

Diaphragm Valve, Plastic *2/2 way, motorized*

Construction

- Valve body and diaphragm are available in various materials
- Maintenance-free electric actuator with reversible synchronous motor
- Reduction gear is operated via a cam
- A spring ensures continuous contact between the cam and the valve spindle
- Optical position indicator

Features

- Suitable for inert and corrosive liquid, viscous and gaseous media
- Insensitive to highly contaminated abrasive media
- Direct 4-20 (0-20) mA control using an optional module or an integrated control module
- Electrical position indication by means of a potentiometer (optional module) or potential-free limit switches
- Consistent adjustable control system and reliable opening and closing action
- Valve in nominal bore size 15 mm with male threads can be fitted to the pipeline without additional connection elements

Advantages

- Long-life synchronous motor, no danger of burn-out
- Opening and closing behaviour is independent of the working pressure
- High flow capability
- Optional flow direction and mounting position
- High efficiency



Working medium

Any inert or corrosive gaseous, viscous or liquid media, subject to the correct choice of body and diaphragm material.

Max. perm. temperature of working medium 60°C

Ambient temperature -15 to +55°C

Diaphragm material

Ref. no.

Perbunan	NBR	2
Viton®	FPM	4
Ethylene-Propylene	EPDM	14
TFM/EPDM	TFM laminated	52

Supply voltages / Mains frequency

Ref. no.

24 V 50/60 Hz	±10%	C4
120 V 50/60 Hz	±10%	G4
230 V 50/60 Hz	±10%	L4

Electrical connection

2 x PG 13,5	(Design without integrated control modules)
2 x concentric plug and socket connection	(Binder series 717)
	(Design with integrated control modules)

Rating

Continuously rated

Power consumption

3.5 VA

Protection class

IP 65 acc. to DIN 40050

Operating time

See type of design (page 3) appr. 17 or 45 s

Nominal size (mm)	Working pressure (bar)	K_v value (m³/h) ISO conn.	Weight (g)
12	0 - 6	2.8	1000
15	0 - 6	3.5	1050

All pressures are given as gauge pressures when applied upstream only.

Body configuration

Ref. no.

Straight through D

Connections

Ref. no.

Threaded sockets - DIN ISO 228	1
Solvent cement sockets - DIN	2
Union ends with metric sockets - DIN	7
Spigots for butt welding	28
Union ends with metric butt weld spigots acc. to DIN 16962 T 13 series 4	78

Valve body material

Ref. no.

PVC-U	1
PP	5
PVDF	20

Design

Ref. no.

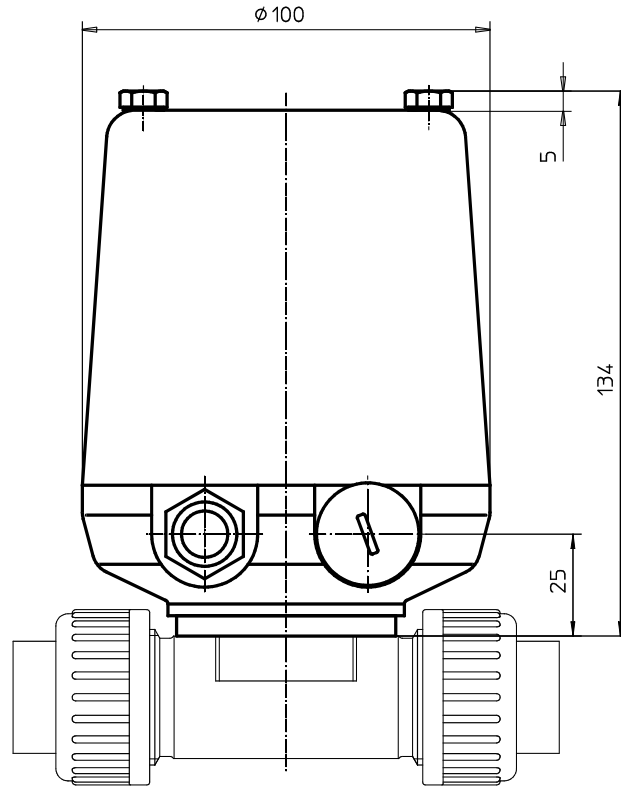
Standard: approx. 17 sec. operating time, 2 potential-free switching contacts	6023
Operating time approx. 45 sec., 2 potential-free switching contacts	6024
Operating time approx. 17 sec., with potentiometer 10 kw	6025
Operating time approx. 45 sec., with potentiometer 10 kw	6026

