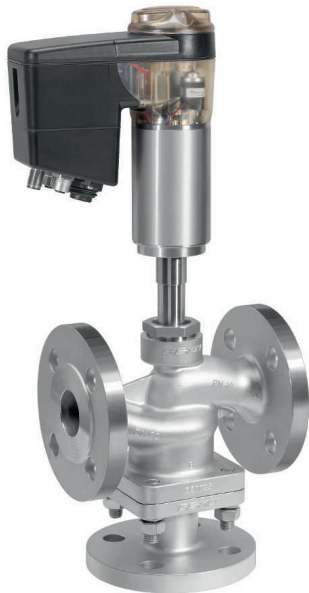


# **GEMÜ 343 eSyDrive**

## *Motorized multi-port globe valve*



### **Features**

- Linear control characteristics can be implemented
- Force and speed are variably adjustable
- Extensive diagnostic facilities
- Operable via web interface eSy-Web
- Integral optical position indicator and LED high visibility display
- Suitable for vacuum up to 20 mbar (a)

### **Description**

The GEMÜ 343 eSyDrive is a motorized 3/2-way globe valve with a hollow shaft electric actuator. The eSyDrive hollow shaft actuator can be operated as On/Off or with integrated positioner or process controller. The valve spindle is sealed by a self-adjusting gland packing. This provides a low-maintenance and reliable valve spindle seal even after an extended period of operation. A wiper ring fitted in front of the gland packing protects the seal against contamination and damage. An integral optical and electrical position indicator is standard.

### **Technical specifications**

- **Media temperature:** -10 to 250 °C
- **Ambient temperature:** -10 to 60 °C
- **Operating pressure :** 0 to 40 bar
- **Nominal sizes:** DN 15 to 100
- **Body configurations:** Multi-port body
- **Connection types:** Flange | Threaded connection
- **Connection standards:** ANSI | DIN | EN | ISO
- **Body materials:** 1.4408, investment casting material | CC499K, cast bronze material
- **Seat seal materials:** PTFE | PTFE, reinforced
- **Supply voltage:** 24 V DC
- **Actuating speed:** max. 6 mm/s
- **Protection class:** IP 65
- **Conformities:** EAC

Technical data depends on the respective configuration

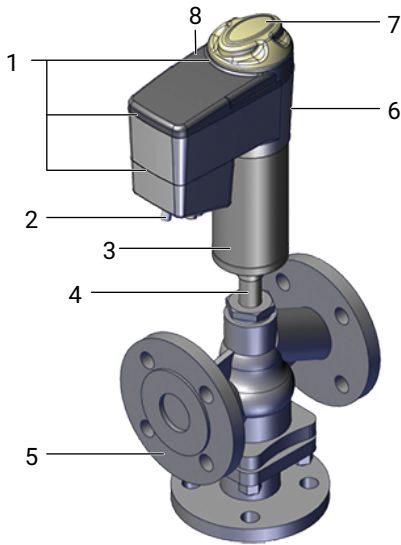


further information  
webcode: GW-343



Product description

Construction



| Item | Name                                                                | Materials           |
|------|---------------------------------------------------------------------|---------------------|
| 1    | O-rings                                                             | EPDM                |
| 2    | Electrical connections                                              |                     |
| 3    | Actuator base                                                       | 1.4301/1.4305       |
| 4    | Distance piece with leak detection hole                             | 1.4408              |
| 5    | Valve body                                                          | 1.4408, cast bronze |
| 6    | Optical position indicator                                          | PESU                |
| 7    | Cover with high visibility LED, manual override and on-site control | PESU                |
| 8    | Actuator top                                                        | PESU black          |

## 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.

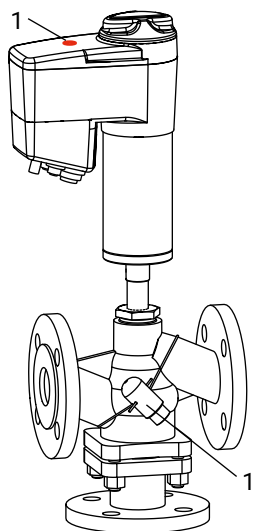
**For further information on GEMÜ CONEXO please visit:**

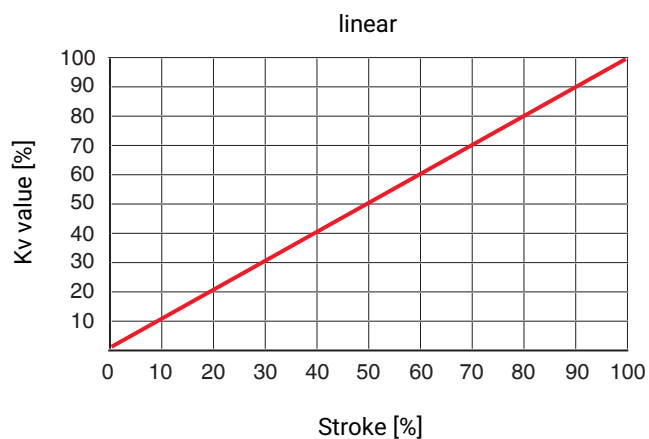
[www.gemu-group.com/conexo](http://www.gemu-group.com/conexo)

