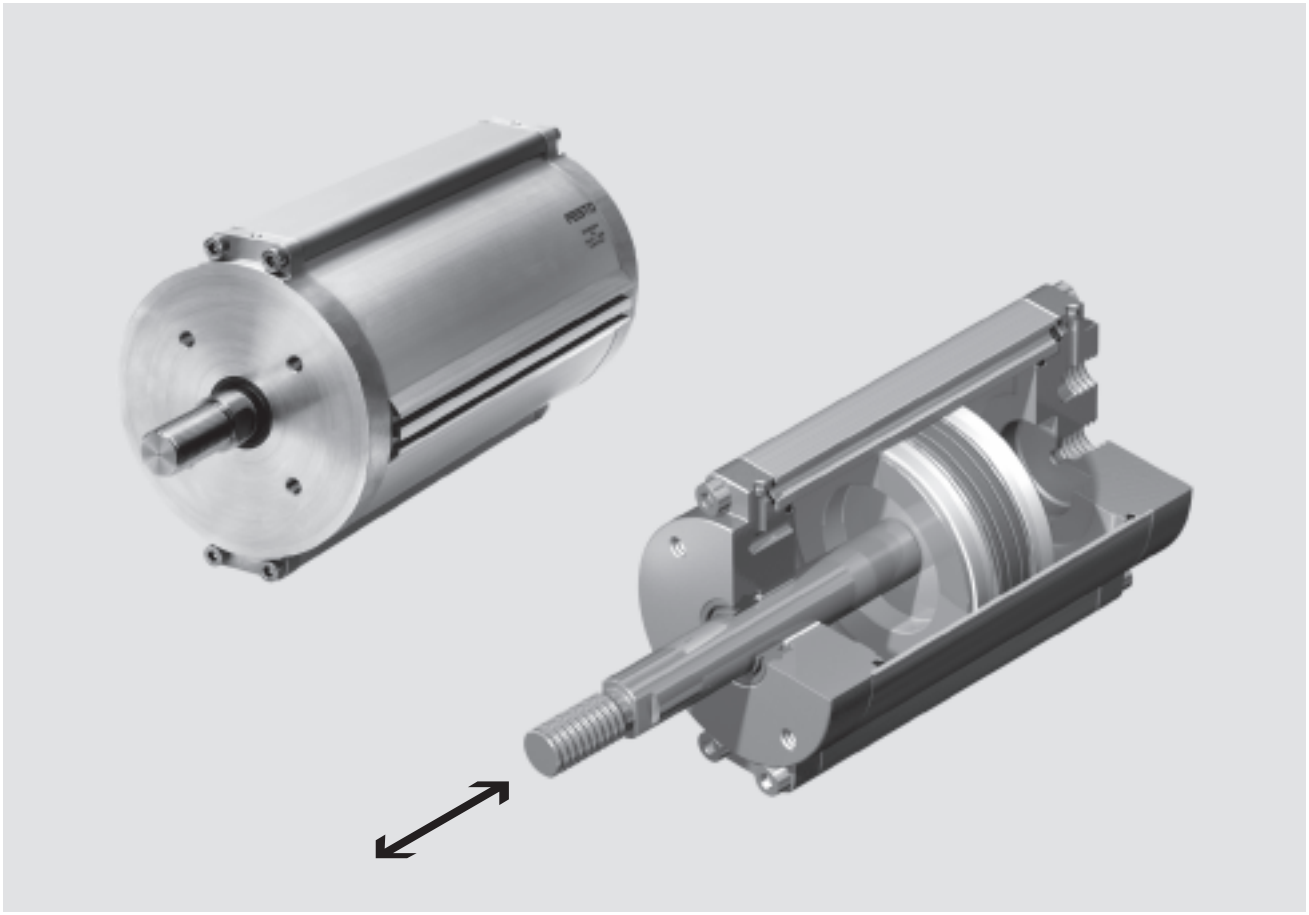
# Linear actuators DLP, Copac

Key features





Diameter
80 ... 320 mm

Stroke length
40 ... 2,000 mm

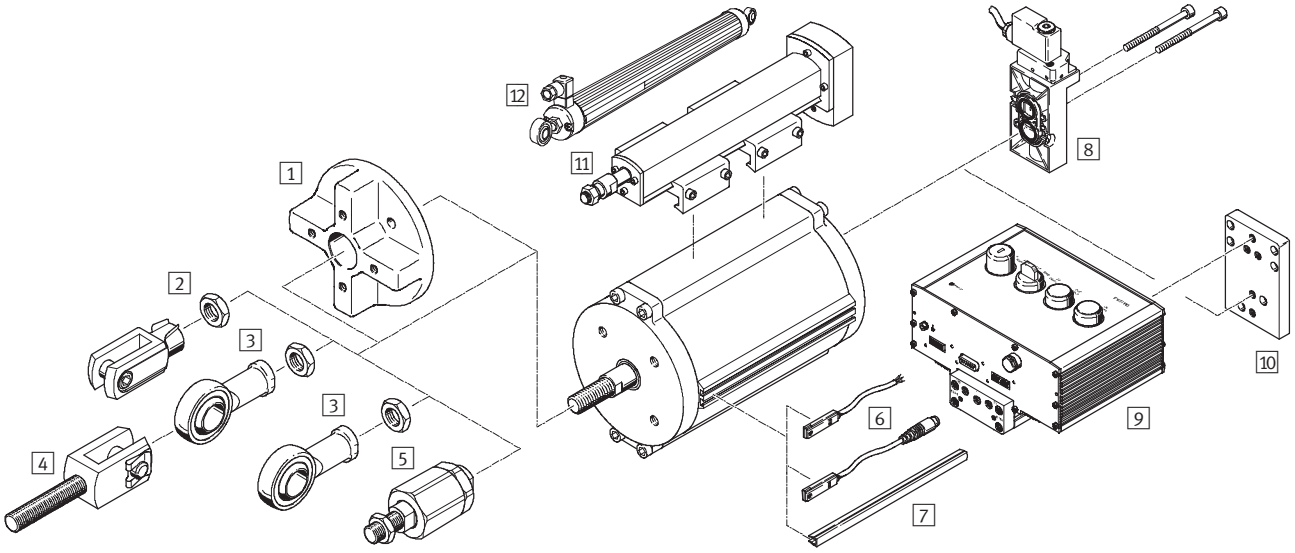
Force
2,800 ... 47,500 N

Festo Copac linear valve actuators are ideally suited for use in water, sewage, industrial process water and sileage technology, as well as the paper and bulk goods industry.
A clean solution for shut-off, safety and control slide valves. The Copac linear actuator acts directly upon the slide plate and facilitates accurate advancing to various positions.

- Fast or slow valve actuation
- Position sensing
- Internal air channels eliminate protruding tubing and attachments, and thus also harmful accumulation of contaminants
- Suitable for manual on-site use, as well as automatic operation
- Opening and closing actuated via flange-mounted solenoid valve with port pattern to Namur, or via valve terminals with a choice of 30 different fieldbus protocols
- Sturdy and reliable, even in aggressive environments
- Highly corrosion resistant
- Mounting port pattern to DIN 3358/ISO 5210 for direct mounting
- Port pattern to Namur VDI/VDE 3845 for attaching solenoid valves

# Linear actuators DLP, Copac

Peripherals overview




| Mounting attachments and accessories | | | | | | |
|---|---|---|---|---|---|---|
| | | Brief description | DLP-80/100 | DLP-125/160 | DLP-200 ... 320 | ➔ Page |
| 1 | Adapter<br>DAPZ-FA | For mounting on slide valve armature with ISO 5211 interface | ■ | ■ | ■ | 7 / 1.1-11 |
| 2 | Rod clevis<br>SG | Enables simple connection between the piston rod and the slide plate | ■ | ■ | ■ | 7 / 1.1-11 |
| | Rod clevis, stainless steel<br>CRSG | | ■ | ■ | – | 7 / 1.1-12 |
| 3 | Rod eye<br>SGS | With spherical bearing | ■ | ■ | ■ | 7 / 1.1-14 |
| | Rod eye, stainless steel<br>CRSGS | | ■ | ■ | – | 7 / 1.1-14 |
| 4 | Rod clevis<br>SGA | With male thread | ■ | ■ | ■ | 7 / 1.1-13 |
| 5 | Self-aligning rod coupler<br>FK | For compensating radial and angular deviations | ■ | ■ | ■ | 7 / 1.1-15 |
| 6 | Proximity sensor<br>SMT-8F-I | Magneto-inductive, Namur, EU-compliant to directive 94/9/EC (ATEX) | ■ | ■ | ■ | 7 / 1.1-18 |
| | Proximity sensor<br>SMT-8 | Magneto-resistive, can be integrated in the cylinder profile barrel | ■ | ■ | ■ | 7 / 1.1-22 |
| | Proximity sensor<br>SME-8 | Magnetic reed, can be integrated in the cylinder profile barrel | ■ | ■ | ■ | 7 / 1.1-26 |
| 7 | Slot cover<br>ABP-5-S | To keep dirt away from the sensor cable and slots | ■ | ■ | ■ | 7 / 1.1-30 |
| 8 | Solenoid valve | Namur port pattern,<br>not with 9 or 11 | ■ | ■ | ■ | 7 / 2.1-2 |
| 9 | Local controller<br>DLP-VSE | Manual control device, not with 8 or 11 | ■ | ■ | ■ | 7 / 3.1-2 |
| 10 | Sub-base<br>DLP-VSE-OBEN-NAMUR | Mounting of local controller on the Namur interface | ■ | ■ | ■ | 7 / 3.1-5 |
| 11 | Measuring unit<br>ASDLP | Conversion of linear movement to rotary movement, not with 8 or 9 | ■ | ■ | – | 7 / 1.1-31 |
| 12 | Displacement encoder<br>MLO-POT | Conversion of linear movement to voltage signal. The maximum stroke is 700 mm. | ■ | ■ | ■ | 7 / 1.1-16 |

