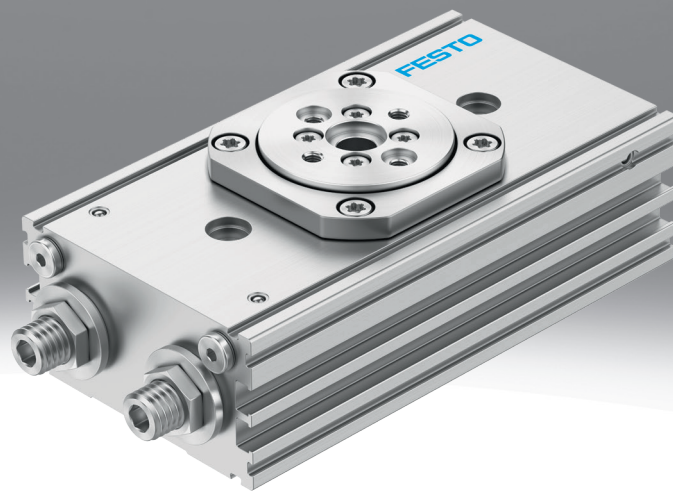


## Semi-rotary drive DRRS

**FESTO**



## Characteristics

### At a glance

Further information → [drrs](#)

- Rack-and-pinion principle
- Extremely accurate in the end positions
- High load-bearing capacity for the bearing, precise and backlash-free
- High mass moments of inertia
- Defined interfaces
- Supply ports at both ends
- Slots on both sides for mounting proximity switches
- Choice of mounting options
- Perfectly suited for handling applications

### Diagrams

Further information → [drrs](#)



The diagrams shown in this document are also available online. These can be used to display precise values.

### Nominal swivel angle [°]

The swivel angle is adjusted via the cushioning elements using a hex screwdriver. If possible, the reduction of the swivel angle should be evenly distributed over both end positions.

- Clockwise direction of rotation: swivel angle decreases
- Anticlockwise direction of rotation: swivel angle increases

### Output shaft

[FH] Flanged shaft, hollow

- The shaft is hollow on the inside. This allows it to be used for carrying electrical signals or compressed air
- Compressed air tubing is required to pass compressed air through the hollow flanged shaft

### Cushioning

[P] Elastic cushioning rings/plates on both sides

Elastic cushioning, with metal stop

Benefits:

- No adjustment required
- Saves time

### Position sensing

[A] For proximity sensor

By using proximity switches, any position can be detected.

### Special material properties

Recommended for production systems for manufacturing lithium-ion batteries

Product:

- Metals with more than 1% copper, zinc or nickel by mass are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, circuit boards, cables, electrical plug connectors and coils

Accessories:

- Please contact your Festo representative for information on which accessories are suitable for manufacturing lithium-ion batteries

## Type code

|      |                   |  |
|------|-------------------|--|
| 001  | Series            |  |
| DRRS | Semi-rotary drive |  |

|     |           |  |
|-----|-----------|--|
| 002 | Size [mm] |  |
| 12  | 12        |  |
| 16  | 16        |  |
| 20  | 20        |  |
| 25  | 25        |  |

|     |                          |  |
|-----|--------------------------|--|
| 003 | Nominal swivel angle [°] |  |
| 180 | 180                      |  |

|     |                       |  |
|-----|-----------------------|--|
| 004 | Output shaft          |  |
| FH  | Flanged shaft, hollow |  |

|     |   |  |
|-----|---|--|
| 005 | Cushioning                                    |  |
| P   | Elastic cushioning rings/plates on both sides |  |

|     |                      |  |
|-----|----------------------|--|
| 006 | Position sensing     |  |
| A   | For proximity sensor |  |

## Datasheet

## General technical data

| Size                             | 12  | 16       | 20 | 25 |
|----------------------------------|---|----------|----|----|
| Design                           | Rack and pinion   |          |    |    |
| Mode of operation                | Double-acting   |          |    |    |
| Pneumatic connection             | M3  | M5       |    |    |
| Type of mounting                 | Either:<br>Via mounting kit<br>With through-hole<br>Via female thread |          |    |    |
| Swivel angle                     | 180 deg   |          |    |    |
| Cushioning                       | Elastic cushioning rings/plates at both ends                          |          |    |    |
| Repetition accuracy              | 0.05 deg  | 0.07 deg |    |    |
| Axial eccentricity poppet valve  | 0.05 mm   | 0.07 mm  |    |    |
| Position detection <sup>1)</sup> | Via proximity switch  |          |    |    |
| Mounting position                | optional  |          |    |    |

1) Note the operating range of the proximity switches.

## Operating and environmental conditions

| Size   | 12   | 16 | 20 | 25 |
|--|--|----|----|----|
| Operating pressure                           | 0.3 ... 0.8 MPa  |    |    |    |
| Operating pressure                           | 3 ... 8 bar  |    |    |    |
| Operating pressure                           | 43.5 ... 116 psi   |    |    |    |
| Note on operating and pilot medium           | Lubricated operation possible (in which case lubricated operation will always be required) |    |    |    |
| Operating medium                             | Compressed air to ISO 8573-1:2010 [7:4:4]  |    |    |    |
| Ambient temperature                          | 0 ... 60°C   |    |    |    |
| Storage temperature                          | -20 ... 60°C   |    |    |    |
| Corrosion resistance class CRC <sup>1)</sup> | 1 - Low corrosion stress   |    |    |    |

1) More information: [www.festo.com/x/topic/crc](http://www.festo.com/x/topic/crc)

## Weight

| Size           | 12    | 16    | 20    | 25      |
|----------------|-------|-------|-------|---------|
| Product weight | 310 g | 630 g | 790 g | 1,240 g |

## Forces and torques

| Size  | 12                     | 16                     | 20                     | 25                    |
|---|------------------------|------------------------|------------------------|-----------------------|
| Max. axial load static                                      | 80 N                   | 140 N                  | 350 N                  | 450 N                 |
| Max. bending moment   | 2 Nm                   | 4 Nm                   | 5 Nm                   | 10 Nm                 |
| Theoretical torque at 0.6 MPa (6 bar, 87 psi) <sup>1)</sup> | 0.9 Nm                 | 2.1 Nm                 | 3.3 Nm                 | 6.6 Nm                |
| Permissible mass moment of inertia                          | 0.005 kgm <sup>2</sup> | 0.008 kgm <sup>2</sup> | 0.018 kgm <sup>2</sup> | 0.04 kgm <sup>2</sup> |

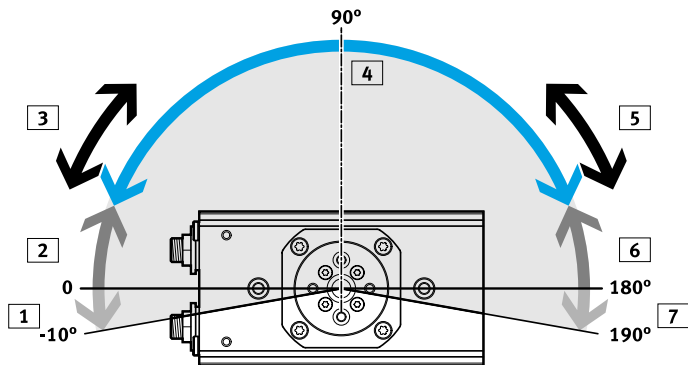
1) If, in the end positions, a torque which exceeds 50% of the theoretical torque acts against the direction of rotation, no exact end position is guaranteed.  
This can be avoided by using a semi-rotary drive with double the torque.