### Ordering

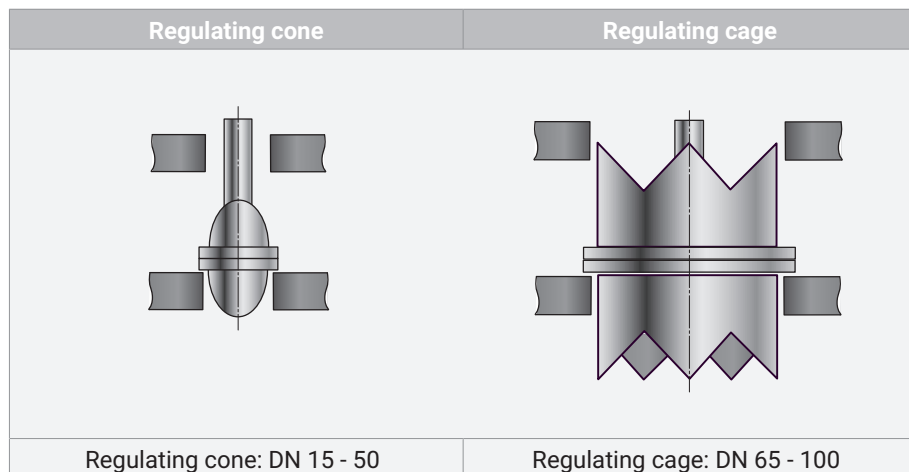
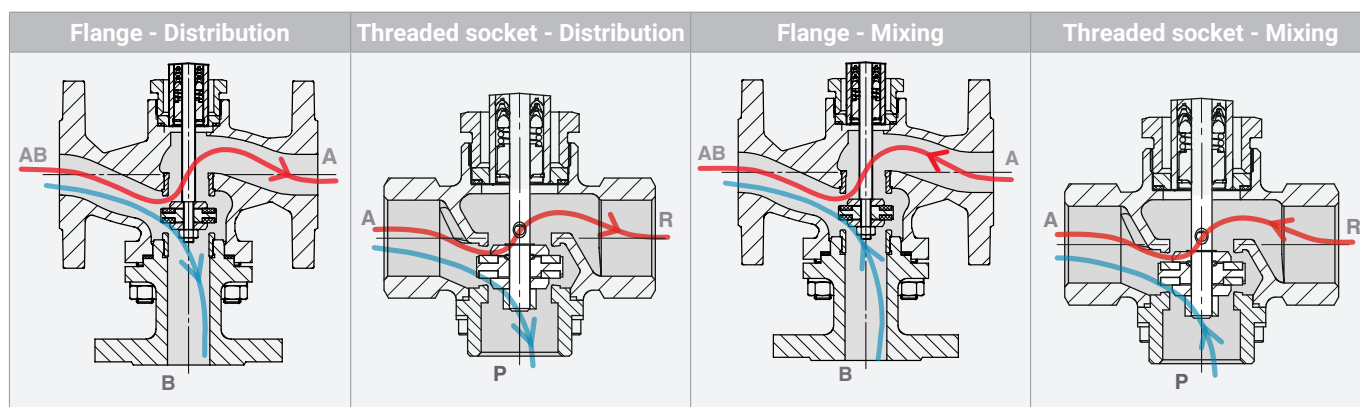
GEMÜ Conexo must be ordered separately with the ordering option "CONEXO".

In the corresponding design with CONEXO, this product has an RFID chip (1) for electronic identification purposes. The position of the RFID chip can be seen below. The CONEXO pen helps read out information stored in the RFID chips. The CONEXO app or CONEXO portal is required to display this information.



**Kv value diagram**

The diagram shows the approximative curve of the Kv value characteristic. The characteristic may deviate depending on valve body, nominal size, regulating cone and valve stroke.

**Regulating cone/regulating cage****Functions**

## Availability

### Availability of valve bodies

#### Flange

| DN  | Connection type code <sup>1)</sup> |       |       |       |       |       |       |       |
|-----|------------------------------------|-------|-------|-------|-------|-------|-------|-------|
|     | 8                                  |       | 11    |       |       | 39    |       |       |
|     | Material code 37 <sup>2)</sup>     |       |       |       |       |       |       |       |
|     | AG 1A                              | AG 2A | AG 0A | AG 1A | AG 2A | AG 0A | AG 1A | AG 2A |
| 15  | -                                  | -     | X     | -     | -     | X     | -     | -     |
| 20  | -                                  | -     | X     | X     | -     | X     | X     | -     |
| 25  | -                                  | -     | X     | X     | -     | X     | X     | -     |
| 32  | -                                  | -     | -     | X     | -     | -     | X     | -     |
| 40  | -                                  | -     | -     | X     | X     | -     | X     | X     |
| 50  | -                                  | -     | -     | X     | X     | -     | X     | X     |
| 65  | X                                  | X     | -     | -     | -     | -     | -     | -     |
| 80  | X                                  | X     | -     | -     | -     | -     | -     | -     |
| 100 | -                                  | X     | -     | -     | -     | -     | -     | -     |

X = Standard

AG = actuator size

#### 1) Connection type

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 39: Flange ANSI Class 125/150 RF, face-to-face dimension FTF EN 558 series 1, ISO 5752, basic series 1,

#### 2) Valve body material

Code 37: 1.4408, investment casting

### Threaded connection

| DN | Connection type code 1 <sup>1)</sup> |       |       |
|----|--------------------------------------|-------|-------|
|    | Material code 9 <sup>2)</sup>        |       |       |
|    | AG 0A                                | AG 1A | AG 2A |
| 15 | X                                    | -     | -     |
| 20 | X                                    | X     | -     |
| 25 | X                                    | X     | -     |
| 32 | -                                    | X     | -     |
| 40 | -                                    | X     | X     |
| 50 | -                                    | X     | X     |

X = Standard

AG = actuator size

#### 1) Connection type

Code 1: Threaded socket DIN ISO 228

#### 2) Valve body material

Code 9: CC499K, cast bronze

## 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 |
|---------------------------------------------------------------------------------------------------------------------------------|------|
| Multi-port globe valve, electrically operated, electro-mechanical hollow shaft actuator, body with flanged connection, eSyDrive | 343  |

| 2 DN   | Code |
|--------|------|
| 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 configuration | Code |
|----------------------|------|
| Multi-port design    | M    |

| 4 Connection type                                                                                   | Code |
|-----------------------------------------------------------------------------------------------------|------|
| Threaded socket DIN ISO 228                                                                         | 1    |
| Flange EN 1092, PN 16, form B, face-to-face dimension FTF EN 558 series 1, ISO 5752, basic series 1 | 8    |
| Flange EN 1092, PN 40, form B, face-to-face dimension FTF EN 558 series 1, ISO 5752, basic series 1 | 11   |
| Flange ANSI Class 125/150 RF, face-to-face dimension FTF EN 558 series 1, ISO 5752, basic series 1, | 39   |

| 5 Valve body material      | Code |
|----------------------------|------|
| CC499K, cast bronze        | 9    |
| 1.4408, investment casting | 37   |

| 6 Seat seal                  | Code |
|------------------------------|------|
| PTFE                         | 5    |
| PTFE, glass fibre reinforced | 5G   |

| 7 Voltage/frequency | Code |
|---------------------|------|
| 24 V DC             | C1   |

| 8 Control module                              | Code |
|-----------------------------------------------|------|
| OPEN/CLOSE, positioner and process controller | L0   |

| 9 Regulating cone                                                                                                                                 | Code  |
|---------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| Please find the number of the optional regulating cone (R-No.) for the linear or equal-percentage modified regulating cone in the Kv value table. | R.... |

| 10 Actuator version | Code |
|---------------------|------|
| Actuator size 0     | 0A   |

| 10 Actuator version | Code |
|---------------------|------|
| Actuator size 1     | 1A   |
| Actuator size 2     | 2A   |

| 11 Type of design         | Code |
|---------------------------|------|
| For elevated temperatures | 2024 |

