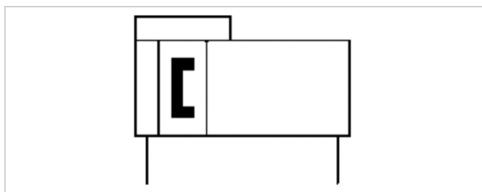


# Guided slide unit, Series GSU

- Ø 16-25 mm
- Ports M5, G 1/8
- double-acting
- with magnetic piston
- mini ball rail guide, ball rail guide
- Cushioning hydraulic, non-adjustable
- Easy2Combine capable
- adjustable end stops



|  |                 |
|--|-----------------|
| Working pressure min./max.             | See table below |
| Ambient temperature min./max.          | 0 ... 60 °C     |
| Medium                                 | Compressed air  |
| Max. particle size                     | 5 µm            |
| Oil content of compressed air          | 0 ... 1 mg/m³   |
| Pressure for determining piston forces | 6.3 bar         |
| Weight                                 | See table below |

## Technical data

| Piston Ø   | 16 mm      | 25 mm      |
|------------|------------|------------|
| Stroke 200 | R402000986 | R402000995 |
| 300        | R402000987 | R402000996 |
| 400        | R402000988 | R402000997 |
| 500        | R402000989 | R402000998 |
| 600        | R402000990 | R402000999 |
| 700        | R402000991 | R402001000 |
| 800        | R402000992 | R402001001 |
| 900        | R402000993 | R402001002 |
| 1000       | R402000994 | R402001003 |

Stroke length adjustable and end stops can be mounted over the entire stroke.

## Technical data

| Piston Ø     | 16 mm | 25 mm |
|--------------|-------|-------|
| Piston force | 127 N | 309 N |

| Piston Ø          | 16 mm   | 25 mm   |
|-------------------|---------|---------|
| Cushioning length | 10 mm   | 12,5 mm |
| Cushioning energy | 2,3 J   | 3,3 J   |
| Speed max.        | 1,5 m/s | 1,5 m/s |
| +10 mm stroke     | -       | -       |
| Stroke max.       | 1000 mm | 1000 mm |

## Technical information

The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .

The oil content of compressed air must remain constant during the life cycle.

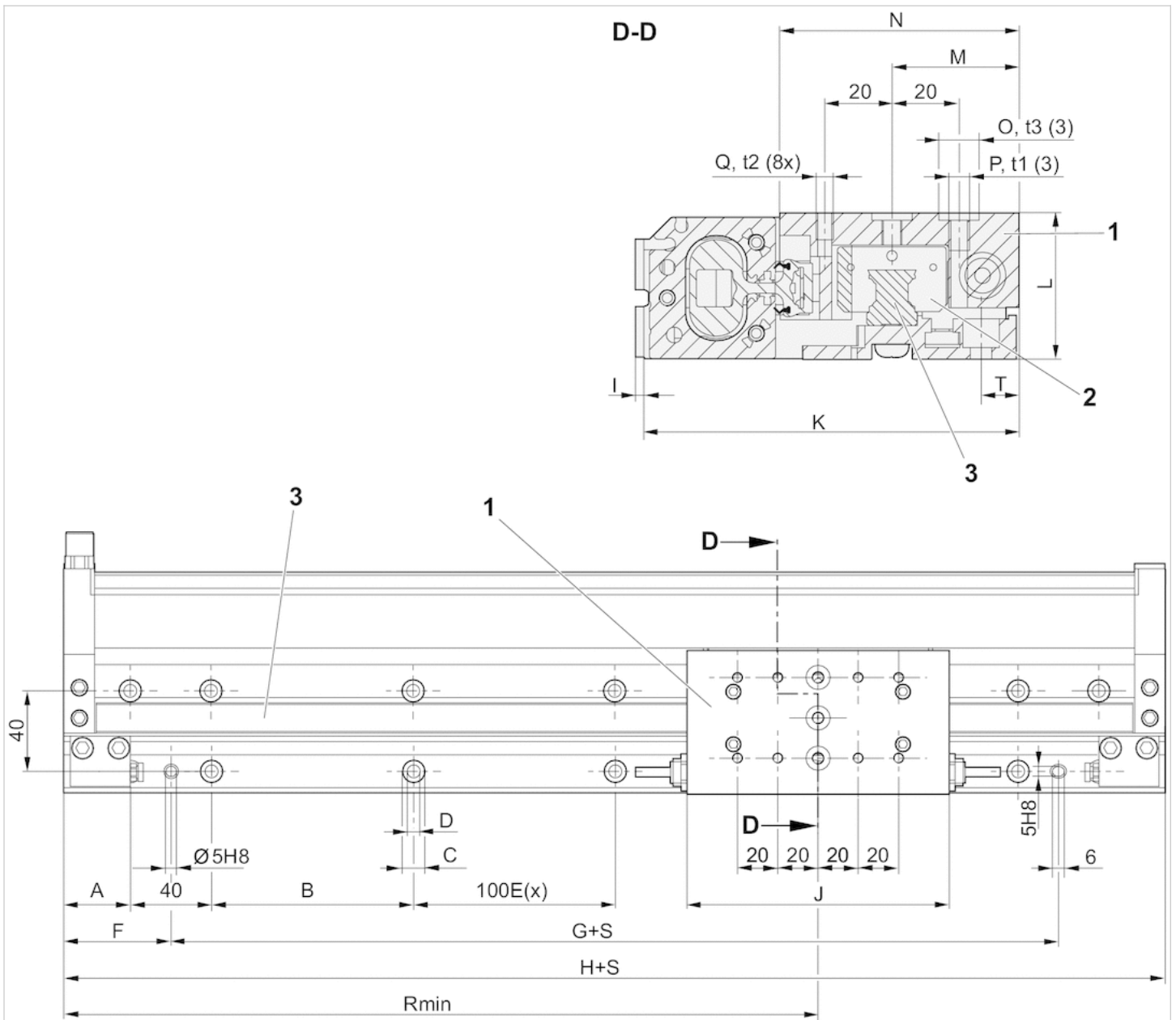
Use only the approved oils from AVENTICS. Further information can be found in the "Technical information" document (available in the MediaCentre).