## Materials

| Size   | 12   | 16 | 20 | 25 |
|--|--|----|----|----|
| Material housing                                   | Anodised aluminium   |    |    |    |
| Material drive shaft                               | -  |    |    |    |
| Material seals                                     | NBR<br>TPE-U(PU)   |    |    |    |
| Note on materials                                  | RoHS-compliant   |    |    |    |
| LABS (PWIS) conformity                             | VDMA24364-C1-L   |    |    |    |
| Cleanroom class                                    | Class 9 according to ISO 14644-1   |    |    |    |
| Suitability for the production of Li-ion batteries | Metals with more than 1% copper, zinc or nickel by mass are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils |    |    |    |

## Datasheet

### Swivel angle



Fundamentally, the following applies:

Swivel angle  $\geq$  cushioning angle

Swivel angle =  $180^\circ + \text{difference swivel angle right} + \text{difference swivel angle left}$

1 = difference swivel angle left (+)

2 = difference swivel angle left (-)

3 = cushioning angle

4 = swivel angle

5 = cushioning angle

6 = difference swivel angle right (-)

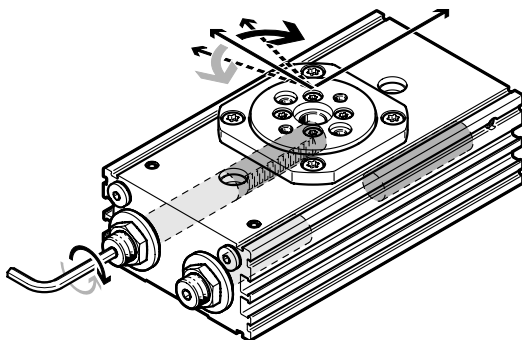
7 = difference swivel angle right (+)

| Size  | 12           | 16       | 20       | 25       |
|---|--------------|----------|----------|----------|
| Swivel angle  | 180 deg      |          |          |          |
| Min. swivel angle <sup>1)</sup>                           | 45 deg       |          |          |          |
| Max. swivel angle   | 200 deg      |          |          |          |
| Setting range of swivel angle on both sides <sup>2)</sup> | +10/-100 deg |          |          |          |
| Cushioning angle  | 23.5 deg     | 19.5 deg | 27.5 deg | 25.5 deg |

1) Smaller swivel angles are adjustable. However, this reduces the cushioning energy.

2) Continuously adjustable

### Swivel angle adjustment



Direction of rotation to the right:

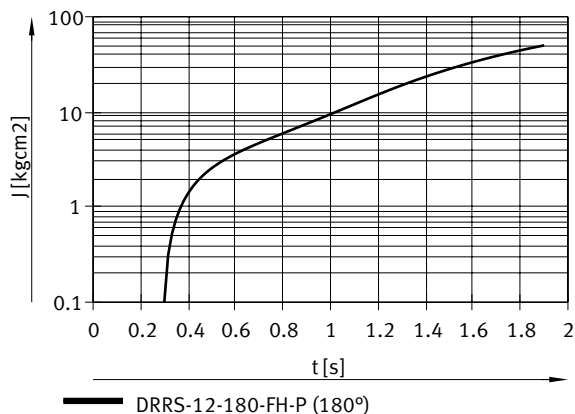
- Swivel angle decreases

Anticlockwise direction of rotation:

- Swivel angle increases

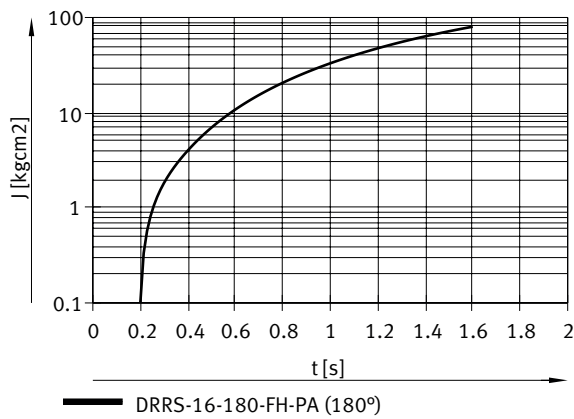
The swivel angle is adjusted via the cushioning components using a hex screwdriver. If possible, the swivel angle should be reduced evenly over both end positions.

**Max. permissible mass moment of inertia  $J$  at the flange shaft as a function of swivel time  $t$  (at room temperature and an operating pressure of 0.6 MPa (6 bar, 87 psi), – DRRS-12-180-...-P, swivel angle 180°**

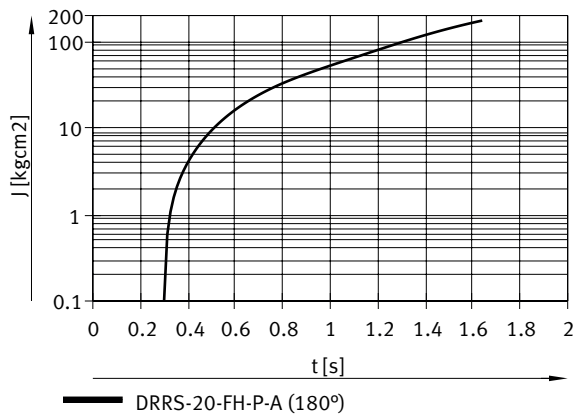


Datasheet

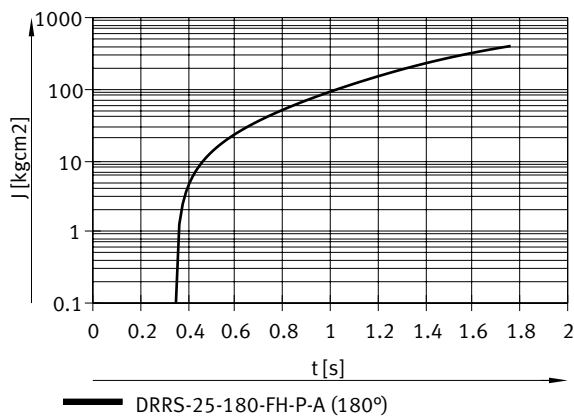
Max. permissible mass moment of inertia  $J$  at the flange shaft as a function of swivel time  $t$  (at room temperature and an operating pressure of 0.6 MPa (6 bar, 87 psi), – DRRS-16-180-...-P, swivel angle 180°