# Linear actuators DLP, Copac

Type codes

DLP – 100 – 125 – A

| Type | |
|---|---|
| DLP | Double-acting linear actuator |

**Piston ∅ [mm]**

**Stroke [mm]**

| Position sensing | |
|---|---|
| A | Via proximity sensor |

**Application example**

# Linear actuators DLP, Copac

Technical data

FESTO

Function

Diameter
80 ... 320 mm

Stroke length
40 ... 2,000 mm

Force
2,800 ... 47,500 N

| General technical data | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Piston ∅ | | 80 | 100 | 125 | 160 | 200 | 250 | 320 |
| Pneumatic connection | | G¼ | | | | | | |
| Design | | Piston cylinder, double-acting | | | | | | |
| Cushioning | | None | | | | | | |
| Stroke reserve | [mm] | 2 | | | | 4 | | |
| Assembly position | | Any | | | | | | |
| Position sensing | | Via proximity sensor | | | | | | |

| Operating and environmental conditions | | |
|---|---|---|
| Operating pressure[1] | [bar] | 2 ... 10 |
| Operating medium | | Filtered compressed air, lubricated or unlubricated |
| | | Other media upon request |
| Ambient temperature[2][3] | [°C] | –20 ... +80 |
| Corrosion resistance class CRC[4] | | 3 |
| CE marking (see declaration of conformity) ➔ www.festo.com | | Explosion protection directive 94/9/EC - ATEX |
| ATEX specification | | II 2 GD c T4 T120°C |
| ATEX ambient temperature[3] | | –20°C ≤ Ta ≤ +60°C |

1) Depending upon the counter force of the valve slide, a higher minimum pressure may be required to actuate the overall system
2) Further temperature ranges upon request
3) Note operating range of proximity sensors
4) Corrosion resistance class 3 according to Festo standard 940 070
Components requiring higher corrosion resistance. External visible parts in direct contact with industrial atmospheres or media such as solvents and cleaning agents, with a predominantly functional requirement for the surface

# Linear actuators DLP, Copac

Technical data

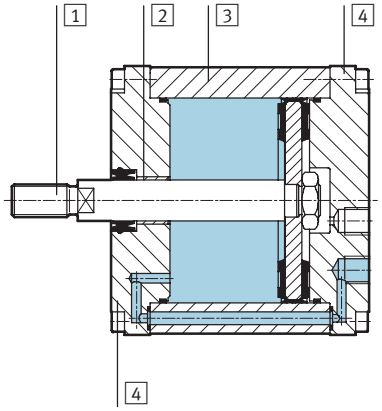
FESTO

| Forces [N] and air consumption [Nl] | | | | | | | |
|---|---|---|---|---|---|---|---|
| Piston ∅ | 80 | 100 | 125 | 160 | 200 | 250 | 320 |
| Theoretical force at 6 bar, advancing | 3,016 | 4,712 | 7,363 | 12,064 | 18,850 | 29,452 | 48,255 |
| Theoretical force at 6 bar, retracting | 2,827 | 4,524 | 6,881 | 11,581 | 18,080 | 28,698 | 47,501 |
| Theoretical air consumption at 6 bar and 10 mm stroke, pushing | 0.35 | 0.55 | 0.86 | 1.41 | 2.12 | 3.44 | 5.63 |
| Theoretical air consumption at 6 bar and 10 mm stroke, pulling | 0.33 | 0.53 | 0.80 | 1.35 | 2.11 | 3.35 | 5.54 |

| Weights [g] | | | | | | | |
|---|---|---|---|---|---|---|---|
| Piston ∅ | 80 | 100 | 125 | 160 | 200 | 250 | 320 |
| Basic weight with 0 mm stroke | 1,843 | 2,801 | 4,855 | 5,854 | 12,831 | 21,117 | 33,907 |
| Additional weight per 10 mm stroke | 68 | 80 | 145 | 159 | 187 | 325 | 399 |

## Materials

Sectional view



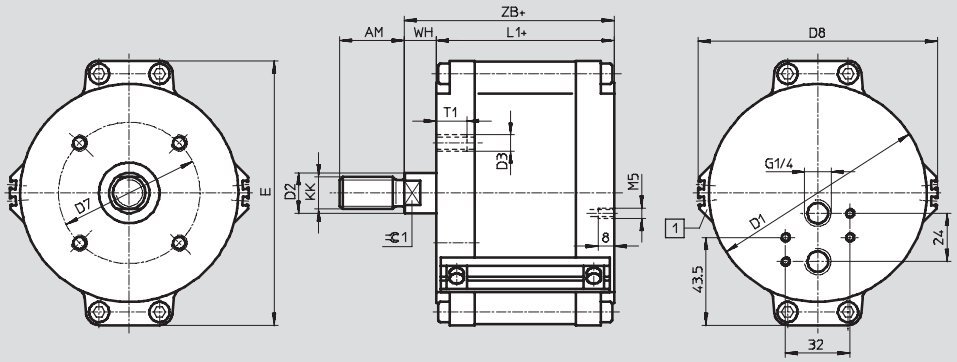

| Linear actuator | | | |
|---|---|---|---|
| 1 | Piston rod | | High-alloy rolled steel |
| 2 | Rod bearing | | Smooth composite material |
| 3 | Cylinder barrel | ∅ 80 ... 200 | Smooth anodised aluminium |
| | | ∅ 250, 320 | Stainless steel |
| 4 | Cylinder cap | | Extruded aluminium |
| – | Seals | | Polyurethane, nitrile rubber |