## Technical information

| Material        |  |
|-----------------|--|
| Cylinder tube   | Aluminum, anodized                         |
| Cap             | Aluminum, anodized                         |
| Seal            | Polyurethane                               |
| Sealing strips  | Polyurethane, Stainless steel              |
| Ball rail table | Aluminum, anodized                         |
| Guide shuttle   | Stainless steel, Steel                     |
| Guide rail      | Stainless steel, hardened, Steel, hardened |

## Dimensions

### Dimensions



S = stroke

t1, t2 = depth of thread  
t3 = sinkhole depth

- 1) Ball rail table
- 2) Guide shuttle
- 3) Guide rail

## Dimensions

| Piston Ø | A  | B   | C     | D     | F  | G   | H   | I   | J   | K      | L    | M     | N     | O       | t3       | P  |
|----------|----|-----|-------|-------|----|-----|-----|-----|-----|--------|------|-------|-------|---------|----------|----|
| 16 mm    | 25 | 92  | Ø 9,5 | Ø 5,5 | 45 | 124 | 214 | 3.6 | 110 | 99     | 29   | 33.5  | 69    | Ø 9 H8  | 2,1 +0,2 | M5 |
| 25 mm    | 33 | 100 | Ø 11  | Ø 6,6 | 53 | 140 | 246 | 2.5 | 130 | 111.65 | 43.5 | 37.85 | 71.15 | Ø 12 H8 | 2,1 +0,2 | M6 |

| t1 | Q  | t2 | R 1) | T   |
|----|----|----|------|-----|
| 9  | M4 | 8  | 107  | 7.5 |

| t1 | Q  | t2 | R 1) | T     |
|----|----|----|------|-------|
| 9  | M5 | 8  | 123  | 11.35 |

1) Min.

## Weight [kg]

| Piston Ø | S    | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 |
|----------|------|-----|-----|-----|-----|-----|-----|-----|-----|------|
| 16 mm    | E(x) | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9    |
| 25 mm    | E(x) | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9    |

