

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) |

Body configuration

Ref. no.

| | |
|------------------|---|
| Straight through | D |
|------------------|---|

Connection

Ref. no.

| | |
|--|----|
| Threaded sockets - DIN ISO 228 | 1 |
| Solvent cement sockets - DIN (only with PVC-U) | 2 |
| Union ends with metric sockets - DIN | 7 |
| Spigots for butt welding (only with PVDF) | 28 |
| Union ends with metric butt weld spigots acc. to DIN 16962 T 13 series 4 (only with PP and PVDF) | 78 |

Rating

Continuously rated

Power consumption

3.5 VA

Protection class

IP 65 acc. to DIN 40050

Valve body material

Ref. no.

| | |
|-------|----|
| PVC-U | 1 |
| PP | 5 |
| PVDF | 20 |

Operating time

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

Design

Ref. no.

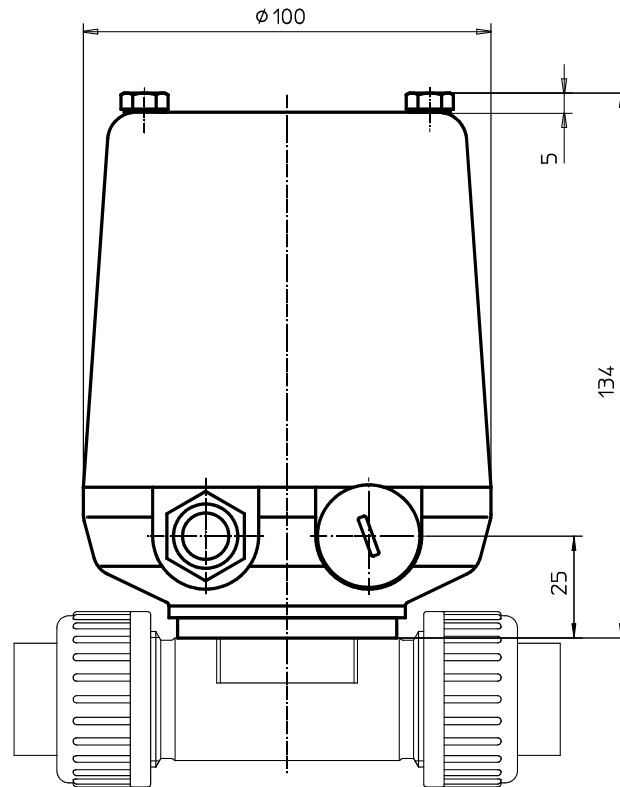
| | |
|---|------|
| Standard: approx. 17 sec. operating time, 2 potential-free switching contacts | 6023 |
| Operating time approx. 45 sec., 2 potential-free switching contacts | 6024 |
| Operating time approx. 17 sec., with potentiometer 10 kΩ | 6025 |
| Operating time approx. 45 sec., with potentiometer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

Order example

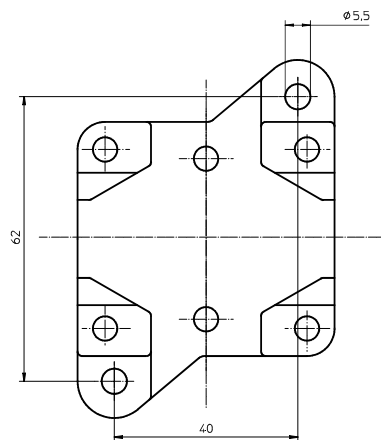
| | 613 | 15 | D | 7 | 1 | 14 | C4 | E2 | 6023 |
|---|-----|----|---|---|---|----|----|----|------|
| Type | 613 | | | | | | | | |
| Nominal size (mm) | | 15 | | | | | | | |
| Body configuration (D) | | | D | | | | | | |
| Connection (reference number) | | | | 7 | | | | | |
| Valve body material (reference 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 | | - |
| <i>Analogue signal processing</i> | | |
| 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 |
| <i>Fieldbus connection for LonWorks</i> | | |
| 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 |

