 Special version	Code
Without	
Special version for oxygen maximum medium temperature: 60 °C, Media wetted materials cleaned, and grease and seal with BAM testing	O
ASME B31.3	P

12 CONEXO	Code
Without	
Integrated RFID chip for electronic identification and traceability	C

**Order example**

Order option	Code	Description
1 Type	B52	Ball valve, metal, electrically operated, three-piece body, low-maintenance spindle seal and blow-out proof shaft, with anti-static unit
2 DN	15	DN 15
3 Body/ball configuration	D	2/2-way body
4 Connection type	1	Threaded socket DIN ISO 228
5 Ball valve material	37	1.4408 / CF8M (body, connection), 1.4401 / SS316 (ball, shaft)
6 Seal material	5	PTFE
7 Voltage/Frequency	C1	24 VDC
8 Control module	A0	ON/OFF actuator
9 Actuator version	1015	Actuator, motorized, operating time 11s, torque 15Nm, GEMUE, size 1 supply voltage B1, C1
10 Type of design		Standard
11 Special version		Without
12 CONEXO		Without

## Ball valve with J+J actuator

The order data provide an overview of standard configurations.

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

Products ordered with **bold marked ordering options** are so-called preferred series. Depending on the nominal size, these are available more quickly.

### Order codes

1 Type	Code
Ball valve, metal, electrically operated, three-piece body, low-maintenance spindle seal and blow-out proof shaft, with anti-static unit	B52

2 DN	Code
DN 8	8
DN 10	10
DN 15	15
DN 20	20
DN 25	25
DN 32	32
DN 40	40
DN 50	50
DN 65	65
DN 80	80
DN 100	100

3 Body/ball configuration	Code
<b>2/2-way body</b>	<b>D</b>
2/2-way body, V-ball 30° (for Kv value see datasheet)	U
2/2-way body, V-ball 90° (for Kv value see datasheet)	W
2/2-way body, V-ball 60° (for Kv value see datasheet)	Y

4 Connection type	Code
<b>Spigot</b>	
Spigot EN 10357 series A/DIN 11866 series A formerly DIN 11850 series 2	17
<b>Spigot DIN EN 12627</b>	<b>19</b>
Spigot ASME BPE/DIN EN 10357 series C (from 2022 edition)/DIN 11866 series C	59
<b>Spigot ISO 1127/DIN EN 10357 series C (2014 edition)/DIN 11866 series B</b>	<b>60</b>
<b>Threaded socket</b>	
<b>Threaded socket DIN ISO 228</b>	<b>1</b>
NPT female thread	31
<b>Flange</b>	
Flange EN 1092, PN 16, form B, face-to-face dimension FTF EN 558 series 1, ISO 5752, basic series 1	8
<b>Flange EN 1092, PN 40, form B, face-to-face dimension FTF EN 558 series 1, ISO 5752, basic series 1</b>	<b>11</b>

5 Ball valve material	Code
<b>1.4408 / CF8M (body, connection), 1.4401 / SS316 (ball, shaft)</b>	<b>37</b>
1.4408 / CF8M (body), 1.4409 / CF3M (connection), 1.4401 / SS316 (ball, shaft)	C7

6 Seal material	Code
<b>PTFE</b>	<b>5</b>

7 Voltage/Frequency	Code
12 VDC	B1
24 - 240 V AC 24 - 135 V DC for model 20, 35, 55, 85, 140, 300	U5

8 Control module	Code
ON/OFF actuator, 3-position actuator, additional potential-free limit switches	A3
ON/OFF actuator, 2 additional potential-free limit switches, Class A (EN15714-2)	AE
ON/OFF actuator, 2 additional potential-free limit switches, BSR battery pack (NC)	AE1
ON/OFF actuator, 2 additional potential-free limit switches, BSR battery pack (NO)	AE2
ON/OFF actuator, potentiometer output, Class A (EN15714-2)	AP
ON/OFF actuator, 2 additional potential-free limit switches, potentiometer output 5 kOhm, Failsafe battery pack (NC), preferred direction adjustable	AP1
Control actuator, external set value 0-10 VDC	E1
Control actuator, external set value 0/4-20 mA	E2
Positioner DPS, external set value 0-10V, BSR battery pack (NC)	E11
Positioner DPS, external set value 4-20mA, BSR battery pack (NO)	E22

9 Actuator version	Code
Actuator, motorized, operating time 9s, torque 20Nm, J+J, type J4 heating, IP67	J4C20
Actuator, motorized, operating time 9s, torque 35Nm, J+J, type J4 heating, IP67	J4C35
Actuator, motorized, operating time 13s, torque 55Nm, J+J, type J4 heating, IP67	J4C55

## Ball valve with J+J actuator

9 Actuator version	Code
Actuator, motorized, operating time 29s, torque 85Nm, J+J, type J4 heating, IP67	J4C85
Actuator, motorized, operating time 34s, torque 140Nm, J+J, type J4 heating, IP67	J4C14

10 Type of design	Code
Standard	
Media wetted area cleaned to ensure suitability for paint applications, parts sealed in plastic bag	0101
Valve free of oil and grease, media wetted area cleaned and packed in PE bag	0107
Thermal separation between actuator and valve body via mounting kit	5222
Thermal separation between actuator and valve body via mounting kit, mounting kit and mounting parts made from stainless steel	5227

10 Type of design	Code
K-no. 0101, K-no. 5227, 0101 - Media wetted area cleaned to ensure suitability for paint applications, 5227 - Thermal separation via mounting kit	5238
K-no. 0107, K-no. 5227, 0107 - Media wetted area cleaned to ensure suitability for paint applications, 5227 - Thermal separation via mounting kit	5239

11 Special version	Code
Without	
Special version for oxygen maximum medium temperature: 60 °C, Media wetted materials cleaned, and grease and seal with BAM testing	O
ASME B31.3	P

12 CONEXO	Code
Without	
Integrated RFID chip for electronic identification and traceability	C

## Order example

Order option	Code	Description
1 Type	B52	Ball valve, metal, electrically operated, three-piece body, low-maintenance spindle seal and blow-out proof shaft, with anti-static unit
2 DN	15	DN 15
3 Body/ball configuration	D	2/2-way body
4 Connection type	1	Threaded socket DIN ISO 228
5 Ball valve material	37	1.4408 / CF8M (body, connection), 1.4401 / SS316 (ball, shaft)
6 Seal material	5	PTFE
7 Voltage/Frequency	B1	12 VDC
8 Control module	AE	ON/OFF actuator, 2 additional potential-free limit switches, Class A (EN15714-2)
9 Actuator version	J4C20	Actuator, motorized, operating time 9s, torque 20Nm, J+J, type J4 heating, IP67
10 Type of design		Standard
11 CONEXO		Without
12 Special version		Without

## Ball valve technical data

### Medium

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

### Temperature

**Media temperature:** Connection code 17, 19, 59, 60: 14 – 356 °F  
 Connection code 1, 31, 8, 11: -4 – 356 °F  
 For media temperatures > 212 °F, we recommend using a mounting kit with adapter between the ball valve and the actuator.

**Ambient temperature:** -4 – 140 °F

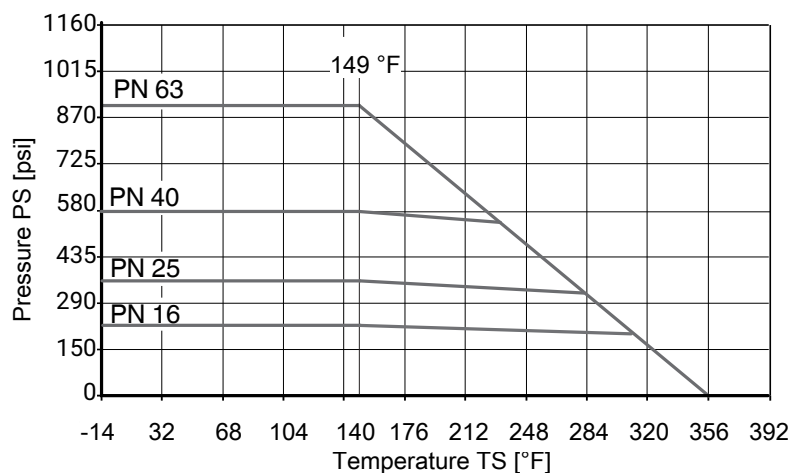
**Storage temperature:** 41 – 104 °F

### Pressure

**Operating pressure:** 0 – 914 psi

**Vacuum:** Can be used up to a vacuum of 1.5 inhg (absolute)  
 These values apply to room temperature and air. The values may deviate for other media and other temperatures.

