

## Linear drives SLM, with guide

**FESTO**



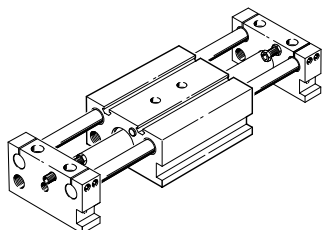
### Key features

#### Version

The linear drive SLM is a combination of a slide unit and a rodless linear drive. The drive moves the slide. The movement is transferred via a magnetic coupling. The modular system enables customised end-position cushioning and end-position sensing solutions.

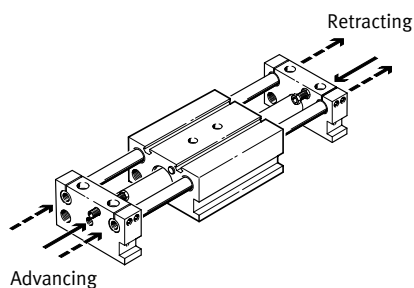
#### Basic unit

##### SLM-...-G



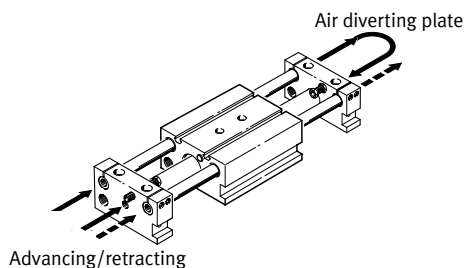
##### SLM-...-GL

With hollow guide rods



##### SLM-...-GU

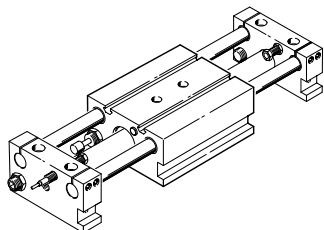
With hollow guide rods, air diverting plate and supply port on one side



#### Standard unit

##### SLM-...-S

With two self-adjusting shock absorbers and two inductive proximity switches with PNP output

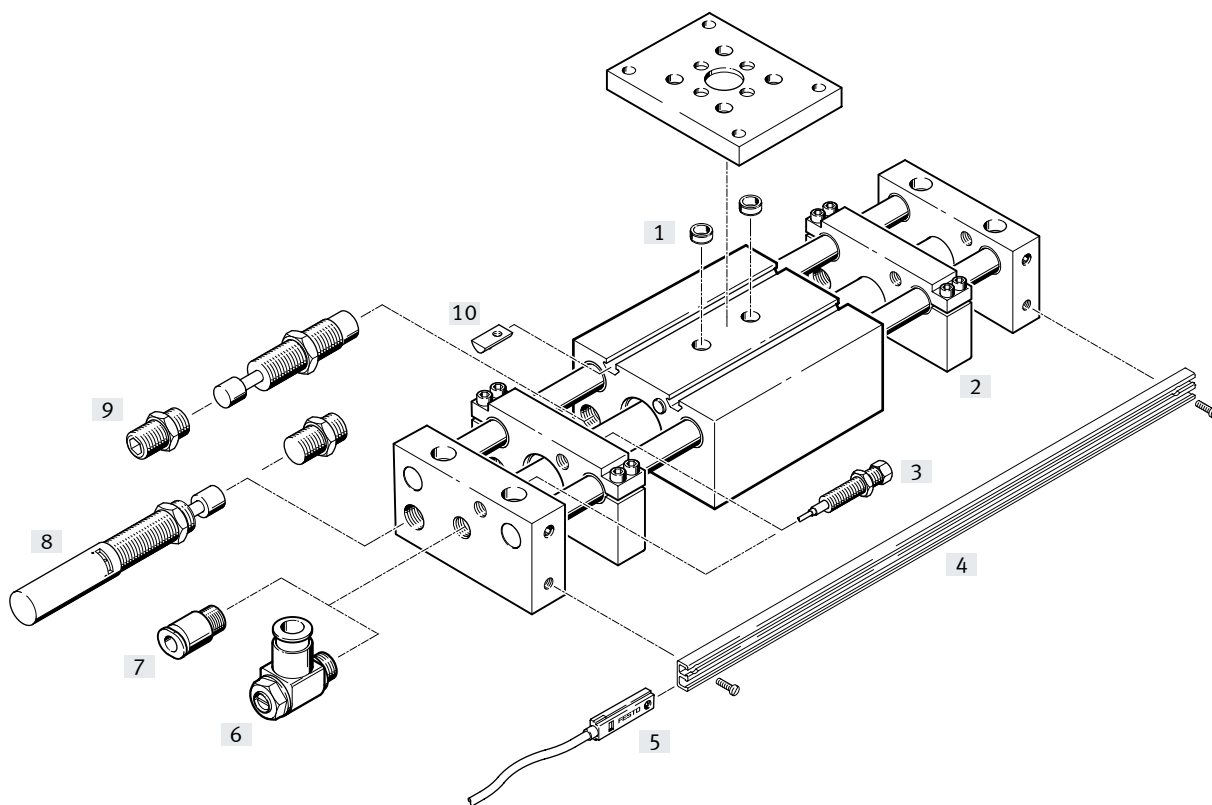


## Type codes

|            |                                                                                  |  |
|------------|----------------------------------------------------------------------------------|--|
| 001        | Series                                                                           |  |
| <b>SLM</b> | Linear drive                                                                     |  |
| 002        | Piston diameter                                                                  |  |
| <b>12</b>  | 12                                                                               |  |
| <b>16</b>  | 16                                                                               |  |
| <b>20</b>  | 20                                                                               |  |
| <b>25</b>  | 25                                                                               |  |
| <b>32</b>  | 32                                                                               |  |
| <b>40</b>  | 40                                                                               |  |
| 003        | Stroke                                                                           |  |
| ...        | 10 ... 1500                                                                      |  |
| 004        | Guide                                                                            |  |
| <b>KF</b>  | Recirculating ball bearing guide                                                 |  |
| 005        | Position sensing                                                                 |  |
| <b>A</b>   | For proximity sensor                                                             |  |
| 006        | Basic unit                                                                       |  |
| <b>G</b>   | Linear drive unit with pneumatic drive                                           |  |
| <b>GL</b>  | Linear drive unit with pneumatic drive and hollow guide rods                     |  |
| <b>GU</b>  | Linear drive unit with pneumatic drive and hollow guide rods and reversing plate |  |
| 007        | Shock absorber at front                                                          |  |
|            | None                                                                             |  |
| <b>CV</b>  | Shock absorber, self-adjusting, with stop, at front                              |  |
| <b>YV</b>  | Shock absorber, adjustable, with stop at front                                   |  |