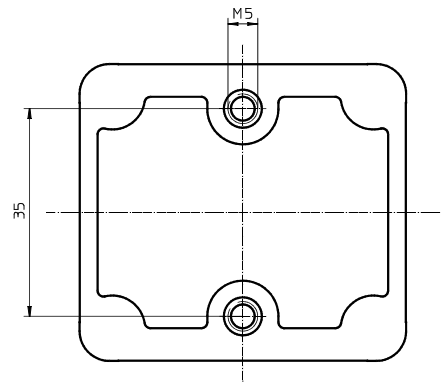
Actuator dimensions (mm)



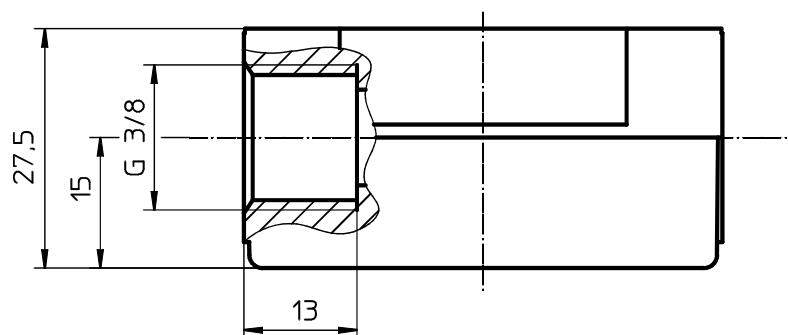
Dimensions of mounting plate GEMÜ 1041 (mm)



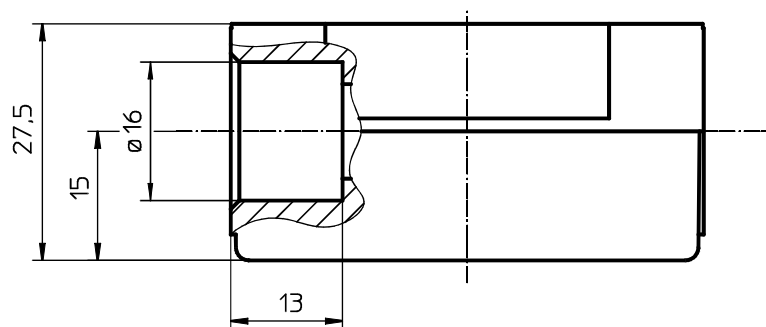
Valve body mounting dimensions (mm)



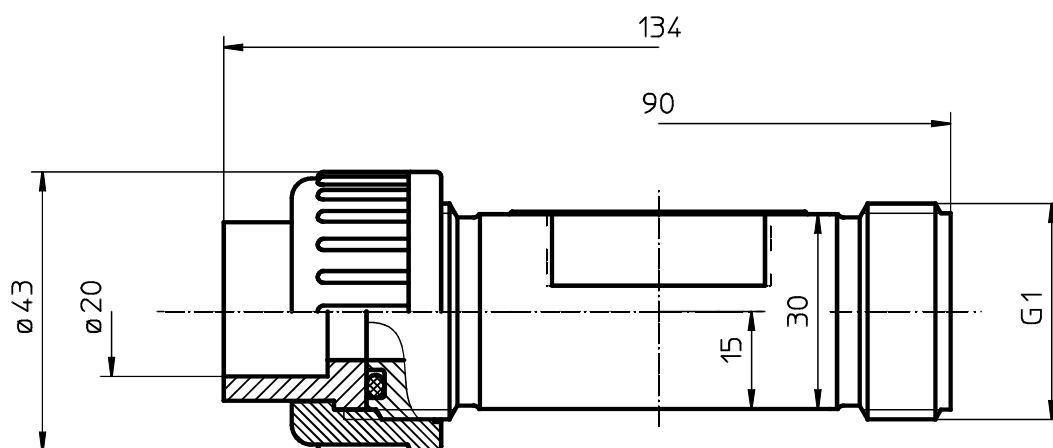
Body dimensions - Threaded sockets ref. no. 1, material ref. no. 1, 5 (mm)