**Pressure/temperature diagram:**



Note media temperature

Pressure/temperature data in accordance with diagram refers to static operating conditions. Strongly fluctuating or fast-changing parameters can lead to a reduction of the service life. Special applications must be talked through with your technical contact person in advance.

**Leakage rate:** Leakage rate according to ANSI FCI70 – B16.104  
 Leakage rate according to EN 12266, 90 psi air, leakage rate A

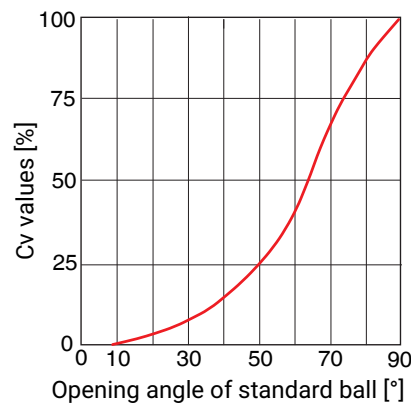
**Cv-values:**

**Standard ball (code D)**

DN	NPS	Cv values
8	1/4"	9.36
10	3/8"	9.36
15	1/2"	19.89
20	3/4"	39.78
25	1"	70.20
32	1¼"	109.98
40	1½"	249.21
50	2"	428.22
65	2½"	696.15
80	3"	1093.95
100	4"	1989.00

Cv values in gpm

**Diagrammatic view**



**V-ball 30° (code U)**

DN	NPS	Opening angle										
		0	15%	20%	30%	40%	50%	60%	70%	80%	90%	100%
15	1/2"	0	0.100	0.100	0.200	0.300	0.500	0.800	1.090	1.590	2.190	2.590
20	3/4"	0	0.100	0.200	0.500	0.700	1.090	1.790	2.390	3.280	4.480	5.370
25	1"	0	0.100	0.300	0.800	1.290	2.290	3.480	5.070	6.970	9.510	9.950
32	1¼"	0	0.200	0.400	1.090	1.990	3.680	5.470	7.960	9.950	12.930	14.920
40	1½"	0	0.300	0.600	1.590	2.980	4.970	7.460	10.940	13.920	16.910	19.890
50	2"	0	0.400	1.190	3.780	5.970	9.950	14.920	22.870	30.830	42.760	59.670
65	2½"	0	0.400	0.990	3.980	7.960	11.930	17.900	27.850	36.800	61.660	74.590
80	3"	0	0.500	1.190	3.980	7.960	13.920	22.870	32.820	45.750	64.640	81.550
100	4"	0	0.600	1.990	5.970	14.920	28.840	47.740	70.610	99.450	129.290	158.180

Cv values in gpm



## Cv-values:

## V-ball 60° (code Y)

DN	NPS	Opening angle										
		0	15%	20%	30%	40%	50%	60%	70%	80%	90%	100%
15	1/2"	0	0.100	0.100	0.300	0.500	0.900	1.390	1.990	3.280	4.380	5.970
20	3/4"	0	0.100	0.200	0.700	0.990	1.690	2.780	3.980	6.460	8.950	11.930
25	1"	0	0.200	0.400	1.090	1.790	3.380	5.270	7.860	12.240	15.220	20.880
32	1¼"	0	0.200	0.600	1.790	2.980	5.470	9.450	12.730	18.900	25.860	38.790
40	1½"	0	0.400	0.800	2.490	3.980	7.960	12.930	18.900	26.850	39.780	51.710
50	2"	0	0.400	1.490	4.570	8.950	16.420	26.850	38.790	54.700	82.540	109.400
65	2½"	0	0.400	1.490	4.970	9.950	20.880	33.810	52.710	74.590	102.430	149.180
80	3"	0	0.500	2.490	5.970	13.920	24.860	39.780	64.640	90.500	127.300	164.150
100	4"	0	0.700	2.980	10.940	24.860	39.780	58.680	89.510	140.280	210.830	354.040

Cv values in gpm

## V-ball 90° (code W)

DN	NPS	Opening angle										
		0	15%	20%	30%	40%	50%	60%	70%	80%	90%	100%
15	1/2"	0	0.100	0.200	0.400	0.600	0.900	1.490	2.190	3.780	5.370	6.860
20	3/4"	0	0.200	0.400	0.800	1.190	1.990	3.080	4.570	7.960	11.240	13.920
25	1"	0	0.200	0.600	1.790	3.380	5.070	8.060	11.340	15.910	20.880	28.840
32	1¼"	0	0.300	0.800	1.990	4.970	7.960	13.920	18.900	27.850	38.790	54.700
40	1½"	0	0.500	0.900	3.480	6.960	12.930	19.890	30.830	41.770	62.650	77.570
50	2"	0	0.700	1.990	5.970	11.930	21.880	34.810	44.750	69.620	104.420	134.320
65	2½"	0	0.500	1.690	6.960	13.920	27.850	47.740	69.620	105.420	159.120	216.800
80	3"	0	0.700	3.480	7.960	17.900	34.810	59.670	89.510	134.320	203.930	308.300
100	4"	0	0.990	3.480	15.910	39.780	74.590	124.370	188.960	293.440	439.570	666.320

Cv values in gpm

**Pressure rating:**

DN	Spigot				Threaded socket		Flange	
	Connection type code <sup>1)</sup>							
	17	19	59	60	1	31	8	11
8	-	PN63	-	PN63	PN63	PN63	-	-
10	PN63	PN63	-	PN63	PN63	PN63	-	-
15	PN63	PN63	PN63	PN63	PN63	PN63	-	PN40
20	PN63	PN63	PN63	PN63	PN63	PN63	-	PN40
25	PN63	PN63	PN63	PN63	PN63	PN63	-	PN40
32	PN63	PN63	-	PN63	PN63	PN63	-	PN40
40	PN63	PN63	PN63	PN63	PN63	PN63	-	PN40
50	PN63	PN63	PN63	PN63	PN63	PN63	-	PN40
65	PN40	PN40	PN40	PN40	PN40	PN40	PN16	PN40*
80	PN40	PN40	PN40	PN40	PN40	PN40	PN16	-
100	PN25	PN25	PN25	PN25	PN25	PN25	PN16	-

\* on request

1) **Connection type**

Code 1: Threaded socket DIN ISO 228

Code 31: NPT female thread

Code 8: Flange EN 1092, PN 16, form B, face-to-face dimension FTF EN 558 series 1, ISO 5752, basic series 1

Code 11: Flange EN 1092, PN 40, form B, face-to-face dimension FTF EN 558 series 1, ISO 5752, basic series 1

Code 17: Spigot EN 10357 series A/DIN 11866 series A formerly DIN 11850 series 2

Code 19: Spigot DIN EN 12627

Code 59: Spigot ASME BPE/DIN EN 10357 series C (from 2022 edition)/DIN 11866 series C

Code 60: Spigot ISO 1127/DIN EN 10357 series C (2014 edition)/DIN 11866 series B

**Product conformity**

**Pressure equipment standards:** ASME GEMÜ B31.3 (DN 15 – 100)  
2014/68/EU

**Food:** FDA  
Regulation (EC) No. 10/2011  
Regulation (EC) No. 1935/2006

**Explosion protection:** ATEX (2014/34/EU), order code Special version X

**ATEX marking:** The ATEX marking of the product depends on the respective product configuration with valve body and actuator. It can be found in the product-specific ATEX documentation and the ATEX type plate.

**Oxygen:** BAM compliant, the product is suitable for application with oxygen

**Mechanical data****Torques:**

DN	NPS	Breakaway torque
8	1/4"	53.10
10	3/8"	53.10
15	1/2"	53.10
20	3/4"	88.51
25	1"	97.36
32	1¼"	150.46
40	1½"	247.82
50	2"	469.09
65	2½"	672.66
80	3"	787.72
100	4"	1221.40

Torques in lbf in

A safety factor of 1.2 is included

With dry, non-lubricating media the breakaway torque may be increased.

Valid for clean, non-particulate and oil-free media (water, alcohol, etc.), gas or saturated steam (clean and wet).  
PTFE seal.