S = stroke

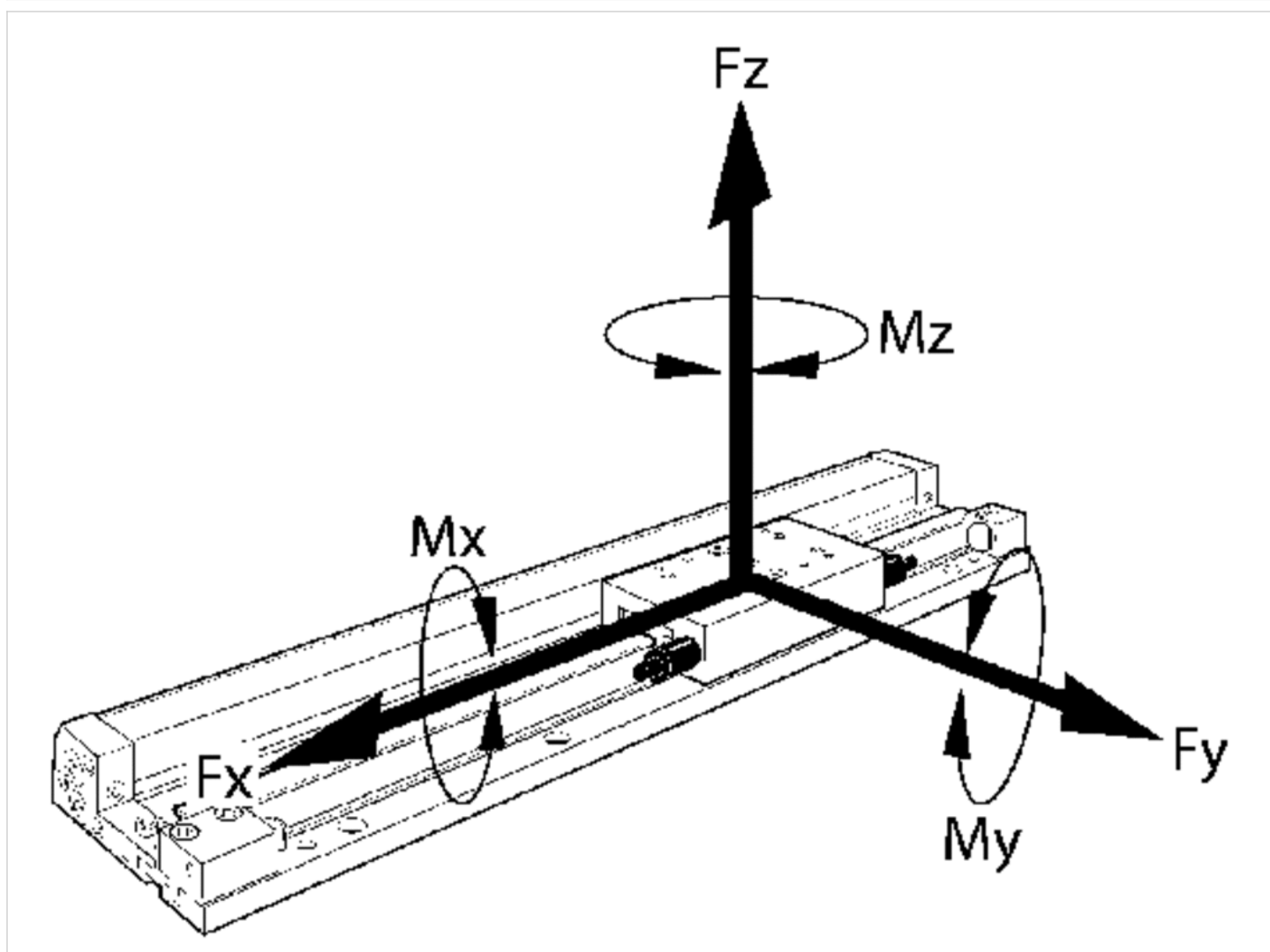
## Stroke-dependent dimensions

| Piston Ø | S    | Weight kg |
|----------|------|-----------|
| 16 mm    | 200  | 1,78 kg   |
| 16 mm    | 300  | 2,09 kg   |
| 16 mm    | 400  | 2,4 kg    |
| 16 mm    | 500  | 2,71 kg   |
| 16 mm    | 600  | 3,02 kg   |
| 16 mm    | 700  | 3,33 kg   |
| 16 mm    | 800  | 3,64 kg   |
| 16 mm    | 900  | 3,95 kg   |
| 16 mm    | 1000 | 4,26 kg   |
| 25 mm    | 200  | 3,21 kg   |
| 25 mm    | 300  | 3,73 kg   |
| 25 mm    | 400  | 4,25 kg   |
| 25 mm    | 500  | 4,77 kg   |
| 25 mm    | 600  | 5,29 kg   |
| 25 mm    | 700  | 5,81 kg   |
| 25 mm    | 800  | 6,33 kg   |
| 25 mm    | 900  | 6,85 kg   |
| 25 mm    | 1000 | 7,37 kg   |

S = stroke

## Dimensions

Permissible forces  $F_x$   $F_y$   $F_z$  and torques  $M_x$   $M_y$   $M_z$  static