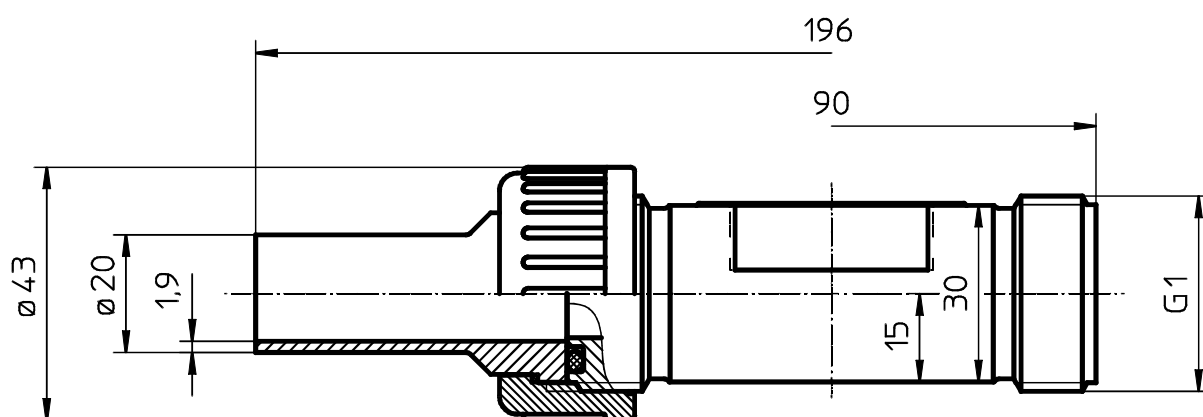
Body dimensions - Solvent cement sockets ref. no. 2, material ref. no. 1 (mm)



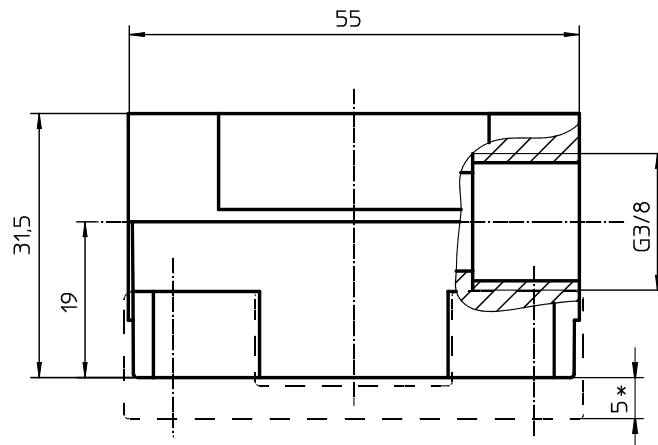
*Body dimensions - Union ends with metric sockets -
DIN ref. no. 7, material ref. no. 1, 5 (mm)*