**Weight:****Ball valve**

DN	NPS	Threaded connection, spigot	Flange
8	1/4"	1.21	2.54
10	3/8"	1.21	2.54
15	1/2"	1.32	2.98
20	3/4"	1.54	3.20
25	1"	1.76	3.97
32	1¼"	2.65	5.29
40	1½"	5.07	7.72
50	2"	7.72	10.80
65	2½"	15.21	20.50
80	3"	25.79	32.41
100	4"	42.55	49.16

Weight in lb

## Technical data of actuator

### GEMÜ 9428, 9468 actuators

#### Mechanical data

Weight:

**GEMÜ 9428**

Supply voltage 12 V / 24 V:	2.20 lbs
-----------------------------	----------

**Actuator type 9468**

Actuator version 2070:	10.14 lbs
Actuator version 4100, 4200:	25.57 lbs

#### Product compliance

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

**EMC Directive:** 2014/30/EU

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

**RoHS Directive:** 2011/65/EU (GEMÜ 9428)

#### Electrical data

**Rated voltage:** 12 V / 24 V AC or DC ( $\pm 10\%$ )

**Rated frequency:** 50/60 Hz (at AC rated voltage)

**Electrical protection class:** I (DIN EN 61140)

**Power consumption:**

Actuator version (code)	Control module (code)	12 V DC (code B1)	12 V AC (code B4)	24 V DC (code C1)	24 V AC (code C4)
<b>1006, 3006</b>	<b>A0, AE</b>	30.0	30.0	30.0	30.0
<b>1015, 3015</b>	<b>A0, AE</b>	30.0	-	30.0	-
<b>2070</b>	<b>00, 0E, 0P</b>	-	-	63.0	-
<b>4100</b>	<b>00, 0E, 0P</b>	-	-	105.0	-
<b>4200</b>	<b>00, 0E, 0P</b>	-	-	90.0	-

Power consumption in W

**Current consumption:**

Actuator version (code)	Control module (code)	12 V DC (code B1)	12 V AC (code B4)	24 V DC (code C1)	24 V AC (code C4)
<b>1006, 3006</b>	<b>A0, AE</b>	2.2	2.0	1.20	1.5
<b>1015, 3015</b>	<b>A0, AE</b>	2.2	-	1.20	-
<b>2070</b>	<b>00, 0E, 0P</b>	-	-	2.60	-
<b>4100</b>	<b>00, 0E, 0P</b>	-	-	4.40	-
<b>4200</b>	<b>00, 0E, 0P</b>	-	-	3.60	-

Current data in A

Max. switching current:	Actuator version (code)	Control module (code)	12 V DC (code B1)	12 V AC (code B4)	24 V DC (code C1)	24 V AC (code C4)
	1006, 3006	A0, AE	6.3	2.4	4.0	1.8
	1015, 3015	A0, AE	9.2	-	3.8	-
	2070	00, 0E, 0P	-	-	14.0	
	4100	00, 0E, 0P	-	-	35.0	-
	4200	00, 0E, 0P	-	-	35.0	

Current data in A

**Input signal:** 24 V DC, 24 V AC, 120 V AC, 230 V AC  
dependent on rated voltage

**Duty cycle:** Continuous duty

**Electrical protection:** **GEMÜ 9428**  
Motor protective system by customer

**GEMÜ 9468**  
Internal for functional module 0x  
Actuator version 2070: MT 6.3 A  
Actuator version 4100, 4200: MT 10.0 A  
Motor protective system by customer, see "Recommended motor protection"

Recommended motor protection:	<b>GEMÜ 9428</b>		
	Voltage	12 V DC	24 V DC
<b>Motor protection switch type</b>		Siemens 3RV 1011-1CA10	Siemens 3RV 1011-1BA10
<b>Set current</b>		2.20	1.70

Current data in A

**GEMÜ 9468**  
Motor protection switch type: Siemens 3RV 1011-1FA10  
Set current: 4.0 A

**Antriebe Bernard, AUMA, J+J**

Note: For technical data see manufacturer's original datasheets

## Dimensions

### Actuator dimensions

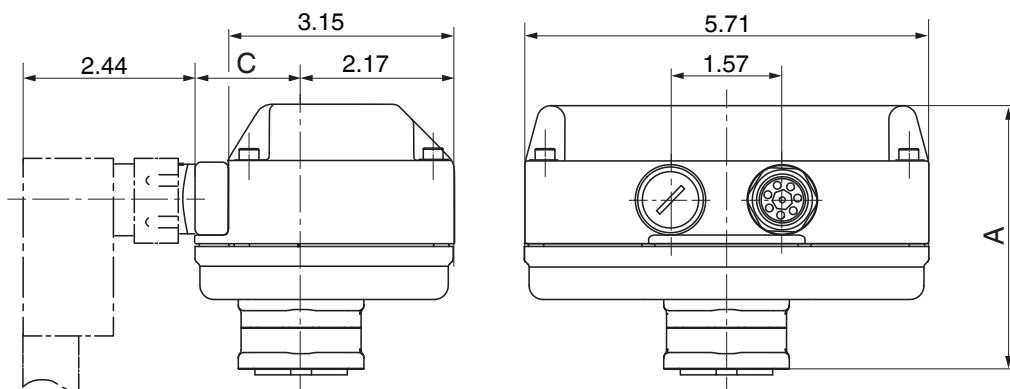
#### GEMÜ 9428, 9468 actuators

Note on actuator mounting:

Standard mounting orientation – actuator positioned in-line with piping

Only with flanged connections the actuator is mounted across the piping

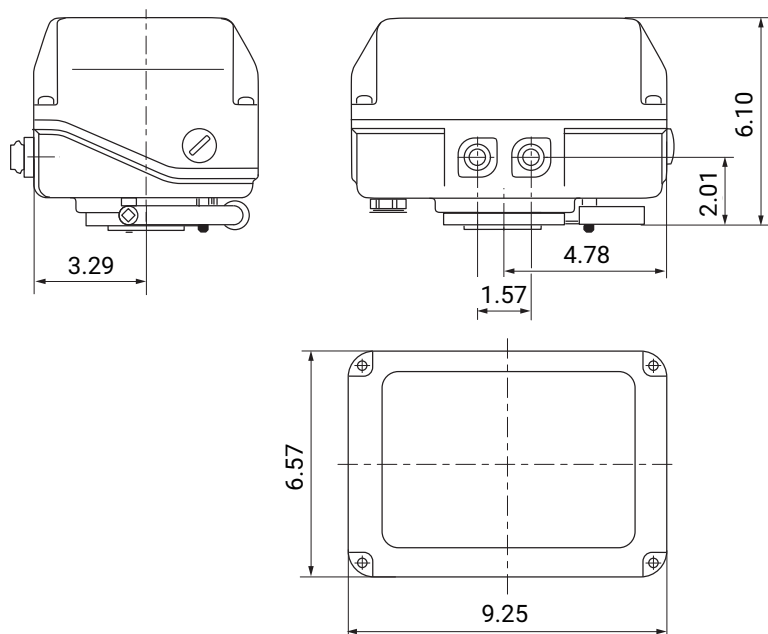
#### Actuator version 1006, 1015

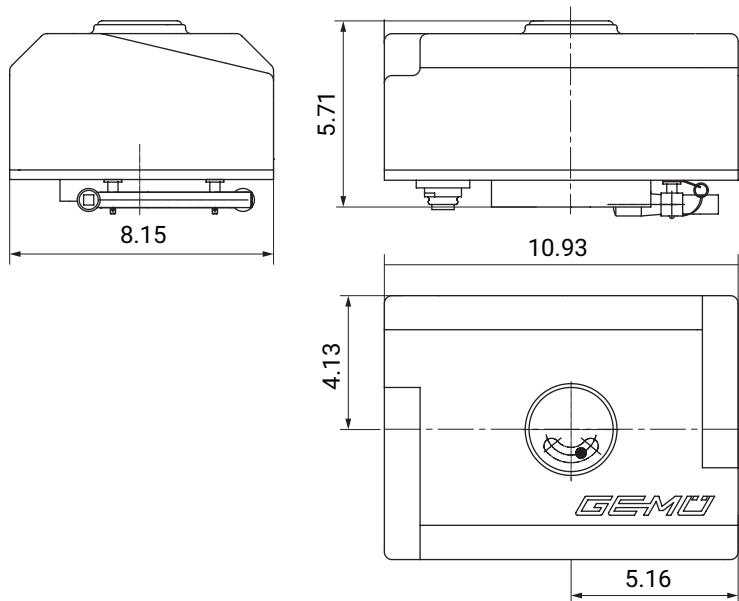


Actuator version	A	C
<b>1006, 1015</b>	3.70	1.93

Dimensions in inch

#### Actuator version 2070



**Actuator version 4100, 4200**

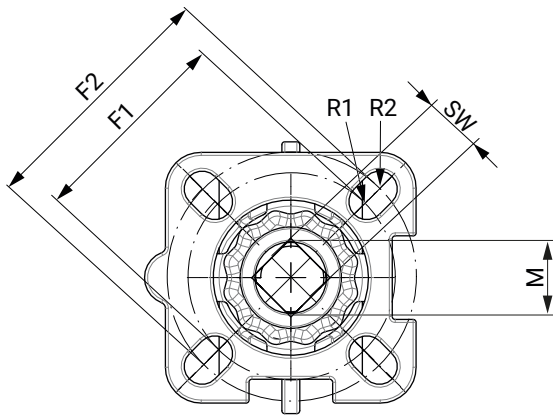
Dimensions in inch

**Bernard, AUMA, J+J actuators**

For more detailed information on third-party actuators, refer to the manufacturers' documentation

**Ball valve**

**Actuator flange**



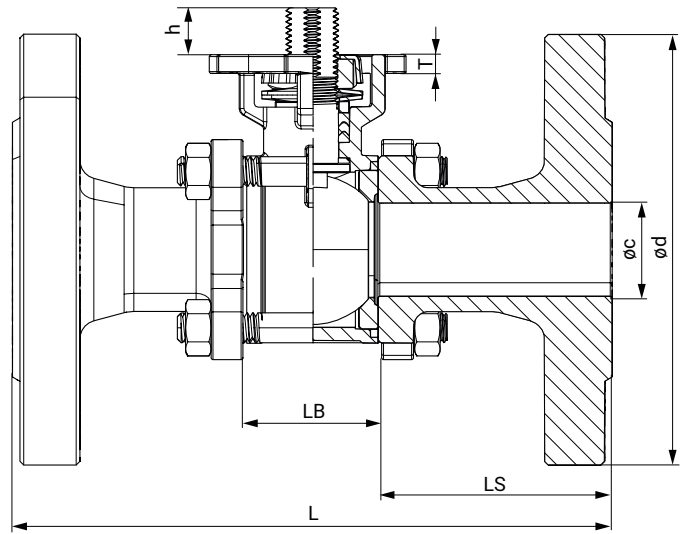
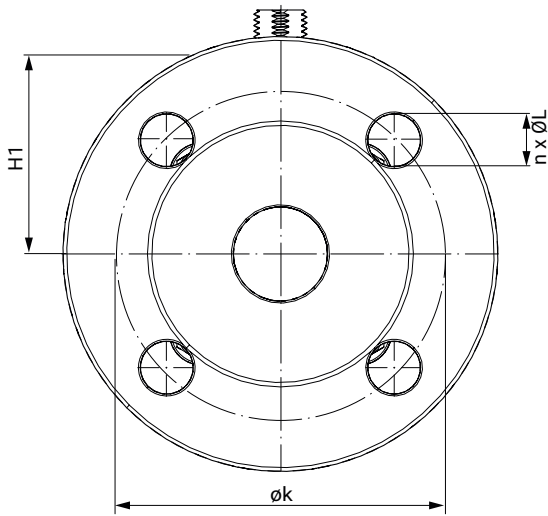
DN	G	F1	ISO 5211	R1	F2	ISO 5211	R2	SW [mm]	M
8	1/4"	1.42	F03	0.12	1.65	F04	0.12	9.0	M12
10	3/8"	1.42	F03	0.12	1.65	F04	0.12	9.0	M12
15	1/2"	1.42	F03	0.12	1.65	F04	0.12	9.0	M12
20	3/4"	1.42	F03	0.12	1.65	F04	0.12	9.0	M12
25	1"	1.65	F04	0.12	1.97	F05	0.14	11.0	M14
32	1 1/4"	1.65	F04	0.12	1.97	F05	0.14	11.0	M14
40	1 1/2"	1.97	F05	0.14	2.76	F07	0.18	14.0	M18
50	2"	1.97	F05	0.14	2.76	F07	0.18	14.0	M18
65	2 1/2"	1.97	F05	0.14	2.76	F07	0.18	14.0	M18
80	3"	2.76	F07	0.20	4.02	F10	0.24	17.0	M22
100	4"	2.76	F07	0.20	4.02	F10	0.24	17.0	M22

Dimensions in inch



**Body dimensions**

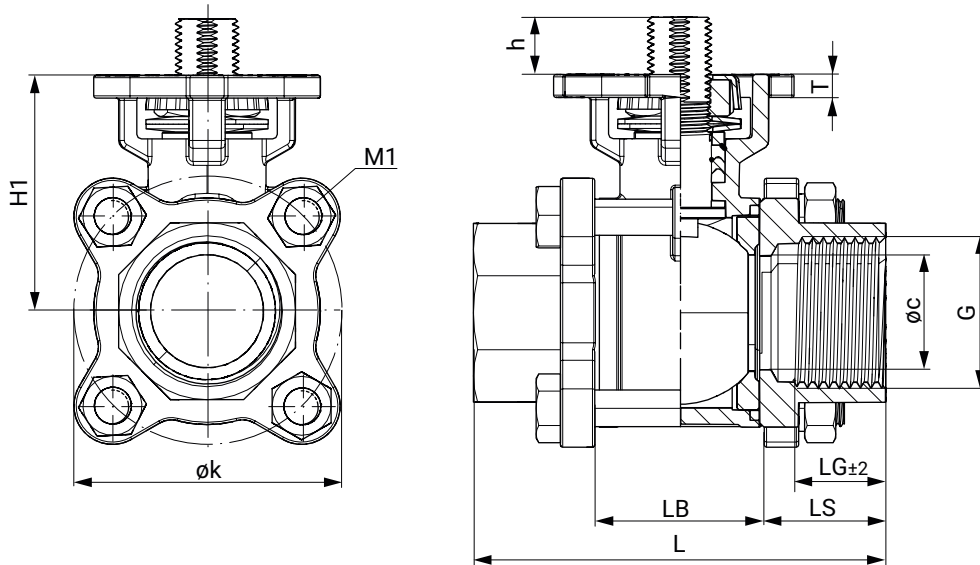
**Flange (connection code 8, 11)**



DN	Conne- tion code	$\varnothing c$	$\varnothing d$	$\varnothing k$	h	L	LB	LS	H1	T	n x $\varnothing L$
15	11	0.59	3.74	2.56	0.35	5.12	0.94	2.09	1.59	0.22	4 x 0.55
20	11	0.79	4.13	2.95	0.41	5.91	1.14	2.38	1.77	0.22	4 x 0.55
25	11	0.98	4.53	3.35	0.49	6.30	1.38	2.46	2.05	0.20	4 x 0.55
32	11	1.26	5.51	3.94	0.49	7.09	1.73	2.68	2.24	0.26	4 x 0.71
40	11	1.50	5.91	4.33	0.63	7.87	2.09	2.89	2.72	0.30	4 x 0.71
50	11	1.93	6.50	4.92	0.63	9.06	2.56	3.25	3.03	0.33	4 x 0.71
65	8	2.56	7.28	5.71	0.59	11.42	3.19	4.11	3.54	0.33	4 x 0.71
80	8	2.99	7.87	6.30	0.71	12.20	3.78	4.21	4.25	0.39	8 x 0.71
100	8	3.94	8.66	7.09	0.71	13.78	4.88	4.45	4.84	0.39	8 x 0.71