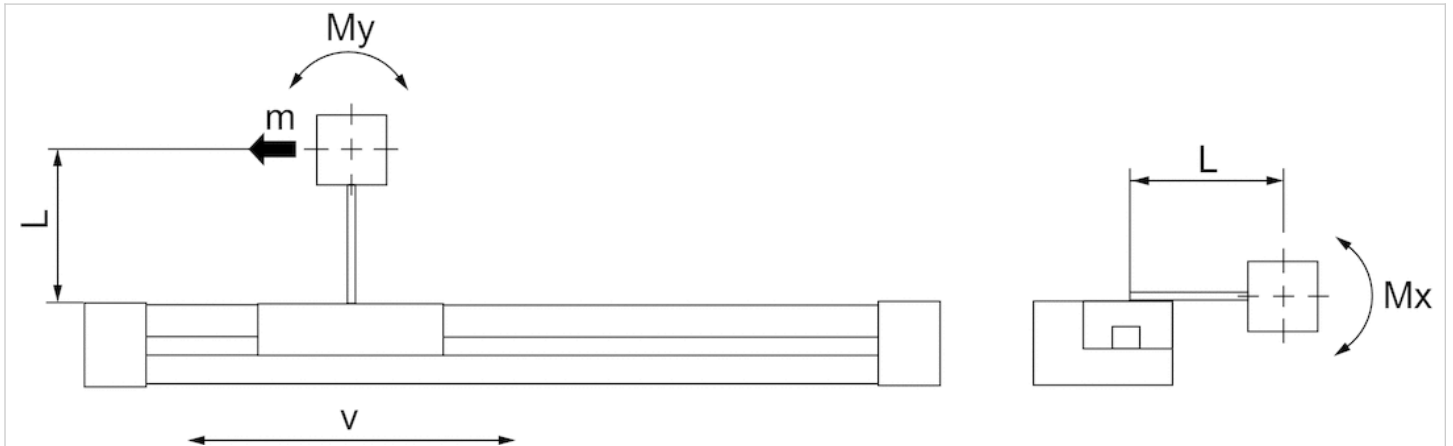


## Dimensions

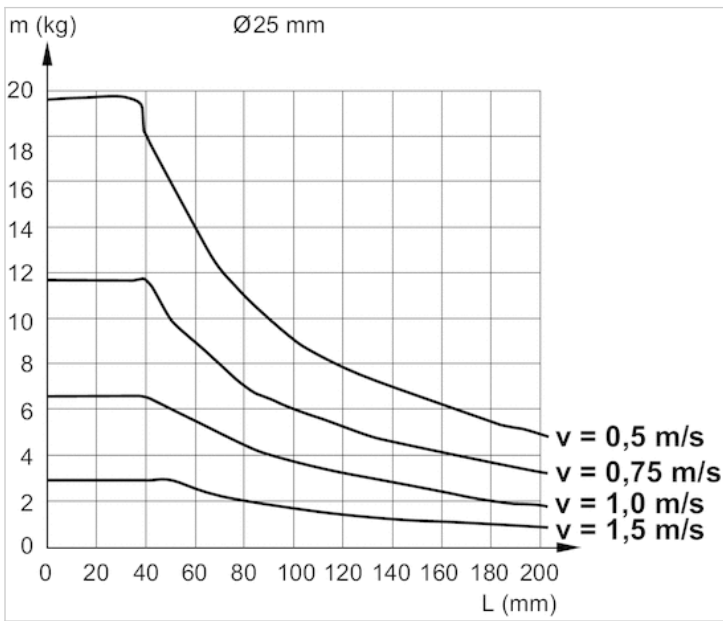
| Piston Ø | $F_x$ [N] | $F_y$ [N] | $F_z$ [N] | $M_x$ [Nm] | $M_y$ [Nm] | $M_z$ [Nm] |
|----------|-----------|-----------|-----------|------------|------------|------------|
| 16 mm    | 880       | 880       | 1500      | 20         | 40         | 40         |
| 25 mm    | 1070      | 1070      | 2500      | 55         | 65         | 65         |

# Dimensions

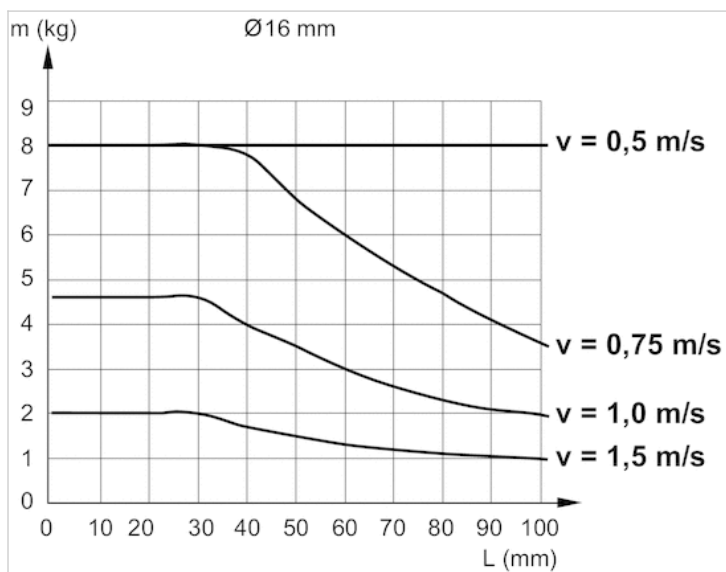
## dynamic



$L$  indicates the distance between the mounting plate center and the center of mass of the attached parts.