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

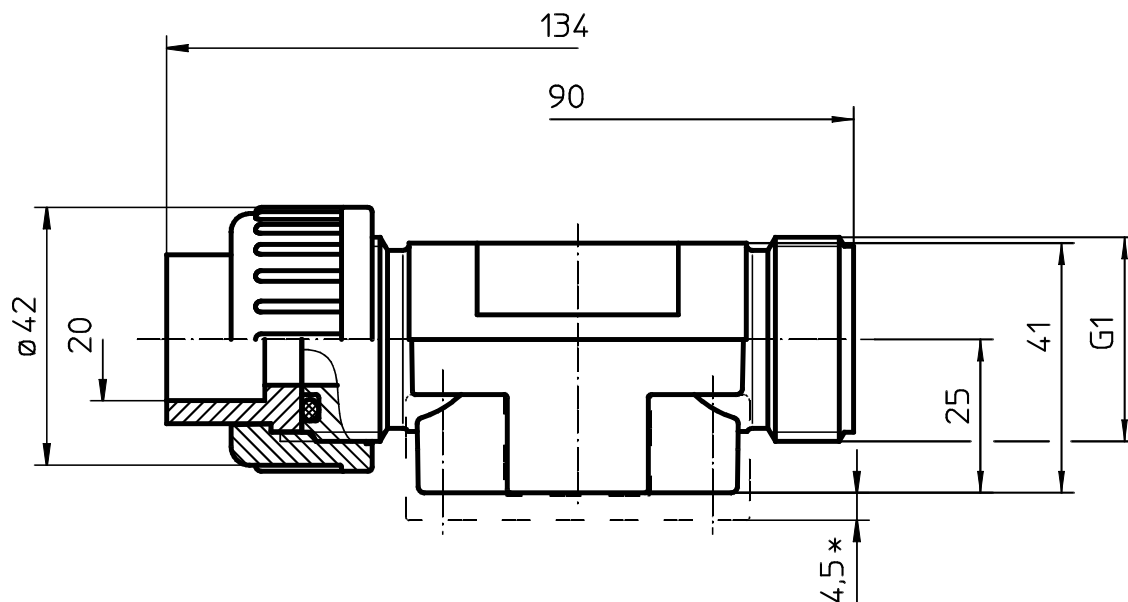


Body dimensions - Threaded sockets ref. no. 1, material ref. no. 20 (mm)



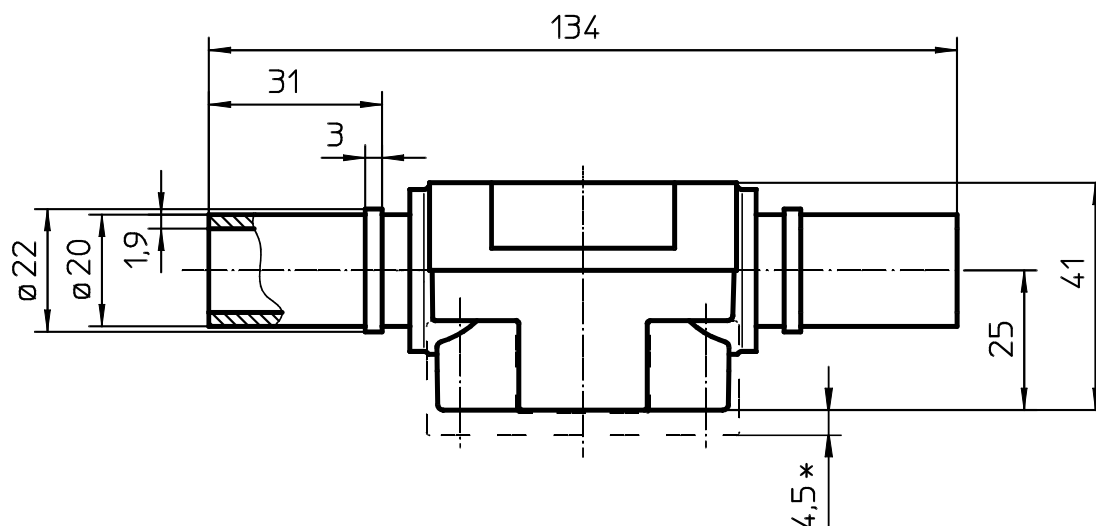
* Dimensions in conjunction with mounting plate GEMÜ 1041