Dimensions in inch  
n = number of bolts

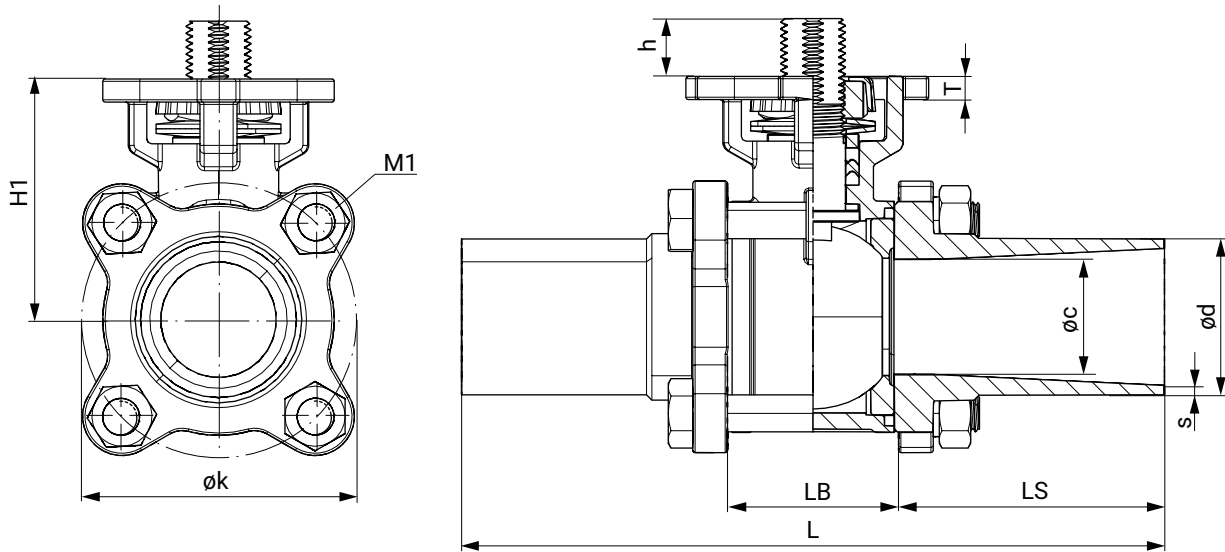
**Threaded socket (connection code 1, 31)**



DN	G	$\phi c$	$\phi k$	h	LG	L	LB	LS	H1	M1	T
8	1/4"	0.39	1.81	0.35	0.47	2.17	0.94	0.61	1.59	M8	0.47
10	3/8"	0.47	1.81	0.35	0.47	2.36	0.94	0.71	1.59	M8	0.55
15	1/2"	0.59	1.81	0.35	0.63	2.95	0.94	1.00	1.59	M8	0.63
20	3/4"	0.79	2.01	0.41	0.63	3.15	1.14	1.00	1.77	M8	0.63
25	1"	0.98	2.40	0.49	0.67	3.54	1.38	1.08	2.05	M8	0.67
32	1 1/4"	1.26	2.87	0.49	0.79	4.33	1.73	1.30	2.24	M10	0.79
40	1 1/2"	1.50	3.27	0.63	0.87	4.72	2.09	1.32	2.72	M10	0.87
50	2"	1.93	3.98	0.63	0.94	5.51	2.56	1.48	3.03	M12	0.94
65	2 1/2"	2.52	5.12	0.59	1.10	7.28	3.19	2.05	3.54	M12	1.10
80	3"	2.99	6.10	0.71	1.26	8.07	3.78	2.15	4.25	M14	1.26
100	4"	3.94	7.36	0.71	1.57	9.45	4.88	2.28	4.84	M14	1.57

Dimensions in inch

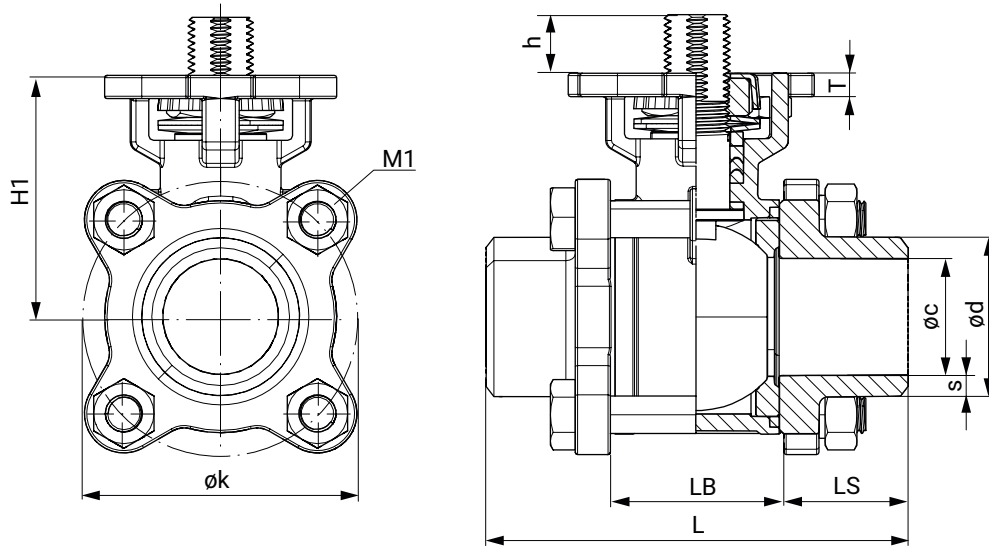
**Spigot EN 10357 series A (connection code 17)**



DN	øc	ød	h	øk	s	L	LB	LS	H1	M1	SW [mm]	T
10	0.39	0.51	0.35	1.81	0.06	4.72	0.94	1.89	1.59	M8	18.0	0.22
15	0.59	0.75	0.35	1.81	0.06	5.52	0.94	2.28	1.59	M8	18.0	0.22
20	0.79	0.91	0.41	2.01	0.06	5.51	1.14	2.19	1.77	M8	18.0	0.22
25	0.98	1.14	0.49	2.40	0.06	5.99	1.38	2.30	2.05	M8	21.0	0.20
32	1.26	1.38	0.49	2.87	0.06	6.50	1.73	2.38	2.24	M10	21.0	0.26
40	1.50	1.61	0.63	3.27	0.06	7.50	2.09	2.70	2.72	M10	27.0	0.30
50	1.97	2.09	0.63	3.98	0.06	7.99	2.56	2.72	3.03	M12	27.0	0.33
65	2.56	2.76	0.59	5.12	0.08	10.00	3.19	3.41	3.54	M12	27.0	0.33
80	3.15	3.35	0.71	6.10	0.08	11.03	3.78	3.62	4.25	M14	-	0.39
100	3.94	4.09	0.71	7.36	0.08	12.48	4.88	3.80	4.84	M14	-	0.39

Dimensions in inch

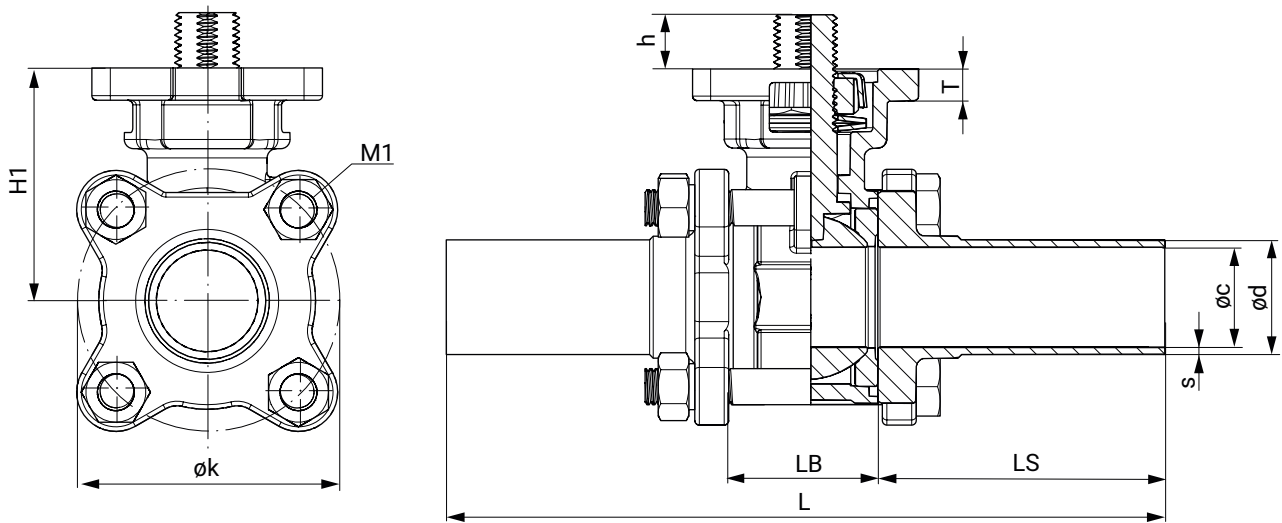
**Spigot DIN EN 12627 (connection code 19)**