# Linear actuators DLP, Copac

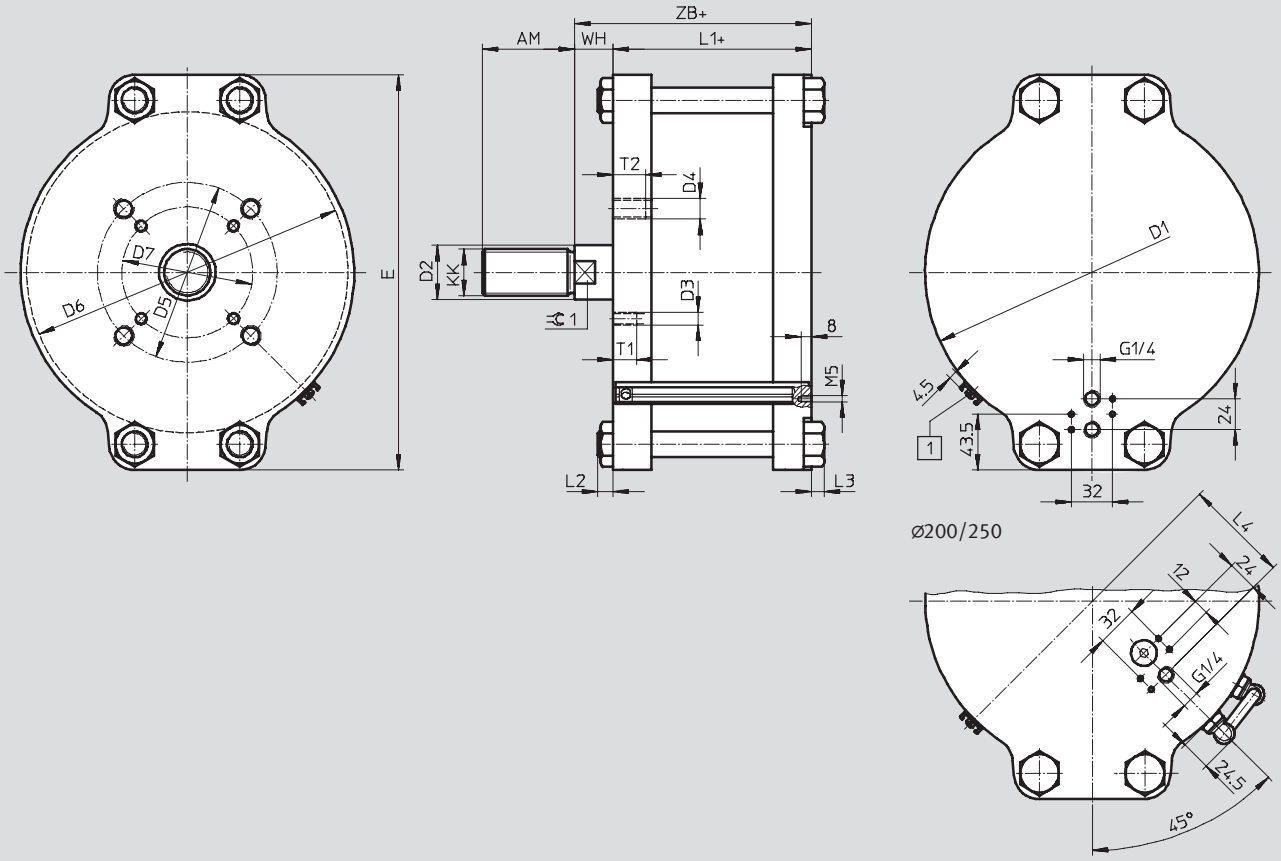
Technical data

**Dimensions** Download CAD data ➔ **www.festo.com/en/engineering**

∅ 80 ... 160




∅ 200 ... 320




1 Mounting slots for proximity sensor SME/SMT-8

\+ = plus stroke length

# Linear actuators DLP, Copac

Technical data

FESTO



| ∅ [mm] | AM −2 | D1 ∅ | D2 ∅ | D3 | D4 | D5 | D6 ∅ min. | D7 ∅ | D8 ∅ | E |
|---|---|---|---|---|---|---|---|---|---|---|
| DLP-80-... | 32 | 87 | 20 | M8 | – | – | – | 70 | 99 | 108 |
| DLP-80-...-A | | | | | | | | | | |
| DLP-100-... | 32 | 108 | 20 | M8 | – | – | – | 70 | 119 | 131 |
| DLP-100-...-A | | | | | | | | | | |
| DLP-125-... | 54 | 135 | 32 | M10 | – | – | – | 102 | 147 | 163 |
| DLP-125-...-A | | | | | | | | | | |
| DLP-160-... | 54 | 170 | 32 | M10 | – | – | – | 102 | 182 | 199 |
| DLP-160-...-A | | | | | | | | | | |
| DLP-200-...-A | 72 | 216 | 40 | M10 | M16 | 140 | 210 | 102 | – | 271 |
| DLP-250-... | 72 | 260 | 40 | M10 | M16 | 140 | 244 | 102 | – | 308 |
| DLP-250-...-A | | | | | | | | | | |
| DLP-320-... | 72 | 332 | 40 | M10 | M16 | 140 | 324 | 102 | – | 378 |
| DLP-320-...-A | | | | | | | | | | |

| ∅ [mm] | KK | L1 | L2 min. | L3 min. | L4 | T1 | T2 min. | WH | ZB | ⫧1 |
|---|---|---|---|---|---|---|---|---|---|---|
| DLP-80-... | M16x1.5 | 73 +1.4/−0.4 | | | – | 15 | | 16 | 89 | 16 |
| DLP-80-...-A | | 100 +1.4/−0.4 | | | | | | | 116 | |
| DLP-100-... | M16x1.5 | 76 +1.4/−0.4 | | | – | 15 | | 16 | 92 | 16 |
| DLP-100-...-A | | 104 +1.4/−0.4 | | | | | | | 120 | |
| DLP-125-... | M27x2 | 114 +1.6/−0.6 | – | – | – | 18 | – | 24 | 138 | 27 |
| DLP-125-...-A | | | | | | | | | | |
| DLP-160-... | M27x2 | 114 +1.6/−0.6 | – | – | – | 18 | – | 24 | 138 | 27 |
| DLP-160-...-A | | | | | | | | | | |
| DLP-200-...-A | M36x2 | 150 +0.8/−1.0 | – | 10 | 81 | 20 | 24 | 30 ±1.4 | 180 ±1 | 36 |
| DLP-250-... | M36x2 | 152 +0.8/−1.4 | – | 25 | 94 | 20 | 25 | 30 +1.8/−1.4 | 182 ±1 | 36 |
| DLP-250-...-A | | | | | | | | | | |
| DLP-320-... | M36x2 | 159 +0.8/−1.4 | 12 | – | – | 20 | 25 | 30 +1.8/−1.6 | 189 +0.8/−1.2 | 36 |
| DLP-320-...-A | | | | | | | | | | |

# Linear actuators DLP, Copac

Technical data

| Ordering data | | | | | |
|---|---|---|---|---|---|
| Version | Piston ∅ [mm] | Stroke [mm] | Part No | Type | |
| Without position sensing | | | | | |
|  | 80 | 40 ... 2,000 | **187 473** | **DLP-80-...** | Available up to 2007 |
| | 100 | 50 ... 2,000 | **187 474** | **DLP-100-...** | Available up to 2007 |
| | 125 | 50 ... 2,000 | **187 475** | **DLP-125-...** | Available up to 2007 |
| | 160 | 100 ... 2,000 | **187 476** | **DLP-160-...** | Available up to 2007 |
| | 250 | 100 ... 2,000 | **187 477** | **DLP-250-...** | Available up to 2007 |
| | 320 | 150 ... 2,000 | **187 478** | **DLP-320-...** | Available up to 2007 |
| With position sensing | | | | | |
|  | 80 | 40 ... 2,000 | **187 479** | **DLP-80-...-A** | |
| | 100 | 50 ... 2,000 | **187 480** | **DLP-100-...-A** | |
| | 125 | 50 ... 2,000 | **187 481** | **DLP-125-...-A** | |
| | 160 | 100 ... 2,000 | **187 482** | **DLP-160-...-A** | |
| | 250 | 100 ... 2,000 | **187 483** | **DLP-250-...-A** | |
| | 320 | 150 ... 2,000 | **187 484** | **DLP-320-...-A** | |

Note

**Stroke length of the actuator**

Generally, the stroke length of the Copac linear actuator corresponds to the nominal diameter of the process valve. The system tolerances may lead to a greater stroke range than the specified nominal stroke range of the linear actuator. The zero point is set with an adjustable rod clevis. This ensures that the end position of the valve slide is reached and the zero position of the system is fixed.

# Linear actuators DLP, Copac

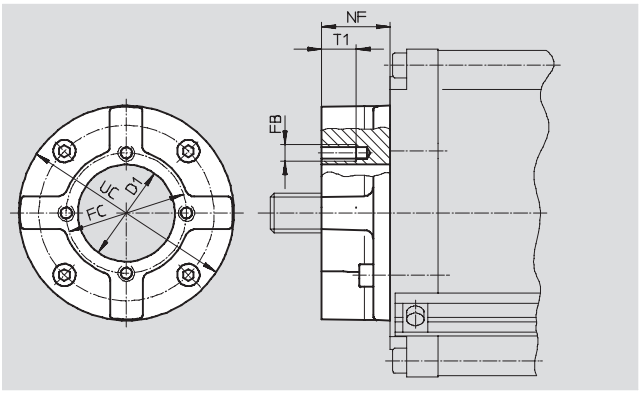
Accessories

**Adapter DAPZ-FA**

Based on ISO 5211 standard

Scope of delivery:
1 flange adapter,
4 socket head screws DIN 912

Material:
Wrought aluminium alloy
Galvanised steel
Free of copper, PTFE and silicone




**Dimensions and ordering data**

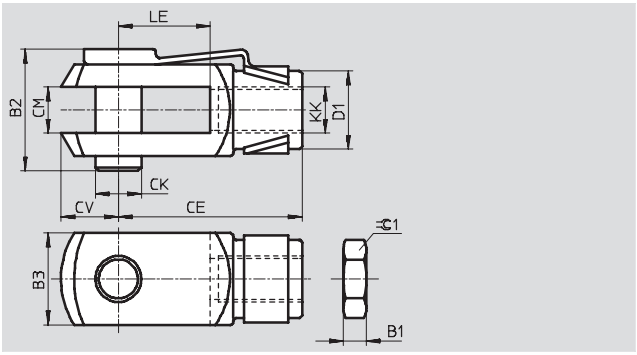
| For ∅ [mm] | Size | D1 ∅ +1 | FB | FC ∅ | NF | T1 | UC ∅ +1 | CRC[1] | Weight [g] | Part No. | Type |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 80, 100 | F07/F07 | 30 | M8 | 70 | 40 | 20 | 125 | 3 | 679 | **536 587** | **DAPZ-FA-F07/F07** |
| | F07/F10 | 30 | M10 | 102 | 40 | 22 | 125 | 3 | 670 | **536 588** | **DAPZ-FA-F07/F10** |
| 125, 160, | F10/F07 | 55 | M8 | 70 | 40 | 20 | 125 | 3 | 667 | **536 589** | **DAPZ-FA-F10/F07** |
| 200, 250, | F10/F10 | 55 | M10 | 102 | 45 | 22 | 125 | 3 | 707 | **536 590** | **DAPZ-FA-F10/F10** |
| 320 | F10/F14 | 55 | M16 | 140 | 65 | 25 | 175 | 3 | 1,884 | **536 591** | **DAPZ-FA-F10/F14** |
| 250, 320 | F14/F14 | 70 | M16 | 140 | 65 | 25 | 175 | 3 | 2,130 | **536 592** | **DAPZ-FA-F14/F14** |

1) Corrosion resistance class 3 according to Festo standard 940 070
Components requiring higher corrosion resistance. External visible parts in direct contact with industrial atmospheres or media such as solvents and cleaning agents, with a predominantly functional requirement for the surface.