Max. permissible mass moment of inertia  $J$  at the flange shaft as a function of swivel time  $t$  (at room temperature and an operating pressure of 0.6 MPa (6 bar, 87 psi), – DRRS-20-180-...-P, swivel angle 180°

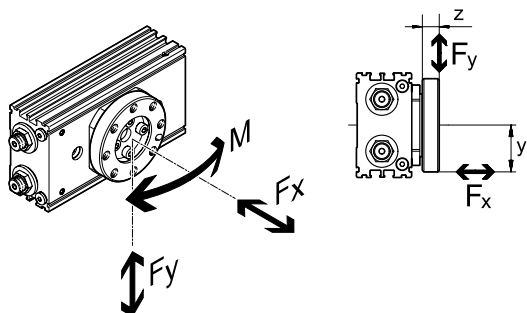


Max. permissible mass moment of inertia  $J$  at the flange shaft as a function of swivel time  $t$  (at room temperature and an operating pressure of 0.6 MPa (6 bar, 87 psi), – DRRS-25-180-...-P, swivel angle 180°



## Datasheet

## Max. load capacity at push-on flange DARF-Q13-...-1



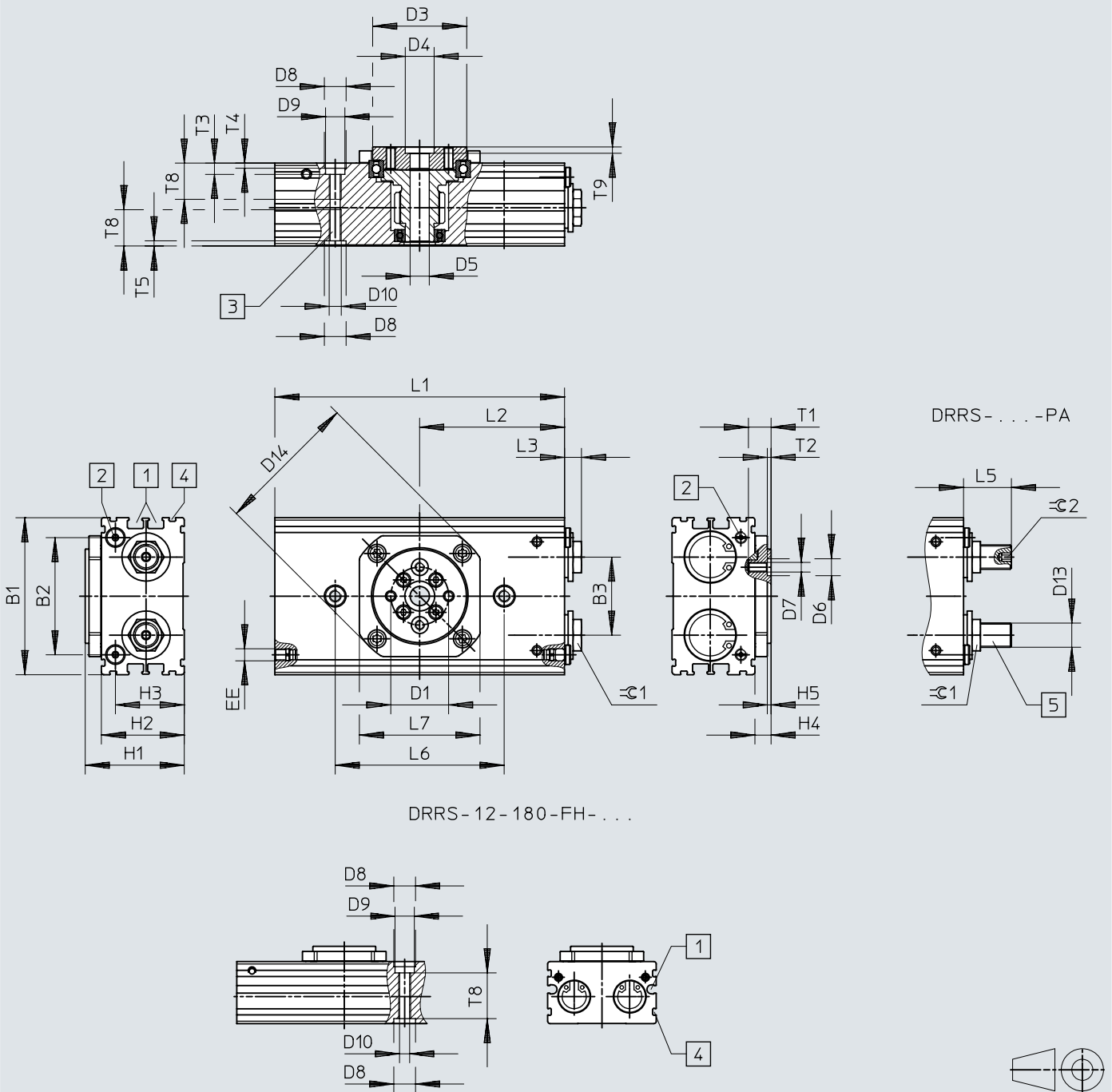
- The limits of the flange shaft and the max. bending moment of the push-on flange apply to the radial forces  $F_y$ .
- The max. bending moment represents the load limit of the push-on flange and must not be exceeded.
- The zero point for dimension  $z$  is always the flange level of the basic drive, independently of the attachments.
- The max. static axial load represents an additional load.

| Size                   | 12   | 16    | 20    | 25    |
|------------------------|------|-------|-------|-------|
| Max. axial load static | 80 N | 140 N | 350 N | 450 N |
| Max. bending moment    | 2 Nm | 4 Nm  | 5 Nm  | 10 Nm |

## Dimensions

Dimensions – Semi-rotary drives DRRS

Download CAD data → [www.festo.com](http://www.festo.com)



DRRS-12-180-FH-...