Order example

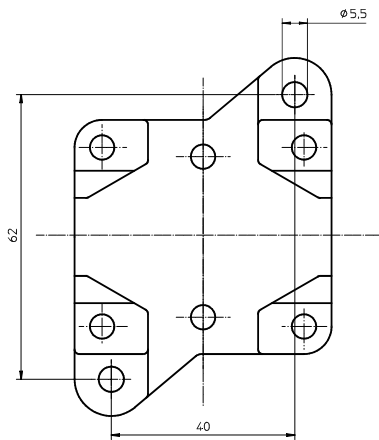
	613	15	D	7	1	14	C4	E2	6023
Type	613								
Nominal size (mm)		15							
Body configuration (D)			D						
Connection (reference number)				7					
Valve body material (reference number)					1				
Diaphragm material (reference number)						14			
Supply voltage / frequency (reference number)							C4		
Integrated control modules (reference number)								E2	
Design (additional K-reference number)									6023

<i>Integrated control modules (with connectors)</i>	<i>Ref. no.</i>
Without	-
Analogue signal processing	
Control of valve position. Actual value control inside the actuator by means of a potentiometer (K 6025/K 6026); set value external, 0/4-20 mA	E2
Control of process variables. Actual value external, 0/4-20 mA, set value external 4-20 mA (K 6023/K 6024)	E3
Fieldbus connection for LonWorks	
Control of process variables. Actual value, set value external by means of Lonworks LPT 10 linkpower transceiver (K 6023/K 6024)	L1
Control of valve position. Actual value control inside the actuator by means of a potentiometer (K 6025/K 6026); set value external by means of Lonworks LPT 10 linkpower transceiver	L2
Control of process variables. Actual value, set value external by means of Lonworks FTT 10A transceiver (K 6023/K 6024)	L3
Control of valve position. Actual value control inside the actuator by means of a potentiometer (K 6025/K 6026); set value external by means of Lonworks FTT 10A transceiver, free topology	L4

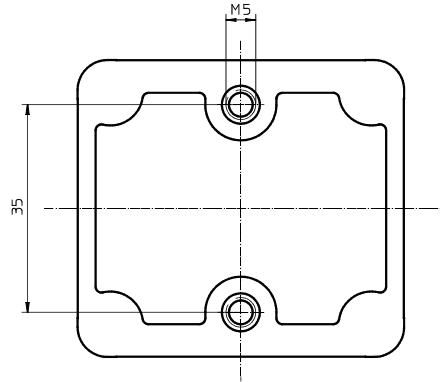
Actuator dimensions (mm)



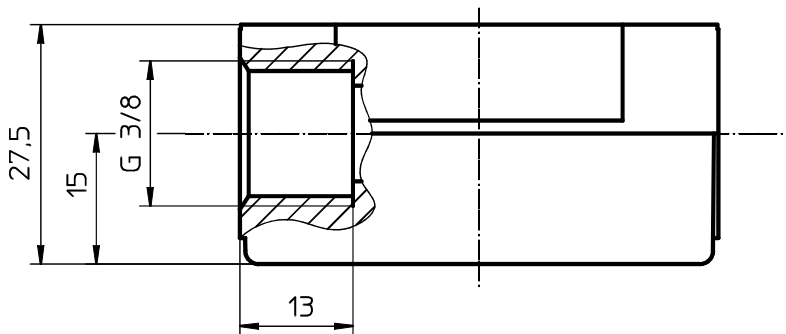
Dimensions of mounting plate GEMÜ 1041 (mm)