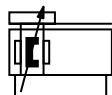
|           |                                                                     |  |
|-----------|---------------------------------------------------------------------|--|
| 008       | Shock absorber at rear                                              |  |
|           | None                                                                |  |
| <b>CH</b> | Shock absorber, self-adjusting, with stop at rear                   |  |
| <b>YH</b> | Shock absorber, adjustable, with stop at rear                       |  |
| 009       | Sensor at front                                                     |  |
|           | None                                                                |  |
| <b>PV</b> | Inductive proximity sensor, PNP, cable 2.5 m, stop sleeve, at front |  |
| <b>NV</b> | Inductive proximity sensor, NPN, 2.5 m cable, stop sleeve, at front |  |
| 010       | Sensor at rear                                                      |  |
|           | None                                                                |  |
| <b>PH</b> | Inductive proximity sensor, PNP, cable 2.5 m, stop sleeve, rear     |  |
| <b>NH</b> | Inductive proximity sensor, NPN, cable 2.5 m, stop sleeve, at rear  |  |
| 011       | Stroke adjustment at front                                          |  |
|           | None                                                                |  |
| <b>HV</b> | Stop plate at front                                                 |  |
| 012       | Stroke adjustment at rear                                           |  |
|           | None                                                                |  |
| <b>HH</b> | Stop plate at rear                                                  |  |
| 013       | Mounting rail                                                       |  |
|           | None                                                                |  |
| <b>E</b>  | Mounting rail                                                       |  |
| 014       | Slot nut                                                            |  |
|           | None                                                                |  |
| ...I      | 1 ... 10 units                                                      |  |

## Peripherals overview



| Accessories |                                                                     | Description                                               | → Page/Internet |
|-------------|---------------------------------------------------------------------|-----------------------------------------------------------|-----------------|
| [1]         | Centring sleeve<br>ZBH                                              | For centring loads and attachments on the slide           | 13              |
| [2]         | Stop plate<br>SLM-...-KF-A                                          | For variable stroke adjustment                            | 13              |
| [3]         | Switching stop with proximity switch<br>SL-...-SIE-PS/SL-...-SIE-NS | Can be integrated into the end or stop plate              | 12              |
| [4]         | Profile strip<br>SLZS/SLMS                                          | For mounting proximity switches SME/SMT-8                 | 13              |
| [5]         | Proximity switch<br>SME/SMT-8                                       | Can be integrated in the profile strip SLZS/SLMS          | 13              |
| [6]         | One-way flow control valve<br>GRLA                                  | For regulating speed                                      | 15              |
| [7]         | Push-in fitting<br>QS                                               | For connecting tubing with standard O.D.                  | qs              |
| [8]         | Shock absorber kit, adjustable<br>SLZ-...-KF-A                      | Higher speeds can be decelerated by using shock absorbers | 12              |
| [9]         | Shock absorber kit, self-adjusting<br>SLZ-...-YSR-C                 | Higher speeds can be decelerated by using shock absorbers | 12              |
| –           | Distance sensor<br>SOIA                                             | for monitoring the condition of the damping elements      | 13              |
| [10]        | Slot nut<br>NST                                                     | For mounting loads and attachments on the slide           | 13              |

## Datasheet



- Ø - Diameter  
12 ... 40 mm
- I - Stroke length  
10 ... 1500 mm


[www.festo.com](http://www.festo.com)

Repair service



| General technical data                     |                                  |            |                         |             |    |      |
|--------------------------------------------|----------------------------------|------------|-------------------------|-------------|----|------|
| Piston Ø                                   | 12                               | 16         | 20                      | 25          | 32 | 40   |
| Stroke [mm]                                | 10 ... 500                       | 10 ... 800 |                         | 10 ... 1500 |    |      |
| Pneumatic connection                       | M5                               |            | G1/8                    |             |    | G1/4 |
| Operating mode                             | Double-acting                    |            |                         |             |    |      |
| Design                                     | Slide unit                       |            |                         |             |    |      |
|                                            | Rodless linear drive             |            |                         |             |    |      |
| End-position cushioning via shock absorber | Self-adjusting at both ends      |            |                         |             |    |      |
|                                            | –                                | –          | Adjustable at both ends |             |    |      |
| Position sensing                           | Via proximity switch             |            |                         |             |    |      |
| Type of mounting                           | Via through-hole                 |            |                         |             |    |      |
|                                            | With female thread               |            |                         |             |    |      |
| Mounting position                          | Any                              |            |                         |             |    |      |
| Protection against rotation/guide          | Guide rods with slide/ball guide |            |                         |             |    |      |

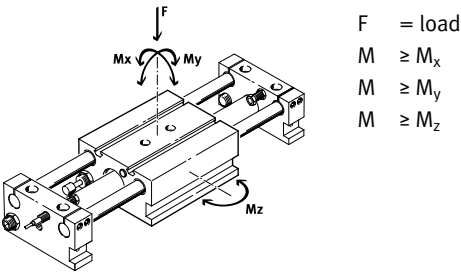
| Operating and environmental conditions |                                                                                            |    |    |    |    |    |
|----------------------------------------|--------------------------------------------------------------------------------------------|----|----|----|----|----|
| Piston Ø                               | 12                                                                                         | 16 | 20 | 25 | 32 | 40 |
| Operating medium                       | Compressed air to ISO 8573-1:2010 [7:–:–]                                                  |    |    |    |    |    |
| Note on the operating/pilot medium     | Lubricated operation possible (in which case lubricated operation will always be required) |    |    |    |    |    |
| Operating pressure [bar]               | ≤7                                                                                         |    |    |    |    |    |
| Ambient temperature <sup>1)</sup> [°C] | –20 ... +60                                                                                |    |    |    |    |    |

1) Note operating range of proximity switches.

