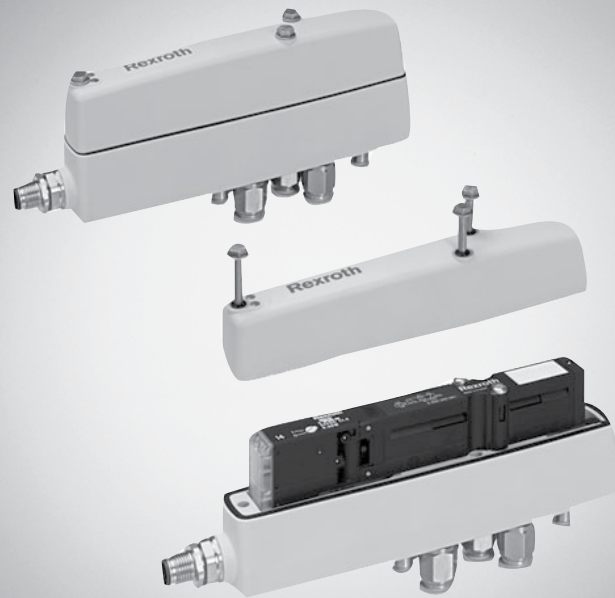


Directional valves → Electrically operated








## CL03 series-EV

Brochure



Directional valves → Electrically operated

**CL03 series-EV**

|  |  |           |
|--|--|-----------|
|    | 2x3/2-directional valve, Series CL03-EV<br>▶ Qn = 700 l/min ▶ Pilot valve width: 16 mm ▶ NO/NC ▶ plate connection ▶ compressed air connection output: Ø 8 - G 1/8 ▶ Manual override: with detent         | <b>3</b>  |
|    | 2x3/2-directional valve, Series CL03-EV<br>▶ Qn = 700 l/min ▶ Pilot valve width: 16 mm ▶ NO/NO ▶ plate connection ▶ compressed air connection output: Ø 8 - G 1/8 ▶ Manual override: with detent         | <b>6</b>  |
|    | 2x3/2-directional valve, Series CL03-EV<br>▶ Qn = 700 l/min ▶ Pilot valve width: 16 mm ▶ NC/NC ▶ plate connection ▶ compressed air connection output: Ø 8 - G 1/8 ▶ Manual override: with detent         | <b>9</b>  |
|    | 5/2-directional valve, Series CL03-EV<br>▶ Qn = 700 l/min ▶ Pilot valve width: 16 mm ▶ plate connection ▶ compressed air connection output: Ø 8 - G 1/8 ▶ Manual override: with detent ▶ single solenoid | <b>12</b> |
|   | 5/2-directional valve, Series CL03-EV<br>▶ Qn = 700 l/min ▶ Pilot valve width: 16 mm ▶ plate connection ▶ compressed air connection output: Ø 8 - G 1/8 ▶ Manual override: with detent ▶ double solenoid | <b>15</b> |
|  | 5/3-directional valve, Series CL03-EV<br>▶ Qn = 700 l/min ▶ Pilot valve width: 16 mm ▶ plate connection ▶ compressed air connection output: Ø 8 - G 1/8 ▶ Manual override: with detent                   | <b>18</b> |
| <b>Zubehör</b>   |  |           |
|  | Connecting cable with plug and socket<br>▶ Socket, M12x1, 4-pin, A-coded ▶ Plug, M12x1, 4-pin, A-coded   | <b>21</b> |

## Directional valves → Electrically operated

**2x3/2-directional valve, Series CL03-EV**

► Qn = 700 l/min ► Pilot valve width: 16 mm ► NO/NC ► plate connection ► compressed air connection output: Ø 8 - G 1/8 ► Manual override: with detent



21013

|   |   |
|---|---|
| Version   | Spool valve, zero overlap                                 |
| Pilot   | External  |
| Sealing principle                                   | Soft sealing  |
| Blocking principle                                  | Single base plate principle                               |
| Working pressure min./max.                          | -0.9 bar / 10 bar   |
| Control pressure min./max.                          | 2.5 bar / 10 bar  |
| Ambient temperature min./max.                       | +0 °C / +50 °C  |
| Medium temperature min./max.                        | +0 °C / +50 °C  |
| Medium  | Compressed air  |
| Max. particle size                                  | 40 µm   |
| Oil content of compressed air                       | 10 mg/m <sup>3</sup><br>With collective pilot air exhaust |
| Degree of protection with electrical connector/plug | IP 65, IP 67, IP 69K                                      |
| Protective circuit                                  | Z-diode<br>Protected against polarity reversal            |
| Status display LED                                  | Yellow  |
| Duty cycle  | 100 %   |
| Switch-on time                                      | 16 ms   |
| Switch-off time                                     | 25 ms   |
| Generic emission standard in accordance with        | EN 61000-6-4  |
| Generic immunity standard in accordance with        | EN 61000-6-2  |
| Mounting screw                                      | M5  |
| mounting screw tightening torque                    | 2 Nm  |
| Tightening torque tolerance                         | ±0,2  |
| Weight  | 0.165 kg  |
| Materials:  |   |
| Housing   | Polyamide, fiber-glass reinforced                         |
| Seals   | Hydrogenated acrylonitrile butadiene rubber               |

**Technical Remarks**

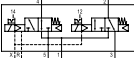

- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
- The oil content of compressed air must remain constant during the life cycle.
- Use only the approved oils from Rexroth Pneumatics, see chapter „Technical information“.
- The pilot valve is UL (Underwriters Laboratories) certified.
- For series QR2 fittings, see “Pneumatic connection technologies”.
- The inner valve can be replaced by all series CL03 valves described under “Valve systems”.

| Operating voltage | Voltage tolerance | Power consumption |
|-------------------|-------------------|-------------------|
| DC                | DC                | DC                |
|                   |                   | W                 |
| 24 V              | -15% / +20%       | 0.35              |

## Directional valves → Electrically operated

**2x3/2-directional valve, Series CL03-EV**

►  $Q_n = 700$  l/min ► Pilot valve width: 16 mm ► NO/NC ► plate connection ► compressed air connection output: Ø 8 - G 1/8 ► Manual override: with detent

|  |       | MO  | Compressed air connection |                     |                     |                  |                       | Operating voltage | Flow conductance |             | Part No.                               |
|--|-------|---|---------------------------|---------------------|---------------------|------------------|-----------------------|-------------------|------------------|-------------|--|
|  |       |   | Input                     | Output              | Exhaust             | Pilot connection | Pilot control exhaust |                   | DC               | b           |  |
|  |       |   |                           |                     |                     |                  |                       |                   |                  | [l/(s*bar)] |  |
|  | NO/NC |  | Ø 8<br>Ø 8<br>G 1/8       | Ø 8<br>Ø 8<br>G 1/8 | Ø 8<br>Ø 8<br>G 1/8 | Ø 4<br>Ø 4<br>M5 | Ø 4<br>Ø 4<br>M5      | 24 V              | 0.22             | 2.9         | R412017959<br>R412017960<br>R412017961 |

| Part No.   | Flow rate value |  | Note |
|------------|-----------------|--|------|
|            | Qn              |  |      |
|            | [l/min]         |  |      |
| R412017959 | 700             |  | 1)   |
| R412017960 | 700             |  | 2)   |
| R412017961 | 700             |  | -    |