DRRS-...-PA

- [1] Sensor slot for proximity switch
- [2] Compressed air ports
- [3] Mounting thread
- [4] For profile mounting
- [5] Cushioning P



## Dimensions

|                   | B1 | B2   | B3   | D1<br>∅ | D3<br>∅<br>±0,05 | D4<br>∅<br>H8 | D5<br>∅ | D6<br>∅<br>H8 | D7 | D8<br>∅<br>H7 | D9<br>∅ | D10 | D13    |
|-------------------|----|------|------|---------|------------------|---------------|---------|---------------|----|---------------|---------|-----|--------|
| DRRS-12-180-FH-PA | 45 | 36   | 23   | 20      | 26               | 7             | 5       | 5             | M3 | 9             | 8       | M5  | M6x0,5 |
| DRRS-16-180-FH-PA | 60 | 44,2 | 30,8 | 21      | 34               | 12            | 8       | 7             | M4 |               |         |     | M8x1   |
| DRRS-20-180-FH-PA | 65 | 48,5 | 32,4 | 24      | 39               |               |         |               |    |               |         |     | M10x1  |
| DRRS-25-180-FH-PA | 60 | 60   | 37,2 | 26      | 49,5             | 15            | 10,5    | 9             | M5 | 12            | 10      | M6  | M12x1  |

|                   | D14<br>∅ | EE | H1 | H2   | H3   | H4  | H5  | L1<br>±0,1 | L2   | L3  | L5   |       |      |
|-------------------|----------|----|----|------|------|-----|-----|------------|------|-----|------|-------|------|
|                   |          |    |    |      |      |     |     |            |      |     | 180° | min.  | max. |
| DRRS-12-180-FH-PA | 42       | M3 | 32 | 25,7 | 19,2 | 6,3 | 2,1 | 89         | 44,5 | 2,5 | 14   | -7,8  | +1,2 |
| DRRS-16-180-FH-PA | 52       | M5 | 39 | 32   | 27,2 | 7   | 2,3 | 114        | 57   |     | 19,1 | -10,4 | +1,5 |
| DRRS-20-180-FH-PA | 59       |    | 41 | 34,3 | 28,5 | 6,7 | 1,6 | 120        | 60   |     | 19,8 | -10,3 |      |
| DRRS-25-180-FH-PA | 68       |    | 46 | 39   | 31,5 | 7   | 1,8 | 150        | 75   |     | 22,5 | -13,2 | 2    |

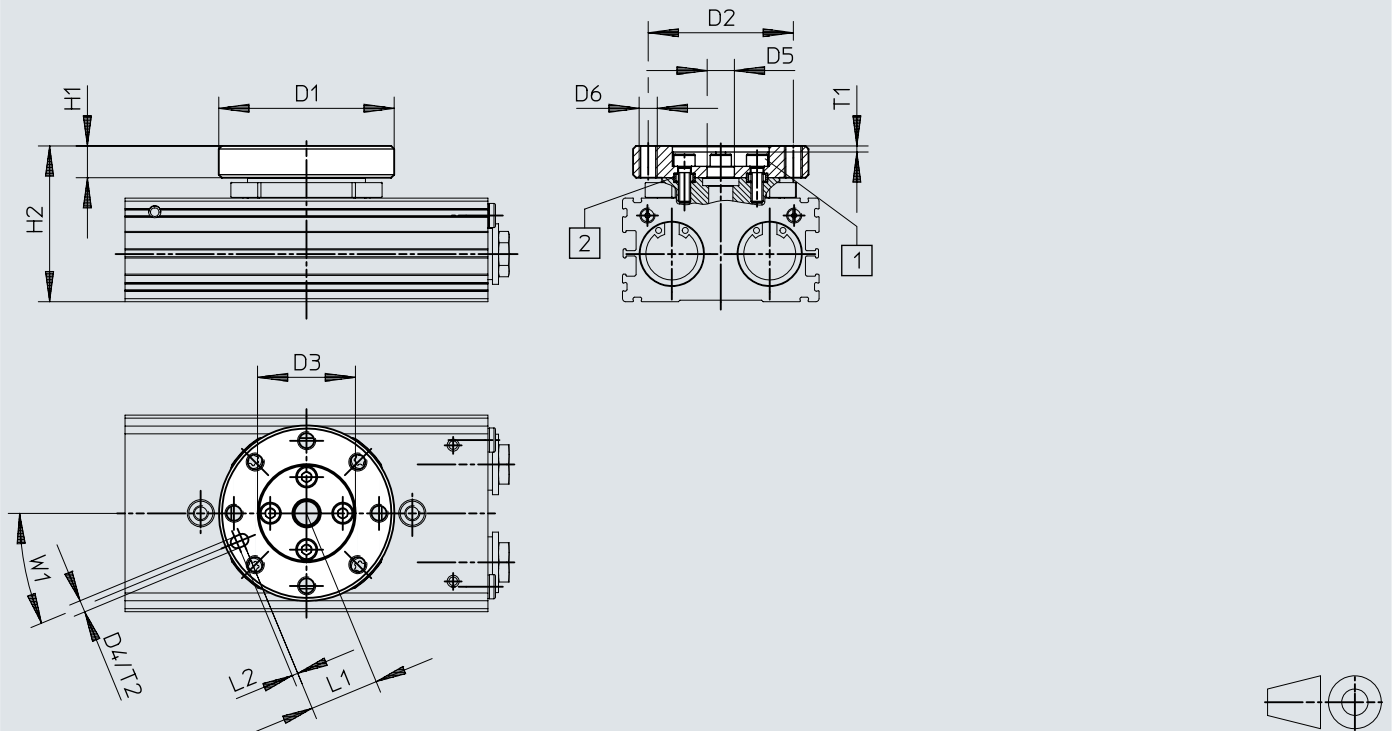
  

|                   | L6 | L7   | T1<br>max. | T2<br>+0,1 | T3  | T4  | T5  | T8   | T9<br>+0,1 | ≅C1 | ≅C2 |
|-------------------|----|------|------------|------------|-----|-----|-----|------|------------|-----|-----|
| DRRS-12-180-FH-PA | 50 | 34,6 | 4,8        | 1,2        | 4,7 | 2,1 | 2,1 | 18,9 | 1,6        | 8   | 3   |
| DRRS-16-180-FH-PA | 64 | 43,4 | 6          | 1,6        |     |     |     | 14,5 | 2,6        | 10  | 5   |
| DRRS-20-180-FH-PA | 70 | 50   | 9,2        |            |     |     |     | 15   |            | 13  |     |
| DRRS-25-180-FH-PA | 80 | 60   | 9          | 2,1        | 5,7 | 2,6 | 2,6 | 18   | 3,2        | 15  | 6   |

