

Ball Valve, Plastic Design

2/2 way, 3/2 way, motorized

Construction

- Maintenance-free electrical actuator with a powerful, reversible dc motor
- The rugged reduction gear in the motor, consisting of a threaded spindle with swivel lever, provides the rotation through 90°
- Plastic housing
- Optical position indicator
- Manual override



Features

- Suitable for inert and corrosive liquid and gaseous media
- Insensitive to media with high viscosities
- Simple installation using union body

Advantages

- Adjustable end positions by means of microswitches
- Emergency power supply with 24V DC types through the emergency power supply module **GEMÜ 1570**
- Opening and closing behaviour is independent of the working pressure



Electrical connection

Supply voltages		12 / 24 V	100-250 V AC
Mains frequency	DC or 50/60 Hz		50/60 Hz
Power consumption	approx. 24 W		approx. 30 W
Control input voltage	motor voltage		20-250 V \pm
Control input current	-		typ. 1 mA
Rating	continuously rated		rated 40%
Type of connection	cable gland PG 13.5		Hirschmann plug type N6RFFS11 (PG 11)
Diameter of cable	7.5 ... 12.5 mm		7 ... 9 mm
Max. cross section of wire	1.5 mm ²		1.5 mm ²
Recomm. connection cable	5x1 mm ² Ölflex®		1 connector (standard): 7x1 mm ² Ölflex® 2 connectors (K-no. 6812): mains: 3x1 mm ² Ölflex® signal: 5x1 mm ² Ölflex®
Electrical protection	Motor protective system by customer		integrated stall and overload protection in addition excess current release T 1A 5x20 mm

Actuator materials

Supply voltages		12 / 24 V	100-250 V AC
Lower part of housing	PPE		PPE
Upper part of housing	PPE		ABS
Indicator	PA transparent		PA transparent

Turn range

Nominal turn range	90°
Max. turn range	93°
Setting range limit switch Min.	0-20°
Setting range limit switch Max.	70-93°

Working medium

Any inert or corrosive gas or liquid, subject to the correct choice of body and seal material

Max. perm. pressure of working medium 10 bar*
(for water and non-hazardous media to which the body material is resistant)

Max. perm. temperature of working medium 60° C*

* See datasheet "Technical Information on Plastic Materials"

Admissible temperatures

Ambient temperature	-10...+60°C
Storage temperature	-20...+60°C

Protection class

IP 65 acc. to DIN 40050

Manual override

with Allan key SW3

Inserts for further connections (please order separately)

Valve body materials	Butt weld spigots		Threaded sockets		
	PE	PP		PVC-U	PP
DN			Threads		
15	CVDE 020	CVDM 020	G 1/2	POFV 012	POFM 012
20	CVDE 025	CVDM 025	G 3/4	POFV 034	POFM 034
25	CVDE 032	CVDM 032	G 1	POFV 100	POFM 100
32	CVDE 040	CVDM 040	G 1 1/4	POFV 114	POFM 114
40	CVDE 050	CVDM 050	G 1 1/2	POFV 112	POFM 112
50	CVDE 063	CVDM 063	G 2	POFV 200	POFM 200

Nominal size (mm)	K _v value l/min		Weight (g)				
	Body type D	Body type M	PVC-U		PP		PVDF
15	200	depending on ball confi- guration and ball position	1320	1295	1260	1225	1370
20	385		1455	1435	1355	1320	1520
25	770		1685	1630	1545	2470	1785
32	1100		2095	2075	1880	1815	2235
40	1750		2370	2510	2120	2080	2570
50	3400		3130	3305	2695	2620	3500

Body type	Ref. no.
Straight through (2/2 way)	D
Multi-port(3/2 way)	M

Actuator size	Ref. no.
Voltages B1, C1, B4, C4	1
Voltage O4	2

Connections	Ref. no.
Solvent cement/welded sockets (DIN)	2
Further connections by inserts see table page 2	