HHB = Manual override

1) push-in fitting: Brass, nickel-plated

2) push-in fitting: Stainless steel

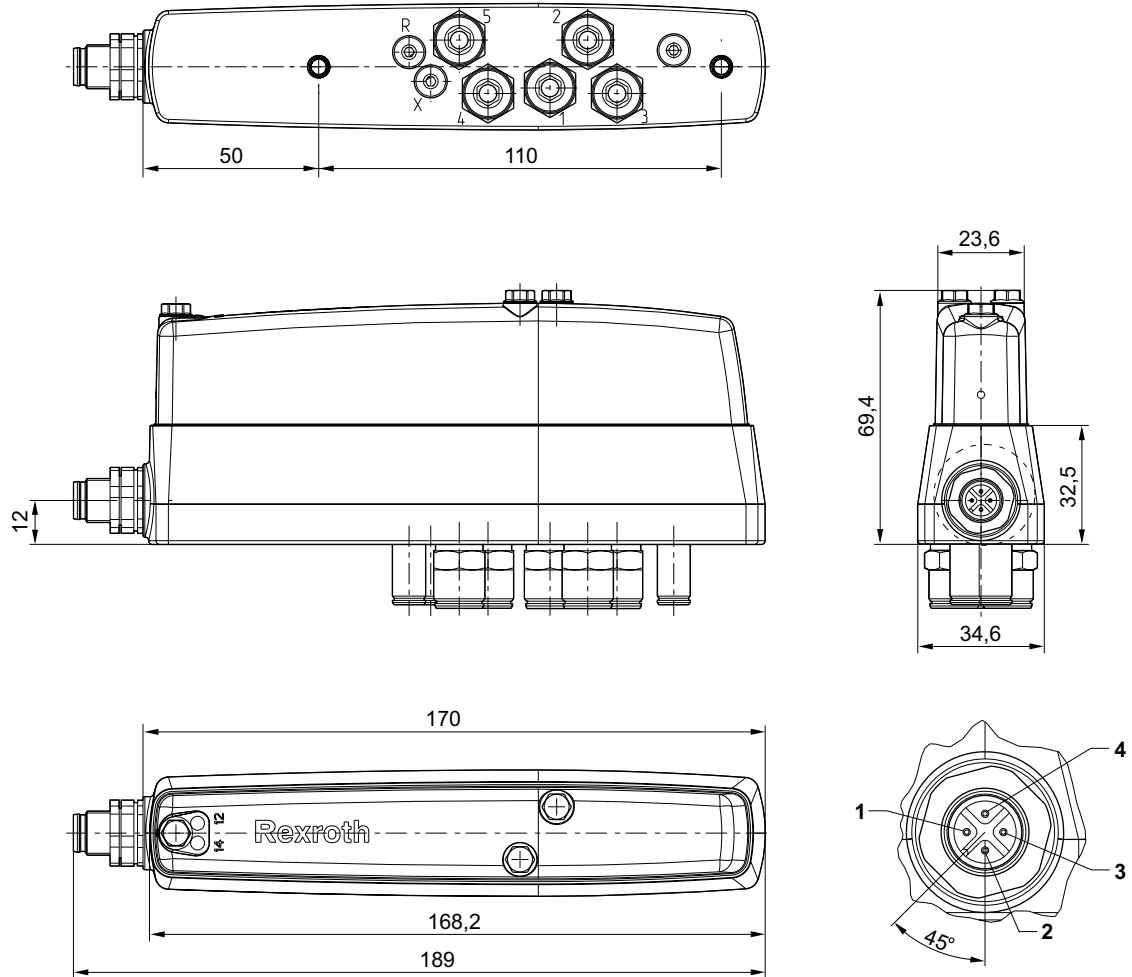
Nominal flow Qn at 6 bar and  $\Delta p = 1$  bar

## Directional valves → Electrically operated

**2x3/2-directional valve, Series CL03-EV**

► Qn = 700 l/min ► Pilot valve width: 16 mm ► NO/NC ► plate connection ► compressed air connection output: Ø 8 - G 1/8 ► Manual override: with detent

## Dimensions



## Electrical connection:

- 1) Not connected
- 2) Solenoid 12
- 3) Ground
- 4) Solenoid 14

20458

**Directional valves → Electrically operated**
**2x3/2-directional valve, Series CL03-EV**

► Qn = 700 l/min ► Pilot valve width: 16 mm ► NO/NO ► plate connection ► compressed air connection output: Ø 8 - G 1/8 ► Manual override: with detent



21013

|   |   |
|---|---|
| Certificates  | UR (Underwriters Laboratories)                            |
| Version   | Spool valve, zero overlap                                 |
| Pilot   | External  |
| Sealing principle                                   | Soft sealing  |
| Blocking principle                                  | Single base plate principle                               |
| Working pressure min./max.                          | -0.9 bar / 10 bar   |
| Control pressure min./max.                          | 2.5 bar / 10 bar  |
| Ambient temperature min./max.                       | +0 °C / +50 °C  |
| Medium temperature min./max.                        | +0 °C / +50 °C  |
| Medium  | Compressed air  |
| Max. particle size                                  | 40 µm   |
| Oil content of compressed air                       | 10 mg/m <sup>3</sup><br>With collective pilot air exhaust |
| Degree of protection with electrical connector/plug | IP 65, IP 67, IP 69K                                      |
| Protective circuit                                  | Z-diode<br>Protected against polarity reversal            |
| Status display LED                                  | Yellow  |
| Duty cycle  | 100 %   |
| Switch-on time                                      | 16 ms   |
| Switch-off time                                     | 25 ms   |
| Generic emission standard in accordance with        | EN 61000-6-4  |
| Generic immunity standard in accordance with        | EN 61000-6-2  |
| Mounting screw                                      | M5  |
| mounting screw tightening torque                    | 2 Nm  |
| Tightening torque tolerance                         | ±0,2  |
| Weight  | 0.165 kg  |
| Materials:  |   |
| Housing   | Polyamide, fiber-glass reinforced                         |
| Seals   | Hydrogenated acrylonitrile butadiene rubber               |

**Technical Remarks**

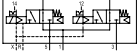

- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
- The oil content of compressed air must remain constant during the life cycle.
- Use only the approved oils from Rexroth Pneumatics, see chapter „Technical information“.
- The pilot valve is UL (Underwriters Laboratories) certified.
- For series QR2 fittings, see “Pneumatic connection technologies”.
- The inner valve can be replaced by all series CL03 valves described under “Valve systems”.