DN	øc	ød	øk	h	s	L	LB	LS	H1	M1	T
8	0.46	0.64	1.81	0.35	0.09	2.36	0.94	0.71	1.59	M8	0.22
10	0.50	0.69	1.81	0.35	0.09	2.36	0.94	0.71	1.59	M8	0.22
15	0.59	0.85	1.81	0.35	0.13	2.95	0.94	1.00	1.59	M8	0.22
20	0.79	1.07	2.01	0.41	0.14	3.15	1.14	1.00	1.77	M8	0.22
25	0.98	1.34	2.40	0.49	0.18	3.54	1.38	1.08	2.05	M8	0.20
32	1.26	1.68	2.87	0.49	0.21	4.33	1.73	1.30	2.24	M10	0.26
40	1.50	1.91	3.27	0.63	0.21	4.72	2.09	1.32	2.72	M10	0.30
50	1.97	2.38	3.98	0.63	0.21	5.51	2.56	1.48	3.03	M12	0.33
65	2.48	3.00	5.12	0.59	0.26	7.30	3.19	2.06	3.54	M12	0.33
80	2.99	3.50	6.10	0.71	0.26	8.07	3.78	2.15	4.25	M14	0.39
100	3.94	4.57	7.36	0.71	0.31	9.45	4.88	2.28	4.84	M14	0.39

Dimensions in inch

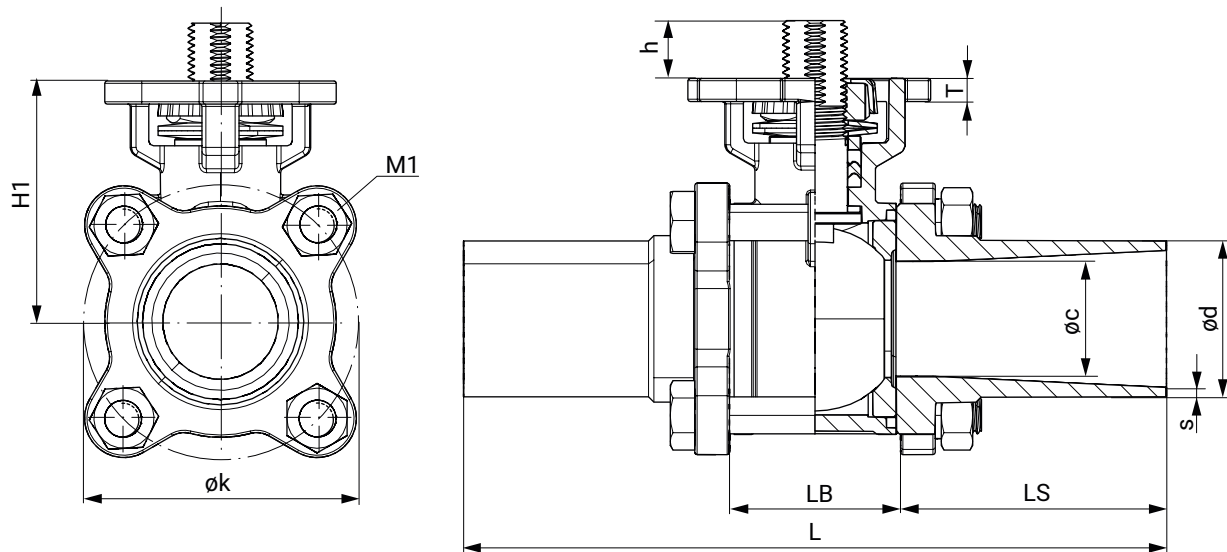
**Spigot ASME (connection code 59)**



DN	øc	ød	h	øk	s	L	LB	LS	H1	M1	T
15	0.37	0.50	0.33	1.81	0.06	5.51	0.98	2.26	1.59	M8	0.20
20	0.62	0.75	0.41	1.85	0.06	5.75	1.10	2.32	1.71	M8	0.20
25	0.87	1.00	0.47	2.20	0.06	6.26	1.26	2.50	1.99	M8	0.28
40	1.37	1.50	0.57	3.11	0.06	7.52	1.89	2.81	2.66	M10	0.31
50	1.87	2.00	0.57	3.88	0.06	8.50	2.44	3.03	2.97	M12	0.31
65	2.37	2.50	0.57	4.96	0.06	9.76	3.15	3.31	3.46	M12	0.31
80	2.87	3.00	0.69	5.75	0.06	10.51	3.54	3.48	4.13	M14	0.39
100	3.83	4.00	0.69	7.09	0.08	12.52	4.65	3.94	4.72	M14	0.39

Dimensions in inch

**Spigot ISO (connection code 60)**



DN	øc	ød	h	øk	s	L	LB	LS	H1	M1	T
8	0.41	0.53	0.35	1.81	0.06	4.72	0.94	1.89	1.59	M8	0.22
10	0.47	0.68	0.35	1.81	0.06	4.72	0.94	1.89	1.59	M8	0.22
15	0.59	0.84	0.35	1.81	0.06	5.52	0.94	2.28	1.59	M8	0.22
20	0.79	1.06	0.41	2.01	0.06	5.51	1.14	2.19	1.77	M8	0.22
25	0.98	1.33	0.49	2.32	0.08	5.99	1.38	2.30	2.05	M8	0.20
32	1.26	1.67	0.49	2.87	0.08	6.50	1.73	2.38	2.24	M10	0.26
40	1.50	1.90	0.63	3.27	0.08	7.50	2.09	2.70	2.72	M10	0.30
50	1.93	2.37	0.63	4.06	0.08	7.99	2.56	2.72	3.03	M12	0.33
65	2.52	3.00	0.59	5.12	0.08	10.00	3.19	3.41	3.54	M12	0.33
80	2.99	3.50	0.71	6.10	0.09	11.03	3.78	3.62	4.25	M14	0.39
100	3.94	4.50	0.71	7.36	0.09	12.48	4.88	3.80	4.84	M14	0.39

Dimensions in inch

## Electrical connection

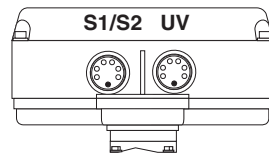
### Connection and wiring diagram – actuator version 1006, 1015

#### ON/OFF actuator (code A0)

12 V DC (code B1) / 24 V DC (code C1)

#### Position of the connectors

Actuator version 1006, 1015

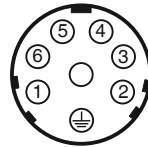


#### Electrical connection



Plug assignment X1, UV

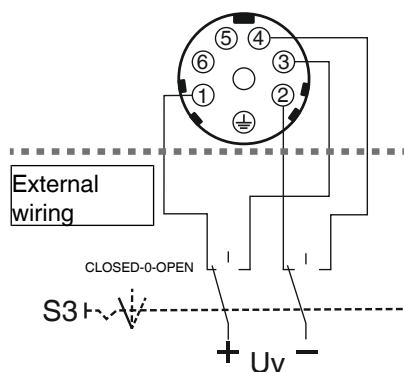
Pin	Description
1	Uv+, direction of travel CLOSED
2	Uv-, direction of travel CLOSED
3	Uv+, direction of travel OPEN
4	Uv-, direction of travel OPEN
5	n.c.
6	n.c.
	PE, protective earth conductor



Plug assignment X2, S1/S2

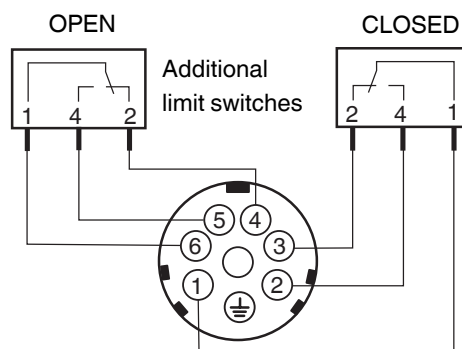
Pin	Description
1	Change-over contact limit switch CLOSED
2	Make contact limit switch CLOSED
3	Break contact limit switch CLOSED
4	Break contact limit switch OPEN
5	Make contact limit switch OPEN
6	Change-over contact limit switch OPEN
	PE, protective earth conductor