Torque/Operating time	Ref. no.
Design with spur gear 6 Nm/approx. 4 sec	06
Design with planetary gear 13 Nm/approx. 11 sec	15*
* only with voltages B1, C1, O4	

Valve body material	Ref. no.
PVC-U	1
PP	5
PVDF (only body type D/ seal mat. 4)	20

Choice of torques	
DN (mm)	Torque
15 - 32	06
40 - 50	15

Seal material	Ref. no.
Seat: PTFE/O-rings: FPM	4
Seat: PTFE/O-rings: EPDM	14

Ball configuration (only body type M)	Ref. no.
T ball	T
L ball	L

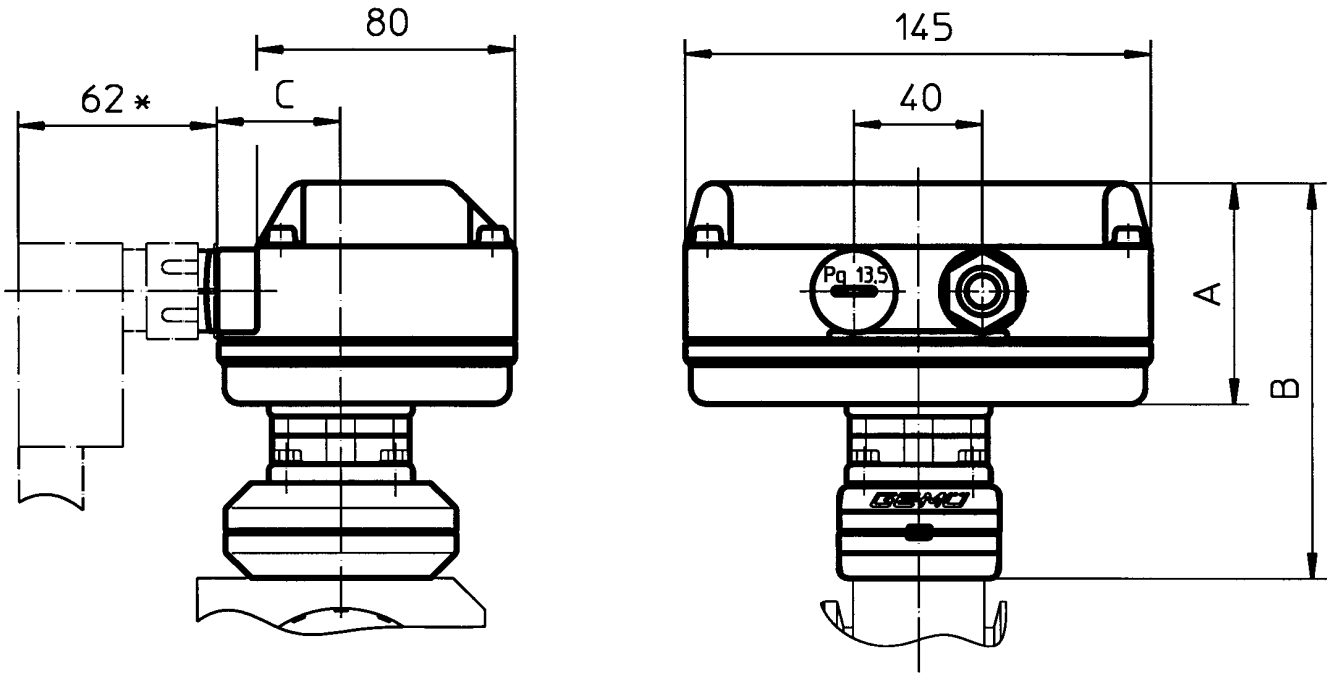
Supply voltages / frequency	Ref. no.
12 V DC	B1
24 V DC	C1
12 V 50/60 Hz *	B4
24 V 50/60 Hz *	C4
100-250 V 50/60 Hz	O4
* only torque 6 Nm (ref.no.06)	