| Operating voltage | Voltage tolerance | Power consumption |
|-------------------|-------------------|-------------------|
| DC                | DC                | DC                |
|                   |                   | W                 |
| 24 V              | -15% / +20%       | 0.35              |

## Directional valves → Electrically operated

**2x3/2-directional valve, Series CL03-EV**

► Qn = 700 l/min ► Pilot valve width: 16 mm ► NO/NO ► plate connection ► compressed air connection output: Ø 8 - G 1/8 ► Manual override: with detent

|   |       | MO  | Compressed air connection |        |         |                  |                       | Operating voltage | Flow conductance |             | Part No.   |
|---|-------|---|---------------------------|--------|---------|------------------|-----------------------|-------------------|------------------|-------------|------------|
|   |       |   | Input                     | Output | Exhaust | Pilot connection | Pilot control exhaust |                   | DC               | b           |            |
|   |       |   |                           |        |         |                  |                       |                   |                  | [l/(s*bar)] |            |
|  | NO/NO |  | Ø 8                       | Ø 8    | Ø 8     | Ø 4              | Ø 4                   | 24 V              | 0.22             | 2.9         | R412017956 |
|   |       |   | Ø 8                       | Ø 8    | Ø 8     | Ø 4              | Ø 4                   |                   |                  |             | R412017957 |
|   |       |   | G 1/8                     | G 1/8  | G 1/8   | M5               | M5                    |                   |                  |             | R412017958 |

| Part No.   | Flow rate value | Note |
|------------|-----------------|------|
|            | Qn              |      |
|            | [l/min]         |      |
| R412017956 | 700             | 1)   |
| R412017957 |                 | 2)   |
| R412017958 |                 | -    |

HHB = Manual override

1) push-in fitting: Brass, nickel-plated

2) push-in fitting: Stainless steel

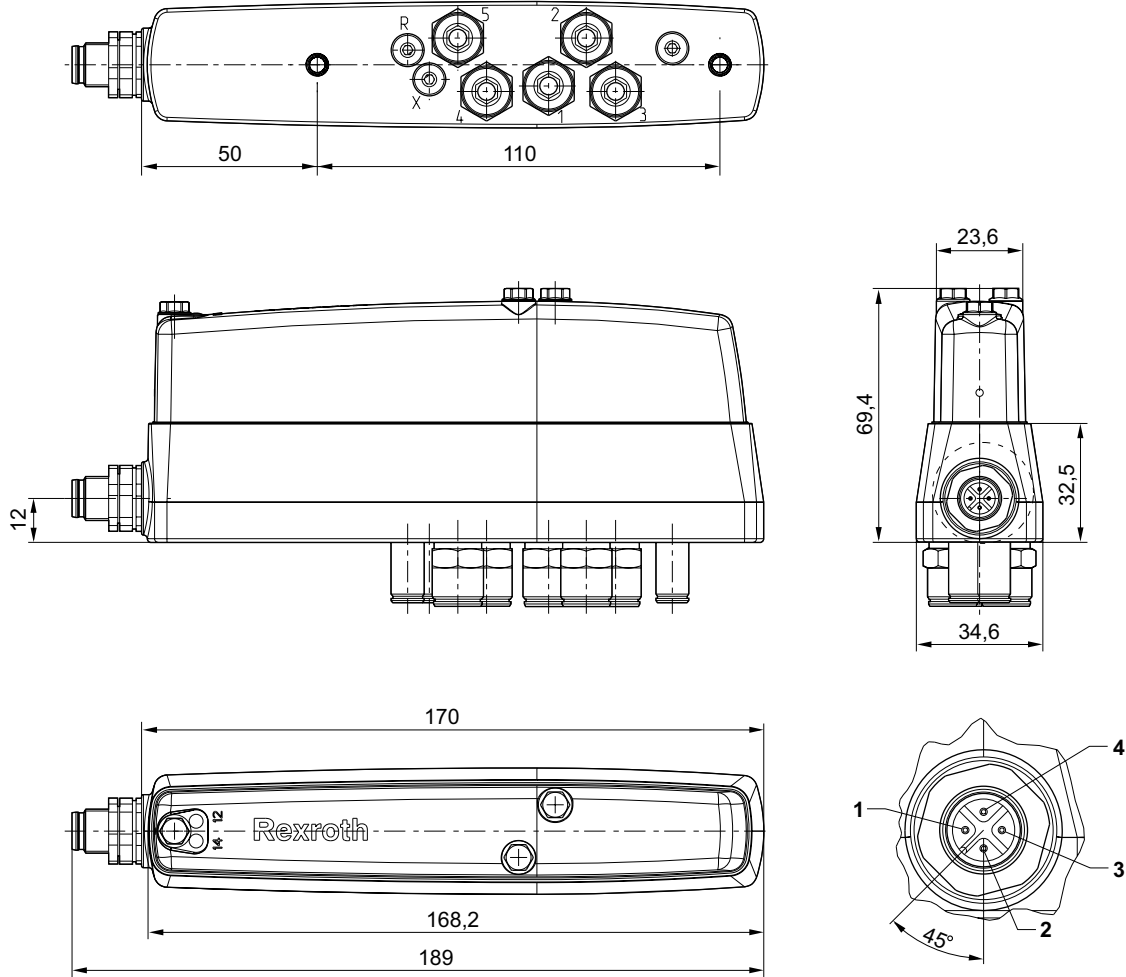
Nominal flow Qn at 6 bar and  $\Delta p = 1$  bar

## Directional valves → Electrically operated

**2x3/2-directional valve, Series CL03-EV**

►  $Q_n = 700 \text{ l/min}$  ► Pilot valve width: 16 mm ► NO/NO ► plate connection ► compressed air connection output:  $\varnothing 8 - G 1/8$  ► Manual override: with detent

## Dimensions



20458

## Electrical connection:

- 1) Not connected
- 2) Solenoid 12
- 3) Ground
- 4) Solenoid 14

## Directional valves → Electrically operated

**2x3/2-directional valve, Series CL03-EV**

► Qn = 700 l/min ► Pilot valve width: 16 mm ► NC/NC ► plate connection ► compressed air connection output: Ø 8 - G 1/8 ► Manual override: with detent



21013

|   |   |
|---|---|
| Version   | Spool valve, zero overlap                                 |
| Pilot   | External  |
| Sealing principle                                   | Soft sealing  |
| Blocking principle                                  | Single base plate principle                               |
| Working pressure min./max.                          | -0.9 bar / 10 bar   |
| Control pressure min./max.                          | 2.5 bar / 10 bar  |
| Ambient temperature min./max.                       | +0 °C / +50 °C  |
| Medium temperature min./max.                        | +0 °C / +50 °C  |
| Medium  | Compressed air  |
| Max. particle size                                  | 40 µm   |
| Oil content of compressed air                       | 10 mg/m <sup>3</sup><br>With collective pilot air exhaust |
| Degree of protection with electrical connector/plug | IP 65, IP 67, IP 69K                                      |
| Protective circuit                                  | Z-diode<br>Protected against polarity reversal            |
| Status display LED                                  | Yellow  |
| Duty cycle  | 100 %   |
| Switch-on time                                      | 16 ms   |
| Switch-off time                                     | 25 ms   |
| Generic emission standard in accordance with        | EN 61000-6-4  |
| Generic immunity standard in accordance with        | EN 61000-6-2  |
| Mounting screw                                      | M5  |
| mounting screw tightening torque                    | 2 Nm  |
| Tightening torque tolerance                         | ±0,2  |
| Weight  | 0.165 kg  |
| Materials:  |   |
| Housing   | Polyamide, fiber-glass reinforced                         |
| Seals   | Hydrogenated acrylonitrile butadiene rubber               |