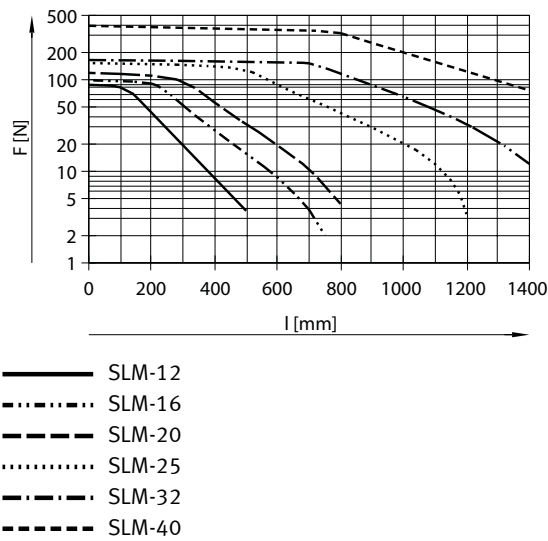
| Forces [N]                               |     |     |     |     |     |      |
|------------------------------------------|-----|-----|-----|-----|-----|------|
| Piston Ø                                 | 12  | 16  | 20  | 25  | 32  | 40   |
| Theoretical force at 6 bar, advancing    | 68  | 121 | 188 | 295 | 483 | 754  |
| Theoretical force at 6 bar, retracting   | 68  | 121 | 188 | 295 | 483 | 754  |
| Breakaway force of the magnetic coupling | 100 | 160 | 270 | 400 | 680 | 1050 |

Datasheet

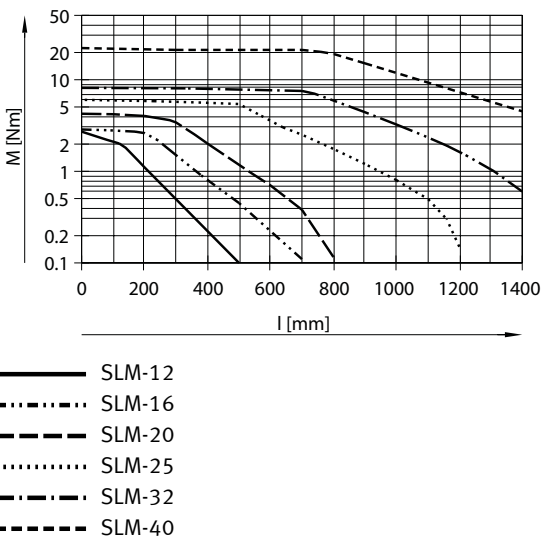
Permissible dynamic load



Permissible payload F as a function of stroke l



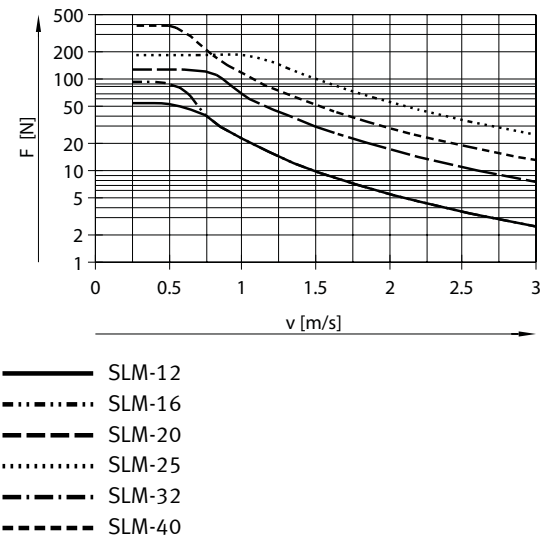
Permissible torque M as a function of stroke l



Permissible shock absorber load F as a function of impact velocity v

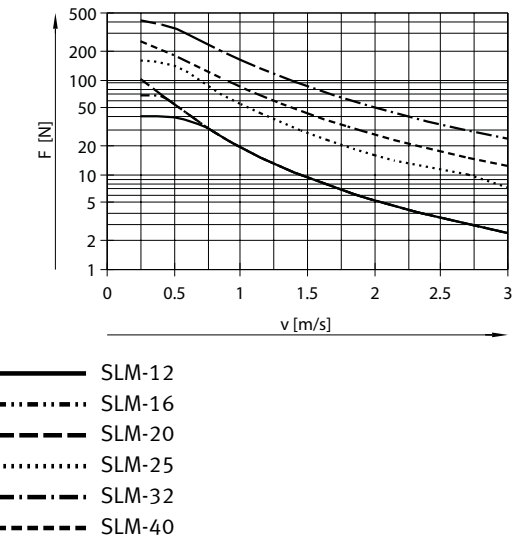
With horizontal installation

$F \geq m_L \times g$   
 $g = 9.81 \text{ N/mm}^2$   
 $m_L = \text{load [kg]}$



With vertical installation

$F \geq (m_L + m_E) \times g$   
 $g = 9.81 \text{ N/mm}^2$   
 $m_E = \text{moving mass (dead weight) [kg]}$   
 $m_L = \text{load [kg]}$

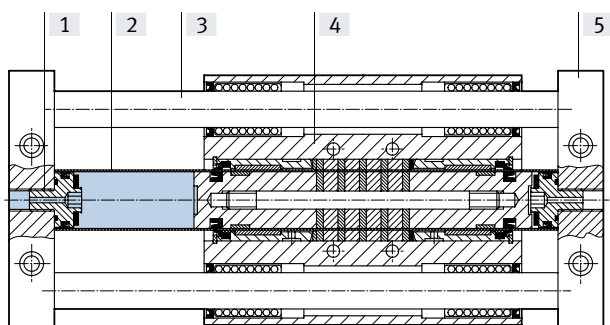


## Datasheet

| <b>Weight [g]</b>                  |      |      |      |      |      |      |
|------------------------------------|------|------|------|------|------|------|
| Piston Ø                           | 12   | 16   | 20   | 25   | 32   | 40   |
| Basic weight with 0 mm stroke      | 1110 | 1730 | 2620 | 3800 | 6400 | 9550 |
| Additional weight per 10 mm stroke | 10   | 15   | 21   | 36   | 55   | 85   |
| Moving mass                        | 620  | 1080 | 1400 | 2150 | 3150 | 5080 |