Ball position (only body type M)	Ref. no.
See drawing page 7	1; 2; 3 or 4

Order example	722	15	M	2	1	14	C1	-	1	06	T	1	6598
Type	722												
Nominal size (reference number)		15											
Body type (reference number)			M										
Connection (reference number)				2									
Valve body material (reference number)					1								
Seal material (reference number)						14							
Supply voltages / frequency (reference number)							C1						
Actuator size (reference number)										1			
Torque/Operating time (reference number)											06		
Ball configuration (reference number)												T	
Ball position (only with T ball) (see page 7)													1
Special design (K-no.) (see page 8)													6598

Actuator dimensions (mm)

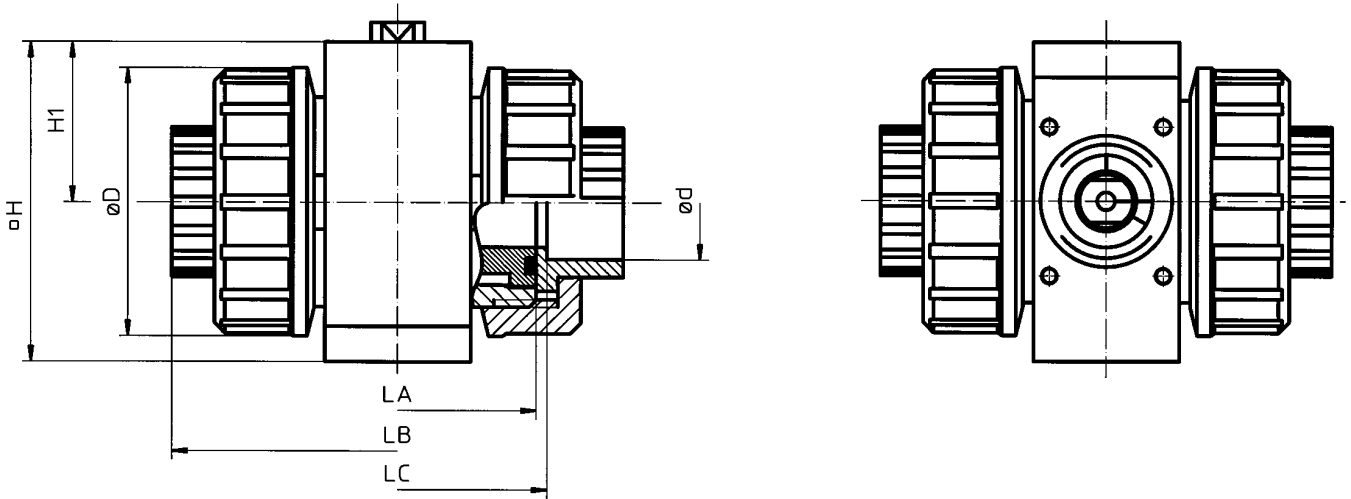
<i>Actuator size</i>	<i>Voltages</i>	<i>A</i>	<i>B</i>	<i>C</i>
1	12 V, 24 V	68	95	49
2	100 V-250 V	94	121	53