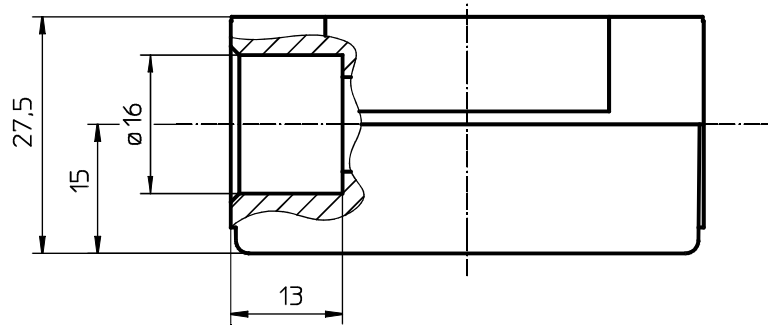
Valve body mounting dimensions (mm)



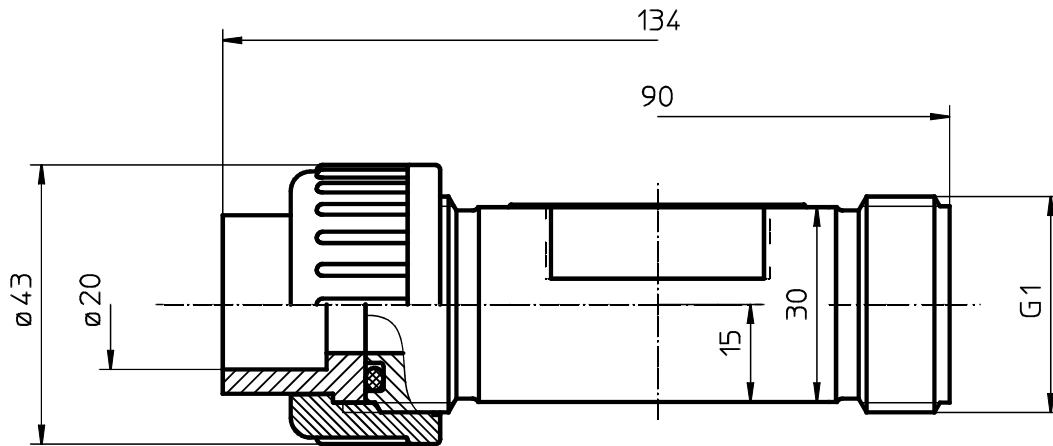
Body dimensions - Threaded sockets ref. no. 1, material ref. no. 1, 5 (mm)



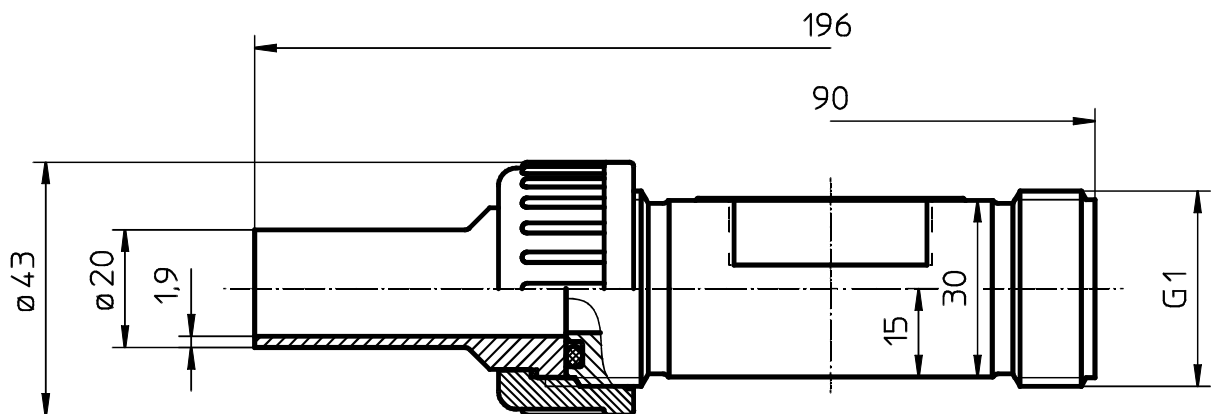
Body dimensions - Solvent cement sockets ref. no. 2, material ref. no. 1 (mm)