### Materials

#### Sectional view



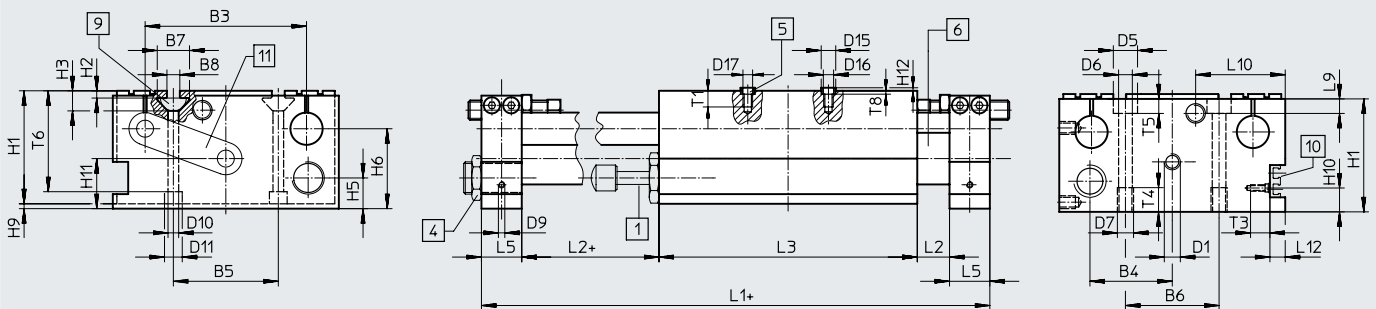
#### Linear drive

|     |                            |                            |
|-----|----------------------------|----------------------------|
| [1] | Cylinder barrel attachment | Wrought aluminium alloy    |
| [2] | Cylinder barrel            | High-alloy stainless steel |
| [3] | Guide rod                  | Steel                      |
| [4] | Slide                      | Wrought aluminium alloy    |
| [5] | End plate                  | Wrought aluminium alloy    |
| –   | Stop plate                 | Wrought aluminium alloy    |
| –   | Seals                      | NBR                        |

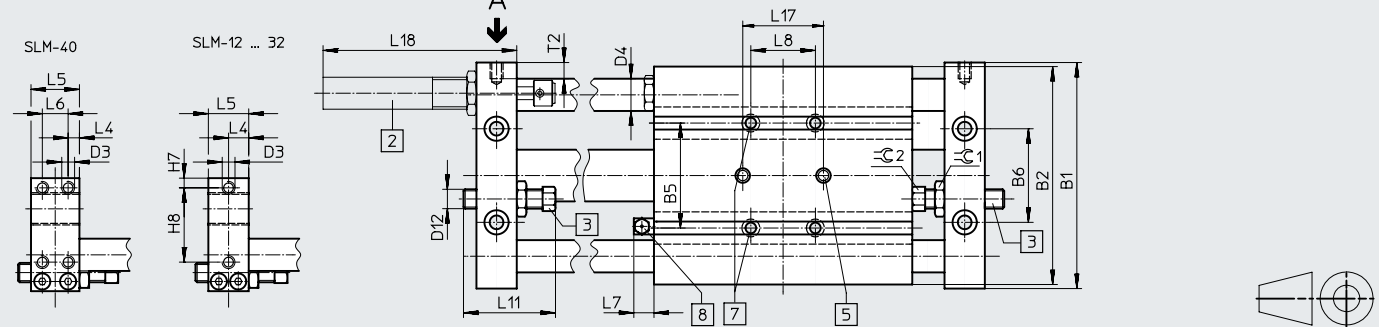
## Datasheet

### Dimensions

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

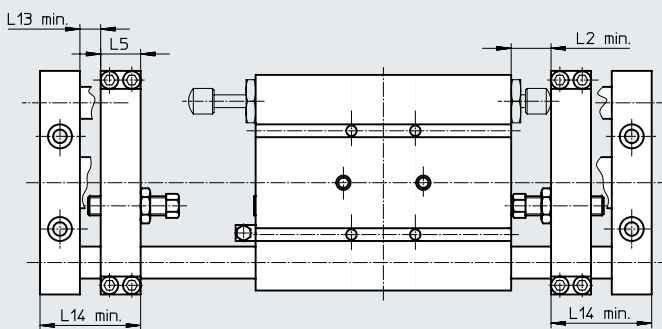


### View A



- |                                                                                |                                                   |
|--------------------------------------------------------------------------------|---------------------------------------------------|
| [1] Self-adjusting shock absorber, for front and rear mounting                 | [6] Pneumatic linear drive                        |
| [2] Adjustable shock absorber, for front and rear mounting on the end plate    | [7] Mounting thread/through-hole                  |
| [3] Switching stop with proximity switch, PNP/NPN, for front and rear mounting | [8] Lubrication nipple                            |
| [4] Stop for shock absorber                                                    | [9] Slot nut                                      |
| [5] Centring sleeves (2 included in scope of delivery)                         | [10] Mounting rail for proximity switch SME/SMT-8 |
|                                                                                | [11] Air diverting plate                          |
|                                                                                | + = plus stroke length                            |

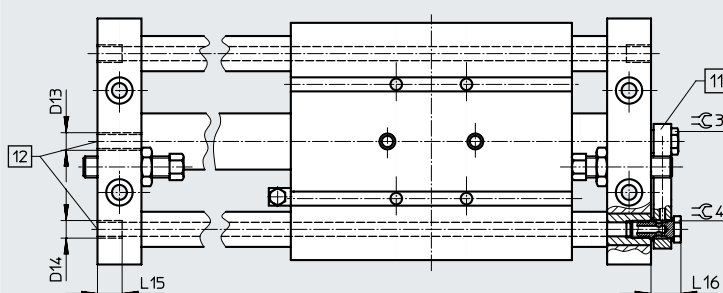
### With stop plate



Note

When using the stop plate at the front and/or rear, the stroke is reduced by at least the dimensions L5 and L13 for each side. If using a shock absorber or switching stop with proximity switch at the front and/or rear, the stroke is additionally reduced by at least dimension L2 per side.