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

**Order example**

| Ordering option       | Code  | Description                                                                                                                     |
|-----------------------|-------|---------------------------------------------------------------------------------------------------------------------------------|
| 1 Type                | 343   | Multi-port globe valve, electrically operated, electro-mechanical hollow shaft actuator, body with flanged connection, eSyDrive |
| 2 DN                  | 40    | DN 40                                                                                                                           |
| 3 Body configuration  | M     | Multi-port design                                                                                                               |
| 4 Connection type     | 11    | Flange EN 1092, PN 40, form B, face-to-face dimension FTF EN 558 series 1, ISO 5752, basic series 1                             |
| 5 Valve body material | 37    | 1.4408, investment casting                                                                                                      |
| 6 Seat seal           | 5     | PTFE                                                                                                                            |
| 7 Voltage/frequency   | C1    | 24 V DC                                                                                                                         |
| 8 Control module      | L0    | OPEN/CLOSE, positioner and process controller                                                                                   |
| 9 Regulating cone     | RS916 | 60 m³/h – mod.EQ                                                                                                                |
| 10 Actuator version   | 2A    | Actuator size 2                                                                                                                 |
| 11 Type of design     |       |                                                                                                                                 |
| 12 CONEXO             |       | Without                                                                                                                         |

## Technical data

### Medium

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

**Max. permissible viscosity:** 600 mm<sup>2</sup>/s  
Other versions for lower / higher temperatures and higher viscosities on request.

### Temperature

**Media temperature:** -10 to 250 °C with K-no. 2024 + seat seal code 5G

**Ambient temperature:** -10 – 60 °C  
-10 to 40 °C with K-no. 2024 + seat seal code 5G

**Storage temperature:** 0 – 40 °C

### Pressure

**Operating pressure:** B – AB / AB - A

| DN  | Actuator version |                          |              |                          |              |                          |
|-----|------------------|--------------------------|--------------|--------------------------|--------------|--------------------------|
|     | 0A<br>Flange     | 0A<br>Threaded<br>socket | 1A<br>Flange | 1A<br>Threaded<br>socket | 2A<br>Flange | 2A<br>Threaded<br>socket |
| 15  | 32               | 16                       | -            | -                        | -            | -                        |
| 20  | 20               | 16                       | 40           | 16                       | -            | -                        |
| 25  | 16               | -                        | 32           | 16                       | -            | -                        |
| 32  | -                | -                        | 20           | 16                       | -            | -                        |
| 40  | -                | -                        | 12           | 12                       | 25           | 16                       |
| 50  | -                | -                        | 8            | 8                        | 16           | 16                       |
| 65  | -                | -                        | 5            | -                        | 10           | -                        |
| 80  | -                | -                        | 4            | -                        | 6            | -                        |
| 100 | -                | -                        | -            | -                        | 4            | -                        |

Pressures in bar

All pressures are gauge pressures.

For max. operating pressures the pressure / temperature correlation must be observed.

**Leakage rate:**

**Open/Close valve**

| Seat seal | Standard       | Test procedure | Leakage rate | Test medium |
|-----------|----------------|----------------|--------------|-------------|
| PTFE      | DIN EN 12266-1 | P12            | A            | Air         |

**Control valve**

| Seat seal | Standard       | Test procedure | Leakage rate | Test medium |
|-----------|----------------|----------------|--------------|-------------|
| FKM, PTFE | DIN EN 60534-4 | 1              | VI           | Air         |

**Pressure/temperature correlation:**

| Connection type code <sup>1)</sup> | Material code <sup>2)</sup> | Max. permissible operating pressures in bar at temperature in °C |      |      |      |      |
|------------------------------------|-----------------------------|------------------------------------------------------------------|------|------|------|------|
|                                    |                             | RT                                                               | 100  | 150  | 200  | 250  |
| <b>1</b>                           | <b>9</b>                    | 16.0                                                             | 16.0 | 16.0 | 13.5 | -    |
| <b>8</b>                           | <b>37</b>                   | 16.0                                                             | 16.0 | 14.5 | 13.4 | 12.7 |
| <b>11</b>                          | <b>37</b>                   | 40.0                                                             | 40.0 | 36.3 | 33.7 | 31.8 |

All pressures are gauge pressures.

The valves may be used to -10 °C

RT = room temperature

1) **Connection type**

Code 1: Threaded socket DIN ISO 228

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

2) **Valve body material**

Code 9: CC499K, cast bronze

Code 37: 1.4408, investment casting

**Kv values:****Open/Close valve**

| DN         | Flange |        | Threaded socket |       |
|------------|--------|--------|-----------------|-------|
|            | AB - A | B - AB | A - R           | P - A |
| <b>15</b>  | 4.1    | 5.4    | 2.5             | 3.6   |
| <b>20</b>  | 7.5    | 11.6   | 3.3             | 5.5   |
| <b>25</b>  | 12.0   | 17.6   | 7.3             | 10.6  |
| <b>32</b>  | 18.8   | 27.0   | 10.4            | 18.0  |
| <b>40</b>  | 30.7   | 46.7   | 20.9            | 31.0  |
| <b>50</b>  | 42.0   | 67.1   | 33.7            | 47.0  |
| <b>65</b>  | 71.9   | 119.9  | -               | -     |
| <b>80</b>  | 107.6  | 174.4  | -               | -     |
| <b>100</b> | 157.1  | 250.7  | -               | -     |

Kv values in m³/h

Kv values determined in accordance with DIN EN 60534. The Kv value specifications refer to the largest actuator for the respective nominal size. The Kv values for other product configurations (e.g. other connections or body materials) may differ.