**Rod clevis SG**

Scope of delivery:
1 rod clevis, 1 hinged spring pin,
1 hex nut to DIN 439

Material:
Galvanised steel
M16x1.5/M27x2: Free of copper, PTFE and silicone




**Dimensions and ordering data**

| KK | B1 | B2 | B3 | CE | CK ∅ H9 | CM | CV | D1 ∅ |
|---|---|---|---|---|---|---|---|---|
| M16x1.5 | 8 | 39 | 32 | 64±0.4 | 16 | 16+0.7/+0.15 | 19 | 26 |
| M27x2 | 13.5 | 74 | 55 | 110±0.4 | 30 | 30+0.7/+0.15 | 38 | 48 |
| M36x2 | 18 | 92 | 70 | 144±0.4 | 35 | 35+0.7/+0.15 | 44 | 60 |

| KK | LE ±0.5 | ⇔C1 | DIN ISO 8140 | DIN 71 752 | CRC[1] | Weight [g] | Part No. | Type |
|---|---|---|---|---|---|---|---|---|
| M16x1.5 | 32 | 24 | ■ | ■ | 2 | 356 | **6 146** | **SG-M16x1,5** |
| M27x2 | 54 | 41 | ■ | – | 2 | 1 475 | **14 987** | **SG-M27x2-B** |
| M36x2 | 72 | 55 | ■ | – | 2 | 4 080 | **9 581** | **SG-M36x2** |

1) Corrosion resistance class 2 according to Festo standard 940 070
Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

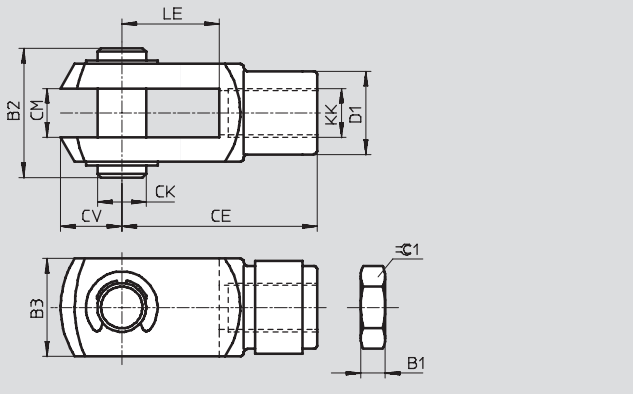
# Linear actuators DLP, Copac

Accessories

**Rod clevis CRSG, stainless steel**

Scope of delivery:
1 rod clevis, 1 pivot pin, 1 hex nut to DIN 439

Material:
High-alloy steel
Free of copper, PTFE and silicone




**Dimensions and ordering data**

| KK | B1 | B2 | B3 | CE | CK ∅ H9 | CM | CV | D1 ∅ |
|---|---|---|---|---|---|---|---|---|
| M16x1.5 | 8 | 43 | 32 | 64±0.4 | 16 | 16+0.7/+0.15 | 19 | 26 |
| M27x2 | 13.5 | 70 | 55 | 110±0.4 | 30 | 30+0.7/+0.15 | 38 | 48 |

| KK | LE ±0.5 | ⊂1 | DIN ISO 8140 | DIN 71 752 | CRC[1] | Weight [g] | Part No. | Type |
|---|---|---|---|---|---|---|---|---|
| M16x1.5 | 32 | 24 | ■ | ■ | 4 | 395 | **13 571** | **CRSG-M16x1,5** |
| M27x2 | 54 | 41 | ■ | – | 4 | 1,900 | **185 361** | **CRSG-M27x2** |

1) Corrosion resistance class 4 according to Festo standard 940 070
Components requiring higher corrosion resistance. Parts used with aggressive media, e.g. food or chemical industry. These applications should be supported with special tests with the media if required.

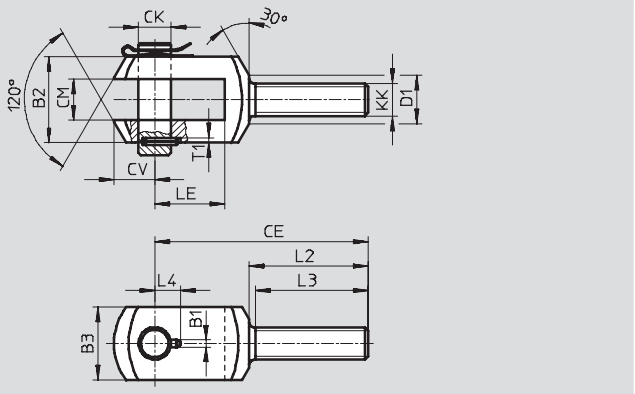
# Linear actuators DLP, Copac

Accessories

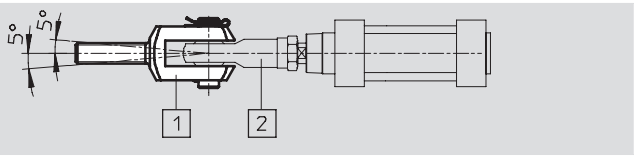
**Rod clevis SGA**

Scope of delivery:
1 rod clevis, 1 pivot pin
and 1 retaining clip

Material:
Galvanised steel
Free of copper, PTFE and silicone




The rod clevis SGA [1] is used in combination with the rod eye SGS [2] (➔ 7 / 1.1-14) for spherical mounting of cylinders.




**Dimensions and ordering data**

| KK | B1 | B2<br>d12 | B3 | CE | CK<br>∅<br>F7/h9 | CM<br>B12 | CV | D1<br>∅ |
|---|---|---|---|---|---|---|---|---|
| M16x1.5 | 4.3 | 40 | 35 | 108 | 16 | 21 | 21 | 24 |
| M27x2 | 6.3 | 67 | 60 | 168 | 30 | 37 | 32 | 38 |
| M36x2 | 6.3 | 78 | 70 | 211 | 35 | 43 | 39 | 48 |

| KK | L2 | L3 | L4 | LE | T1 | CRC[1)] | Weight<br>[g] | Part No. | Type |
|---|---|---|---|---|---|---|---|---|---|
| M16x1.5 | 65 | 62 | 14 | 31 | 3 | 2 | 500 | **10 768** | **SGA-M16x1,5** |
| M27x2 | 98 | 92 | 24 | 54 | 5 | 2 | 2,120 | **10 770** | **SGA-M27x2** |
| M36x2 | 121 | 115 | 26.5 | 72 | 5 | 2 | 3,825 | **10 771** | **SGA-M36x2** |

1) Corrosion resistance class 2 according to Festo standard 940 070
Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

# Linear actuators DLP, Copac

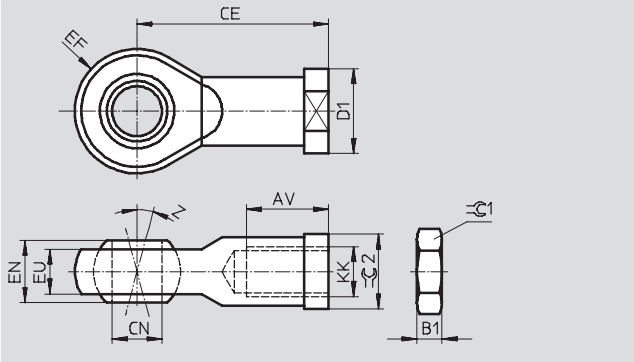
Accessories

FESTO

## Rod eye SGS

Scope of delivery:
1 rod eye, 1 hex nut to DIN 439

Material:
Galvanised steel




**Dimensions and ordering data**

| KK | AV | B1 | CE | CN ∅ | D1 ∅ | EF ±0.5 | EN | EU |
|---|---|---|---|---|---|---|---|---|
| M16x1.5 | 28 –2 | 8 | 64 | $16_{H7}$ | 27 | 21 | 21 | 15 |
| M27x2 | 51 –2 | 13.5 | 110 | $30_{H7}$ | 50 | 35 | 37 | 25 |
| M36x2 | 56 +2 | 18 | 125 | $35_{H7}$ | 58 | 40 | 43 | 28 |

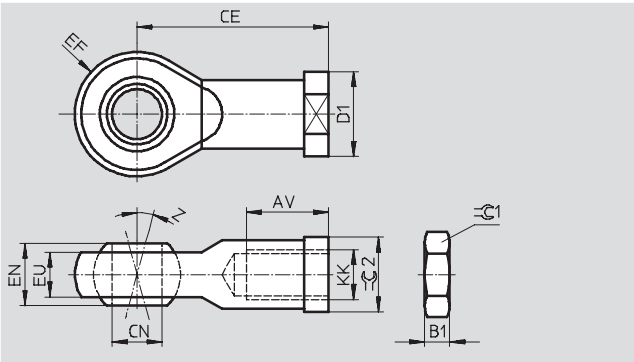
| KK | Z [°] | ⌀C1 | ⌀C2 | DIN ISO 12 240-4 dimensional series K | CRC[1)] | Weight [g] | Part No. | Type |
|---|---|---|---|---|---|---|---|---|
| M16x1.5 | 15 | 24 | 22 | – | 2 | 210 | **9 263** | **SGS-M16x1,5** |
| M27x2 | 15 | 41 | 41 | – | 2 | 1,300 | **10 774** | **SGS-M27x2** |
| M36x2 | 15 | 55 | 50 | ■ | 2 | 1,825 | **10 775** | **SGS-M36x2** |

1) Corrosion resistance class 2 according to Festo standard 940 070
Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

## Rod eye CRSGS, stainless steel

Scope of delivery:
1 rod eye, 1 hex nut to DIN 439

Material:
High-alloy steel




**Dimensions and ordering data**

| KK | AV | B1 | CE | CN ∅ | D1 ∅ | EF ±0.5 | EN | EU |
|---|---|---|---|---|---|---|---|---|
| M16x1.5 | 28 | 8 | 64 | $16_{H7}$ | 27 | 21 | 21 | 15 |
| M27x2 | 51 | 13.5 | 110 | $30_{H7}$ | 50 | 35 | 37 | 25 |

| KK | Z | ⌀C1 | ⌀C2 | DIN ISO 12 240-4 dimensional series K | CRC[1)] | Weight [g] | Part No. | Type |
|---|---|---|---|---|---|---|---|---|
| M16x1.5 | 15 | 24 | 22 | – | 4 | 210 | **195 584** | **CRSGS-M16x1,5** |
| M27x2 | 15 | 41 | 41 | – | 4 | 1,300 | **195 586** | **CRSGS-M27x2** |

1) Corrosion resistance class 4 according to Festo standard 940 070
Components requiring higher corrosion resistance. Parts used with aggressive media, e.g. food or chemical industry. These applications should be supported with special tests with the media if required.