## Dimensions

### Dimensions – Push-on flange DARF-Q13-...-1

Download CAD data → [www.festo.com](http://www.festo.com)



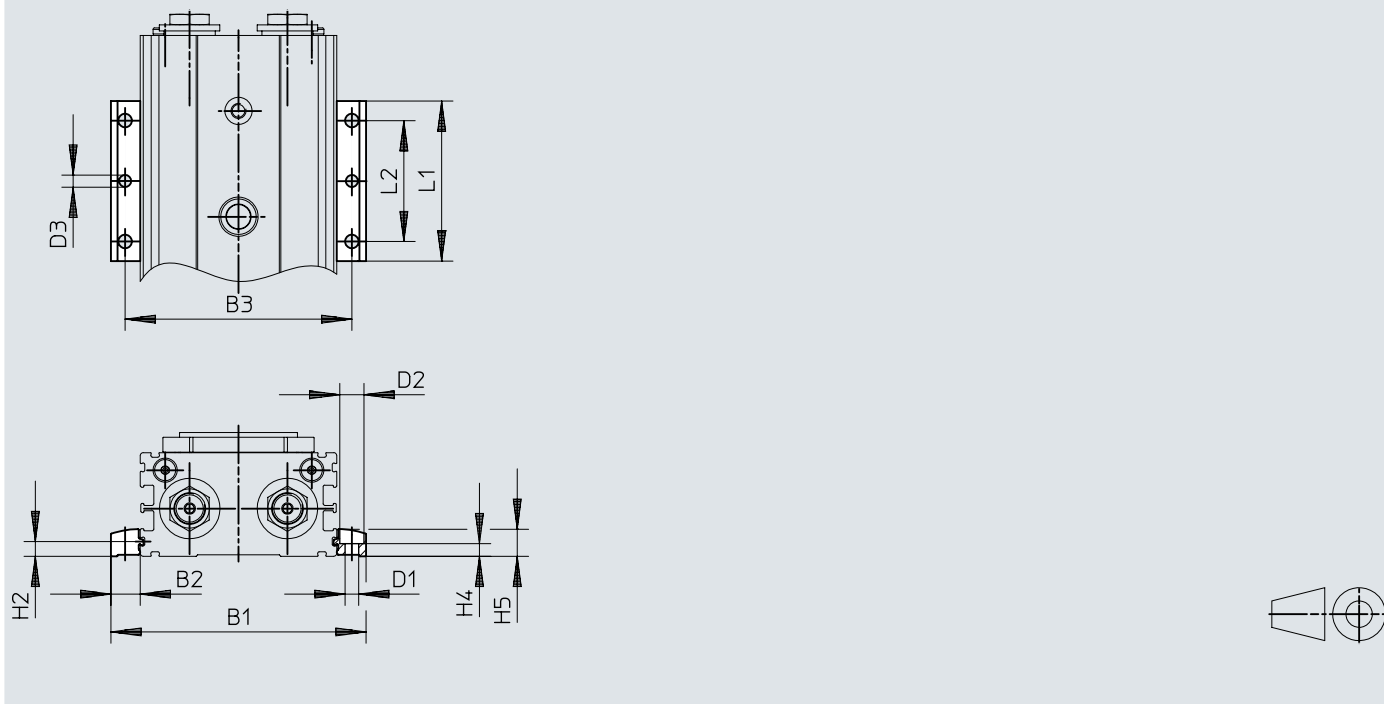
- [1] Socket head screw
- [2] Drilled hole for centring sleeve
- [3] The attachment can be positioned every 90°

|               | B1   | B2<br>+0,1<br>-0,2 | D1<br>∅<br>h9 | D2<br>∅ | D3<br>∅<br>H8 | D4<br>H9 | D5<br>∅ | D6      |
|---------------|------|--------------------|---------------|---------|---------------|----------|---------|---------|
| DARF-Q13-12-1 | 10   | 4,8                | 40            | 32      | 20            | 3        | 6       | M5x0,8  |
| DARF-Q13-16-1 | 10,5 | 6,2                | 51,5          | 43      | 28            | 4        | 9       | M6x1    |
| DARF-Q13-20-1 | 12   | 7,5                | 58            | 48      | 32            |          |         |         |
| DARF-Q13-25-1 | 13   | 10                 | 66            | 55      | 35            | 5        | 11      | M8x1,25 |

|               | H1<br>±0,05 | H2   | L1   | L2 | T1 | T2  | W1   |
|---------------|-------------|------|------|----|----|-----|------|
| DARF-Q13-12-1 | 9           | 41   | 15   | 2  | 2  | 3,5 | 22,5 |
| DARF-Q13-16-1 | 10          | 49   | 20,5 |    |    | 4,5 |      |
| DARF-Q13-20-1 | 10,5        | 51,5 | 23   |    |    | 4,5 |      |
| DARF-Q13-25-1 | 12          | 58   | 26,5 |    |    | 5,5 |      |