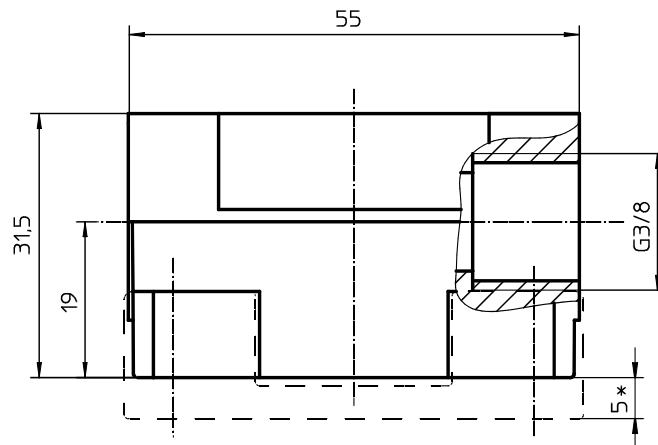
*Body dimensions - Union ends with metric sockets -
DIN ref. no. 7, material ref. no. 1, 5 (mm)*



Body dimensions - Union ends with metric butt weld spigots ref. no. 78, material ref. no. 5 (mm)

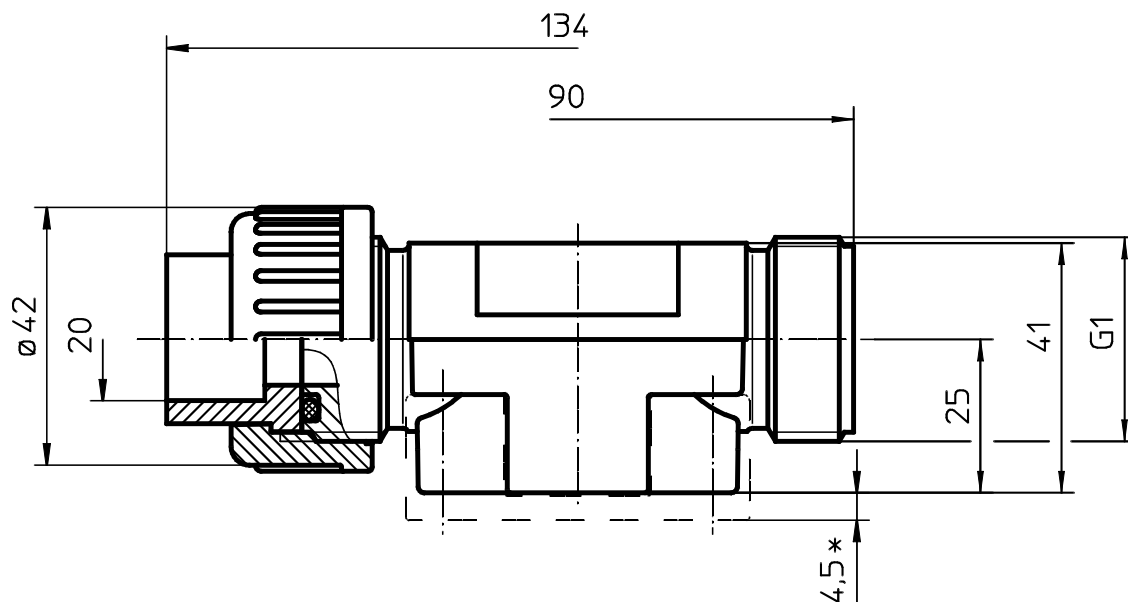


Body dimensions - Threaded sockets ref. no. 1, material ref. no. 20 (mm)