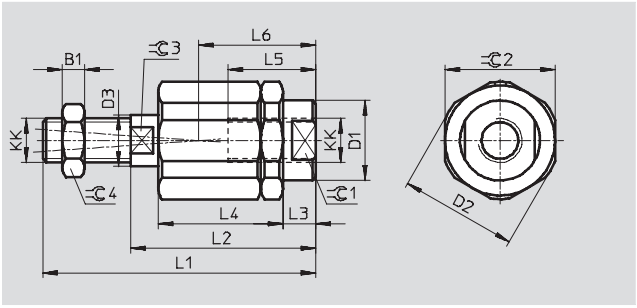
# Linear actuators DLP, Copac

Accessories

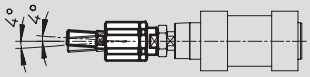
**Self-aligning rod coupler FK**

Scope of delivery:
1 self-aligning rod coupler, 1 hex nut to DIN 439

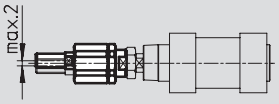
Material:
Galvanised steel
Free of copper, PTFE and silicone




Angle compensator




Radial compensation of central axis




**Dimensions and ordering data**

| KK | B1 | D1 ∅ | D2 ∅ | D3 ∅ | L1 | L2 | L3 | L4 | L5 | L6 |
|---|---|---|---|---|---|---|---|---|---|---|
| M16x1.5 | 8 | 33.8 | 45 | 22 | 103 | 71 | 10 | 53 | 32 | 44.5 |
| M27x2 | 13.5 | 62 | 62 | 28 | 157 | 103 | 12.2 | 79 | 42 | 62.5 |
| M36x2 | 18 | 80 | 80 | 38 | 251 | 179 | 22 | 136 | 78 | 110 |

| KK | =C1 | =C2 | =C3 | =C4 | Radial deviation [mm] | CRC[1] | Weight [g] | Part No. | Type |
|---|---|---|---|---|---|---|---|---|---|
| M16x1.5 | 30 | 41 | 19 | 24 | ±1 | 2 | 650 | **6 142** | **FK-M16x1,5** |
| M27x2 | 55 | 55 | 24 | 41 | ±1 | 2 | 2,100 | **10 485** | **FK-M27x2** |
| M36x2 | 75 | 75 | 32 | 55 | ±1 | 2 | 5,800 | **10 746** | **FK-M36x2** |

1) Corrosion resistance class 2 according to Festo standard 940 070
Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

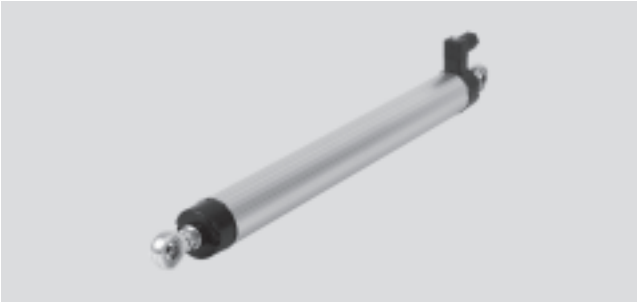
# Linear actuators DLP, Copac

Accessories – Displacement encoder

FESTO

**MLO-POT-...-LWG**

- l - Stroke length
  100 ... 750 mm



| General technical data | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Stroke | | | 100 | 150 | 225 | 300 | 360 | 450 | 500 | 600 | 750 |
| Constructional design | | | Round profile with connecting rod | | | | | | | | |
| Measuring principle | | | Analogue displacement encoder, with contact and absolute measurement | | | | | | | | |
| Resolution | | [mm] | 0.01 | | | | | | | | |
| Max. speed of travel | | [m/s] | 5 | | | | | | | | |
| Max. acceleration | | [m/s$^2$] | 200 | | | | | | | | |
| Mounting position | | | Any | | | | | | | | |
| Driver, | Angle offset | [°] | ±12.5 | | | | | | | | |
| ball coupling | Parallel offset | [mm] | – | | | | | | | | |
| Service life | Strokes | [10$^6$] | Typical 50 | | | | | | | | |
| Connection | | | 4-pin square plug | | | | | | | | |
| Product weight | | [g] | | | | | | | | | |

| General electrical data | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Stroke | | | 100 | 150 | 225 | 300 | 360 | 450 | 500 | 600 | 750 |
| Power supply | | [V DC] | 10[1)] | | | | | | | | |
| Max. current consumption | | [mA] | 4 | | | | | | | | |
| Wiper current | recommended | [µA] | < 1 | | | | | | | | |
| | maximum | [mA] | 10[2)] | | | | | | | | |
| Connection resistance | | [kΩ] | 3 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 10 |
| Connection resistance tolerance | | [%] | ±20 | | | | | | | | |
| Independent linearity | | [%] | 0.1 | 0.08 | 0.07 | 0.06 | 0.05 | 0.05 | 0.05 | 0.05 | 0.04 |
| Temperature coefficient | | [ppm/°K] | 5 | | | | | | | | |
| Interface | | | Analogue | | | | | | | | |

1) Stabilised power supply is recommended, max. 42 V DC permissible.
2) Only permissible in the short-term in the event of a fault.

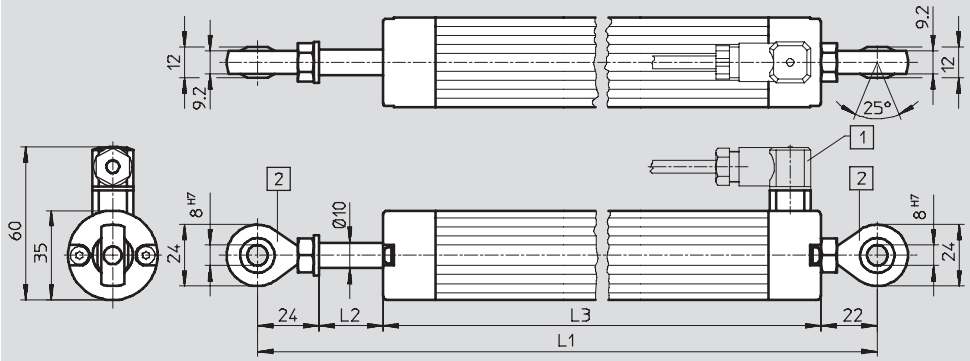
| Operating and environmental conditions | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Stroke | | | 100 | 150 | 225 | 300 | 360 | 450 | 500 | 600 | 750 |
| Ambient temperature | | [°C] | –30 ... +100[1)] | | | | | | | | |
| Protection class | | | IP65 | | | | | | | | |
| Vibration resistance | | | To DIN/IEC 68 Parts 2 – 6, severity level 2 | | | | | | | | |
| Continuous shock resistance | | | To DIN/IEC 68 Parts 2 – 27, severity level 2 | | | | | | | | |
| CE marking symbol (see conformity declaration) | | | As per EU EMC directive | | | | | | | | |

1) Please note temperature ranges of individual components used in a complete system solution.

| MLO-POT-...-LWG | | |
|---|---|---|
| Housing | | Anodised aluminium |
| Bearing cap | | Reinforced polyester |
| Bearing seal | | Nitrile rubber |
| Connecting rod | | Corrosion resistant steel |
| Rod seal | | Polytetraflouroethylene |
| Lubricant | | ISOFLEX Topas MB52 |
| Resistor element | | Conductive plastic |
| Wiper | Contact | Stainless steel |
| | Silencer | Elastomer |

## Dimensions

Download CAD data ➔ **www.festo.com/en/engineering**



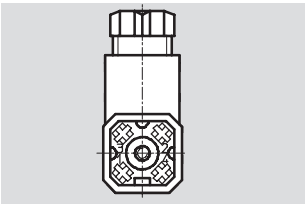

1 Plug socket, 4-pin
Type: SD-4-WD-7
Insert 90° rotatable
(not included in scope of delivery)

2 Rod eye, backlash-free

## Dimensions and ordering data

| Stroke [mm] | L1 | L2 (effective mechanical/electrical displacement) | L3 | Part No. | Type |
|---|---|---|---|---|---|
| 100 | 273 | 105/102 | 227 | **192 213** | **MLO-POT-100-LWG** |
| 150 | 323 | 155/152 | 277 | **192 214** | **MLO-POT-150-LWG** |
| 225 | 400 | 231/228 | 354 | **152 645** | **MLO-POT-225-LWG** |
| 300 | 476 | 307/304 | 430 | **152 646** | **MLO-POT-300-LWG** |
| 360 | 551 | 368/366 | 505 | **152 647** | **MLO-POT-360-LWG** |
| 450 | 665 | 460/457 | 619 | **152 648** | **MLO-POT-450-LWG** |
| 500 | 730 | 510/508 | 684 | **152 649** | **MLO-POT-500-LWG** |
| 600 | 856 | 612/610 | 810 | **152 650** | **MLO-POT-600-LWG** |
| 750 | 1040 | 764/762 | 994 | **152 651** | **MLO-POT-750-LWG** |

## Ordering data – Accessories



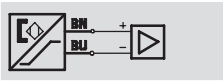
| PIN | Pin allocation | Designation | Part No. | Type |
|---|---|---|---|---|
| 1 | Power supply | Plug socket | **194 332** | **SD-4-WD-7** |
| 2 | Signal | | | |
| 3 | 0 V | | | |
| 4 | PE (yellow), screen | | | |