## Dimensions

## Dimensions – Profile mounting EAHF-L2-...-P

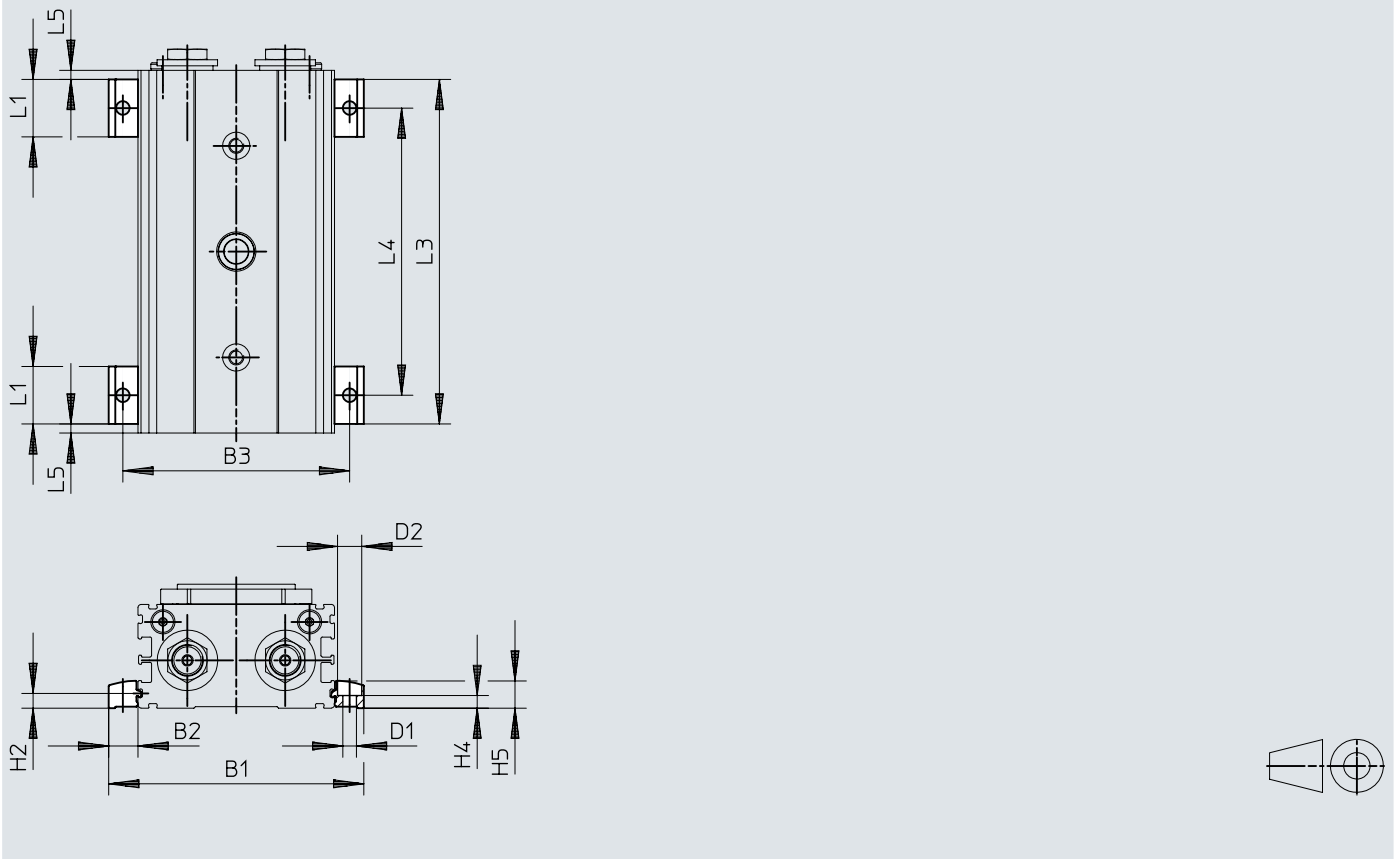
Download CAD data → [www.festo.com](http://www.festo.com)

|              |         | B1   | B2  | B3 | D1<br>∅<br>H13 | D2<br>∅<br>H13 | D3 | H2  | H4<br>±0,1 | H5 | L1 | L2 |
|--------------|---------|------|-----|----|----------------|----------------|----|-----|------------|----|----|----|
| EAHF-L2-25-P | DRRS-12 | 64,4 | 9,7 | 55 | 4,5            | 8              | 4  | 4,9 | 4,2        | 9  | 53 | 40 |
|              | DRRS-16 | 79,4 |     | 70 |                |                |    |     |            |    |    |    |
|              | DRRS-20 | 84,4 |     | 75 |                |                |    |     |            |    |    |    |
|              | DRRS-25 | 94,4 |     | 85 |                |                |    |     |            |    |    |    |

## Dimensions

Dimensions – Profile mounting EAHF-L2-...-P-S


Download CAD data → [www.festo.com](http://www.festo.com)



|                |         | B1   | B2  | B3 | D1<br>∅<br>H13 | D2<br>∅<br>H13 | H2  | H4<br>±0,1 |
|----------------|---------|------|-----|----|----------------|----------------|-----|------------|
| EAHF-L2-25-P-S | DRRS-12 | 64,4 | 9,7 | 55 | 4,5            | 8              | 4,9 | 4,2        |
|                | DRRS-16 | 79,4 |     | 70 |                |                |     |            |
|                | DRRS-20 | 84,4 |     | 75 |                |                |     |            |
|                | DRRS-25 | 94,4 |     | 85 |                |                |     |            |

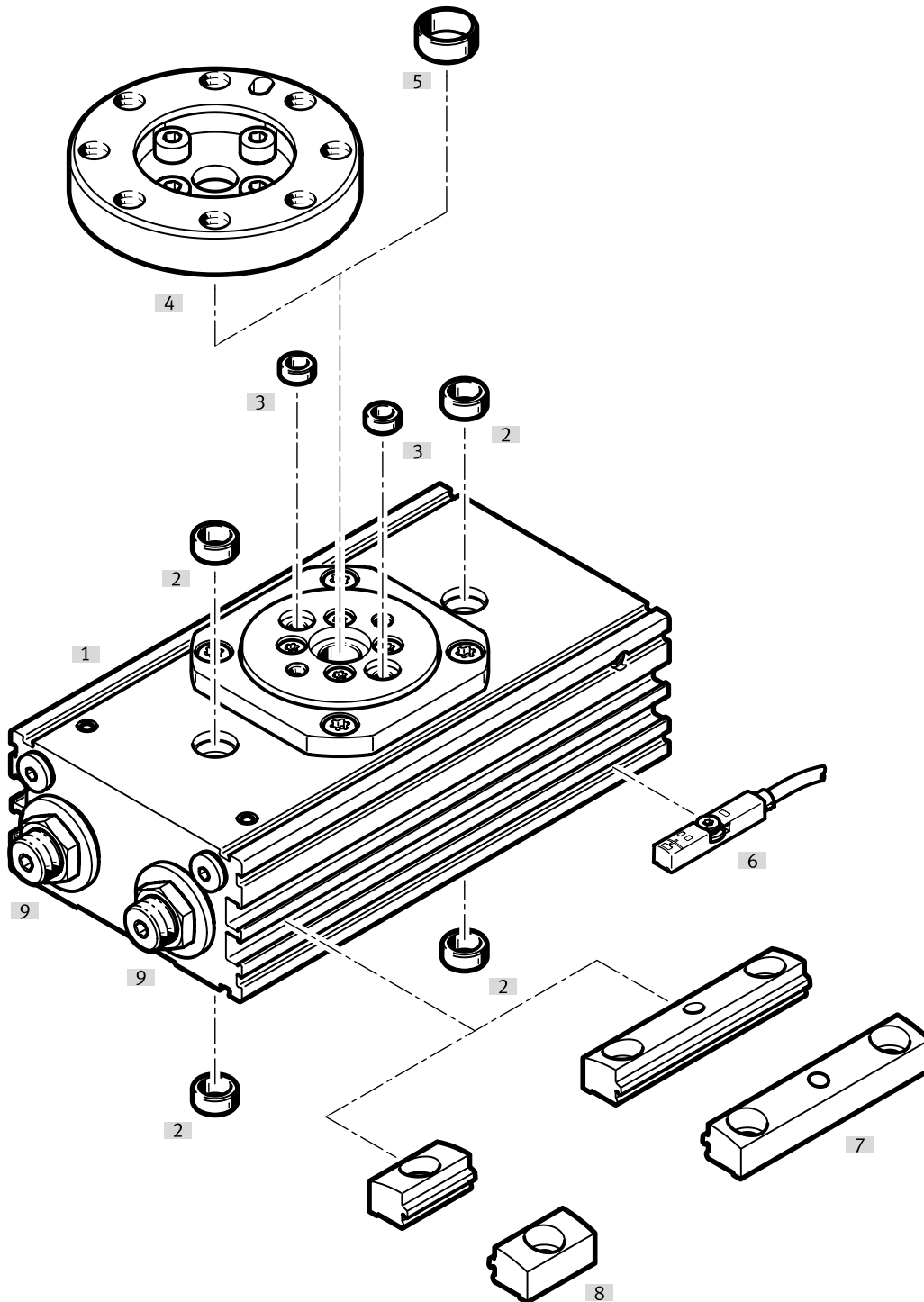
|                |         | H540 | L1 | L3   |      | L4   |      | L5   |
|----------------|---------|------|----|------|------|------|------|------|
|                |         |      |    | min. | max. | min. | max. | min. |
| EAHF-L2-25-P-S | DRRS-12 | 9    | 19 | 59   | 83   | 40   | 64   | 3    |
|                | DRRS-16 |      |    | 73   | 108  | 54   | 89   |      |
|                | DRRS-20 |      |    | 79   | 114  | 60   | 95   |      |
|                | DRRS-25 |      |    | 89   | 144  | 70   | 125  |      |