**Technical Remarks**

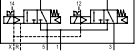

- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
- The oil content of compressed air must remain constant during the life cycle.
- Use only the approved oils from Rexroth Pneumatics, see chapter „Technical information“.
- The pilot valve is UL (Underwriters Laboratories) certified.
- For series QR2 fittings, see “Pneumatic connection technologies”.
- The inner valve can be replaced by all series CL03 valves described under “Valve systems”.

| Operating voltage | Voltage tolerance | Power consumption |
|-------------------|-------------------|-------------------|
| DC                | DC                | DC                |
|                   |                   | W                 |
| 24 V              | -15% / +20%       | 0.35              |

## Directional valves → Electrically operated

**2x3/2-directional valve, Series CL03-EV**

►  $Q_n = 700$  l/min ► Pilot valve width: 16 mm ► NC/NC ► plate connection ► compressed air connection output: Ø 8 - G 1/8 ► Manual override: with detent

|  |       | MO  | Compressed air connection |        |         |                  |                       | Operating voltage | Flow conductance |     | Part No.   |
|--|-------|---|---------------------------|--------|---------|------------------|-----------------------|-------------------|------------------|-----|------------|
|  |       |   | Input                     | Output | Exhaust | Pilot connection | Pilot control exhaust |                   | DC               | b   |            |
|  |       |   |                           |        |         |                  |                       |                   |                  |     |            |
|  |       |   |                           |        |         |                  |                       |                   |                  |     |            |
|  |       |   |                           |        |         |                  |                       |                   |                  |     |            |
|  | NC/NC |  | Ø 8                       | Ø 8    | Ø 8     | Ø 4              | Ø 4                   | 24 V              | 0.22             | 2.9 | R412021814 |
|  |       |   | Ø 8                       | Ø 8    | Ø 8     | Ø 4              | Ø 4                   |                   |                  |     | R412021815 |
|  |       |   | G 1/8                     | G 1/8  | G 1/8   | M5               | M5                    |                   |                  |     | R412021816 |

| Part No.   | Flow rate value |  | Note |
|------------|-----------------|--|------|
|            | Qn              |  |      |
|            | [l/min]         |  |      |
| R412021814 |                 |  | 1)   |
| R412021815 | 700             |  | 2)   |
| R412021816 |                 |  | -    |

HHB = Manual override

1) push-in fitting: Brass, nickel-plated

2) push-in fitting: Stainless steel

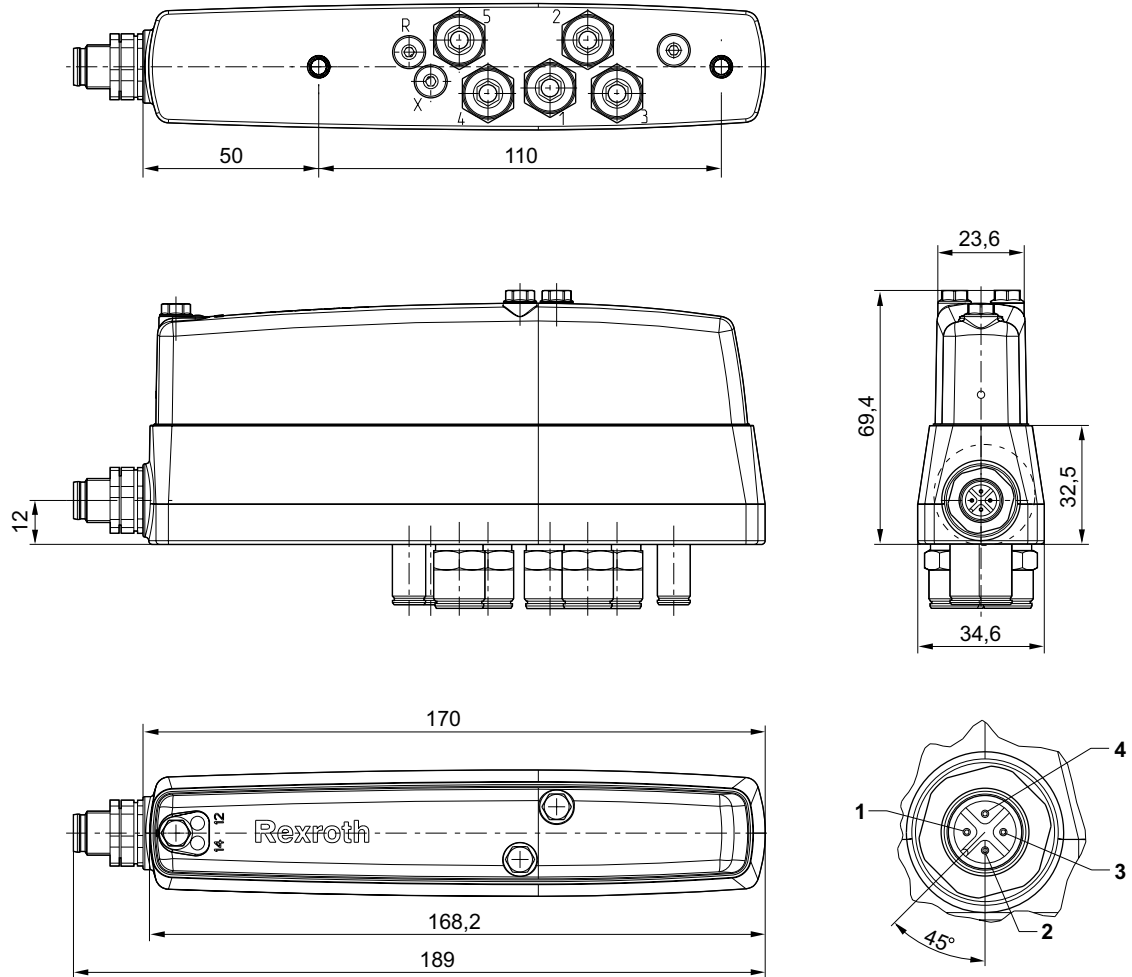
Nominal flow  $Q_n$  at 6 bar and  $\Delta p = 1$  bar