### With hollow guide rod and air diverting plate



- [11] Air diverting plate  
[12] Compressed air supply port

## Datasheet

| ∅<br>[mm] | B1  | B2  | B3<br>±0.03 | B4   | B5<br>±0.2 | B6<br>±0.2 | B7   | B8 | D1   | D3 | D4<br>∅<br>h6 | D5<br>∅ | D6<br>∅ | D7  | D9 | D10<br>∅ |
|-----------|-----|-----|-------------|------|------------|------------|------|----|------|----|---------------|---------|---------|-----|----|----------|
| 12        | 74  | 71  | 52          | 26.5 | 26         | 35         | 11.6 | 5  | M5   | M5 | 8             | 10      | 5.3     | M6  | M4 | 5.3      |
| 16        | 84  | 80  | 58          | 31   | 32         | 40         | 11.6 | 5  | M5   | M5 | 10            | 10      | 5.3     | M6  | M4 | 5.5      |
| 20        | 100 | 96  | 72          | 36.5 | 40         | 47         | 11.6 | 5  | G1/8 | M6 | 12            | 11      | 6.8     | M8  | M4 | 5.5      |
| 25        | 114 | 110 | 80          | 39.5 | 45         | 48         | 11.6 | 5  | G1/8 | M6 | 16            | 10.5    | 6.8     | M8  | M4 | 5.5      |
| 32        | 140 | 135 | 100         | 51   | 65         | 58         | 20   | 8  | G1/8 | M8 | 20            | 15      | 8.5     | M10 | M4 | 6.6      |
| 40        | 166 | 160 | 118         | 63   | 75         | 78         | 20   | 8  | G1/4 | M6 | 25            | 15      | 8.5     | M10 | M4 | 6.6      |

| ∅<br>[mm] | D11<br>∅ | D12     | D13  | D14  | D15<br>∅<br>H7 | D16<br>∅ | D17 | H1 | H2  | H3   | H5   | H6   | H7  | H8<br>±0.2 | H9 |
|-----------|----------|---------|------|------|----------------|----------|-----|----|-----|------|------|------|-----|------------|----|
| 12        | 9        | M6x0.75 | M5   | –    | 9              | 6.4      | M6  | 38 | 1.8 | 6.4  | 11.5 | 27   | 3.5 | 31         | 2  |
| 16        | 10       | M6x0.75 | M5   | M5   | 9              | 6.4      | M6  | 40 | 1.8 | 6.4  | 12   | 28.5 | 4.5 | 31         | 2  |
| 20        | 10       | M8x1    | G1/8 | M5   | 9              | 6.4      | M6  | 50 | 1.8 | 6.4  | 16   | 36   | 5   | 40         | 2  |
| 25        | 10       | M8x1    | G1/8 | M5   | 9              | 6.4      | M6  | 55 | 1.8 | 6.4  | 14   | 36.5 | 5   | 34         | 2  |
| 32        | 11       | M12x1   | G1/8 | G1/8 | 9              | 6.4      | M6  | 70 | 4.5 | 12.5 | 19   | 49.5 | 6   | 46         | 3  |
| 40        | 11       | M12x1   | G1/4 | G1/4 | 9              | 6.4      | M6  | 75 | 4.5 | 12.5 | 19   | 51   | 5.5 | 51.5       | 3  |

| ∅<br>[mm] | H10  | H11  | H12 | L1  | L2 | L3  | L4   | L5 | L6 | L7   | L8<br>±0.2 | L9  | L10  | L11 | L12 | L13 |
|-----------|------|------|-----|-----|----|-----|------|----|----|------|------------|-----|------|-----|-----|-----|
| 12        | 16   | 15.5 | 1.9 | 139 | 12 | 85  | 7.5  | 15 | –  | 11   | 19         | 6.5 | 37   | 33  | –   | 7   |
| 16        | 16   | 19   | 1.9 | 154 | 12 | 100 | 7.5  | 15 | –  | 11   | 32         | 6   | 31.5 | 33  | –   | 7   |
| 20        | 16   | 22   | 1.9 | 192 | 16 | 120 | 10   | 20 | –  | 12.5 | 26         | 8   | 44   | 45  | –   | 10  |
| 25        | 16   | 25   | 1.9 | 212 | 16 | 140 | 10   | 20 | –  | 12.5 | 26         | 8   | 45   | 45  | –   | 10  |
| 32        | 14.8 | 31   | 1.9 | 250 | 20 | 160 | 12.5 | 25 | –  | 12.5 | 40         | 9   | 55.5 | 57  | 9.5 | 13  |
| 40        | 15.8 | 36.5 | 1.9 | 270 | 20 | 180 | 6.5  | 25 | 12 | 12.5 | 50         | 9   | 61.5 | 57  | 10  | 13  |

| ∅<br>[mm] | L14 | L15 | L16  | L17 <sup>1)</sup> | L18 | T1 | T2  | T3 | T4 | T5  | T6   | T8<br>+0.2 | ≈C1 | ≈C2 | ≈C3 | ≈C4 |
|-----------|-----|-----|------|-------------------|-----|----|-----|----|----|-----|------|------------|-----|-----|-----|-----|
| 12        | 37  | –   | –    | 40                | –   | 10 | 7   | 12 | 10 | 5.7 | 30.5 | 2.1        | 10  | 8   | –   | –   |
| 16        | 37  | 8   | 12.5 | 40                | –   | 10 | 6.5 | 12 | 10 | 5.7 | 34.3 | 2.1        | 10  | 8   | 13  | –   |
| 20        | 50  | 8   | 19.5 | 40                | 97  | 10 | 9   | 12 | 12 | 6.8 | 44   | 2.1        | 13  | 11  | 13  | 8   |
| 25        | 50  | 10  | 19.5 | 40                | 97  | 10 | 9   | 12 | 12 | 6.8 | 49.3 | 2.1        | 13  | 11  | 13  | –   |
| 32        | 63  | 14  | 15.5 | 40                | 115 | 10 | 10  | 12 | 15 | 9   | 62.5 | 2.1        | 19  | 13  | 13  | –   |
| 40        | 63  | 15  | 17   | 40                | 115 | 10 | 10  | 12 | 16 | 9   | 61   | 2.1        | 19  | 13  | 17  | –   |