* Standard with supply voltage reference number O4

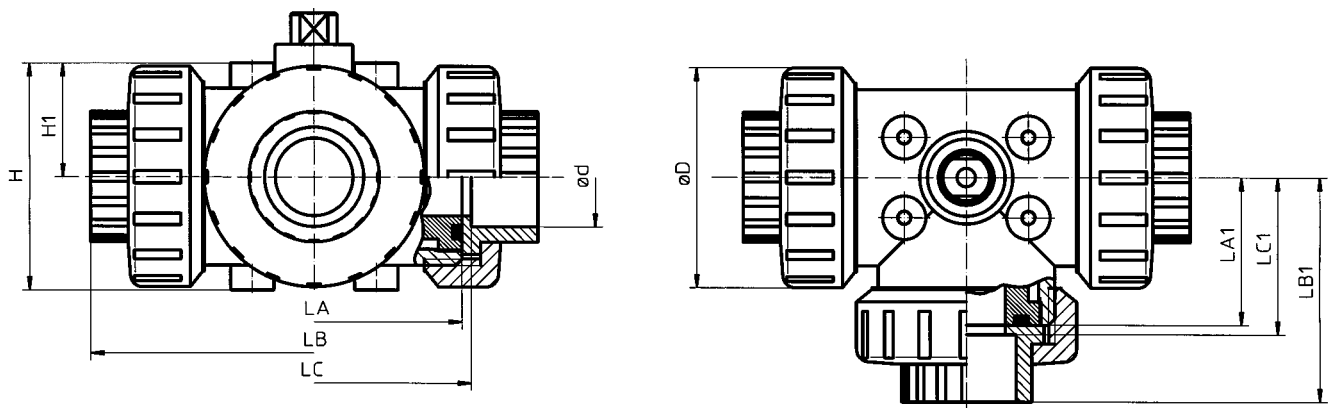
Body dimensions - 2/2 way design (mm)

DN	LA	LB	LC	H	H1	øD	ød
15	65	103	71	63	32	55	20
20	70	115	77	73	37	66	25
25	77	128	84	90	45	75	32
32	87	146	94	104	52	87	40
40	91	164	102	112	56	100	50
50	110	199	123	135	68	122	63

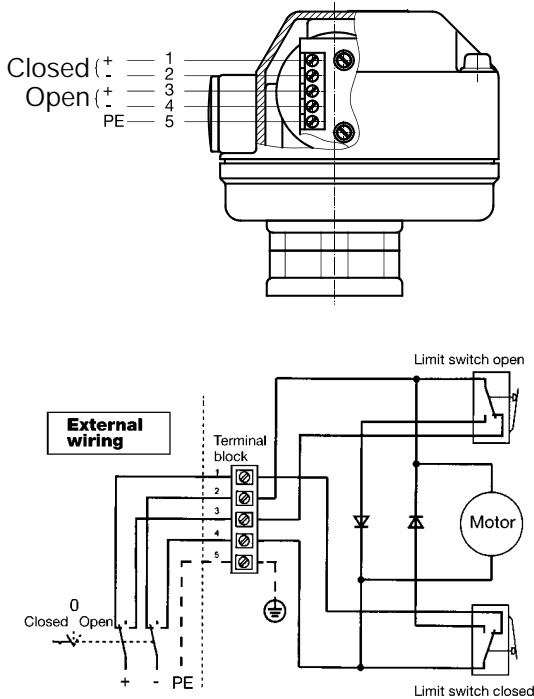


Body dimensions - 3/2 way design (mm)

DN	LA	LB	LC	LA1	LB1	LC1	H	H1	øD	ød
15	70	108	76	36	54	38	55	28	53	20
20	83	128	90	42	64	45	65	33	62	25
25	94	144	100	49	72	50	73	37	71	32
32	115	173	121	60	87	61	86	43	84	40
40	131	197	135	69	99	68	103	52	98	50
50	155	243	167	78	122	84	119	60	117	63