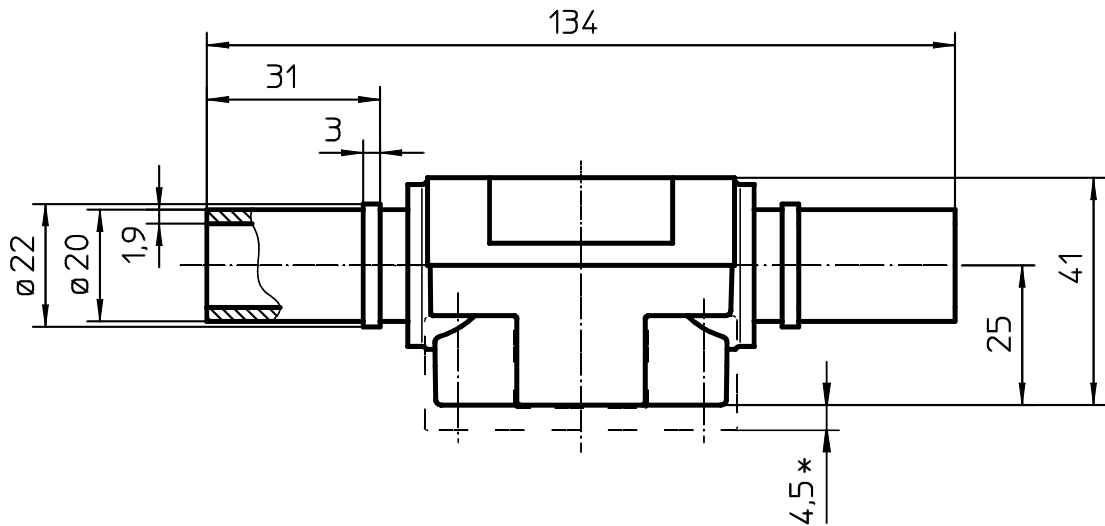
* Dimensions in conjunction with mounting plate GEMÜ 1041

Body dimensions - Union ends with metric sockets - DIN ref. no. 7, material ref. no. 20 (mm)



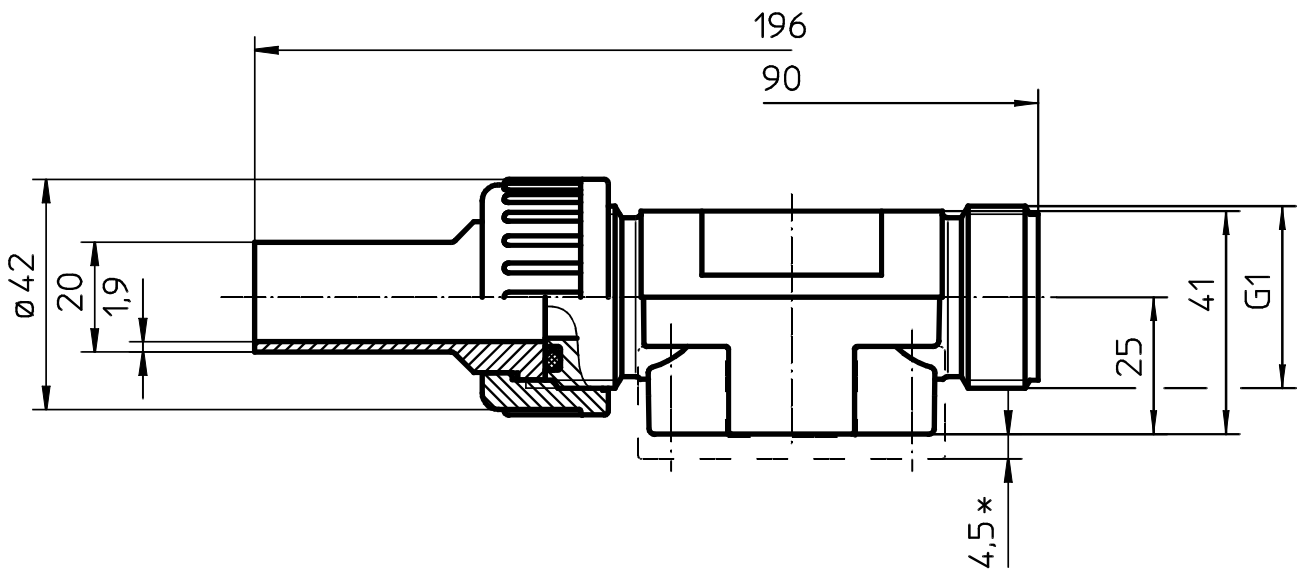
* Dimensions in conjunction with mounting plate GEMÜ 1041