1) Tolerance for centring hole ±0.03 mm  
Tolerance for thread ±0.1 mm

# Ordering data – Modular product system

| Ordering table    |                                        |                                                                                   |       |                                               |       |       |            |       |            |
|-------------------|----------------------------------------|-----------------------------------------------------------------------------------|-------|-----------------------------------------------|-------|-------|------------|-------|------------|
| Size              | 12                                     | 16                                                                                | 20    | 25                                            | 32    | 40    | Conditions | Code  | Enter code |
| Module no.        | 32781                                  | 32782                                                                             | 32783 | 32784                                         | 32785 | 32786 |            |       |            |
| Function          | Linear drive unit                      |                                                                                   |       |                                               |       |       |            | SLM   | SLM        |
| Size<br>[mm]      | 12                                     | 16                                                                                | 20    | 25                                            | 32    | 40    |            | -...  |            |
| Stroke<br>[mm]    | 10 ... 500                             | 10 ... 800                                                                        |       | 10 ... 1500                                   |       |       |            | -...  |            |
| Guide             | With ball bushings                     |                                                                                   |       |                                               |       |       |            | -KF   | -KF        |
| Position sensing  | Via proximity switch                   |                                                                                   |       |                                               |       |       |            | -A    | -A         |
| Basic unit        | Linear drive unit with pneumatic drive |                                                                                   |       |                                               |       |       |            | -G    |            |
|                   | –                                      | Linear drive unit with pneumatic drive and hollow guide rods                      |       |                                               |       |       |            | -GL   |            |
|                   | –                                      | Linear drive unit with pneumatic drive, hollow guide rods and air diverting plate |       |                                               |       |       |            | -GU   |            |
| Shock absorber    | Front                                  | Self-adjusting shock absorber, with stop at front                                 |       |                                               |       |       |            | -CV   |            |
|                   |                                        | –                                                                                 | –     | Adjustable shock absorber, with stop at front |       |       |            | -YV   |            |
|                   | Rear                                   | Self-adjusting shock absorber, with stop at rear                                  |       |                                               |       |       |            | -CH   |            |
|                   |                                        | –                                                                                 | –     | Adjustable shock absorber, with stop at rear  |       |       |            | -YH   |            |
| Sensor (bonded)   | Front                                  | Inductive sensor with 2.5 m cable, PNP, with stop sleeve at front                 |       |                                               |       |       |            | -PV   |            |
|                   |                                        | Inductive sensor with 2.5 m cable, NPN, with stop sleeve at front                 |       |                                               |       |       |            | -NV   |            |
|                   | Rear                                   | Inductive sensor with 2.5 m cable, PNP, with stop sleeve at rear                  |       |                                               |       |       |            | -PH   |            |
|                   |                                        | Inductive sensor with 2.5 m cable, NPN, with stop sleeve at rear                  |       |                                               |       |       |            | -NH   |            |
| Stroke adjustment | Front                                  | Stop plate at the front                                                           |       |                                               |       |       | [1]        | -HV   |            |
|                   | Rear                                   | Stop plate at the rear                                                            |       |                                               |       |       | [2]        | -HH   |            |
| Mounting rail     | Mounting rail                          |                                                                                   |       |                                               |       |       |            | -E    |            |
| Slot nut          | 1 ... 10                               |                                                                                   |       |                                               |       |       |            | -...I |            |

## Ordering data – Modular products, package solution

| Ordering table   |                                    |            |       |             |       |       |            |      |  |            |
|------------------|------------------------------------|------------|-------|-------------|-------|-------|------------|------|--|------------|
| Size             | 12                                 | 16         | 20    | 25          | 32    | 40    | Conditions | Code |  | Enter code |
| Module no.       | 32781                              | 32782      | 32783 | 32784       | 32785 | 32786 |            |      |  |            |
| Function         | Linear drive unit                  |            |       |             |       |       |            | SLM  |  | SLM        |
| Size<br>[mm]     | 12                                 | 16         | 20    | 25          | 32    | 40    |            | -... |  |            |
| Stroke<br>[mm]   | 10 ... 500                         | 10 ... 800 |       | 10 ... 1500 |       |       |            | -... |  |            |
| Guide            | With ball bushings                 |            |       |             |       |       |            | -KF  |  | -KF        |
| Position sensing | Via proximity switch               |            |       |             |       |       |            | -A   |  | -A         |
| Standard unit    | Package solution S = G-CV-CH-PV-PH |            |       |             |       |       |            | -S   |  | -S         |

## Accessories

### Shock absorber kit

#### SLZ-...-YSR-C, self-adjusting

(Order code: CV, CH)

Material:

YSR-8-8-C: Nickel-plated brass

YSR-12-12-C, YSR-16-20-C:

Galvanised steel



| Ordering data |                                                       | Part no. | Type         |
|---------------|-------------------------------------------------------|----------|--------------|
| For ø<br>[mm] | Includes shock absorber<br>Datasheets → Internet: ysr |          |              |
| 12, 16        | YSR-8-8-C                                             | 115315   | SLZ-16-YSR-C |
| 20, 25        | YSR-12-12-C                                           | 115316   | SLZ-25-YSR-C |
| 32, 40        | YSR-16-20-C                                           | 115317   | SLZ-32-YSR-C |

### Shock absorber kit

#### SLZ-...-KF-A, adjustable

(Order code: YV, YH)

Material:

Galvanised steel



| Ordering data |                                                        | Part no. | Type        |
|---------------|--------------------------------------------------------|----------|-------------|
| For ø<br>[mm] | Includes shock absorber<br>Datasheets → Internet: dysr |          |             |
| 20, 25        | DYSR-12-12-Y5                                          | 114032   | SLZ-25-KF-A |
| 32, 40        | DYSR-16-20-Y5                                          | 114033   | SLZ-32-KF-A |

### Switching stop SL-...-SIE-PS

(Order code: PV, PH)

Kit with inductive proximity switch

PNP



### Switching stop SL-...-SIE-NS

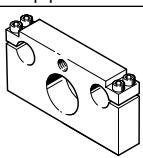
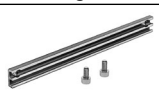
(Order code: NV, NH)