# Linear actuators DLP, Copac

Accessories – Proximity sensors

FESTO

Function
Namur, with cable




- EU conformity in accordance with EU explosion protection directive (ATEX)
- Magneto-inductive measuring principle
- Insertable in the slot from above
- Cable clip included in the scope of delivery

| Design | | |
|---|---|---|
| Constructional design | | For T-slot |
| Type of mounting | | Clamped, insertable in the slot from above |
| Connection direction | | In-line |
| Reproducibility of switching point[1)] | [mm] | ±0.1 |

1) Only applicable to drives secured against rotation

| Technical data | | |
|---|---|---|
| Switching element function | | Namur |
| Switch output | | Namur |
| Conforms to | | DIN EN 60 947-5-6 |
| Electrical connection | | Cable, 2-wire |
| Operating voltage | [V DC] | 8.2 |
| Max. output current in Namur operation | [mA] | < 4.5 |
| Max. switching capacity | [W] | – |
| Voltage drop | [V] | – |
| Residual current | [mA] | < 0.7 |
| Switch-on time | [ms] | ≤ 0.5 |
| Switch-off time | [ms] | ≤ 0.5 |
| Protection against short circuit | | Yes |
| Protection against polarity reversal | | For all electrical connections |
| Protection class | | IP65/IP67 |
| CE symbol (declaration of conformity) | | In accordance with EU EMC directive<br>In accordance with EU explosion protection directive (ATEX) |
| ATEX symbol | | II 1 GD EEx ia IIC T4...T6[1)]<br>T115°C KEMA 04ATEX1114 X[1)] |
| Switching status display | | Yellow LED |
| Cable length | [m] | 5.0 |
| Product weight | [g] | 70 |

1) Further details ➔ Operating instructions

Note

When used in areas subject to explosion hazard, the proximity sensor SMT-8F-I must be operated using an isolation amplifier according to EN 60 947-5-6.

Note

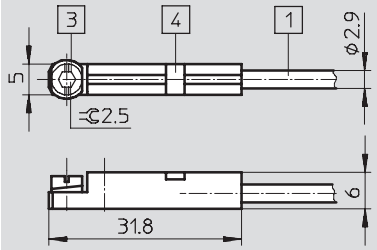
Operating instructions, conformity declarations and statements of conformity ➔ www.festo.com

| Materials | |
|---|---|
| Housing | Polyamide |
| Cable sheath | Polyvinyl chloride |
| Note on materials | Free of copper, PTFE and silicone |

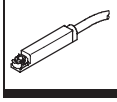
| Operating and environmental conditions | | | |
|---|---|---|---|
| Cable installation | | Fixed | Flexible |
| Ambient temperature | [°C] | –10 ... +70 | –5 ... +70 |
| ATEX ambient temperature | [°C] | –10 °C ≤ Ta ≤ +70 °C | –5 °C ≤ Ta ≤ +70 °C |
| Corrosion resistance class CRC[1)] | | 1 | 1 |

1) Corrosion resistance class 1 according to Festo standard 940 070
Components requiring low corrosion resistance. Transport and storage protection. Parts that do not have primarily decorative surface requirements, e.g. in internal areas that are not visible or behind covers

**Dimensions** Download CAD data ➔ **www.festo.com/en/engineering**




1 Connecting cable
3 Cable clip
4 Yellow LED

| Ordering data | | | | | |
|---|---|---|---|---|---|
| | Switch output | Electrical connection | Cable length | Part No. | Type |
|  | Namur | Cable, 2-wire | 5.0 | **536 956** | **SMT-8F-I-8,2V-K5,0-OE-EX** |

# Linear actuators DLP, Copac

Accessories – Proximity sensors

FESTO

Function
N/O contact, two-wire, with cable


- Magneto-resistive measuring principle
- EU conformity in accordance with EU explosion protection directive (ATEX)
- Insertable in the slot from above
- Cable clip and inscription label included in the scope of delivery

| Design | | |
|---|---|---|
| Constructional design | | For T-slot |
| Type of mounting | | Clamped, insertable in the slot from above |
| Connection direction | | In-line |
| Reproducibility of switching point[1)] | [mm] | ±0.1 |

1) Only applicable to drives secured against rotation

| Technical data – N/O contact, 2-wire | | |
|---|---|---|
| Electrical connection | | Cable, 2-wire |
| Cable length | [m] | 2.5 |
| Operating voltage range | [V DC] | 10 ... 30 |
| Max. output current | [mA] | 100 |
| Max. switching capacity | [W] | 3 |
| Voltage drop | [V] | 5.6 |
| Residual current | [mA] | 0.8 |
| Switch-on time | [ms] | ≤1.6 |
| Switch-off time | [ms] | 1.6 |
| Protection against short circuit | | Yes |
| Protection against polarity reversal | | For all electrical connections |
| Protection class | | IP65/IP67 |
| CE symbol (declaration of conformity) | | In accordance with EU EMC directive<br>In accordance with EU explosion protection directive (ATEX) |
| ATEX symbol | | II 3 GD EEx nA II T4 T110°C X |
| Switching status display | | Yellow LED |
| Product weight | [g] | 22 |

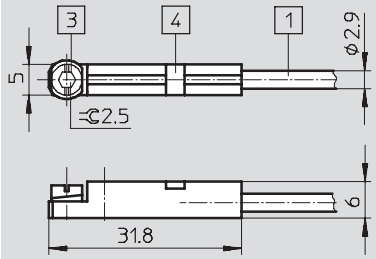
| Materials | |
|---|---|
| Switch output | Two-wire |
| Housing | Reinforced polyamide |
| Cable sheath | Polyurethane |
| Note on materials | Free of copper, PTFE and silicone |

| Operating and environmental conditions | | | |
|---|---|---|---|
| Electrical connection | | Cable, 2-wire | |
| Cable installation | | Fixed | Flexible |
| Ambient temperature | [°C] | –25 ... +55 | –5 ... +55 |
| ATEX ambient temperature | [°C] | –25 ≤ Ta ≤ +55 IP65 | |
| Corrosion resistance class CRC[1)] | | 4 | |

1) Corrosion resistance class 4 according to Festo standard 940 070
Components requiring higher corrosion resistance. Parts used with aggressive media, e.g. food or chemical industry. These applications should be supported with special tests with the media if required

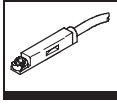
## Dimensions

Download CAD data ➔ **www.festo.com/en/engineering**



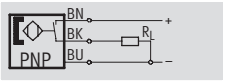

1 Connecting cable
3 Cable clip
4 Yellow LED

## Ordering data

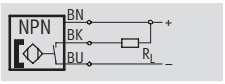
| | Switch output | Electrical connection | | | | Cable length | Part No. | Type |
|---|---|---|---|---|---|---|---|---|
| | | Cable | Cable with plug | | | | | |
| | | | M5x0.5 | M8x1 | M12x1 | [m] | | |
|  | N/O contact | | | | | | | |
| | Two-wire | 2-wire | – | – | – | 2.5 | **525 908** | **SMT-8F-ZS-24V-K2,5-OE-EX** |

Function

e.g. PNP, N/O contact, with cable




e.g. NPN, N/O contact, with cable




- Magneto-resistive measuring principle
- Insertable in the slot lengthwise

| Design | | |
|---|---|---|
| Constructional design | | For T-slot |
| Type of mounting | | Clamped, insertable in the slot lengthwise, flush with the cylinder profile |
| Connection direction | | In-line |
| Reproducibility of switching point[1)] | [mm] | ±0.2 |
| Switching status display | | Yellow LED |

1) Only applicable to drives secured against rotation

| Technical data – PNP, N/O contact | | | | |
|---|---|---|---|---|
| Electrical connection | | Cable, 3-wire | | Cable with plug M8x1, 3-pin |
| Cable length | [m] | 2.5 | 5.0 | 0.3 |
| Operating voltage range | [V DC] | 10 ... 30 | | |
| Max. output current | [mA] | 100 | | |
| Max. switching capacity | [W] | 3 | | |
| Voltage drop | [V] | 1.8 | | |
| Residual current | [mA] | ≤0.01 | | |
| Switch-on time | [ms] | ≤0.2 | | |
| Switch-off time | [ms] | ≤0.5 | | |
| Protection against short circuit | | Yes | | |
| Protection against polarity reversal | | For all electrical connections | | |
| Protection class | | IP65/IP67 | | |

| Technical data – NPN, N/O contact | | | |
|---|---|---|---|
| Electrical connection | | Cable, 3-wire | Cable with plug M8x1, 3-pin |
| Cable length | [m] | 2.5 | 0.3 |
| Operating voltage range | [V DC] | 10 ... 30 | |
| Max. output current | [mA] | 100 | |
| Max. switching capacity | [W] | 3 | |
| Voltage drop | [V] | 1.5 | |
| Residual current | [mA] | 0.002 | |
| Switch-on time | [ms] | ≤0.1 | |
| Switch-off time | [ms] | 0.8 | |
| Protection against short circuit | | Yes | |
| Protection against polarity reversal | | For all electrical connections | |
| Protection class | | IP65/IP67 | |

| Operating and environmental conditions | | | | | |
|---|---|---|---|---|---|
| Electrical connection | Cable, 3-wire | | | Cable with plug | |
| Cable installation | Fixed | Flexible | | Fixed | Flexible |
| Ambient temperature [°C] | –20 ... +60 | –5 ... +60 | | –20 ... +60 | –5 ... +60 |
| Corrosion resistance class CRC[1)] | 4 | | | 2 | |
| CE symbol (declaration of conformity) | In accordance with EU EMC directive | | | | |