**Control valve - Flange**

| DN         | Flange |       |       |          |
|------------|--------|-------|-------|----------|
|            | AG 0   | AG 1  | AG 2  | Kv value |
| <b>15</b>  | RS190  | -     | -     | 4.0      |
| <b>20</b>  | RS191  | RS193 | -     | 6.3      |
| <b>25</b>  | RS192  | RS194 | -     | 10.0     |
| <b>32</b>  | -      | RS195 | -     | 14.0     |
| <b>40</b>  | -      | RS196 | RS200 | 20.0     |
| <b>50</b>  | -      | RS197 | RS231 | 32.0     |
| <b>65</b>  | -      | RS198 | RS232 | 63.0     |
| <b>80</b>  | -      | RS199 | RS233 | 90.0     |
| <b>100</b> | -      | -     | RS234 | 140.0    |

Kv values in m³/h

Kv values refer to the flow direction A-AB and B-AB.

**Kv values:**

**Control valve - Threaded socket**

| DN        | Threaded socket |       |       |          |
|-----------|-----------------|-------|-------|----------|
|           | AG 0            | AG 1  | AG 2  | Kv value |
| <b>15</b> | RS180           | -     | -     | 1.6      |
| <b>20</b> | RS181           | -     | -     | 2.5      |
| <b>25</b> | RS182           | RS183 | -     | 6.3      |
| <b>32</b> | -               | RS184 | -     | 10.0     |
| <b>40</b> | -               | RS185 | RS188 | 16.0     |
| <b>50</b> | -               | RS187 | RS189 | 25.0     |

Kv values in m<sup>3</sup>/h

Kv values refer to the flow direction A-AB and B-AB.

## **Product compliance**

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

**Pressure Equipment Directive:** 2014/68/EU

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

**RoHS Directive:** 2011/65/EU

## Mechanical data

**Protection class:** IP 65 acc. to EN 60529

**Actuating speed:**

|                     |                         |
|---------------------|-------------------------|
| Actuator version 0A | adjustable, max. 6 mm/s |
| Actuator version 1A | adjustable, max. 6 mm/s |
| Actuator version 2A | adjustable, max. 4 mm/s |

**Weight:**

**Actuator**

|                     |        |
|---------------------|--------|
| Actuator version 0A | 1.8 kg |
| Actuator version 1A | 3.0 kg |
| Actuator version 2A | 9.0 kg |

**Body**

| DN  | Flange | Threaded socket |
|-----|--------|-----------------|
| 15  | 3.4    | 0.6             |
| 20  | 4.9    | 0.7             |
| 25  | 5.7    | 1.1             |
| 32  | 8.5    | 1.8             |
| 40  | 9.7    | 2.3             |
| 50  | 15.8   | 3.4             |
| 65  | 19.4   | -               |
| 80  | 24.6   | -               |
| 100 | 32.8   | -               |

Weights in kg

## Actuator duty cycle and service life

|                      |                                                                                                                                                                                                                           |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Service life:</b> | <b>Control operation</b> - Class C acc. to EN 15714-2 (1,800,000 start-ups and 1200 start-ups per hour).<br><b>Open / Close duty</b> - Minimum 1,000,000 switching cycles at room temperature and permissible duty cycle. |
| <b>Duty cycle:</b>   | <b>Control operation</b> - Class C acc. to EN 15714-2.<br><b>Open/Close duty</b> - 100%                                                                                                                                   |

## Electrical data

| Supply voltage:            | Actuator size 0                | Actuator size 1 | Actuator size 2 |
|----------------------------|--------------------------------|-----------------|-----------------|
| Voltage                    | U <sub>V</sub> = 24 V DC ± 10% |                 |                 |
| Rating                     | Max. 28 W                      | Max. 65 W       | Max. 120 W      |
| Reverse battery protection | Yes                            |                 |                 |

## Analogue input signals

### Set value

|                                    |                                                      |
|------------------------------------|------------------------------------------------------|
| <b>Input signal:</b>               | 0/4 - 20 mA; 0 – 10 V DC (selectable using software) |
| <b>Input type:</b>                 | passive                                              |
| <b>Input resistance:</b>           | 250 Ω                                                |
| <b>Accuracy/linearity:</b>         | ≤ ±0.3% of full flow                                 |
| <b>Temperature drift:</b>          | ≤ ±0.1% / 10°K                                       |
| <b>Resolution:</b>                 | 12 bit                                               |
| <b>Reverse battery protection:</b> | No                                                   |
| <b>Overload proof:</b>             | Yes (up to ± 24 V DC)                                |

### Process actual value

|                                    |                                                      |
|------------------------------------|------------------------------------------------------|
| <b>Input signal:</b>               | 0/4 - 20 mA; 0 – 10 V DC (selectable using software) |
| <b>Input type:</b>                 | passive                                              |
| <b>Input resistance:</b>           | 250 Ω                                                |
| <b>Accuracy/linearity:</b>         | ≤ ±0.3% of full flow                                 |
| <b>Temperature drift:</b>          | ≤ ±0.1% / 10°K                                       |
| <b>Resolution:</b>                 | 12 bit                                               |
| <b>Reverse battery protection:</b> | No                                                   |
| <b>Overload proof:</b>             | Yes (up to ± 24 V DC)                                |

### **Digital input signals**

|                  |                                |
|------------------|--------------------------------|
| Digital inputs:  | 3                              |
| Function:        | Can be selected using software |
| Voltage:         | 24 V DC                        |
| Logic level "1": | >14 V DC                       |
| Logic level "0": | < 8 V DC                       |
| Input current:   | typ. 2.5 mA (at 24 V DC)       |

### **Analogue output signals**

#### **Actual value**

|                      |                                                      |
|----------------------|------------------------------------------------------|
| Output signal:       | 0/4 - 20 mA; 0 – 10 V DC (selectable using software) |
| Output type:         | Active (AD5412)                                      |
| Accuracy:            | $\leq \pm 1\%$ of full flow                          |
| Temperature drift:   | $\leq \pm 0.1\%$ / $10^\circ\text{K}$                |
| Load resistor:       | $\leq 750\text{ k}\Omega$                            |
| Resolution:          | 10 bit                                               |
| Overload proof:      | Yes (up to $\pm 24\text{ V DC}$ )                    |
| Short-circuit proof: | Yes                                                  |