## Directional valves → Electrically operated

**2x3/2-directional valve, Series CL03-EV**

►  $Q_n = 700 \text{ l/min}$  ► Pilot valve width: 16 mm ► NC/NC ► plate connection ► compressed air connection output:  $\varnothing 8 - G 1/8$  ► Manual override: with detent

## Dimensions



20458

Electrical connection:

- 1) Not connected
- 2) Solenoid 12
- 3) Ground
- 4) Solenoid 14

**Directional valves → Electrically operated**
**5/2-directional valve, Series CL03-EV**

- Qn = 700 l/min ► Pilot valve width: 16 mm ► plate connection ► compressed air connection output: Ø 8 - G 1/8  
 ► Manual override: with detent ► single solenoid



21013

|   |   |
|---|---|
| Certificates  | UR (Underwriters Laboratories)  |
| Version   | Spool valve, zero overlap   |
| Pilot   | External  |
| Sealing principle                                   | Soft sealing  |
| Blocking principle                                  | Single base plate principle   |
| Working pressure min./max.                          | -0.9 bar / 10 bar   |
| Control pressure min./max.                          | 2.5 bar / 10 bar  |
| Ambient temperature min./max.                       | +0 °C / +50 °C  |
| Medium temperature min./max.                        | +0 °C / +50 °C  |
| Medium  | Compressed air  |
| Max. particle size                                  | 40 µm   |
| Oil content of compressed air                       | 0 mg/m <sup>3</sup> - 10 mg/m <sup>3</sup><br>With collective pilot air exhaust |
| Degree of protection with electrical connector/plug | IP 65, IP 67, IP 69K  |
| Protective circuit                                  | Z-diode<br>Protected against polarity reversal                                  |
| Status display LED                                  | Yellow  |
| Duty cycle  | 100 %   |
| Switch-on time                                      | 16 ms   |
| Switch-off time                                     | 23 ms   |
| Generic emission standard in accordance with        | EN 61000-6-4  |
| Generic immunity standard in accordance with        | EN 61000-6-2  |
| Mounting screw                                      | M5  |
| mounting screw tightening torque                    | 2 Nm  |
| Tightening torque tolerance                         | ±0,2  |
| Weight  | 0.165 kg  |
| Materials:  |   |
| Housing   | Polyamide, fiber-glass reinforced   |
| Seals   | Hydrogenated acrylonitrile butadiene rubber                                     |

**Technical Remarks**

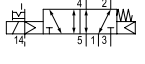

- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
- The oil content of compressed air must remain constant during the life cycle.
- Use only the approved oils from Rexroth Pneumatics, see chapter „Technical information“.
- The pilot valve is UL (Underwriters Laboratories) certified.
- For series QR2 fittings, see “Pneumatic connection technologies”.
- The inner valve can be replaced by all series CL03 valves described under “Valve systems”.

| Operating voltage | Voltage tolerance | Power consumption |
|-------------------|-------------------|-------------------|
| DC                | DC                | DC                |
|                   |                   | W                 |
| 24 V              | -15% / +20%       | 0.35              |

## Directional valves → Electrically operated

**5/2-directional valve, Series CL03-EV**

- Qn = 700 l/min ► Pilot valve width: 16 mm ► plate connection ► compressed air connection output: Ø 8 - G 1/8  
 ► Manual override: with detent ► single solenoid

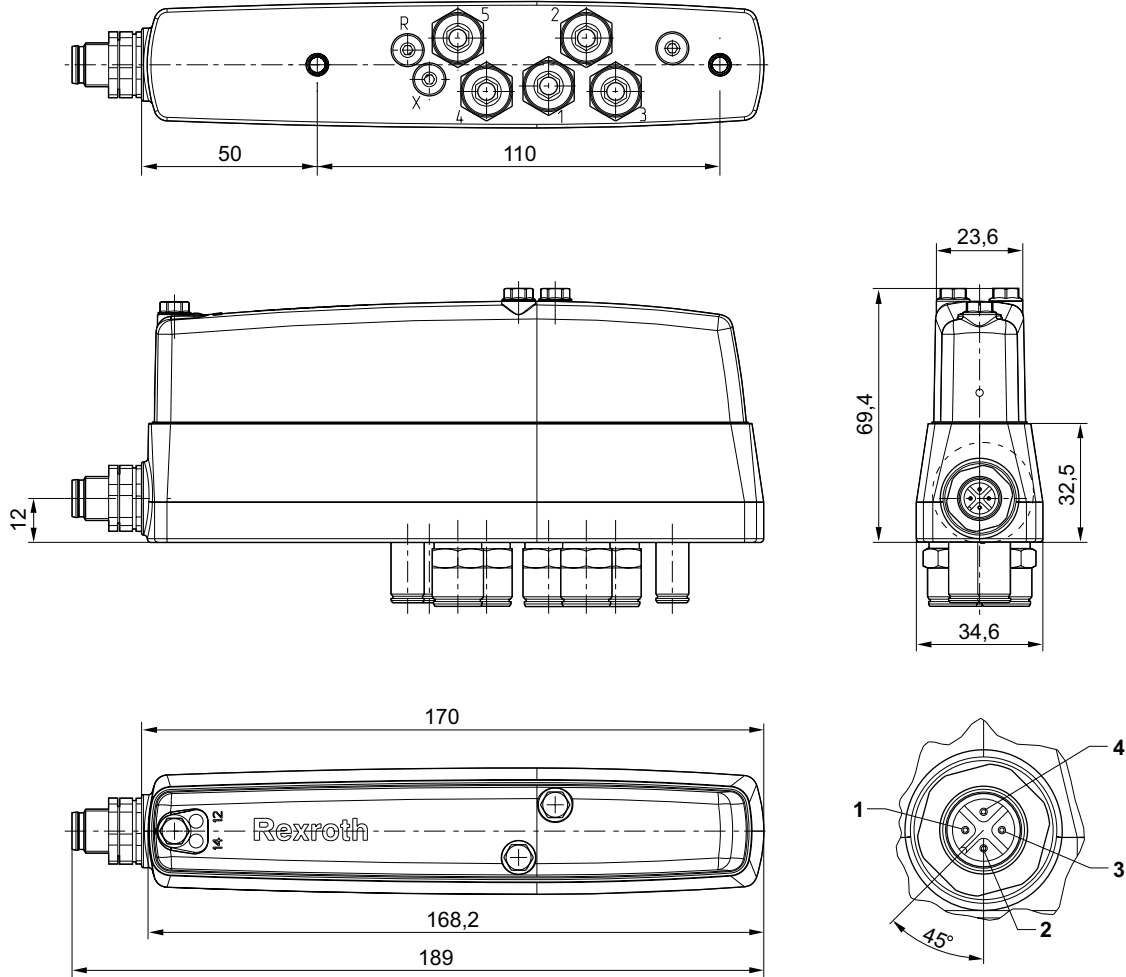
|   | MO  | Compressed air connection |                     |                     |                  |                       | Operating voltage | Flow conductance |     | Flow rate value | Part No.                               |
|---|---|---------------------------|---------------------|---------------------|------------------|-----------------------|-------------------|------------------|-----|-----------------|--|
|   |   | Input                     | Output              | Exhaust             | Pilot connection | Pilot control exhaust |                   | DC               | b   |                 |  |
|   |   |                           |                     |                     |                  |                       |                   |                  |     | [l/(s*bar)]     |  |
|    |  | Ø 8<br>Ø 8<br>G 1/8       | Ø 8<br>Ø 8<br>G 1/8 | Ø 8<br>Ø 8<br>G 1/8 | Ø 4<br>Ø 4<br>M5 | Ø 4<br>Ø 4<br>M5      | 24 V              | 0.22             | 2.9 | 700             | R412017962<br>R412017963<br>R412017964 |
| Part No.  | Note  |                           |                     |                     |                  |                       |                   |                  |     |                 |  |
| R412017962  | 1)  |                           |                     |                     |                  |                       |                   |                  |     |                 |  |
| R412017963  | 2)  |                           |                     |                     |                  |                       |                   |                  |     |                 |  |
| R412017964  | -   |                           |                     |                     |                  |                       |                   |                  |     |                 |  |
| HHB = Manual override<br>1) push-in fitting: Brass, nickel-plated<br>2) push-in fitting: Stainless steel<br>Nominal flow Qn at 6 bar and $\Delta p = 1$ bar |   |                           |                     |                     |                  |                       |                   |                  |     |                 |  |