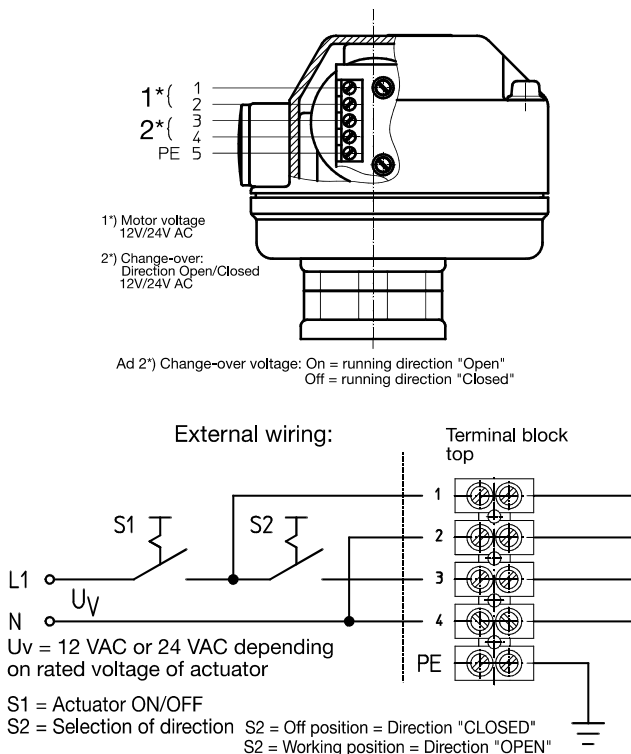
**Connection diagram for
12 V/24 V DC (standard)**



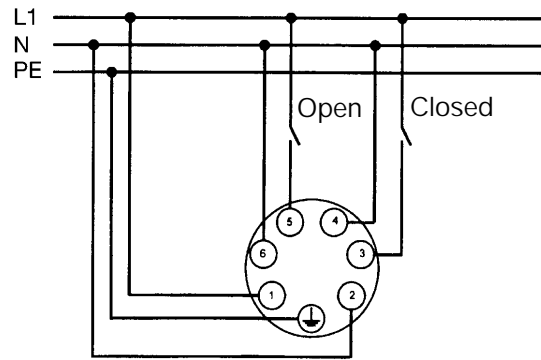
Terminals must not be bridged!

If parallel connection of several actuators is required, the variant with K-no. 6410 must be used.

**Connection diagram for
12 V/24 V AC**

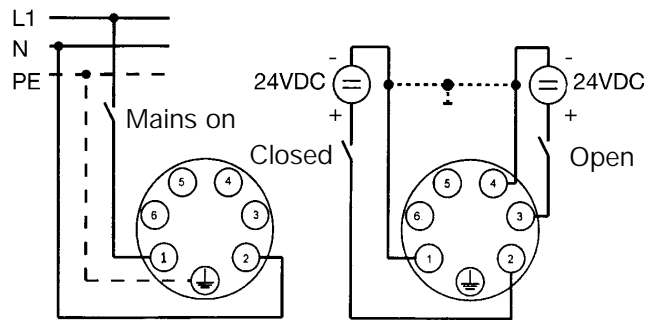


**Connection diagram for
100-250 VAC (standard)
using 1 connector 100-250 VAC**



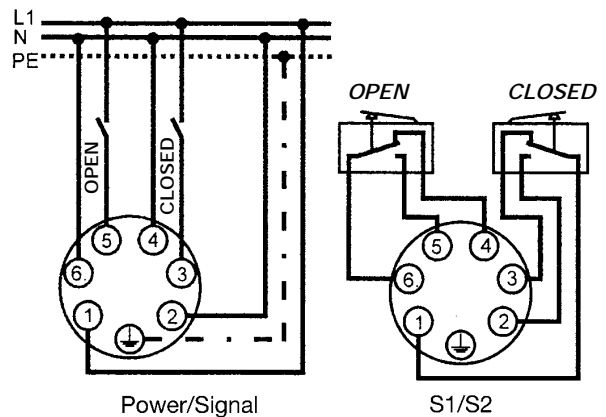
Direction change-over with preferred direction "Closed"

**Connection diagram for
100-250 V AC (K-no. 6812)
using 2 connectors
separate mains and signal connections**



Direction change-over with preferred direction "Closed"

**Connection diagram for
100-250 V AC (K-no. 6597)
using 2 connectors
additional potential-free limit switches**



Direction change-over with preferred direction "Closed"