Kit with inductive proximity switch

NPN

| Ordering data |                                                                              | Part no. | Type             |
|---------------|------------------------------------------------------------------------------|----------|------------------|
| For ø<br>[mm] | Switching output<br>Includes proximity switch<br>Datasheets → Internet: sien |          |                  |
| 12, 16        | PNP                                                                          | 116251   | SL-1 0/16-SIE-PS |
|               | NPN                                                                          | 116252   | SL-1 0/16-SIE-NS |
| 20, 25        | PNP                                                                          | 116253   | SL-2 0/25-SIE-PS |
|               | NPN                                                                          | 116254   | SL-2 0/25-SIE-NS |
| 32, 40        | PNP                                                                          | 117525   | SL-3 2/50-SIE-PS |
|               | NPN                                                                          | 117526   | SL-3 2/50-SIE-NS |

## Accessories

| Ordering data – Accessories                                                       |               |                            |            |          |                 |                  |
|-----------------------------------------------------------------------------------|---------------|----------------------------|------------|----------|-----------------|------------------|
|                                                                                   | For ø<br>[mm] | Material                   | Order code | Part no. | Type            | PU <sup>1)</sup> |
| Stop plate SLM-...-KF-A                                                           |               |                            |            |          |                 |                  |
|  | 12            | Wrought aluminium alloy    | HV, HH     | 119527   | SLM-12-...-KF-A | 1                |
|                                                                                   | 16            |                            |            | 119528   | SLM-16-...-KF-A | 1                |
|                                                                                   | 20            |                            |            | 119529   | SLM-20-...-KF-A | 1                |
|                                                                                   | 25            |                            |            | 119530   | SLM-25-...-KF-A | 1                |
|                                                                                   | 32            |                            |            | 119531   | SLM-32-...-KF-A | 1                |
|                                                                                   | 40            |                            |            | 119532   | SLM-40-...-KF-A | 1                |
| Mounting rail SLZS/SLMS for proximity switch                                      |               |                            |            |          |                 |                  |
|  | 12            | Wrought aluminium alloy    | E          | 150916   | SLZS-16-...-... | 1                |
|                                                                                   | 16            |                            |            | 152744   | SLMS-16-...-... | 1                |
|                                                                                   | 20            |                            |            | 150917   | SLZS-25-...-... | 1                |
|                                                                                   | 25            |                            |            | 152745   | SLMS-25-...-... | 1                |
|                                                                                   | 32            |                            |            | 150918   | SLZS-32-...-... | 1                |
|                                                                                   | 40            |                            |            | 150919   | SLZS-40-...-... | 1                |
| Slot nut NST                                                                      |               |                            |            |          |                 |                  |
|  | 12 ... 25     | Non-alloyed tempered steel | I          | 150914   | NST-5-M5-1      | 1                |
|                                                                                   | 32, 40        |                            |            | 150915   | NST-8-M6-1      | 1                |
| Centring sleeve ZBH                                                               |               |                            |            |          |                 |                  |
|  | 16 ... 40     | Stainless steel            | –          | 8137184  | ZBH-9-B         | 10               |
|                                                                                   |               |                            |            |          |                 |                  |

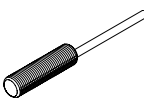
1) Packaging unit

## Monitoring with distance sensor SOIA

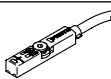
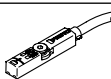
To monitor the application and condition of the damping elements. Enables predictive maintenance and increases reliability and accuracy.

The following parameters can be monitored:

- Impact velocity
- End position
- Energy consumption
- Residual energy
- Damping reserve

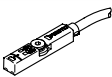
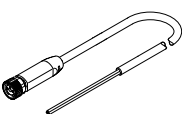
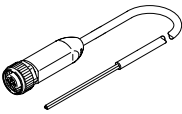
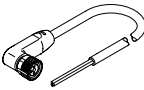
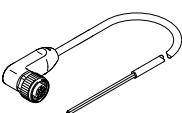
| Distance sensor SOIA, inductive                                                     |               |                                 |                                   |                       |          |                     |
|-------------------------------------------------------------------------------------|---------------|---------------------------------|-----------------------------------|-----------------------|----------|---------------------|
|                                                                                     | Mounting type | Displacement<br>measuring range | Switching output                  | Electrical connection | Part no. | Type                |
|  | Flush         | 0 ... 2 mm                      | PNP/NPN, switchable,<br>Push-pull | Open end              | 8161194  | SOIA-M8PB-PNLK-LE   |
|                                                                                     |               | 0 ... 4 mm                      |                                   |                       | 8161198  | SOIA-M12PB-PNLK-LE  |
|                                                                                     | Not flush     | 0 ... 4 mm                      |                                   |                       | 8161196  | SOIA-M8PNB-PNLK-LE  |
|                                                                                     |               | 0 ... 7 mm                      |                                   |                       | 8161200  | SOIA-M12PNB-PNLK-LE |

Datasheets → Internet: soia

| Ordering data – Proximity switch for T-slot, magneto-resistive                      |                                                                                |                  |                       |                  |          | Datasheets → Internet: smt |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|------------------|-----------------------|------------------|----------|----------------------------|
|                                                                                     | Type of mounting                                                               | Switching output | Electrical connection | Cable length [m] | Part no. | Type                       |
| N/O                                                                                 |                                                                                |                  |                       |                  |          |                            |
|  | Inserted in the slot from above, flush with the cylinder profile, short design | PNP              | Cable, 3-core         | 2.5              | 574335   | SMT-8M-A-PS-24V-E-2.5-OE   |
|                                                                                     |                                                                                |                  | Plug M8x1, 3-pin      | 0.3              | 574334   | SMT-8M-A-PS-24V-E-0.3-M8D  |
|                                                                                     |                                                                                |                  | Plug M12x1, 3-pin     | 0.3              | 574337   | SMT-8M-A-PS-24V-E-0.3-M12  |
|                                                                                     |                                                                                | NPN              | Cable, 3-core         | 2.5              | 574338   | SMT-8M-A-NS-24V-E-2.5-OE   |
|                                                                                     |                                                                                |                  | Plug M8x1, 3-pin      | 0.3              | 574339   | SMT-8M-A-NS-24V-E-0.3-M8D  |
| N/C                                                                                 |                                                                                |                  |                       |                  |          |                            |
|  | Inserted in the slot from above, flush with the cylinder profile, short design | PNP              | Cable, 3-core         | 7.5              | 574340   | SMT-8M-A-PO-24V-E-7.5-OE   |