# Diagrams



# Sensor, Series ST4

- 4 mm C-slot
- with cable
- Plug, M8, 3-pin, with knurled screw
- UL certification
- Reed, electronic PNP
- Direct mounting for series PRA, SSI, GSU, RTC, CKP, GPC, MSC, MSN, RCM, CVI
- Indirect mounting for series MNI, CSL-RD, ICM



|                                |   |
|--------------------------------|---|
| Certificates                   | UL (Underwriters Laboratories), cULus, RoHS |
| Ambient temperature min./max.  | -30 ... 80 °C                               |
| Protection class               | IP65, IP67                                  |
| Switching point precision      | ±0,1 mT                                     |
| Min./max. DC operating voltage | See table below                             |
| Switching logic                | NO (make contact)                           |
| Display                        | LED   |
| LED status display             | Yellow                                      |
| Vibration resistance           | 10 - 55 Hz, 1 mm                            |
| Shock resistance               | 30 g / 11 ms                                |
| Mounting screw                 | Combination: slotted and hexagon socket     |

## Technical data

| Part No.   |   | for  |
|------------|---|--|
| R412019490 |  | PRA, SSI, GSU, RTC, CKP, GPC, MSC, MSN, RCM, CVI |
| R412019686 |  | PRA, SSI, GSU, RTC, CKP, GPC, MSC, MSN, RCM, CVI |
| R412019493 |  | PRA, SSI, GSU, RTC, CKP, GPC, MSC, MSN, RCM, CVI |
| R412019687 |  | PRA, SSI, GSU, RTC, CKP, GPC, MSC, MSN, RCM, CVI |

| Part No.   | Type of contact | Cable length<br>L | Min./max. DC operating voltage |
|------------|-----------------|-------------------|--------------------------------|
| R412019490 | Reed            | 0,3 m             | 5 ... 30 V DC                  |
| R412019686 | Reed            | 0,5 m             | 5 ... 30 V DC                  |
| R412019493 | electronic PNP  | 0,3 m             | 10 ... 30 V DC                 |
| R412019687 | electronic PNP  | 0,5 m             | 10 ... 30 V DC                 |

| Part No.   | Voltage drop U at I <sub>max</sub> | DC switching current, max. |
|------------|------------------------------------|----------------------------|
| R412019490 | ≤ 0,5 V                            | 0,13 A                     |
| R412019686 | ≤ 0,5 V                            | 0,13 A                     |
| R412019493 | ≤ 2,5 V                            | 0,1 A                      |
| R412019687 | ≤ 2,5 V                            | 0,1 A                      |

| Part No.   | AC switching current, max. | Switching capacity |
|------------|----------------------------|--------------------|
| R412019490 | 0,13 A                     | 3 W / 3 VA         |



| Part No.   | AC switching current, max. | Switching capacity |
|------------|----------------------------|--------------------|
| R412019686 | 0,13 A                     | 3 W / 3 VA         |
| R412019493 | -                          | -                  |
| R412019687 | -                          | -                  |

| Part No.   | Version  |
|------------|--|
| R412019490 | Protected against polarity reversal                          |
| R412019686 | Protected against polarity reversal                          |
| R412019493 | short circuit resistant, Protected against polarity reversal |
| R412019687 | short circuit resistant, Protected against polarity reversal |