#### Connection diagram



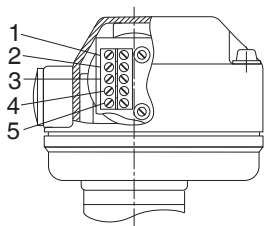
Connection assignment X1, UV

S3	Actuator
CLOS ED	Direction of travel CLOSED
0	OFF
OPEN	Direction of travel OPEN



**12 V AC (code B4) / 24 V AC (code C4)**

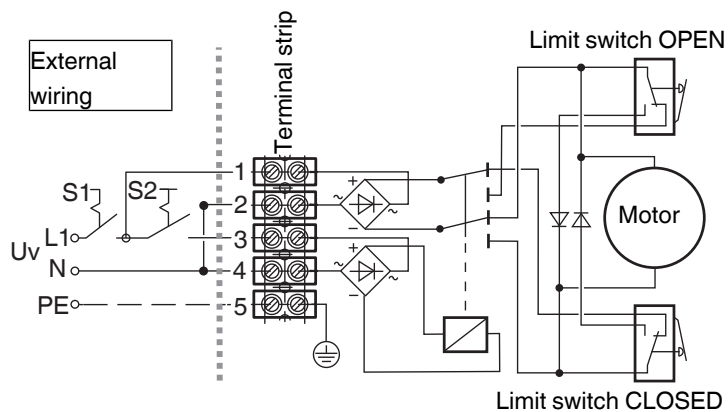
**Assignment of the terminal strips**



Item	Description
1	L1, supply voltage
2	N, supply voltage
3	L1, change-over (OPEN/CLOSED)
4	N, change-over (OPEN/CLOSED)
5	PE, protective earth conductor

Preferred direction -OPEN- when all signals are present

**Connection diagram**



S1	Actuator
0	OFF
1	ON

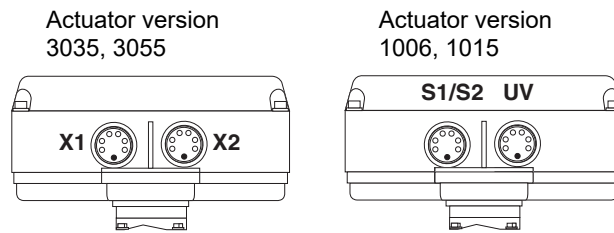
S2	Direction of travel
0	CLOSED
1	OPEN



**ON/OFF actuator with 2 potential-free limit switches (code AE)**

12 V DC (code B1) / 24 V DC (code C1)

**Position of the connectors**

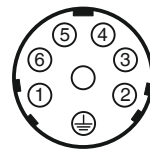


**Electrical connection**



Plug assignment X1, UV

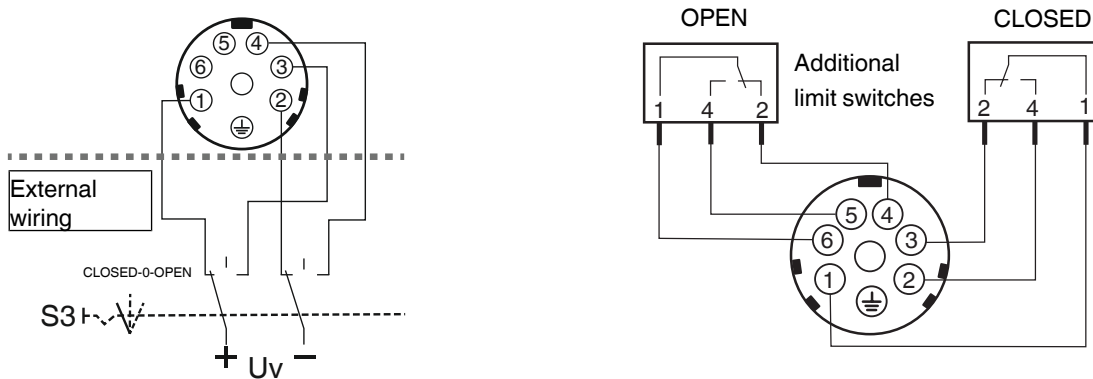
Pin	Description
1	Uv+, direction of travel CLOSED
2	Uv-, direction of travel CLOSED
3	Uv+, direction of travel OPEN
4	Uv-, direction of travel OPEN
5	n.c.
6	n.c.
⊕	PE, protective earth conductor



Plug assignment X2, S1/S2

Pin	Description
1	Change-over contact limit switch CLOSED
2	Make contact limit switch CLOSED
3	Break contact limit switch CLOSED
4	Break contact limit switch OPEN
5	Make contact limit switch OPEN
6	Change-over contact limit switch OPEN
⊕	PE, protective earth conductor

**Connection diagram**



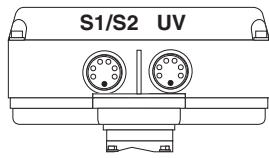
Connection assignment X1, UV

S3	Actuator
CLOSED	Direction of travel CLOSED
0	OFF
OPEN	Direction of travel OPEN

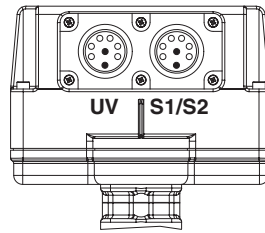
**12 V AC (code B4) / 24 V AC (code C4)**

**Position of the connectors**

Actuator version 1006



Actuator version 2015

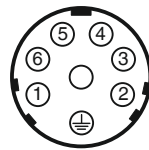


**Electrical connection**



Plug assignment UV

Pin	Description
1	L1, supply voltage
2	N, supply voltage
3	L1, change-over (OPEN/CLOSED)
4	N, change-over (OPEN/CLOSED)
5	n.c.
6	n.c.
⊕	PE, protective earth conductor

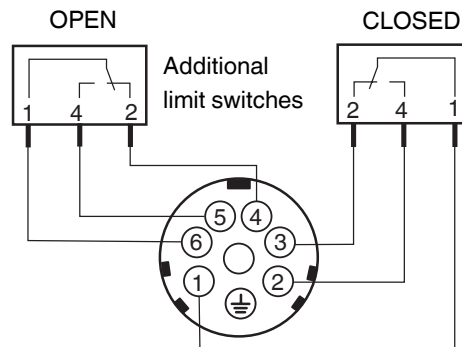
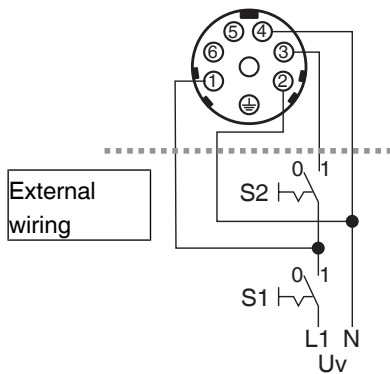


Plug assignment S1/S2

Pin	Description
1	Change-over contact limit switch CLOSED
2	Make contact limit switch CLOSED
3	Break contact limit switch CLOSED
4	Break contact limit switch OPEN
5	Make contact limit switch OPEN
6	Change-over contact limit switch OPEN
⊕	PE, protective earth conductor

Preferred direction -OPEN- when all signals are present

**Connection diagram**



Connection diagram X1, UV

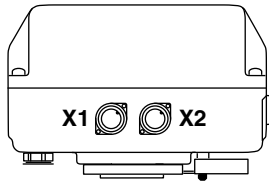
S1	Actuator
0	OFF
1	ON
S2	Direction of travel
0	CLOSED
1	OPEN

## Connection and wiring diagram – actuator version 2070, 4100, 4200

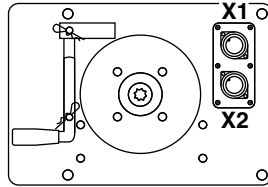
### Connection/wiring diagram

ON/OFF actuator with relay (code 00), 24 V DC (code C1)

#### Position of the connectors

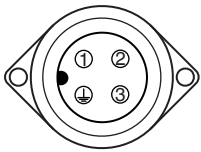


Actuator version 2070



Actuator version 4100, 4200

#### Electrical connection



Plug assignment X1

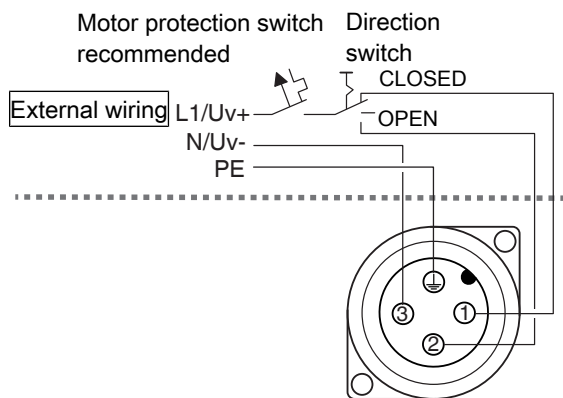
Pin	Description
1	L1 / Uv+, direction of travel CLOSED
2	L1 / Uv+, direction of travel OPEN
3	N / Uv-, neutral conductor
	PE, protective earth conductor

N / L- signals in the unit are separated.