## Directional valves → Electrically operated

**5/2-directional valve, Series CL03-EV**

- ▶  $Q_n = 700 \text{ l/min}$  ▶ Pilot valve width: 16 mm ▶ plate connection ▶ compressed air connection output:  $\text{Ø } 8 - \text{G } 1/8$
- ▶ Manual override: with detent ▶ single solenoid

## Dimensions



20458

## Electrical connection:

- 1) Not connected
- 2) Solenoid 12
- 3) Ground
- 4) Solenoid 14

## Directional valves → Electrically operated

**5/2-directional valve, Series CL03-EV**

- Qn = 700 l/min ► Pilot valve width: 16 mm ► plate connection ► compressed air connection output: Ø 8 - G 1/8  
 ► Manual override: with detent ► double solenoid



21013

|   |   |
|---|---|
| Certificates  | UR (Underwriters Laboratories)  |
| Version   | Spool valve, zero overlap   |
| Pilot   | External  |
| Sealing principle                                   | Soft sealing  |
| Blocking principle                                  | Single base plate principle   |
| Working pressure min./max.                          | -0.9 bar / 10 bar   |
| Control pressure min./max.                          | 2.5 bar / 10 bar  |
| Ambient temperature min./max.                       | +0 °C / +50 °C  |
| Medium temperature min./max.                        | +0 °C / +50 °C  |
| Medium  | Compressed air  |
| Max. particle size                                  | 40 µm   |
| Oil content of compressed air                       | 0 mg/m <sup>3</sup> - 10 mg/m <sup>3</sup><br>With collective pilot air exhaust |
| Degree of protection with electrical connector/plug | IP 65, IP 67, IP 69K  |
| Protective circuit                                  | Z-diode<br>Protected against polarity reversal                                  |
| Status display LED                                  | Yellow  |
| Duty cycle  | 100 %   |
| Switch-on time                                      | 13 ms   |
| Switch-off time                                     | 15 ms   |
| Generic emission standard in accordance with        | EN 61000-6-4  |
| Generic immunity standard in accordance with        | EN 61000-6-2  |
| Mounting screw                                      | M5  |
| mounting screw tightening torque                    | 2 Nm  |
| Tightening torque tolerance                         | ±0,2  |
| Weight  | 0.165 kg  |
| Materials:  |   |
| Housing   | Polyamide, fiber-glass reinforced   |
| Seals   | Hydrogenated acrylonitrile butadiene rubber                                     |

**Technical Remarks**

- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
- The oil content of compressed air must remain constant during the life cycle.
- Use only the approved oils from Rexroth Pneumatics, see chapter „Technical information“.
- The pilot valve is UL (Underwriters Laboratories) certified.
- For series QR2 fittings, see “Pneumatic connection technologies”.
- The inner valve can be replaced by all series CL03 valves described under “Valve systems”.

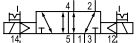

| Operating voltage | Voltage tolerance | Power consumption |
|-------------------|-------------------|-------------------|
| DC                | DC                | DC                |
|                   |                   | W                 |
| 24 V              | -15% / +20%       | 0.35              |

## Directional valves → Electrically operated

**5/2-directional valve, Series CL03-EV**

▶ Qn = 700 l/min ▶ Pilot valve width: 16 mm ▶ plate connection ▶ compressed air connection output: Ø 8 - G 1/8

▶ Manual override: with detent ▶ double solenoid

|  | MO  | Compressed air connection |                     |                     |                  |                       | Operating voltage | Flow conductance |             | Flow rate value | Part No.                               |
|--|---|---------------------------|---------------------|---------------------|------------------|-----------------------|-------------------|------------------|-------------|-----------------|--|
|  |   | Input                     | Output              | Exhaust             | Pilot connection | Pilot control exhaust |                   | DC               | b           |                 |  |
|  |   |                           |                     |                     |                  |                       |                   |                  | [l/(s*bar)] | [l/min]         |  |
|  |  | Ø 8<br>Ø 8<br>G 1/8       | Ø 8<br>Ø 8<br>G 1/8 | Ø 8<br>Ø 8<br>G 1/8 | Ø 4<br>Ø 4<br>M5 | Ø 4<br>Ø 4<br>M5      | 24 V              | 0.22             | 2.9         | 700             | R412017950<br>R412017951<br>R412017952 |