### **Digital output signals**

#### **Switching outputs 1 and 2**

|                    |                                 |
|--------------------|---------------------------------|
| Design:            | 2x make contact, potential-free |
| Switching voltage: | max. 48 V DC / 48 V AC          |
| Switch rating:     | max. 60 W / 2A                  |
| Switch points:     | Adjustable 0 - 100 %            |

#### **Switching output 3**

|                       |                                   |
|-----------------------|-----------------------------------|
| Function:             | Signal fault                      |
| Type of contact:      | Push-Pull                         |
| Switching voltage:    | Supply voltage                    |
| Switching current:    | $\leq 0.1\text{ A}$               |
| Drop voltage:         | Max. 2.5 V DC at 0.1 A            |
| Overload proof:       | Yes (up to $\pm 24\text{ V DC}$ ) |
| Short-circuit proof:  | Yes                               |
| Pull-Down resistance: | 120 k $\Omega$                    |

### **Communication eSy-Web**

|                       |                                         |
|-----------------------|-----------------------------------------|
| <b>Interface:</b>     | Ethernet                                |
| <b>Function:</b>      | Parameterisation via web browser        |
| <b>IP address:</b>    | 192.168.2.1 alterable via web browser   |
| <b>Subnet screen:</b> | 255.255.252.0 alterable via web browser |

The actuator and the PC must be in the same network to use the web server. The IP address of the actuator is entered in the web browser and the actuator can then be parametrised. In order to use more than one actuator, a definitive IP address must be assigned to each actuator in the same network.

### **Communication Modus TCP**

|                       |                                         |
|-----------------------|-----------------------------------------|
| <b>Interface:</b>     | Modbus TCP                              |
| <b>IP address:</b>    | 192.168.2.1 alterable via web browser   |
| <b>Subnet screen:</b> | 255.255.252.0 alterable via web browser |
| <b>Port:</b>          | 502                                     |

**Supported function codes:**

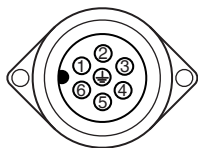
| Code Dezimal | Code Hex | Function                        |
|--------------|----------|---------------------------------|
| 3            | 0x03     | Read Holding Registers          |
| 4            | 0x04     | Read Input Registers            |
| 6            | 0x06     | Write Single Register           |
| 16           | 0x10     | Write Multiple Registers        |
| 23           | 0x17     | Read / Write Multiple Registers |

### **Behaviour in the event of an error**

|                        |                                                                                                                                                                                                                                                                                                                                                 |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Function:</b>       | <p>In the event of an error the valve moves to the error position.</p> <p>Notes: Moving to the error position is only possible with full power supply. This behaviour is not a safety position. The valve must be operated with a GEMÜ 1571 emergency power supply module (see accessories) to ensure the function in case of voltage loss.</p> |
| <b>Error position:</b> | Closed, open or hold (adjustable via eSy-web web interface).                                                                                                                                                                                                                                                                                    |

## Electrical connection

### Connection X1



7-pin plug, Binder, type 693

| Pin    | Signal name                   |
|--------|-------------------------------|
| Pin 1  | Uv, 24 V DC supply voltage    |
| Pin 2  | Uv GND                        |
| Pin 3  | Relay output K1, common       |
| Pin 4  | Relay output K1, make contact |
| Pin 5  | Relay output K2, common       |
| Pin 6  | Relay output K2, make contact |
| Pin PE | Function earth                |

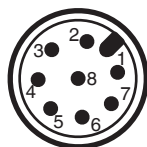
### Connection X2



5-pin M12 built-in socket, D-coded

| Pin   | Signal name     |
|-------|-----------------|
| Pin 1 | Tx + (Ethernet) |
| Pin 2 | Rx + (Ethernet) |
| Pin 3 | Tx - (Ethernet) |
| Pin 4 | Rx - (Ethernet) |
| Pin 5 | Shield          |

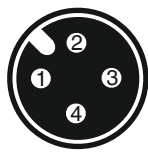
### Connection X3



8-pin M12 plug, A-coded

| Pin   | Signal name                                                          |
|-------|----------------------------------------------------------------------|
| Pin 1 | W+ set value input                                                   |
| Pin 2 | W – set value input                                                  |
| Pin 3 | X + actual value output                                              |
| Pin 4 | GND (actual value output, digital input 1 – 3, error message output) |
| Pin 5 | Error message output 24 V DC                                         |
| Pin 6 | Digital input 3                                                      |
| Pin 7 | Digital input 1                                                      |
| Pin 8 | Digital input 2                                                      |