## Ordering data

| DRRS  |      |              |  |                      |                          |                          |
|---|------|--------------|--|----------------------|--------------------------|--------------------------|
|   | Size | Swivel angle | Cushioning                                   | Pneumatic connection | Part no.                 | Type                     |
|  | 12   | 180 deg      | Elastic cushioning rings/plates at both ends | M3                   | <b>8163607</b>           | <b>DRRS-12-180-FH-PA</b> |
|   | 16   |              |  | M5                   | <b>8163609</b>           | <b>DRRS-16-180-FH-PA</b> |
|   | 20   |              |  | <b>8163611</b>       | <b>DRRS-20-180-FH-PA</b> |                          |
|   | 25   |              |  | <b>8163613</b>       | <b>DRRS-25-180-FH-PA</b> |                          |

## Peripherals

### Peripherals overview



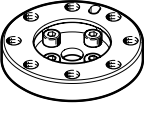
| Accessories                       |   |  | → Page/Internet |
|-----------------------------------|---|--|-----------------|
| Type/order code                   | Description   |  |                 |
| [1] Semi-rotary drive DRRS        | Double-acting   |  | dr rs           |
| [2] Centring sleeve ZBH           | For centring the drive  |  | 16              |
| [3] Centring sleeve ZBH           | For centring attachments (included in the scope of delivery of the attachments) |  | 16              |
| [4] Push-on flange DARF-Q13-...-1 | For mounting on the flanged shaft   |  | 16              |
| [5] Centring sleeve ZBH           | For centring attachments (included in the scope of delivery of the attachments) |  | 16              |
| [6] Proximity switch SMT-8        | - For sizes 16 ... 25<br>- For sensing the piston position                      |  | 17              |
| [6] Proximity switch SDBT-MSB     | - For sizes 16 ... 25<br>- For sensing the piston position                      |  | 17              |

## Peripherals

| Accessories                          |  | → Page/Internet |
|--------------------------------------|--|-----------------|
| Type/order code                      | Description  |                 |
| [6] Proximity switch SMT-10          | - For size 12<br>- For sensing the piston position | 17              |
| [6] Proximity switch SDBC-MSB        | - For size 12<br>- For sensing the piston position | 17              |
| [7] Profile mounting EAHF-L2-...-P   | For mounting on the side of the profile            | 16              |
| [8] Profile mounting EAHF-L2-...-P-S | For mounting on the side of the profile            | 16              |
| [9] Cushioning P                     | Elastic cushioning, with metal stop                | dyef            |
| [10] One-way flow control valve GRLA | For adjusting the swivel speed                     | 16              |

## Accessories

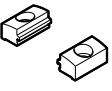
## Push-on flange DARF-Q13-...-1

|  | Size | Type of mounting                     | Material flange                  | Product weight | Part no. | Type          |
|--|------|--------------------------------------|----------------------------------|----------------|----------|---------------|
|  | 12   | Via through-hole and centring sleeve | Anodised wrought aluminium alloy | 23 g           | 8163621  | DARF-Q13-12-1 |
|  | 16   |                                      |                                  | 52 g           | 8163622  | DARF-Q13-16-1 |
|  | 20   |                                      |                                  | 66 g           | 8163623  | DARF-Q13-20-1 |
|  | 25   |                                      |                                  | 94 g           | 8163624  | DARF-Q13-25-1 |


## Profile mounting EAHF-L2-...-P

|  | Material plate                   | Note on materials | Product weight | Part no. | Type         |
|--|----------------------------------|-------------------|----------------|----------|--------------|
|  | Anodised wrought aluminium alloy | RoHS-compliant    | 19 g           | 4835684  | EAHF-L2-25-P |


## Profile mounting EAHF-L2-...-P-S

|  | Material plate                   | Note on materials | Product weight | Part no. | Type           |
|--|----------------------------------|-------------------|----------------|----------|----------------|
|  | Anodised wrought aluminium alloy | RoHS-compliant    | 4 g            | 5183153  | EAHF-L2-25-P-S |


## Centring sleeve ZBH-5

|  | Description | Material sleeve | Size of pack | Product weight | Part no. | Type    |
|--|-------------|-----------------|--------------|----------------|----------|---------|
|  | For size 12 | Steel           | 10           | 1 g            | 8146543  | ZBH-5-B |


## Centring sleeve ZBH-7

|  | Description          | Material sleeve | Size of pack | Product weight | Part no. | Type    |
|--|----------------------|-----------------|--------------|----------------|----------|---------|
|  | For sizes 12, 16, 20 | Steel           | 10           | 1 g            | 8146544  | ZBH-7-B |


## Centring sleeve ZBH-9

|  | Description              | Material sleeve | Size of pack | Product weight | Part no. | Type    |
|--|--------------------------|-----------------|--------------|----------------|----------|---------|
|  | For sizes 12, 16, 20, 25 | Steel           | 10           | 2 g            | 8137184  | ZBH-9-B |