## Technical information

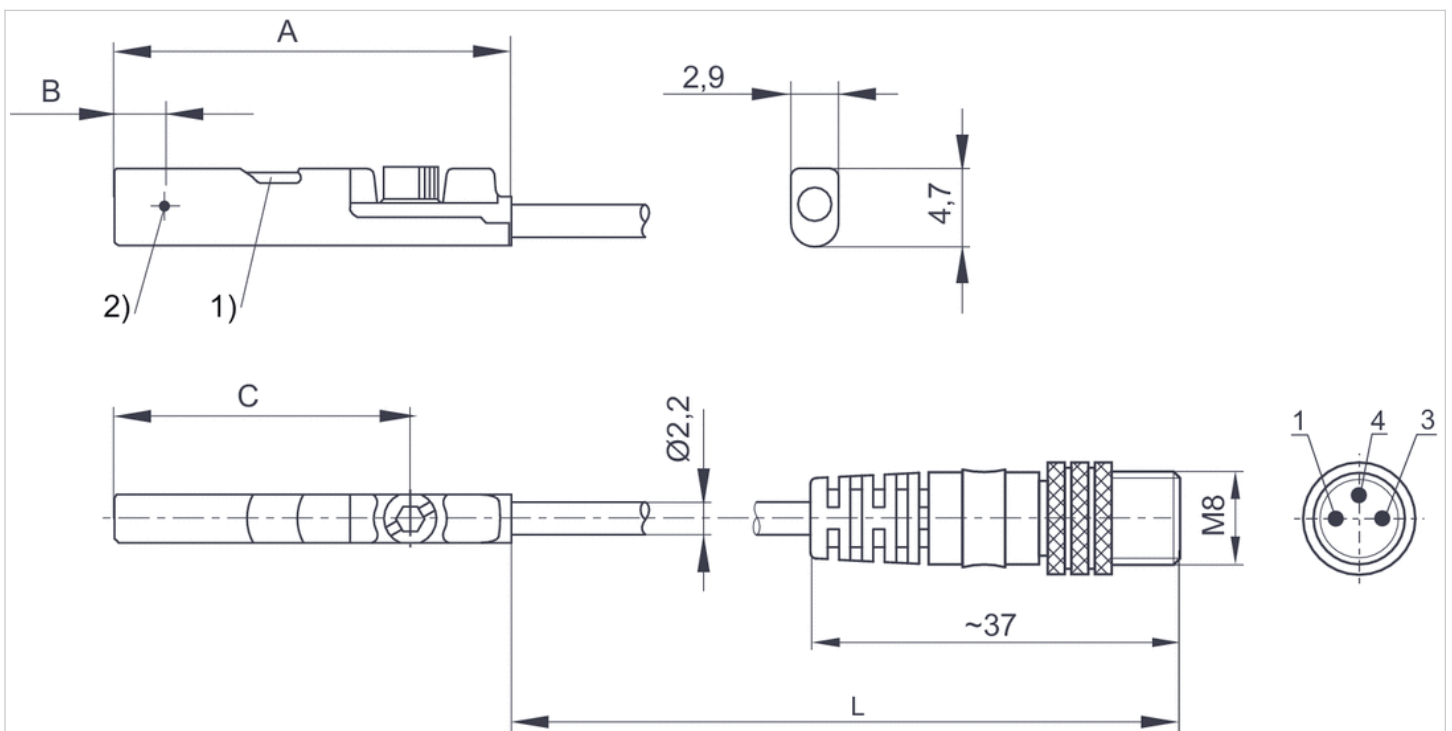
The max. switching capacity must not be exceeded.

## Technical information

| Material     |                                   |
|--------------|-----------------------------------|
| Housing      | Polyamide, fiber-glass reinforced |
| Cable sheath | Polyurethane                      |

## Dimensions

### Dimensions



1) LED 2) Switching point  
L = cable length

Pin assignment: 1 = (+) 3 = (-) 4 = (OUT)

## Dimensions

| Part No.   | A    | B   | C    |
|------------|------|-----|------|
| R412019490 | 26.3 | 6.3 | 20.3 |
| R412019686 | 26.3 | 6.3 | 20.3 |
| R412019493 | 23.7 | 2.8 | 17.7 |
| R412019687 | 23.7 | 2.8 | 17.7 |

# Sensor, Series ST4

- 4 mm C-slot
- with cable
- Plug, M8, 3-pin
- UL certification
- Reed, electronic PNP, electronic NPN
- Direct mounting for series PRA, SSI, GSU, RTC, CKP, GSP, MSC, MSN, RCM, CVI
- Indirect mounting for series MNI, CSL-RD, ICM



## Certificates

|                                |   |
|--------------------------------|---|
| Ambient temperature min./max.  | UL (Underwriters Laboratories), cULus, RoHS |
| Protection class               | -30 ... 80 °C                               |
| Switching point precision      | IP65, IP67                                  |
| Min./max. DC operating voltage | ±0,1 mT                                     |
| Switching logic                | See table below                             |
| Display                        | NO (make contact)                           |
| LED status display             | LED   |
| Vibration resistance           | Yellow                                      |
| Shock resistance               | 10 - 55 Hz, 1 mm                            |
| Mounting screw                 | 30 g / 11 ms                                |
|                                | Combination: slotted and hexagon socket     |

## Technical data

| Part No.   |   | for  |
|------------|---|--|
| R412019682 |  | PRA, SSI, GSU, RTC, CKP, GSP, MSC, MSN, RCM, CVI |
| R412019683 |  | PRA, SSI, GSU, RTC, CKP, GSP, MSC, MSN, RCM, CVI |
| R412019694 |  | PRA, SSI, GSU, RTC, CKP, GSP, MSC, MSN, RCM, CVI |

| Part No.   | Type of contact | Cable length<br>L | Min./max. DC operating voltage |
|------------|-----------------|-------------------|--------------------------------|
| R412019682 | Reed            | 0,3 m             | 5 ... 30 V DC                  |
| R412019683 | electronic PNP  | 0,3 m             | 10 ... 30 V DC                 |
| R412019694 | electronic NPN  | 0,3 m             | 10 ... 30 V DC                 |