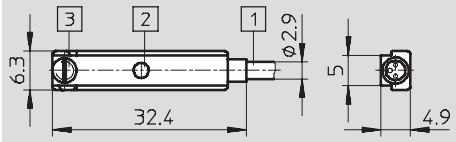
1) Corrosion resistance class 2 according to Festo standard 940 070
Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.
Corrosion resistance class 4 according to Festo standard 940 070
Components requiring higher corrosion resistance. Parts used with aggressive media, e.g. food or chemical industry. These applications should be supported with special tests with the media if required.

| Materials | |
|---|---|
| Housing | Polyurethane |
| Cable sheath | Polyurethane |
| Note on materials | Free of copper and PTFE |

| Product weights [g] | | | |
|---|---|---|---|
| Electrical connection | Cable | | Cable with plug |
| Cable length [m] | 2.5 | 5.0 | 0.3 |
| N/O contact | | | |
| PNP | 30 | 60 | 10 |
| NPN | 30 | – | 10 |

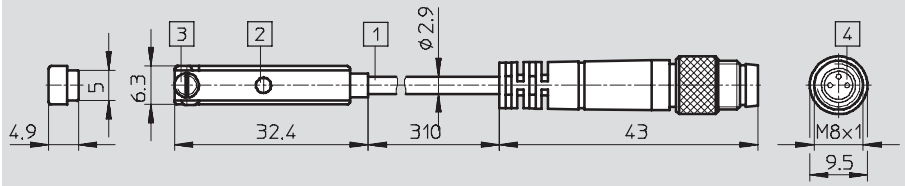
**Dimensions** Download CAD data ➔ **www.festo.com/en/engineering**

Cable type



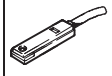

1 Connecting cable
2 Yellow LED
3 Clamping component

Plug type M8x1




1 Connecting cable
2 Yellow LED
3 Clamping component
4 Plug suitable for plug socket with cable NEBU-M8...

**Ordering data**

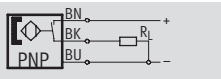
| | Switch output | Electrical connection | | Cable length [m] | Part No. | Type |
|---|---|---|---|---|---|---|
| | | Cable | Plug M8x1 | | | |
|  | N/O contact | | | | | |
| | PNP | 3-wire | – | 2.5 | **175 436** | **SMT-8-PS-K-LED-24-B** |
| | | | | 5.0 | **175 434** | **SMT-8-PS-K5-LED-24-B** |
| | | – | 3-pin | 0.3 | **175 484** | **SMT-8-PS-S-LED-24-B** |
| | NPN | 3-wire | – | 2.5 | **171 180** | **SMT-8-NS-K-LED-24-B** |
| | | – | 3-pin | 0.3 | **171 181** | **SMT-8-NS-S-LED-24-B** |

# Linear actuators DLP, Copac

Accessories – Proximity sensors

FESTO

Function
PNP, N/O contact, with cable




- Corrosion resistant
- Magneto-resistive measuring principle
- Insertable in the slot lengthwise

| Design | | |
|---|---|---|
| Constructional design | | For T-slot |
| Type of mounting | | Clamped, insertable in the slot lengthwise, flush with the cylinder profile |
| Connection direction | | In-line |
| Reproducibility of switching point[1)] | [mm] | ±0.2 |
| Switching status display | | Yellow LED |

1) Only applicable to drives secured against rotation

| Technical data – PNP, N/O contact | | | |
|---|---|---|---|
| Electrical connection | | Cable, 3-wire | |
| Cable length | [m] | 2.5 | 5.0 |
| Operating voltage range | [V DC] | 10 ... 30 | |
| Max. output current | [mA] | 100 | |
| Max. switching capacity | [W] | 3 | |
| Voltage drop | [V] | 1.8 | |
| Residual current | [mA] | ≤0.1 | |
| Switch-on time | [ms] | ≤0.2 | |
| Switch-off time | [ms] | ≤0.5 | |
| Protection against short circuit | | Yes | |
| Protection against polarity reversal | | For all electrical connections | |
| Protection class | | IP65/IP67 | |

| Operating and environmental conditions | | | |
|---|---|---|---|
| Cable installation | | Fixed | Flexible |
| Ambient temperature | [°C] | –20 ... +60 | –5 ... +60 |
| Corrosion resistance class CRC[1)] | | 4 | |
| CE symbol (declaration of conformity) | | In accordance with EU EMC directive | |

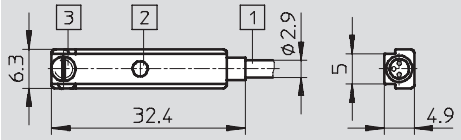
1) Corrosion resistance class 4 according to Festo standard 940 070
Components requiring higher corrosion resistance. Parts used with aggressive media, e.g. food or chemical industry. These applications should be supported with special tests with the media if required.

| Materials | |
|---|---|
| Housing | Polypropylene |
| Cable sheath | Thermoplastic rubber |
| Note on materials | Free of copper and PTFE |

| Product weights [g] | | | |
|---|---|---|---|
| Electrical connection | | Cable | |
| Cable length | [m] | 2.5 | 5.0 |
| N/O contact | | | |
| PNP | | 30 | 60 |

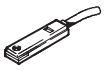
**Dimensions** Download CAD data ➔ **www.festo.com/en/engineering**

Cable type




1 Connecting cable
2 Yellow LED
3 Clamping component

**Ordering data**

| | Switch output | Electrical connection | Cable length | Part No. | Type |
|---|---|---|---|---|---|
|  | N/O contact | | | | |
| | PNP | Cable, 3-wire | 2.5 | **525 563** | **CRSMT-8-PS-K2,5-LED-24** |
| | | | 5.0 | **525 564** | **CRSMT-8-PS-K5-LED-24** |

# Linear actuators DLP, Copac

Accessories – Proximity sensors

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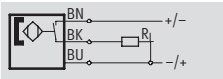
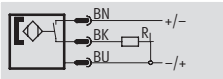
Function

e.g. N/O contact, 3-wire, with cable




e.g. N/O contact, 3-wire, with plug




- Magnetic reed measuring principle
- Heat resistant variant
- Variant for 3 … 250 V DC/AC
- Insertable in the slot lengthwise

| Design | | |
|---|---|---|
| Constructional design | | For T-slot |
| Type of mounting | | Clamped, insertable in the slot lengthwise, flush with the cylinder profile[1] |
| Connection direction | | In-line or lateral[2] |
| Reproducibility of switching point[3] | [mm] | ±0.1 |

1) Not for N/O contact, 2-wire, operating voltage range 3 … 250 V AC/DC and 5 … 250 V AC/DC
2) N/O contact, 2-wire, operating voltage range 5 … 250 V AC/DC
3) Only applicable to drives secured against rotation

| Technical data – N/O contact, 3-wire | | | | | | |
|---|---|---|---|---|---|---|
| Switch output | | | Conventional contact, bipolar | | | |
| Electrical connection | | | Cable, 3-wire | | | Cable with plug M8x1, 3-pin |
| Cable length | | [m] | 2.5 | 5.0 | 7.5 | 0.3 |
| Operating voltage range | DC | [V DC] | 12 … 30 | | | |
| Max. output current | DC | [mA] | 500 | | | |
| Max. switching capacity | DC | [W] | 10 | | | |
| Switch-on time | | [ms] | ≤0.5 | | | |
| Switch-off time | | [ms] | 0.03 | | | |
| Protection against short circuit | | | No | | | |
| Protection against polarity reversal | | | No | | | |
| Protection class | | | IP65/IP67 | | | |
| Switching status display | | | Yellow LED | | | |

| Technical data – N/O contact, 2-wire | | | | | | |
|---|---|---|---|---|---|---|
| Switch output | | | Conventional contact, bipolar[1] | | | |
| Electrical connection | | | Cable, 2-wire | | | |
| Cable length | | [m] | 2.5 | | 2.5 | 5.0 |
| Operating voltage range | DC | [V DC] | 12 … 27 | 3 … 250 | 5 … 250 | |
| | AC | [V AC] | – | 3 … 250 | 5 … 250 | |
| Max. output current | DC | [mA] | 80 | 120 | 120 | |
| | AC | [mA] | – | 120 | 120 | |
| Max. switching capacity | DC | [W] | 2 | 10 | 10 | |
| | AC | [VA] | – | 10 | 10 | |
| Voltage drop | | [V] | 3.5 | 3.9 | 4 | |
| Switch-on time | | [ms] | ≤0.5 | ≤2 | ≤2 | |
| Switch-off time | | [ms] | 0.03 | | ≤0.1 | |
| Protection against short circuit | | | No | | | |
| Protection against polarity reversal | | | No | | | |
| Protection class | | | IP67 | | IP65, IP67 | |
| Switching status display | | | Yellow LED | | | |