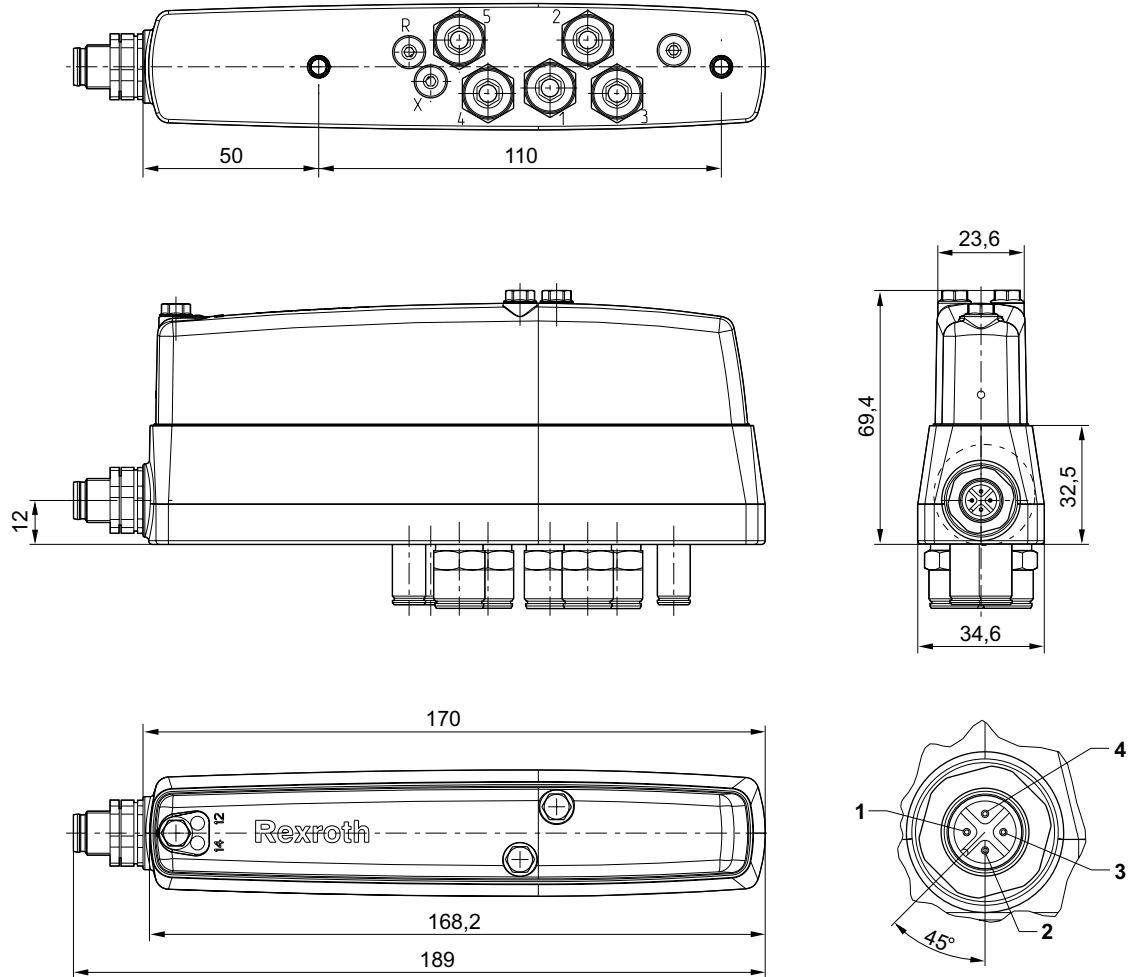
| Part No.  | Note |
|---|------|
| R412017950  | 1)   |
| R412017951  | 2)   |
| R412017952  | -    |
| HHB = Manual override<br>1) push-in fitting: Brass, nickel-plated<br>2) push-in fitting: Stainless steel<br>Nominal flow Qn at 6 bar and $\Delta p = 1$ bar |      |

## Directional valves → Electrically operated

**5/2-directional valve, Series CL03-EV**

- $Q_n = 700 \text{ l/min}$  ► Pilot valve width: 16 mm ► plate connection ► compressed air connection output:  $\text{Ø } 8 - \text{G } 1/8$   
 ► Manual override: with detent ► double solenoid

## Dimensions



20458

Electrical connection:

- 1) Not connected
- 2) Solenoid 12
- 3) Ground
- 4) Solenoid 14

**Directional valves → Electrically operated**
**5/3-directional valve, Series CL03-EV**
**► Qn = 700 l/min ► Pilot valve width: 16 mm ► plate connection ► compressed air connection output: Ø 8 - G 1/8**
**► Manual override: with detent**


21013

|   |   |
|---|---|
| Certificates  | UR (Underwriters Laboratories)  |
| Version   | Spool valve, zero overlap   |
| Pilot   | External  |
| Sealing principle                                   | Soft sealing  |
| Blocking principle                                  | Single base plate principle   |
| Working pressure min./max.                          | -0.9 bar / 10 bar   |
| Control pressure min./max.                          | 2.5 bar / 10 bar  |
| Ambient temperature min./max.                       | +0 °C / +50 °C  |
| Medium temperature min./max.                        | +0 °C / +50 °C  |
| Medium  | Compressed air  |
| Max. particle size                                  | 40 µm   |
| Oil content of compressed air                       | 0 mg/m <sup>3</sup> - 10 mg/m <sup>3</sup><br>With collective pilot air exhaust |
| Degree of protection with electrical connector/plug | IP 65, IP 67, IP 69K  |
| Protective circuit                                  | Z-diode<br>Protected against polarity reversal                                  |
| Status display LED                                  | Yellow  |
| Duty cycle  | 100 %   |
| Switch-on time                                      | 14 ms   |
| Switch-off time                                     | 15 ms   |
| Generic emission standard in accordance with        | EN 61000-6-4  |
| Generic immunity standard in accordance with        | EN 61000-6-2  |
| Mounting screw                                      | M5  |
| mounting screw tightening torque                    | 2 Nm  |
| Tightening torque tolerance                         | ±0,2  |
| Weight  | 0.165 kg  |
| Materials:  |   |
| Housing   | Polyamide, fiber-glass reinforced   |
| Seals   | Acrylonitrile Butadiene Rubber  |

**Technical Remarks**

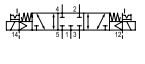

- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
- The oil content of compressed air must remain constant during the life cycle.
- Use only the approved oils from Rexroth Pneumatics, see chapter „Technical information“.
- The pilot valve is UL (Underwriters Laboratories) certified.
- For series QR2 fittings, see “Pneumatic connection technologies”.
- The inner valve can be replaced by all series CL03 valves described under “Valve systems”.

| Operating voltage | Voltage tolerance | Power consumption |
|-------------------|-------------------|-------------------|
| DC                | DC                | DC                |
|                   |                   | W                 |
| 24 V              | -15% / +20%       | 0.35              |

## Directional valves → Electrically operated

**5/3-directional valve, Series CL03-EV**

- Qn = 700 l/min ► Pilot valve width: 16 mm ► plate connection ► compressed air connection output: Ø 8 - G 1/8  
 ► Manual override: with detent