The potential must be assigned by the user.

When the OPEN and CLOSED switches are operated simultaneously the actuator "CLOSES".

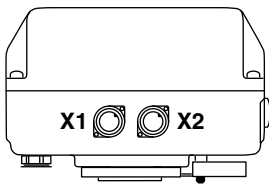
#### Connection diagram



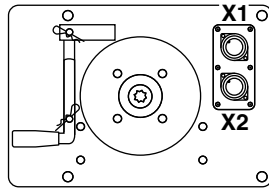
Connection assignment X1

**ON/OFF actuator with 2 additional potential-free limit switches, with relay (code 0E), 24 V DC (code C1)**

**Position of the connectors**

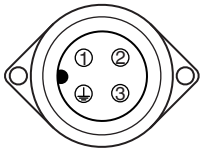


Actuator version 2070



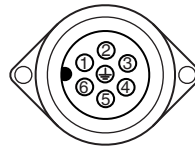
Actuator version 4100, 4200

**Electrical connection**



Plug assignment X1

Pin	Description
1	L1 / Uv+, direction of travel CLOSED
2	L1 / Uv+, direction of travel OPEN
3	N / Uv-, neutral conductor
	PE, protective earth conductor



Plug assignment X2

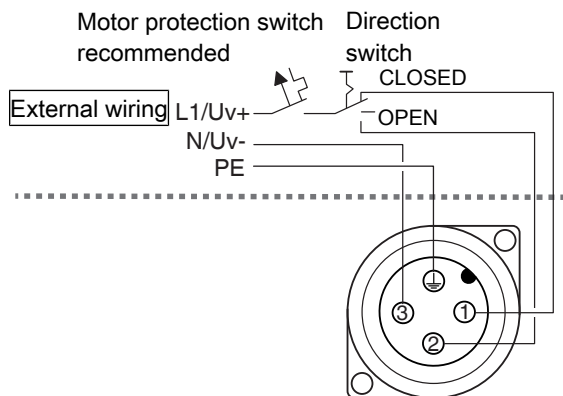
Pin	Description
1	Change-over contact limit switch CLOSED
2	Make contact limit switch CLOSED
3	Break contact limit switch CLOSED
4	Break contact limit switch OPEN
5	Make contact limit switch OPEN
6	Change-over contact limit switch OPEN
	PE, protective earth conductor

N / L- signals in the unit are separated.

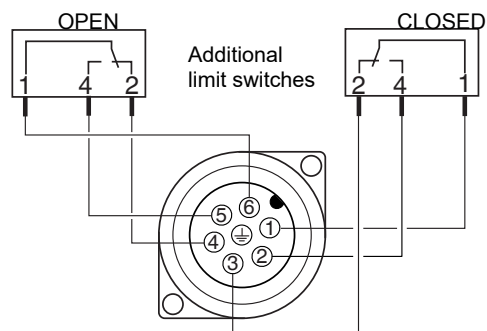
The potential must be assigned by the user.

When the OPEN and CLOSED switches are operated simultaneously the actuator "CLOSES".

**Connection diagram**



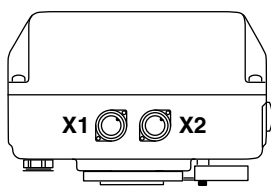
Connection assignment X1



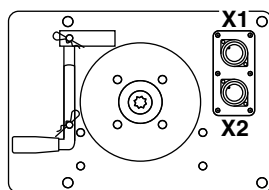
Connection assignment X2

**ON/OFF actuator with potentiometer output, with relay (code 0P), 24 V DC (code C1)**

**Position of the connectors**

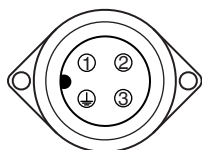


Actuator version 2070



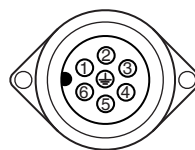
Actuator version 4100, 4200

**Electrical connection**



Plug assignment X1

Pin	Description
1	L1 / Uv+, direction of travel CLOSED
2	L1 / Uv+, direction of travel OPEN
3	N / Uv-, neutral conductor
⊕	PE, protective earth conductor



Plug assignment X2

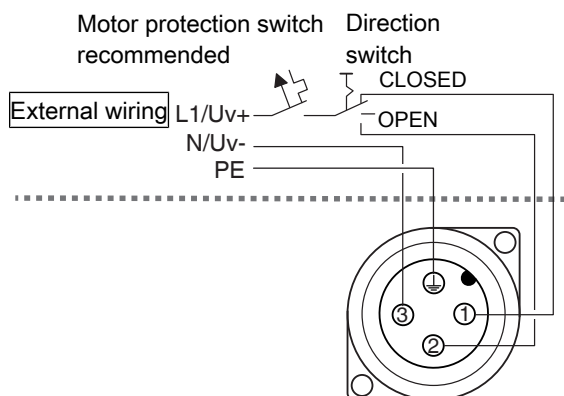
Pin	Description
1	n. c.
2	n. c.
3	n. c.
4	Us-, actual value potentiometer signal voltage minus
5	Us ⊥, actual value potentiometer signal output
6	Us+, actual value potentiometer signal voltage plus
⊕	PE, protective earth conductor

N / L- signals in the unit are separated.

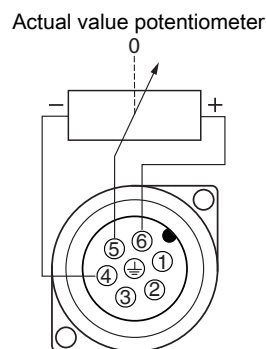
The potential must be assigned by the user.

When the OPEN and CLOSED switches are operated simultaneously the actuator "CLOSES".

**Connection diagram**



Connection assignment X1



Connection assignment X2

**Certificates**

Certificate	Standard	Item number
3.1 Material	EN 10204	88333336

## 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:**

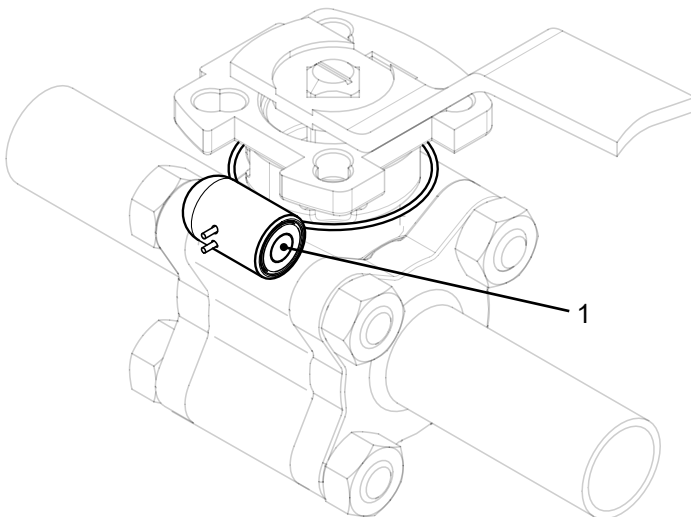
[www.gemu-group.com/conexo](http://www.gemu-group.com/conexo)

### Ordering

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

### Installing the RFID chip

In the corresponding design with CONEXO, this product has an RFID chip for electronic identification purposes. The position of the RFID chip can be seen below.





GEMÜ Gebr. Müller Apparatebau GmbH & Co. KG  
Fritz-Müller-Straße 6-8, 74653 Ingelfingen-Criesbach, Germany  
Tel. +49 (0)7940 123-0 · info@gemue.de  
www.gemu-group.com