| Part No.   | Voltage drop U at I <sub>max</sub> | DC switching current, max. |
|------------|------------------------------------|----------------------------|
| R412019682 | ≤ 0,5 V                            | 0,13 A                     |
| R412019683 | ≤ 2,5 V                            | 0,1 A                      |
| R412019694 | ≤ 2,5 V                            | 0,1 A                      |

| Part No.   | AC switching current, max. | Switching capacity |
|------------|----------------------------|--------------------|
| R412019682 | 0,13 A                     | 3 W / 3 VA         |
| R412019683 | -                          | -                  |
| R412019694 | -                          | -                  |

| Part No.   | Version  |
|------------|--|
| R412019682 | Protected against polarity reversal                          |
| R412019683 | short circuit resistant, Protected against polarity reversal |
| R412019694 | short circuit resistant, Protected against polarity reversal |

## Technical information

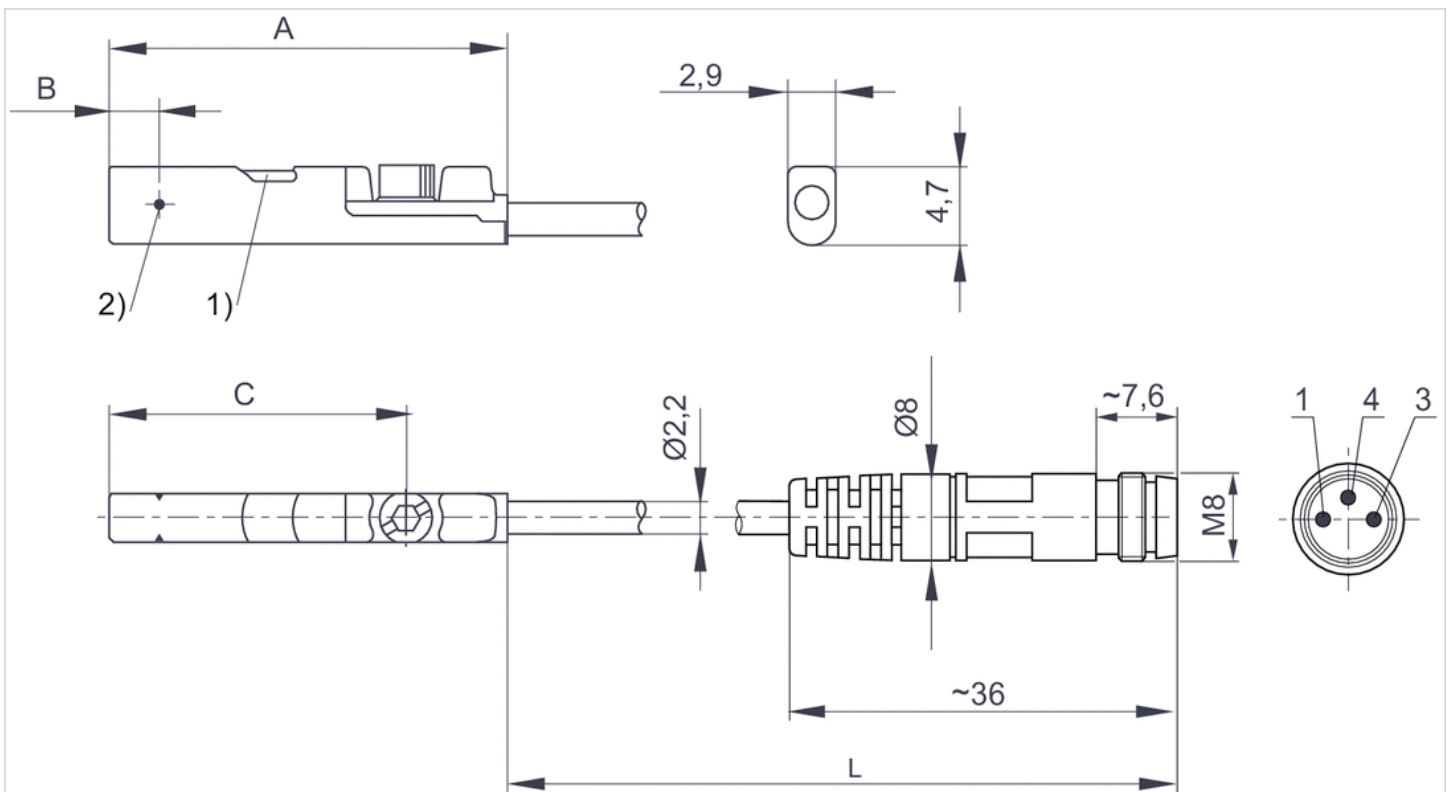
The max. switching capacity must not be exceeded.