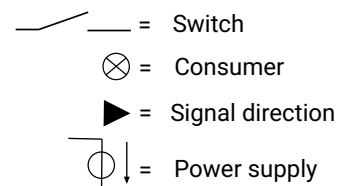
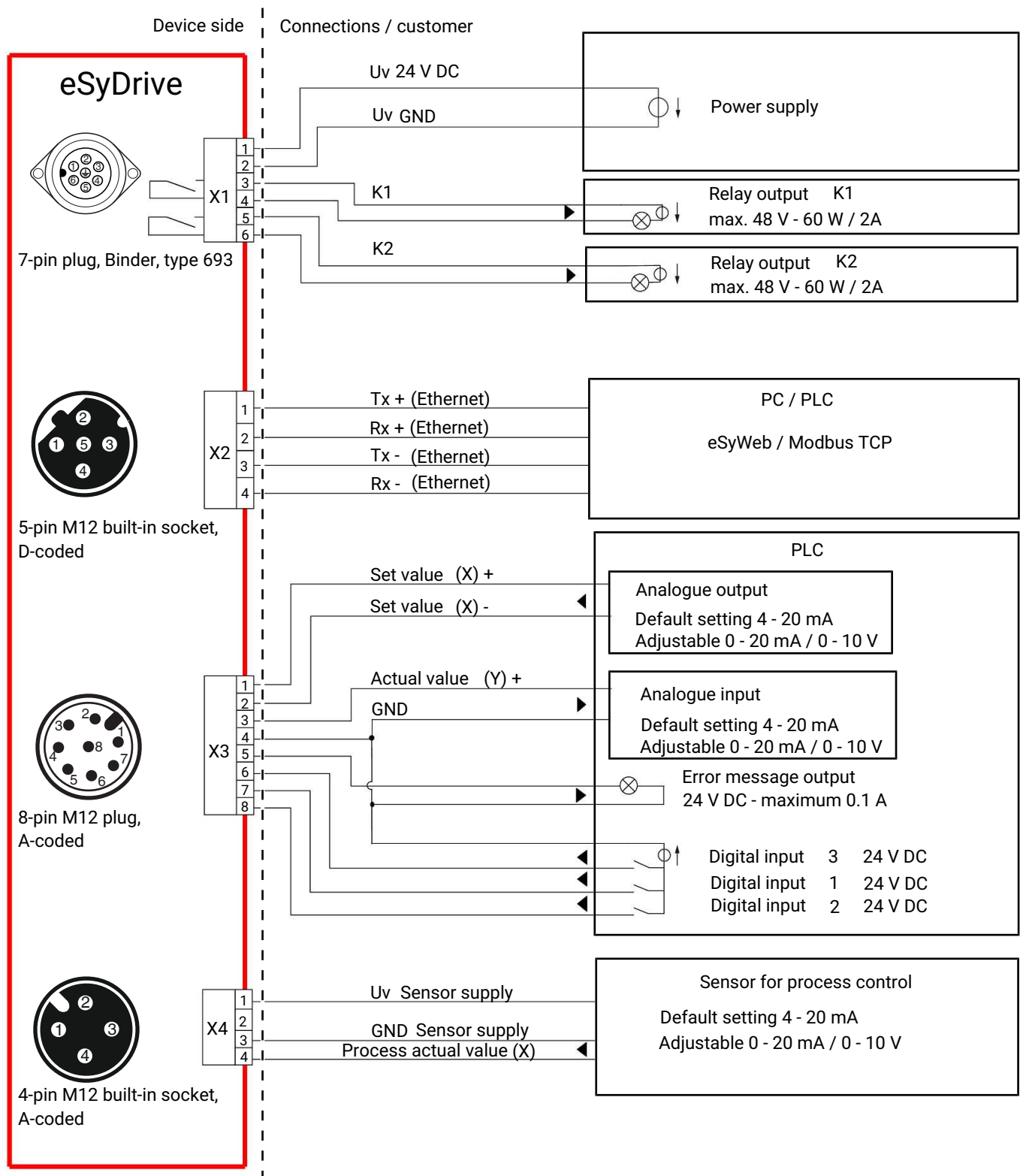
Connection X4



4-pin M12 built-in socket, A-coded

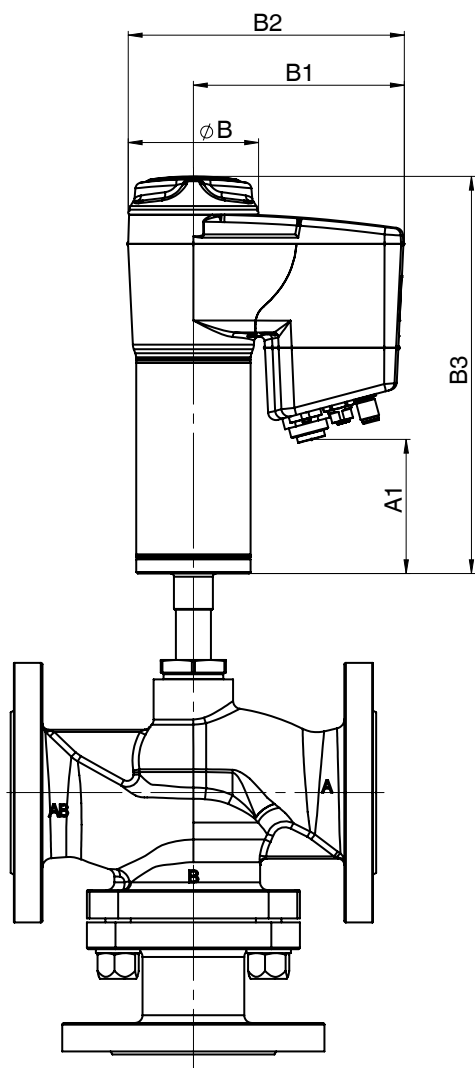
| Pin   | Signal name                                   |
|-------|-----------------------------------------------|
| Pin 1 | UV, 24 V DC actual value supply               |
| Pin 2 | n.c.                                          |
| Pin 3 | GND (actual value supply, actual value input) |
| Pin 4 | X+, process actual value input                |
| Pin 5 | n.c.                                          |

## Connection diagram



## Dimensions

### Actuator dimensions

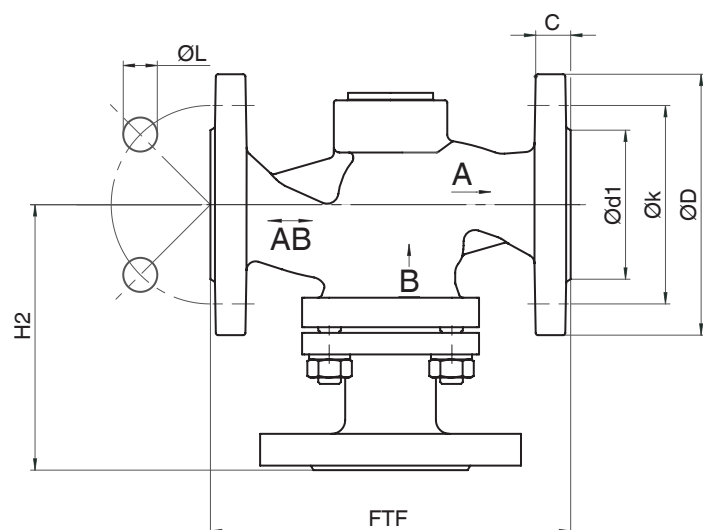


| Actuator version | A1    | B     | B1    | B2    | B3    |
|------------------|-------|-------|-------|-------|-------|
| 0A               | 45.0  | 68.0  | 126.0 | 160.0 | 193.0 |
| 1A               | 86.0  | 82.0  | 132.0 | 172.0 | 252.0 |
| 2A               | 121.0 | 129.0 | 157.0 | 224.0 | 304.0 |