## Centring sleeve ZBH-12

|  | Description          | Material sleeve | Size of pack | Product weight | Part no. | Type     |
|--|----------------------|-----------------|--------------|----------------|----------|----------|
|  | For sizes 16, 20, 25 | Steel           | 10           | 1 g            | 8137185  | ZBH-12-B |

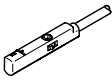
## One-way flow control valve GRLA

|  | Pneumatic connection, port 2 | Pneumatic connection 1 | Product weight | Part no. | Type           |
|--|------------------------------|------------------------|----------------|----------|----------------|
|  | M3                           | Push-in connector 3 mm | 7 g            | 175041   | GRLA-M3-QS-3   |
|  | M5                           |                        | 13 g           | ★ 193137 | GRLA-M5-QS-3-D |

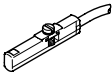


## Accessories

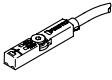
## Proximity switch SMT-10M for round slot, magneto-resistive – for sizes 12

|   | Type of mounting                                 | Switching output       | Electrical connection | Cable length | Part no. | Type                       |
|---|--|------------------------|-----------------------|--------------|----------|----------------------------|
|  | Screw-clamped, Insertable in the slot from above | 3-wire NPN N/O contact | Open end              | 2.5 m        | ★ 551377 | SMT-10M-NS-24V-E-2,5-L-OE  |
|   |  |                        | Plug M8, A-coded      | 0.3 m        | ★ 551379 | SMT-10M-NS-24V-E-0,3-L-M8D |
|   |  | 3-wire PNP N/O contact | Open end              | 2.5 m        | ★ 551373 | SMT-10M-PS-24V-E-2,5-L-OE  |
|   |  |                        | Plug M8, A-coded      | 0.3 m        | ★ 551375 | SMT-10M-PS-24V-E-0,3-L-M8D |
|   |  | 2-wire PNP N/O contact | Open end              | 2.5 m        | ★ 551382 | SMT-10M-ZS-24V-E-2,5-L-OE  |

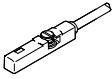
## Proximity switch SDBC-MSB for round slot, magneto-resistive – for size 12

|   | Switching output       | Switching element function | Electrical connection | Cable length | Part no. | Type                    |
|---|------------------------|----------------------------|-----------------------|--------------|----------|-------------------------|
|  | NPN                    | N/O contact                | Open end              | 2 m          | 8139724  | SDBC-MSB-1L-NU-K-2-LE   |
|   |                        |                            | Plug M8, A-coded      | 0.3 m        | 8139727  | SDBC-MSB-1L-NU-K-0,3-M8 |
|   | PNP                    |                            | Open end              | 2 m          | 8139723  | SDBC-MSB-1L-PU-K-2-LE   |
|   |                        |                            | Plug M8, A-coded      | 0.3 m        | 8139726  | SDBC-MSB-1L-PU-K-0,3-M8 |
|   | Non-contacting, 2-wire |                            | Open end              | 2 m          | 8139725  | SDBC-MSB-1L-ZU-K-2-LE   |

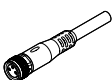
## Proximity switch SMT-8M for T-slot, magneto-resistive – for sizes 16 ... 25

|  | Type of mounting                                 | Switching output       | Electrical connection | Cable length | Part no.  | Type                      |
|--|--|------------------------|-----------------------|--------------|-----------|---------------------------|
|  | Screw-clamped, Insertable in the slot from above | 3-wire NPN N/O contact | Open end              | 2.5 m        | ★ 574338  | SMT-8M-A-NS-24V-E-2,5-OE  |
|  |  |                        | Plug M8, A-coded      | 0.3 m        | ★ 574339  | SMT-8M-A-NS-24V-E-0,3-M8D |
|  |  | 3-wire PNP N/O contact | Open end              | 2.5 m        | ★ 574335  | SMT-8M-A-PS-24V-E-2,5-OE  |
|  |  |                        | Plug M8, A-coded      | 0.3 m        | ★ 574334  | SMT-8M-A-PS-24V-E-0,3-M8D |
|  |  | 2-wire PNP N/O contact | Open end              | 5 m          | ★ 8165237 | SMT-8M-A-ZS-24V-E-5,0-OE  |

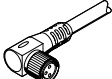
## Proximity switch SDBT-MSB for T-slot, magneto-resistive – for sizes 16 ... 25

|   | Switching output       | Switching element function | Electrical connection | Cable length | Part no. | Type                    |
|---|------------------------|----------------------------|-----------------------|--------------|----------|-------------------------|
|  | NPN                    | N/O contact                | Open end              | 2 m          | 8150172  | SDBT-MSB-1L-NU-K-2-LE   |
|   |                        |                            | Plug M8, A-coded      | 0.3 m        | 8150175  | SDBT-MSB-1L-NU-K-0,3-M8 |
|   | PNP                    |                            | Open end              | 2 m          | 8150171  | SDBT-MSB-1L-PU-K-2-LE   |
|   |                        |                            | Plug M8, A-coded      | 0.3 m        | 8150174  | SDBT-MSB-1L-PU-K-0,3-M8 |
|   | Non-contacting, 2-wire |                            | Open end              | 2 m          | 8150173  | SDBT-MSB-1L-ZU-K-2-LE   |

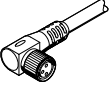
## Connecting cables NEBU, straight

|   | Electrical connection 1, connector system | Electrical connection 2, connector system | Electrical connection 2, number of connections/cores | Cable length | Part no. | Type                |
|---|---|---|--|--------------|----------|---------------------|
|  | M8x1, A-coded, to EN 61076-2-104          | Open end                                  | 3  | 2.5 m        | 541333   | NEBU-M8G3-K-2.5-LE3 |
|   |   |   |  | 5 m          | 541334   | NEBU-M8G3-K-5-LE3   |

## Connecting cables NEBU, angled

|   | Electrical connection 1, connector system | Electrical connection 2, connector system | Electrical connection 2, number of connections/cores | Cable length | Part no. | Type                |
|---|---|---|--|--------------|----------|---------------------|
|  | M8x1, A-coded, to EN 61076-2-104          | Open end                                  | 3  | 2.5 m        | 541338   | NEBU-M8W3-K-2.5-LE3 |

## Accessories

| Connecting cables NEBU, angled   |   |   |  |              |               |                          |
|--|---|---|--|--------------|---------------|--------------------------|
|  | Electrical connection 1, connector system | Electrical connection 2, connector system | Electrical connection 2, number of connections/cores | Cable length | Part no.      | Type                     |
|  | M8x1, A-coded, to EN 61076-2-104          | Open end                                  | 3  | 5 m          | <b>541341</b> | <b>NEBU-M8W3-K-5-LE3</b> |