Body dimensions - Butt weld spigots ref. no. 28, material ref. no. 20 (mm)



* Dimensions in conjunction with mounting plate GEMÜ 1041

Body dimensions - Union ends with metric butt weld spigots ref. no. 78, material ref. no. 20

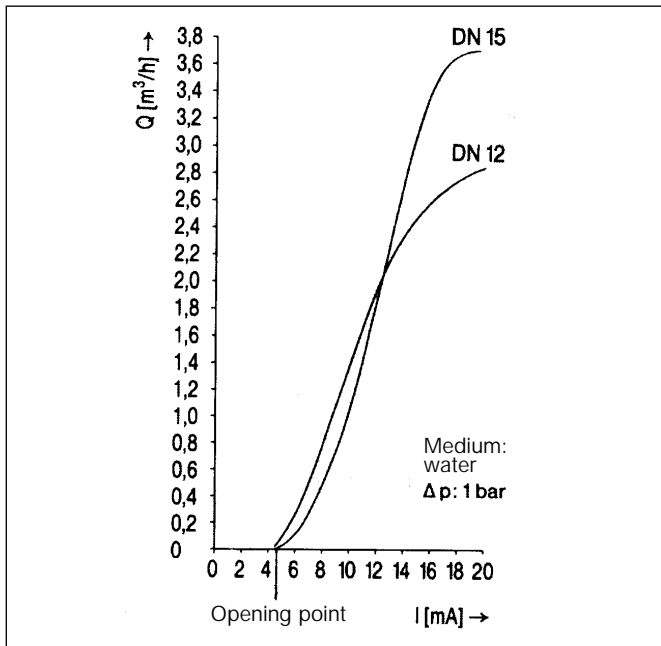


* Dimensions in conjunction with mounting plate GEMÜ 1041

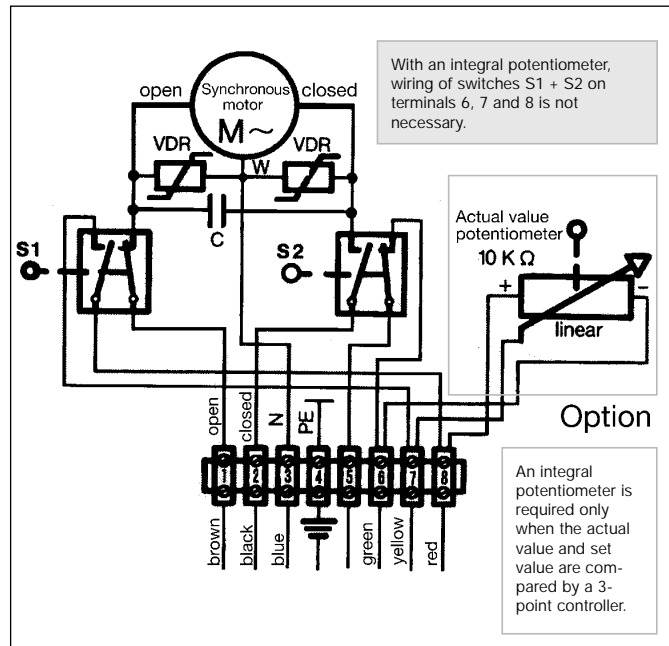
Overview of valve bodies for GEMÜ 613

Valve body material (ref. no.)	PVC-U (ref. no. 1)			PP (ref. no. 5)			PVDF (ref. no. 20)			