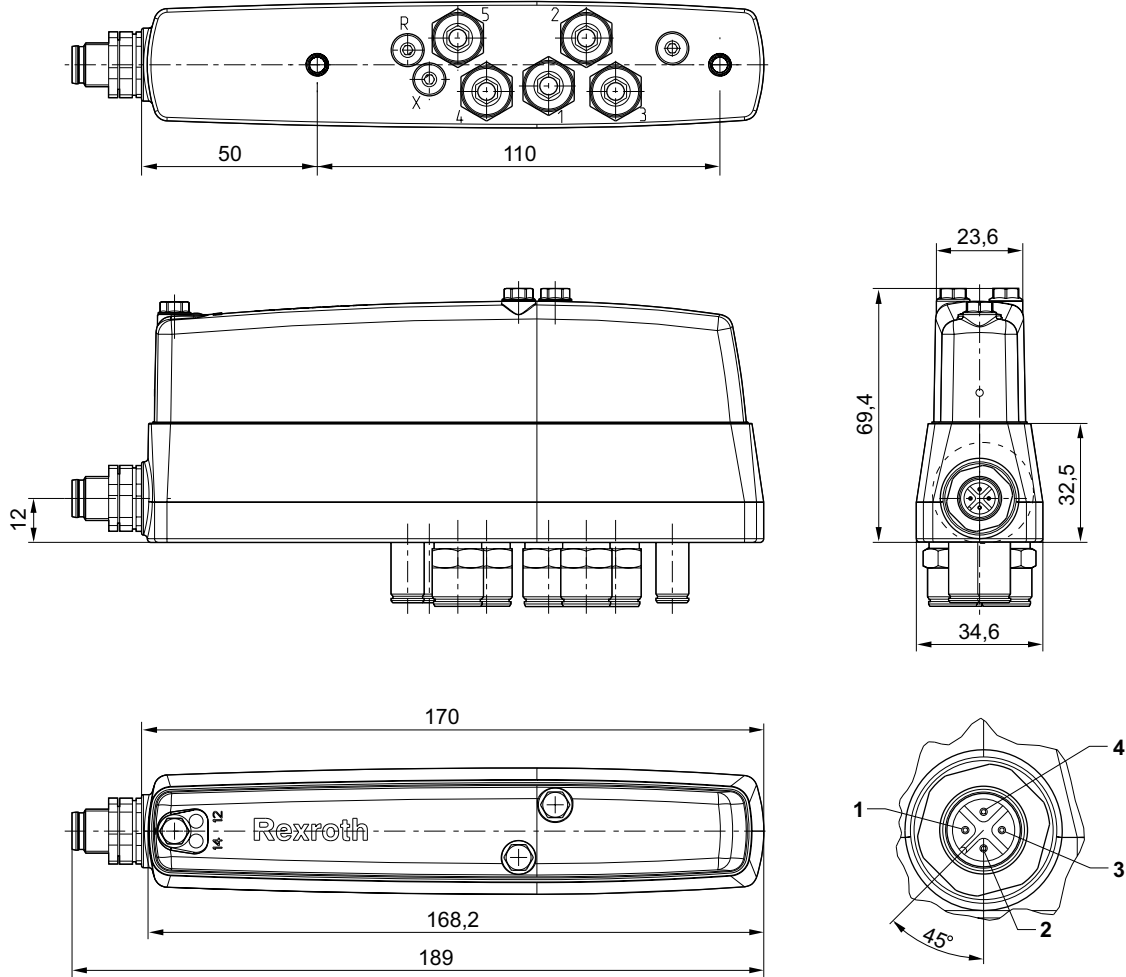
|   | MO  | Compressed air connection |                     |                     |                  |                       | Operating voltage | Flow conductance |     | Flow rate value | Part No.                               |             |
|---|---|---------------------------|---------------------|---------------------|------------------|-----------------------|-------------------|------------------|-----|-----------------|--|-------------|
|   |   | Input                     | Output              | Exhaust             | Pilot connection | Pilot control exhaust |                   | DC               | b   |                 |  | C           |
|   |   |                           |                     |                     |                  |                       |                   |                  |     |                 |  | [l/(s*bar)] |
|    |  | Ø 8<br>Ø 8<br>G 1/8       | Ø 8<br>Ø 8<br>G 1/8 | Ø 8<br>Ø 8<br>G 1/8 | Ø 4<br>Ø 4<br>M5 | Ø 4<br>Ø 4<br>M5      | 24 V              | 0.39             | 2.5 | 700             | R412017953<br>R412017954<br>R412017955 |             |
| Part No.  | Note  |                           |                     |                     |                  |                       |                   |                  |     |                 |  |             |
| R412017953  | 1)  |                           |                     |                     |                  |                       |                   |                  |     |                 |  |             |
| R412017954  | 2)  |                           |                     |                     |                  |                       |                   |                  |     |                 |  |             |
| R412017955  | -   |                           |                     |                     |                  |                       |                   |                  |     |                 |  |             |
| HHB = Manual override<br>1) push-in fitting: Brass, nickel-plated<br>2) push-in fitting: Stainless steel<br>Nominal flow Qn at 6 bar and $\Delta p = 1$ bar |   |                           |                     |                     |                  |                       |                   |                  |     |                 |  |             |

## Directional valves → Electrically operated

**5/3-directional valve, Series CL03-EV**

- ▶  $Q_n = 700 \text{ l/min}$  ▶ Pilot valve width: 16 mm ▶ plate connection ▶ compressed air connection output:  $\text{Ø } 8 - \text{G } 1/8$
- ▶ Manual override: with detent

## Dimensions



20458

## Electrical connection:

- 1) Not connected
- 2) Solenoid 12
- 3) Ground
- 4) Solenoid 14

## Directional valves → Electrically operated

**Series CL03-EV**  
 Accessories

**Connecting cable with plug and socket**

▶ Socket, M12x1, 4-pin, A-coded ▶ Plug, M12x1, 4-pin, A-coded


 Ambient temperature min./max.  
 Protection class

 -25 °C / +70 °C  
 IP 69K

Materials:

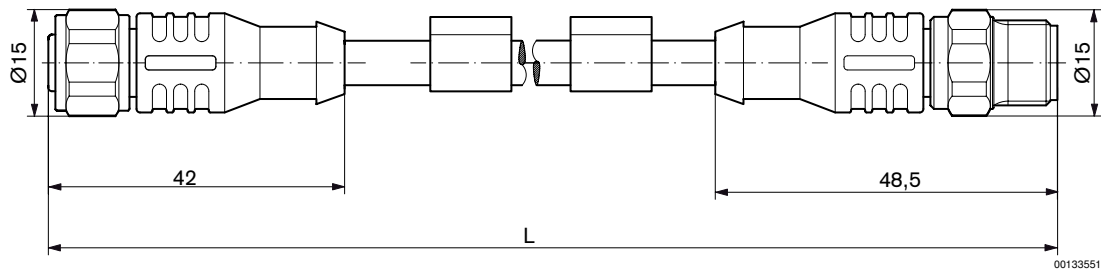
 Housing  
 Cable sheath

 Stainless steel  
 Polyvinyl chloride

**Technical Remarks**

- The specified protection class is valid only in assembled and tested state.

| Type         | Electrical interface          |                             | Cable exit | Bending radius min. | Cable length L | Weight | Part No.   |
|--------------|-------------------------------|-----------------------------|------------|---------------------|----------------|--------|------------|
|              | [Port 1]                      | [Port 2]                    |            |                     |                |        |            |
| power supply | Socket, M12x1, 4-pin, A-coded | Plug, M12x1, 4-pin, A-coded | straight   | 54                  | 5              | 0.258  | R402003760 |
|              |                               |                             |            |                     | 10             | 0.484  | R402003761 |
|              |                               |                             |            |                     | 15             | 0.699  | R402003762 |

**Dimensions**


L = cable length

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