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



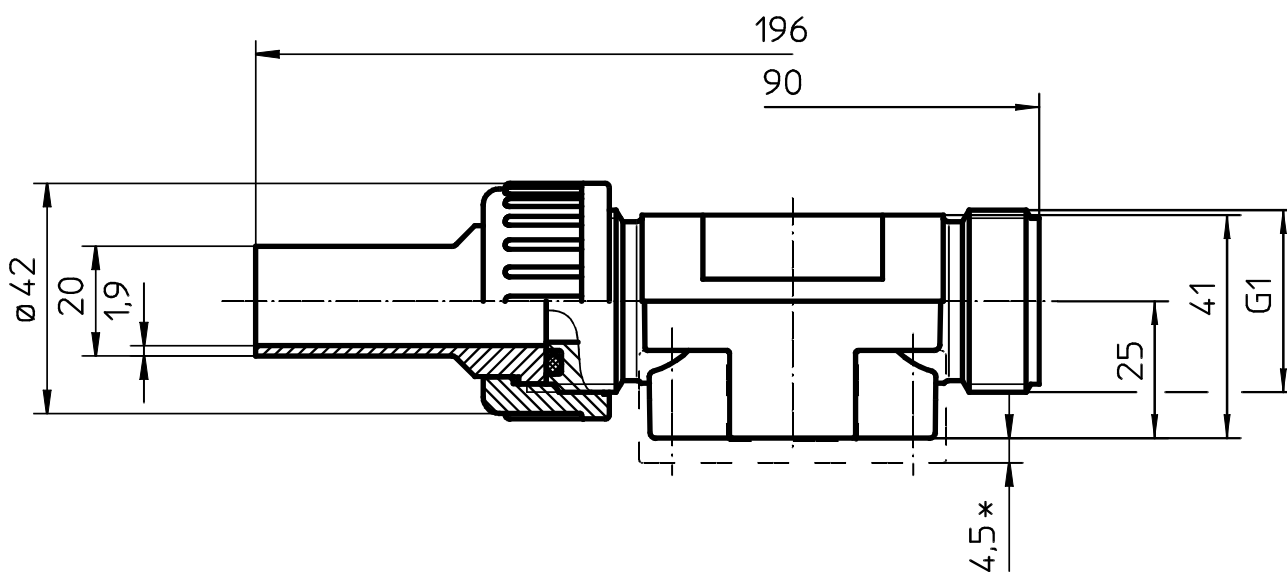
* Dimensions in conjunction with mounting plate GEMÜ 1041