Dimensions in mm

## Body dimensions

### Flange EN (code 8, 11)



Connection type flange, length EN 558 (code 8)<sup>1)</sup>, investment casting material (code 37)<sup>2)</sup>

| DN  | NPS | c    | ø D   | FTF   | H2    | ø K   | ø L  | n |
|-----|-----|------|-------|-------|-------|-------|------|---|
| 65  | 2½" | 20.0 | 185.0 | 290.0 | 183.0 | 145.0 | 18.0 | 4 |
| 80  | 3"  | 22.0 | 200.0 | 310.0 | 204.0 | 160.0 | 18.0 | 8 |
| 100 | 4"  | 24.0 | 220.0 | 350.0 | 236.0 | 180.0 | 18.0 | 8 |

Connection type flange, length EN 558 (code 11)<sup>1)</sup>, investment casting material (code 37)<sup>2)</sup>

| DN | NPS  | c    | ø D   | FTF   | H2    | ø K   | ø L  | n |
|----|------|------|-------|-------|-------|-------|------|---|
| 15 | 1/2" | 16.0 | 95.0  | 130.0 | 97.0  | 65.0  | 14.0 | 4 |
| 20 | 3/4" | 18.0 | 105.0 | 150.0 | 112.0 | 75.0  | 14.0 | 4 |
| 25 | 1"   | 18.0 | 115.0 | 160.0 | 118.0 | 85.0  | 14.0 | 4 |
| 32 | 1¼"  | 18.0 | 140.0 | 180.0 | 143.0 | 100.0 | 18.0 | 4 |
| 40 | 1½"  | 18.0 | 150.0 | 200.0 | 147.0 | 110.0 | 18.0 | 4 |
| 50 | 2"   | 20.0 | 165.0 | 230.0 | 167.0 | 125.0 | 18.0 | 4 |

Dimensions in mm

n = number of bolts

#### 1) Connection type

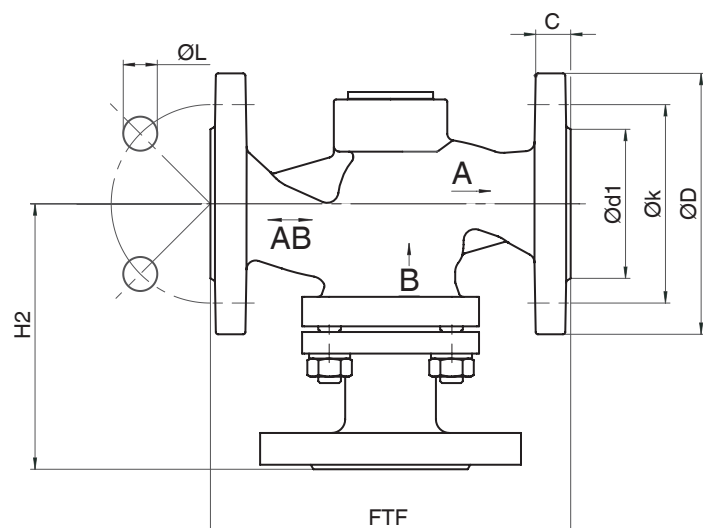
Code 8: Flange EN 1092, PN 16, form B, face-to-face dimension FTF EN 558 series 1, ISO 5752, basic series 1

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

#### 2) Valve body material

Code 37: 1.4408, investment casting

## Flange ANSI Class (code 39)



Connection type flange, length EN 558 (code 39)<sup>1)</sup>, investment casting material (code 37)<sup>2)</sup>

| DN | NPS    | c    | ø D   | FTF   | H1    | ø K   | ø L  | n |
|----|--------|------|-------|-------|-------|-------|------|---|
| 15 | 1/2"   | 16.0 | 90.0  | 130.0 | 97.0  | 60.3  | 15.9 | 4 |
| 20 | 3/4"   | 18.0 | 100.0 | 150.0 | 112.0 | 69.9  | 15.9 | 4 |
| 25 | 1"     | 18.0 | 110.0 | 160.0 | 118.0 | 79.4  | 15.9 | 4 |
| 32 | 1 1/4" | 18.0 | 115.0 | 180.0 | 143.0 | 88.9  | 15.9 | 4 |
| 40 | 1 1/2" | 18.0 | 125.0 | 200.0 | 147.0 | 98.4  | 15.9 | 4 |
| 50 | 2"     | 20.0 | 150.0 | 230.0 | 167.0 | 120.7 | 19.0 | 4 |

Dimensions in mm

n = number of bolts

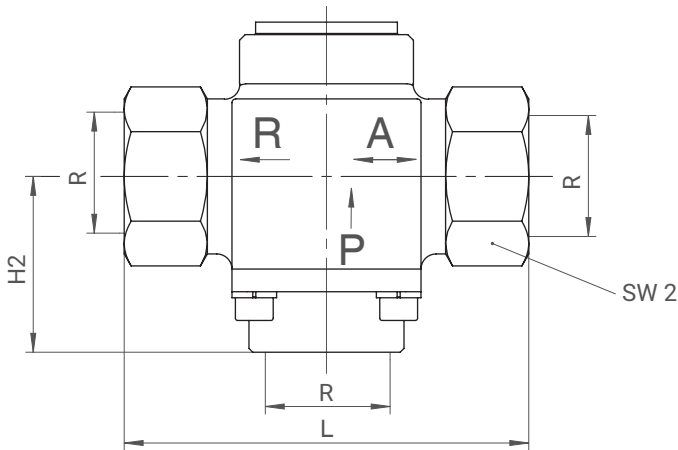
1) **Connection type**

Code 39: Flange ANSI Class 125/150 RF, face-to-face dimension FTF EN 558 series 1, ISO 5752, basic series 1,