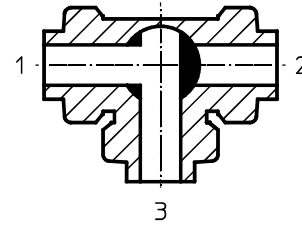
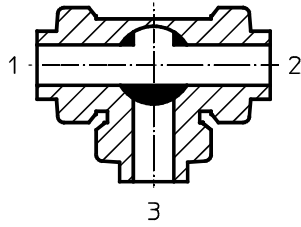
Ball positions

T ball

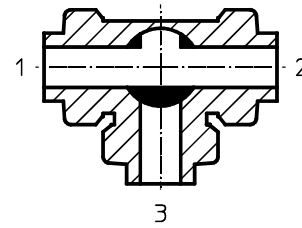
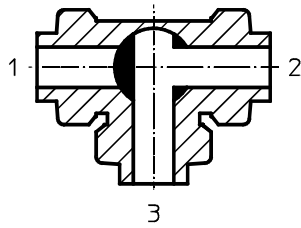
End position "Closed"

End position "Open"

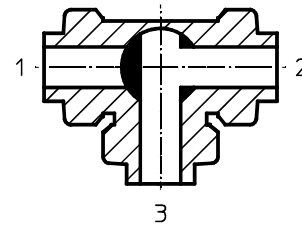
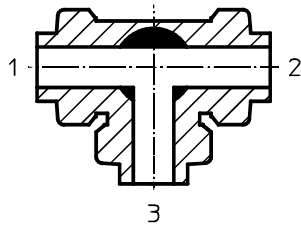
Reference number 1



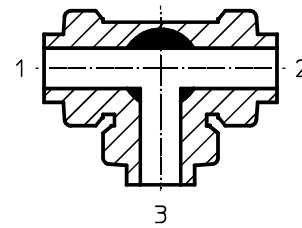
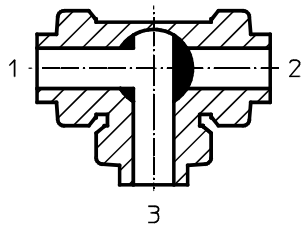
Reference number 2



Reference number 3



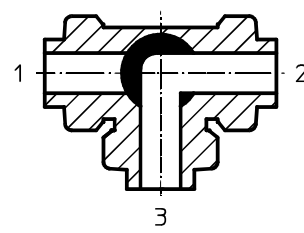
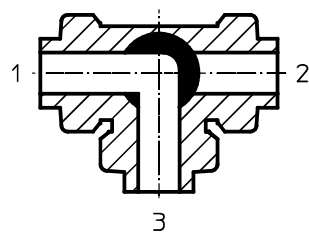
Reference number 4



L ball

End position "Closed"

End position "Open"





GEMÜ® 1570

Emergency power supply module

(only for design 24 V DC)

Special designs

Supply voltages	12 / 24 V DC	100-250 V AC
Connection with 1 Hirschmann socket DIN 43651 Type N6RFFS11 (Cable diameter 7...9 mm; wire cross section up to 1.5 mm ² ; PG11)	K-no. 6598	standard
Mains and signal galvanically separated, connection with 2 Hirschmann sockets DIN 43651 Type N6RFFS11 (Cable diameter 7...9 mm; wire cross section up to 1.5 mm ² ; PG11)	-	K-no. 6812
With additional potential-free limit switches and connection with 2 Harting plugs Type HAN 7D (Cable diameter 7...9 mm; wire cross section 0.14...2.5 mm ² ; PG11)	K-no. 6722	K-no. 6722
Parallel operation	K-no. 6410	standard
With additional potential-free limit switches and connection with 2 Hirschmann sockets DIN 43651 Type N6RFFS11 (Cable diameter 7...9 mm; wire cross section up to 1.5 mm ² ; PG11)	K-no. 6597	K-no. 6597

Connection plugs are included with each item.



GEMÜ® VALVES, ACTUATORS AND CONTROL SYSTEMS