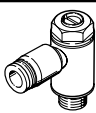
Datasheets → Internet: smt

## Accessories

| Ordering data – Proximity switch for T-slot, magnetic reed                         |                                                                  |                                                |                                               |                  |          |                         | Datasheets → Internet: sme |
|------------------------------------------------------------------------------------|------------------------------------------------------------------|------------------------------------------------|-----------------------------------------------|------------------|----------|-------------------------|----------------------------|
|                                                                                    | Type of mounting                                                 | Switching output                               | Electrical connection                         | Cable length [m] | Part no. | Type                    |                            |
| N/O                                                                                |                                                                  |                                                |                                               |                  |          |                         |                            |
|    | Inserted in the slot from above, flush with the cylinder profile | Contacting                                     | Cable, 3-core                                 | 2.5              | 543862   | SME-8M-DS-24V-K-2.5-OE  |                            |
|                                                                                    |                                                                  |                                                |                                               | 5.0              | 543863   | SME-8M-DS-24V-K-5.0-OE  |                            |
|                                                                                    |                                                                  |                                                | Cable, 2-core                                 | 2.5              | 543872   | SME-8M-ZS-24V-K-2.5-OE  |                            |
|                                                                                    |                                                                  |                                                | Plug M8x1, 3-pin                              | 0.3              | 543861   | SME-8M-DS-24V-K-0.3-M8D |                            |
| Connecting cables NEBA, straight, M8 connection                                    |                                                                  |                                                |                                               |                  |          |                         |                            |
|    | Electrical connection 1, connection technology                   | Electrical connection 2, connection technology | Electrical connection 2, number of pins/cores | Cable length     | Part no. | Type                    |                            |
|                                                                                    |                                                                  |                                                |                                               |                  |          |                         |                            |
|                                                                                    | M8x1 A-coded to EN 61076-2-104                                   | Open end                                       | 3                                             | 2.5 m            | 8078223  | NEBA-M8G3-U-2.5-N-LE3   |                            |
|                                                                                    |                                                                  |                                                |                                               | 5 m              | 8078224  | NEBA-M8G3-U-5-N-LE3     |                            |
| Connecting cables NEBA, straight, M12 connection                                   |                                                                  |                                                |                                               |                  |          |                         |                            |
|  | Electrical connection 1, connection technology                   | Electrical connection 2, connection technology | Electrical connection 2, number of pins/cores | Cable length     | Part no. | Type                    |                            |
|                                                                                    |                                                                  |                                                |                                               |                  |          |                         |                            |
|                                                                                    | M12x1, A-coded to EN 61076-2-101                                 | Open end                                       | 3                                             | 2.5 m            | 8078236  | NEBA-M12G5-U-2.5-N-LE3  |                            |
|                                                                                    |                                                                  |                                                |                                               | 5 m              | 8078237  | NEBA-M12G5-U-5-N-LE3    |                            |
| Connecting cables NEBA, angled, M8 connection                                      |                                                                  |                                                |                                               |                  |          |                         |                            |
|  | Electrical connection 1, connection technology                   | Electrical connection 2, connection technology | Electrical connection 2, number of pins/cores | Cable length     | Part no. | Type                    |                            |
|                                                                                    |                                                                  |                                                |                                               |                  |          |                         |                            |
|                                                                                    | M8x1 A-coded to EN 61076-2-104                                   | Open end                                       | 3                                             | 2.5 m            | 8078230  | NEBA-M8W3-U-2.5-N-LE3   |                            |
|                                                                                    |                                                                  |                                                |                                               | 5 m              | 8078231  | NEBA-M8W3-U-5-N-LE3     |                            |
| Connecting cables NEBA, angled, M12 connection                                     |                                                                  |                                                |                                               |                  |          |                         |                            |
|  | Electrical connection 1, connection technology                   | Electrical connection 2, connection technology | Electrical connection 2, number of pins/cores | Cable length     | Part no. | Type                    |                            |
|                                                                                    |                                                                  |                                                |                                               |                  |          |                         |                            |
|                                                                                    | M12x1, A-coded to EN 61076-2-101                                 | Open end                                       | 3                                             | 2.5 m            | 8078245  | NEBA-M12W5-U-2.5-N-LE3  |                            |
|                                                                                    |                                                                  |                                                |                                               | 5 m              | 8078246  | NEBA-M12W5-U-5-N-LE3    |                            |

## Accessories

| Ordering data – Slot cover for T-slot                                             |            |               |               |                |
|-----------------------------------------------------------------------------------|------------|---------------|---------------|----------------|
|                                                                                   | Mounting   | Length<br>[m] | Part no.      | Type           |
|  | Insertable | 2x 0.5        | <b>151680</b> | <b>ABP-5-S</b> |

| Ordering data – One-way flow control valves                                       |                      |                 |              | Datasheets → Internet: grla |                         |
|-----------------------------------------------------------------------------------|----------------------|-----------------|--------------|-----------------------------|-------------------------|
|                                                                                   | Connection<br>Thread | For tubing O.D. | Material     | Part no.                    | Type                    |
|  | M5                   | 3               | Metal design | <b>193137</b>               | <b>GRLA-M5-QS-3-D</b>   |
|                                                                                   |                      | 4               |              | <b>193138</b>               | <b>GRLA-M5-QS-4-D</b>   |
|                                                                                   |                      | 6               |              | <b>193139</b>               | <b>GRLA-M5-QS-6-D</b>   |
|                                                                                   | G1/8                 | 3               |              | <b>193142</b>               | <b>GRLA-1/8-QS-3-D</b>  |
|                                                                                   |                      | 4               |              | <b>193143</b>               | <b>GRLA-1/8-QS-4-D</b>  |
|                                                                                   |                      | 6               |              | <b>193144</b>               | <b>GRLA-1/8-QS-6-D</b>  |
|                                                                                   |                      | 8               |              | <b>193145</b>               | <b>GRLA-1/8-QS-8-D</b>  |
|                                                                                   | G1/4                 | 6               |              | <b>193146</b>               | <b>GRLA-1/4-QS-6-D</b>  |
|                                                                                   |                      | 8               |              | <b>193147</b>               | <b>GRLA-1/4-QS-8-D</b>  |
|                                                                                   |                      | 10              |              | <b>193148</b>               | <b>GRLA-1/4-QS-10-D</b> |
|                                                                                   |                      |                 |              |                             |                         |