Connection (ref. no.)	1	2	7	1	7	78	1	7	28	78
DN 12	X	X	-	X	-	-	X	-	-	-
DN 15	-	-	X	-	X	X	-	X	X	X

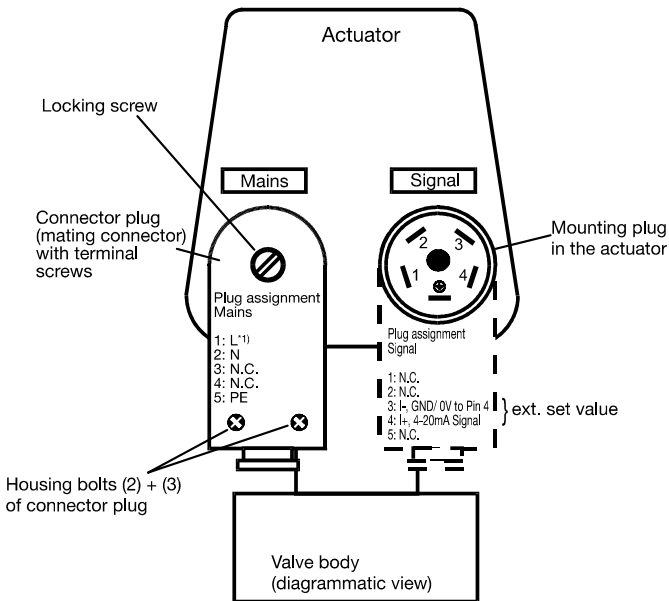
Flow characteristic with e module GEMÜ series 1281-1284



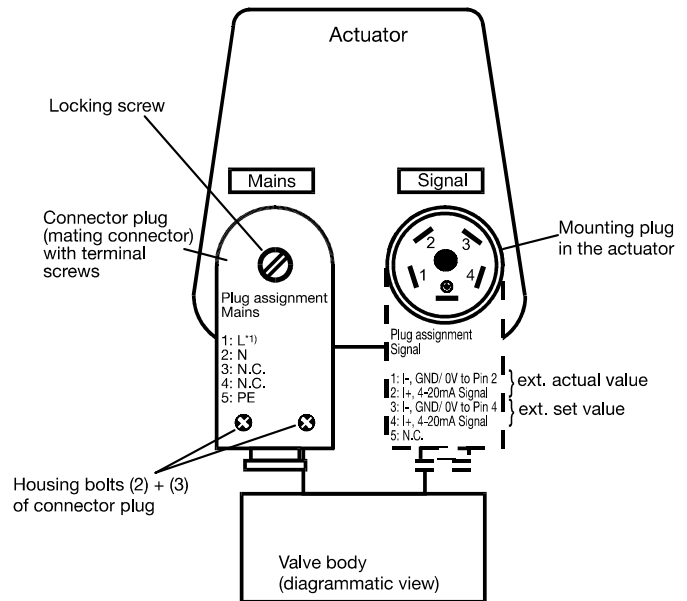
Connection diagram GEMÜ 613



Connection diagram integrated control modules ref. no. E2



Connection diagram integrated control modules ref. no. E3



*1 For the supply voltage (mains) check the details on the label (24, 120, or 230 VAC). N.C. = not connected



GEMÜ® VALVES, ACTUATORS
AND CONTROL SYSTEMS