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

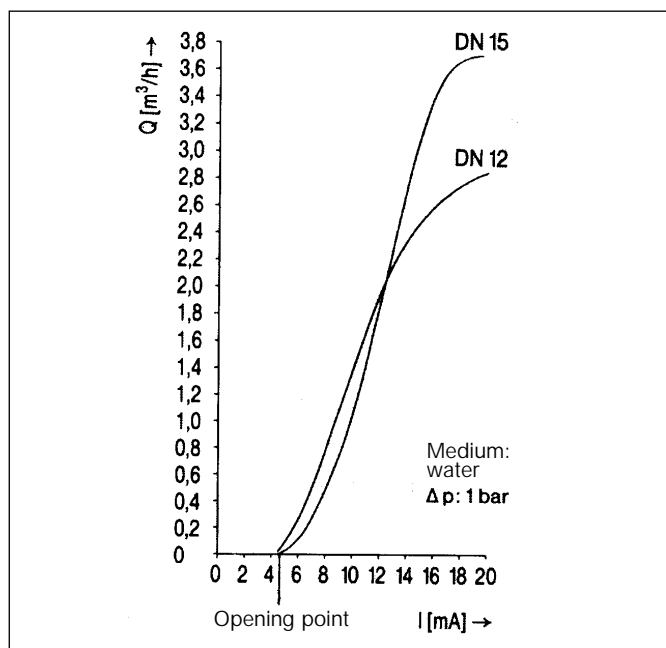


* Dimensions in conjunction with mounting plate GEMÜ 1041

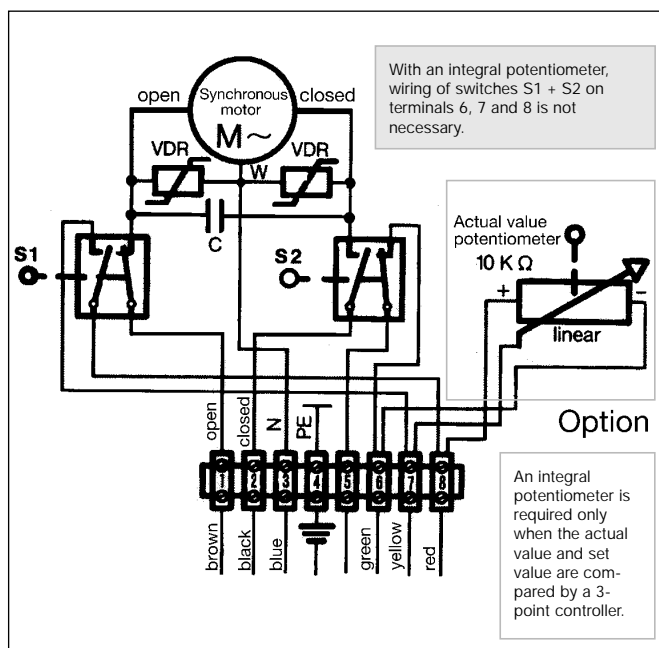
Overview of valve bodies for GEMÜ 613

| 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 |

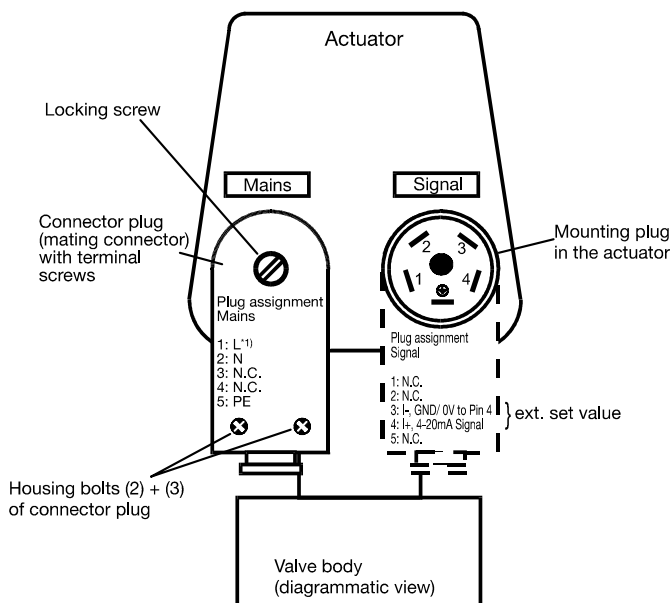
Flow characteristic with e module GEMÜ series 1281-1284



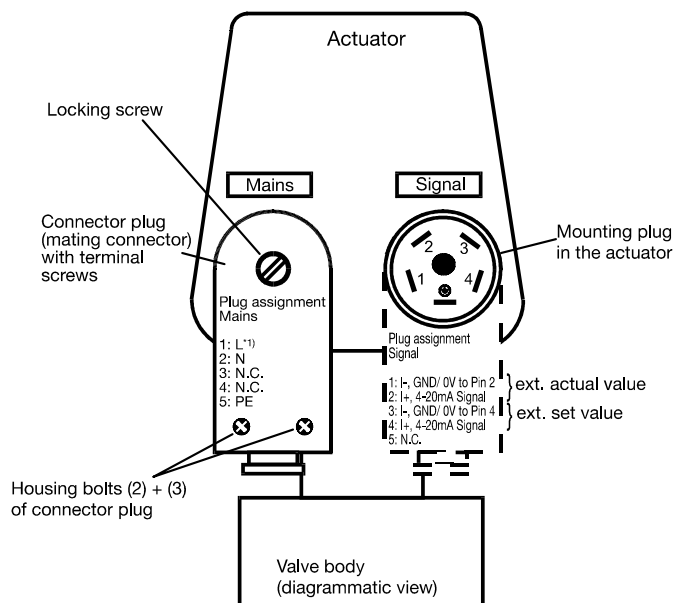
Connection diagram GEMÜ 613



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