2) **Valve body material**

Code 37: 1.4408, investment casting

**Threaded socket DIN (code 1)**



Connection type threaded socket DIN (code 1)<sup>1)</sup>, block material (code 9)<sup>2)</sup>

| DN | NPS  | CT       |       | CT1      |       | H2   | L     | R     | SW1 | SW2 |
|----|------|----------|-------|----------|-------|------|-------|-------|-----|-----|
|    |      | Actuator |       | Actuator |       |      |       |       |     |     |
|    |      | 1        | 2     | 1        | 2     |      |       |       |     |     |
| 15 | 1/2" | 192.0    | -     | 88.0     | -     | 41.0 | 75.0  | G 1/2 | 36  | 27  |
| 20 | 3/4" | 196.0    | -     | 92.0     | -     | 46.0 | 87.0  | G 3/4 | 36  | 32  |
| 25 | 1"   | 196.0    | -     | 92.0     | -     | 47.0 | 107.0 | G 1   | 41  | 41  |
| 32 | 1¼"  | 200.0    | 277.0 | 96.0     | 125.0 | 66.0 | 123.0 | G 1¼  | 55  | 50  |
| 40 | 1½"  | 200.0    | 277.0 | 96.0     | 125.0 | 68.0 | 147.0 | G 1½  | 55  | 58  |
| 50 | 2"   | 204.0    | 281.0 | 100.0    | 125.0 | 74.0 | 171.0 | G 2   | 55  | 70  |

Dimensions in mm

- 1) **Connection type**  
Code 1: Threaded socket DIN ISO 228
- 2) **Valve body material**  
Code 9: CC499K, cast bronze

**Accessories**



**GEMÜ 1218  
Connector**

The GEMÜ 1218 is a connector (cable socket / cable plug), 7-pin. Straight and/or 90° angled plug type.

| GEMÜ 1218 Binder connector                    |                                 |                                                                                    |                        |
|-----------------------------------------------|---------------------------------|------------------------------------------------------------------------------------|------------------------|
| Connection X1 – supply voltage, relay outputs |                                 |                                                                                    |                        |
| Binder plug                                   | 468/eSy series mating connector | Terminal compartment/<br>screws,<br>7-pin                                          | 88220649 <sup>1)</sup> |
|                                               |                                 | Terminal compartment/<br>screws,<br>7-pin, 90°                                     | 88377714               |
|                                               |                                 | Terminal compartment/<br>screws,<br>7-pin, 90°, fitted with a 2<br>metre cable set | 88770522               |

1) provided in the scope of delivery

**GEMÜ 1219****Cable socket / cable plug M12**

The GEMÜ 1219 is a connector (cable socket / cable plug) M12, 5-pin. Straight and/or 90° angled plug type. Defined cable length or with threaded connection without cable. Various materials available for the threaded ring.

| GEMÜ 1219 Ethernet/M12 cable                            |                                                  |                               |                        |
|---------------------------------------------------------|--------------------------------------------------|-------------------------------|------------------------|
| Connection X2 - network connection                      |                                                  |                               |                        |
| M12 cable plug, straight, 4-pin                         | Fitted with a 1 metre cable set                  | Ethernet RJ45                 | 88450499               |
|                                                         | Fitted with a 4 metre cable set                  |                               | 88450500               |
|                                                         | Fitted with a 15 metre cable set                 |                               | 88450502               |
| M12 cable plug, angled, 4-pin                           | Fitted with a 4 metre cable set                  |                               | 88715615               |
| Connection X3 – analogue/digital inputs and outputs     |                                                  |                               |                        |
| M12 cable socket, straight, 8-pin                       | Without cable, for cable dia. 6-8 mm             |                               | 88304829 <sup>1)</sup> |
|                                                         | Fitted with a 5 metre cable set, PUR black cable |                               | 88758155               |
| M12 cable socket, angled, 8-pin                         | Without cable, for cable dia. 6-8 mm             |                               | 88422823               |
|                                                         | Fitted with a 5 metre cable set, PUR black cable |                               | 88374574               |
| Connection X4 – actual value supply, actual value input |                                                  |                               |                        |
| M12 cable plug, straight, 5-pin                         | Without cable PG7                                | Nickel-plated brass           | 88208641 <sup>1)</sup> |
|                                                         | Fitted with a 2 metre cable set, PUR black cable | 5 x 0.34, nickel-plated brass | 88208643               |
|                                                         | Fitted with a 5 metre cable set, PUR black cable | 5 x 0.34, nickel-plated brass | 88208644               |
| M12 cable plug, angled, 5-pin                           | Without cable, for cable dia. 6-8 mm             | Nickel-plated brass           | 88208645               |
|                                                         | Fitted with a 2 metre cable set, PUR black cable | 5 x 0.34, nickel-plated brass | 88208649               |
|                                                         | Fitted with a 5 metre cable set, PUR black cable | 5 x 0.34, nickel-plated brass | 88208650               |

1) provided in the scope of delivery

**GEMÜ 1571****Emergency power supply module**

The GEMÜ 1571 capacitive emergency power supply module is suitable for valves with motorized actuators such as GEMÜ eSyStep and eSyDrive as well as the GEMÜ C53 iComLine control valve. In the event of a power failure, the product provides an uninterrupted power supply so that the valve can be moved to the safety position. The emergency power supply module is available individually or with an expansion module and can supply several valves. The input and output voltage is 24 V.

| GEMÜ 1571 emergency power supply module |                |          |             |
|-----------------------------------------|----------------|----------|-------------|
| Input voltage                           | Output voltage | Capacity | Item number |
| 24 V                                    | 24 V           | 1700 Ws  | 88660398    |
| 24 V                                    | 24 V           | 13200 Ws | 88751062    |

**GEMÜ 1573****Switching power supply unit**

The GEMÜ 1573 switching power supply unit converts unstable input voltages from 100 to 240 V AC into a continuous DC voltage. It can be used as an accessory for valves with motorized actuators e. g. GEMÜ eSyLite, eSyStep und eSyDrive and for additional devices with a 24 V DC power supply. Different power levels, output currents and a 48 V DC version for servoDrive actuators are available.

| GEMÜ 1573 switching power supply unit |                |                |             |
|---------------------------------------|----------------|----------------|-------------|
| Input voltage                         | Output voltage | Output current | Item number |
| 100 - 240 V AC                        | 24 V DC        | 5 A            | 88660400    |
|                                       |                | 10 A           | 88660401    |



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