1) Without LED function

| Technical data – N/O contact, heat resistant | | | |
|---|---|---|---|
| Switch output | | | Conventional contact, bipolar |
| Electrical connection | | | Cable, 2-wire |
| Cable length | | [m] | 2.5 |
| Operating voltage range | DC | [V DC] | 0 ... 30 |
| Max. output current | DC | [mA] | 500 |
| Max. switching capacity | DC | [W] | 10 |
| Voltage drop | | [V] | – |
| Switch-on time | | [ms] | ≤0.5 |
| Switch-off time | | [ms] | ≤0.5 |
| Protection against short circuit | | | No |
| Protection against polarity reversal | | | No |
| Protection class | | | IP67 |
| Switching status display | | | – |

| Technical data – N/C contact, 3-wire | | | |
|---|---|---|---|
| Switch output | | | Conventional contact, bipolar |
| Electrical connection | | | Cable, 3-wire |
| Cable length | | [m] | 7.5 |
| Operating voltage range | DC | [V DC] | 12 ... 30 |
| Max. output current | DC | [mA] | 50 |
| Max. switching capacity | DC | [W] | 1.5 |
| Voltage drop | | [V] | 1.8 |
| Switch-on time | | [ms] | ≤2 |
| Switch-off time | | [ms] | ≤0.2 |
| Protection against short circuit | | | No |
| Protection against polarity reversal | | | No |
| Protection class | | | IP67 |
| Switching status display | | | Yellow LED |

| Operating and environmental conditions | | | | | | | |
|---|---|---|---|---|---|---|---|
| Electrical connection | | | Cable | | Cable with plug | | Cable, heat resistant | |
| Cable installation | | | Fixed | Flexible | Fixed | Flexible | Fixed | Flexible |
| Ambient temperature | | [°C] | –20 ... +60 | –5 ... +60 | –20 ... +60 | –5 ... +60 | –40 ... +120 | –5 ... +120 |
| Corrosion resistance class CRC[1)] | | | 4 | | 2 | | 4 | |
| CE symbol (declaration of conformity) | | | In accordance with EU EMC directive | | | | | |
| | | | In accordance with EU low voltage directive[2)] | | | | – | |

1) Corrosion resistance class 2 according to Festo standard 940 070
Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.
Corrosion resistance class 4 according to Festo standard 940 070
Components requiring higher corrosion resistance. Parts used with aggressive media, e.g. food or chemical industry. These applications should be supported with special tests with the media if required.
2) Only valid for N/O contact, 2-wire, operating voltage range 3 ... 250 V AC/DC and 5 ... 250 V AC/DC

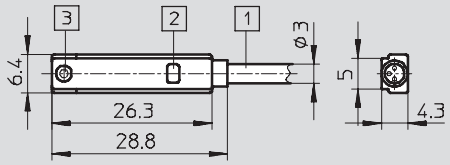
| Materials | | | |
|---|---|---|---|
| Electrical connection | Cable | Cable with plug | Cable, heat resistant |
| Housing | Polyethylene terephthalate, polycarbonate | | |
| Cable sheath | Polyurethane, polyvinyl chloride[1)] | | Thermoplastic styrene elastomer |
| Note on materials | Free of copper and PTFE | | |

1) N/O contact, 2-wire, operating voltage range 3 ... 250 V AC/DC

| Product weights [g] | | | | |
|---|---|---|---|---|
| Electrical connection | Cable | | | Cable with plug |
| Cable length [m] | 2.5 | 5.0 | 7.5 | 0.3 |
| N/O contact | | | | |
| 3-wire | 30 | 60 | 85 | 8 |
| 2-wire, operating voltage range 12 ... 27 V DC | 24 | – | – | – |
| 2-wire, operating voltage range 3 ... 250 V AC/DC | 40 | – | – | – |
| 2-wire, operating voltage range 5 ... 250 V AC/DC | 30 | 51 | – | – |
| 2-wire, heat resistant | 50 | – | – | – |
| | | | | |
| N/C contact | | | | |
| 3-wire | – | – | 85 | – |

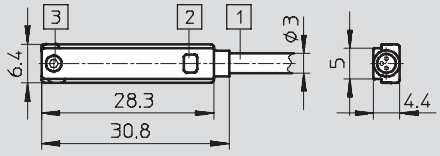
**Dimensions** Download CAD data ➔ **www.festo.com/en/engineering**

N/O contact cable type



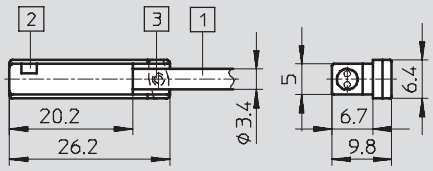

1 Connecting cable
2 Yellow LED
3 Clamping component

N/C contact cable type

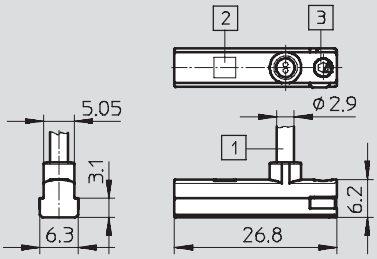



1 Connecting cable
2 Yellow LED
3 Clamping component

Operating voltage range 3 ... 250 V AC/DC

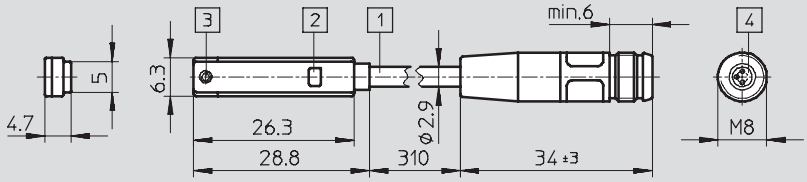



Operating voltage range 5 ... 250 V AC/DC



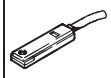

1 Connecting cable
2 Yellow LED
3 Clamping component

Plug type M8x1




1 Connecting cable
2 Plug suitable for plug socket with cable NEBU-M8...
3 Clamping component
4 Yellow LED

**Ordering data**

| | Electrical connection | | Cable length | Part No. | Type |
|---|---|---|---|---|---|
| | Cable | Plug M8x1 | [m] | | |
|  | N/O contact | | | | |
| | Operating voltage range 0 ... 30 V AC/DC | | | | |
| | 3-wire | – | 2.5 | **150 855** | **SME-8-K-LED-24** |
| | | | 5.0 | **175 404** | **SME-8-K5-LED-24** |
| | | | 7.5 | **530 491** | **SME-8-K-7,5-LED-24** |
| | – | 3-pin | 0.3 | **150 857** | **SME-8-S-LED-24** |
| | 2-wire | – | 2.5 | **171 169** | **SME-8-ZS-KL-LED-24** |
| | | | | | |
| | Heat resistant up to 120°C | | | | |
| | 2-wire | – | 2.5 | **161 756** | **SME-8-K-24-S6** |
| | | | | | |
| | Operating voltage range 3 ... 250 V AC/DC | | | | |
| | 2-wire | – | 2.5 | **152 820** | **SME-8-K-LED-230** |
| | | | | | |
| | Operating voltage range 5 ... 250 V AC/DC | | | | |
| | 2-wire | – | 2.5 | **538 816** | **SME-8-ZS-230V-K2,5Q-OE** New |
| | | | 5.0 | **538 817** | **SME-8-ZS-230V-K5,0Q-OE** New |
| | | | | | |
| | N/C contact | | | | |
| | 3-wire | – | 7.5 | **160 251** | **SME-8-O-K-LED-24** |

# Linear actuators DLP, Copac

Accessories – Proximity sensors

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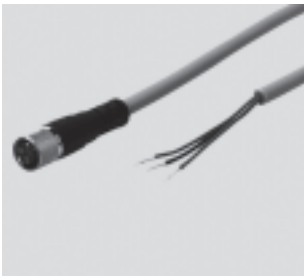
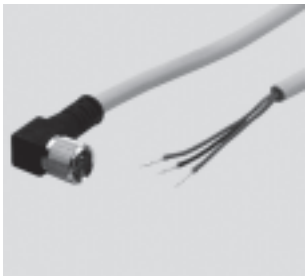
**Connecting cable M8x1**
**NEBU-M8**

Material:
Housing: Polyurethane
Cable sheath: Polyurethane





| Ordering data | | | | | |
|---|---|---|---|---|---|
| Electrical connection, left | Electrical connection, right | Switch output | Cable length [m] | Part No. | Type |
| Basic version | | | | | |
| Straight socket, M8x1, 3-pin | Cable, open end, 3-wire | – | 2.5 | **541 333** | **NEBU-M8G3-K-2.5-LE3** |
| | | | 5 | **541 334** | **NEBU-M8G3-K-5-LE3** |
| | | | 10 | **541 332** | **NEBU-M8G3-K-10-LE3** |
| Angled socket, M8x1, 3-pin | Cable, open end, 3-wire | – | 2.5 | **541 338** | **NEBU-M8W3-K-2.5-LE3** |
| | | | 5 | **541 341** | **NEBU-M8W3-K-5-LE3** |
| | | | 10 | **541 335** | **NEBU-M8W3-K-10-LE3** |
| With switching status display | | | | | |
| Angled socket, M8x1, 3-pin | Cable, open end, 3-wire | PNP | 2.5 | **541 337** | **NEBU-M8W5P-K-2.5-LE3** |
| | | | 5 | **541 340** | **NEBU-M8W5P-K-5-LE3** |
| | | NPN | 2.5 | **541 336** | **NEBU-M8W5N-K-2.5-LE3** |
| | | | 5 | **541 339** | **NEBU-M8W5N-K-5-LE3** |

| Ordering data – Slot cover for T-slot | | | | |
|---|---|---|---|---|
| | Assembly | Length [m] | Part no. | Type |
|  | Insertable from above | 2x 0.5 | **151 680** | **ABP-5-S** |

| Ordering data – Cable clip SMBK-8 | | | |
|---|---|---|---|
| | | Part no. | Type |
|  | For fixing the cable in the sensor slot | **534 254** | **SMBK-8** |

| Ordering data – Inscription labels | | | | | | |
|---|---|---|---|---|---|---|
| | Material | Use | Dimensions [mm] | Part No. | Type | PU[1] |
|  | Polycarbonate | For insertion in the inscription label holder | 23x4 | **541 598** | **ASLR-L-423** | **51** |
| | | | 18x4 | **546 111** | **ASLR-L-418** | **57** |

1) Packaging unit in quantity per frame.