## Technical information

| Material     |                                   |
|--------------|-----------------------------------|
| Housing      | Polyamide, fiber-glass reinforced |
| Cable sheath | Polyurethane                      |

## Dimensions

### Dimensions



1) LED 2) Switching point

L = cable length

Pin assignment: 1 = (+) 3 = (-) 4 = (OUT)

## Dimensions

| Part No.   | A    | B   | C    |
|------------|------|-----|------|
| R412019682 | 26.3 | 6.3 | 20.3 |
| R412019683 | 23.7 | 2.8 | 17.7 |
| R412019694 | 23.7 | 2.8 | 17.7 |

# Sensor, Series ST4

- 4 mm C-slot
- with cable
- open cable ends, 3-pin
- UL certification
- Reed, electronic PNP, electronic NPN
- Direct mounting for series PRA, SSI, GSU, RTC, CKP, GPC, MSC, MSN, RCM, CVI
- Indirect mounting for series MNI, CSL-RD, ICM



|                                |   |
|--------------------------------|---|
| Certificates                   | UL (Underwriters Laboratories), cULus, RoHS |
| Ambient temperature min./max.  | -30 ... 80 °C                               |
| Protection class               | IP65, IP67                                  |
| Switching point precision      | ±0,1 mT                                     |
| Min./max. DC operating voltage | See table below                             |
| Switching logic                | NO (make contact)                           |
| Display                        | LED   |
| LED status display             | Yellow                                      |
| Vibration resistance           | 10 - 55 Hz, 1 mm                            |
| Shock resistance               | 30 g / 11 ms                                |
| Mounting screw                 | Combination: slotted and hexagon socket     |

## Technical data

| Part No.   |  | for  |
|------------|--|--|
| R412019488 |  | PRA, SSI, GSU, RTC, CKP, GPC, MSC, MSN, RCM, CVI |
| R412019489 |  | PRA, SSI, GSU, RTC, CKP, GPC, MSC, MSN, RCM, CVI |
| R412019680 |  | PRA, SSI, GSU, RTC, CKP, GPC, MSC, MSN, RCM, CVI |
| R412019681 |  | PRA, SSI, GSU, RTC, CKP, GPC, MSC, MSN, RCM, CVI |
| R412019684 |  | PRA, SSI, GSU, RTC, CKP, GPC, MSC, MSN, RCM, CVI |
| R412019685 |  | PRA, SSI, GSU, RTC, CKP, GPC, MSC, MSN, RCM, CVI |

| Part No.   | Type of contact | Cable length L | Min./max. DC operating voltage |
|------------|-----------------|----------------|--------------------------------|
| R412019488 | Reed            | 3 m            | 5 ... 30 V DC                  |
| R412019489 | Reed            | 5 m            | 5 ... 30 V DC                  |
| R412019680 | electronic PNP  | 3 m            | 10 ... 30 V DC                 |
| R412019681 | electronic PNP  | 5 m            | 10 ... 30 V DC                 |
| R412019684 | electronic NPN  | 3 m            | 10 ... 30 V DC                 |
| R412019685 | electronic NPN  | 5 m            | 10 ... 30 V DC                 |

| Part No.   | Voltage drop U at I <sub>max</sub> | DC switching current, max. |
|------------|------------------------------------|----------------------------|
| R412019488 | ≤ 0,5 V                            | 0,13 A                     |
| R412019489 | ≤ 0,5 V                            | 0,13 A                     |
| R412019680 | ≤ 2,5 V                            | 0,1 A                      |
| R412019681 | ≤ 2,5 V                            | 0,1 A                      |

| Part No.   | Voltage drop U at I <sub>max</sub> | DC switching current, max. |
|------------|------------------------------------|----------------------------|
| R412019684 | ≤ 2,5 V                            | 0,1 A                      |
| R412019685 | ≤ 2,5 V                            | 0,1 A                      |

| Part No.   | AC switching current, max. | Switching capacity |
|------------|----------------------------|--------------------|
| R412019488 | 0,13 A                     | 3 W / 3 VA         |
| R412019489 | 0,13 A                     | 3 W / 3 VA         |
| R412019680 | -                          | -                  |
| R412019681 | -                          | -                  |
| R412019684 | -                          | -                  |
| R412019685 | -                          | -                  |

| Part No.   | Version  |
|------------|--|
| R412019488 | Protected against polarity reversal                          |
| R412019489 | Protected against polarity reversal                          |
| R412019680 | short circuit resistant, Protected against polarity reversal |
| R412019681 | short circuit resistant, Protected against polarity reversal |
| R412019684 | short circuit resistant, Protected against polarity reversal |
| R412019685 | short circuit resistant, Protected against polarity reversal |

## Technical information

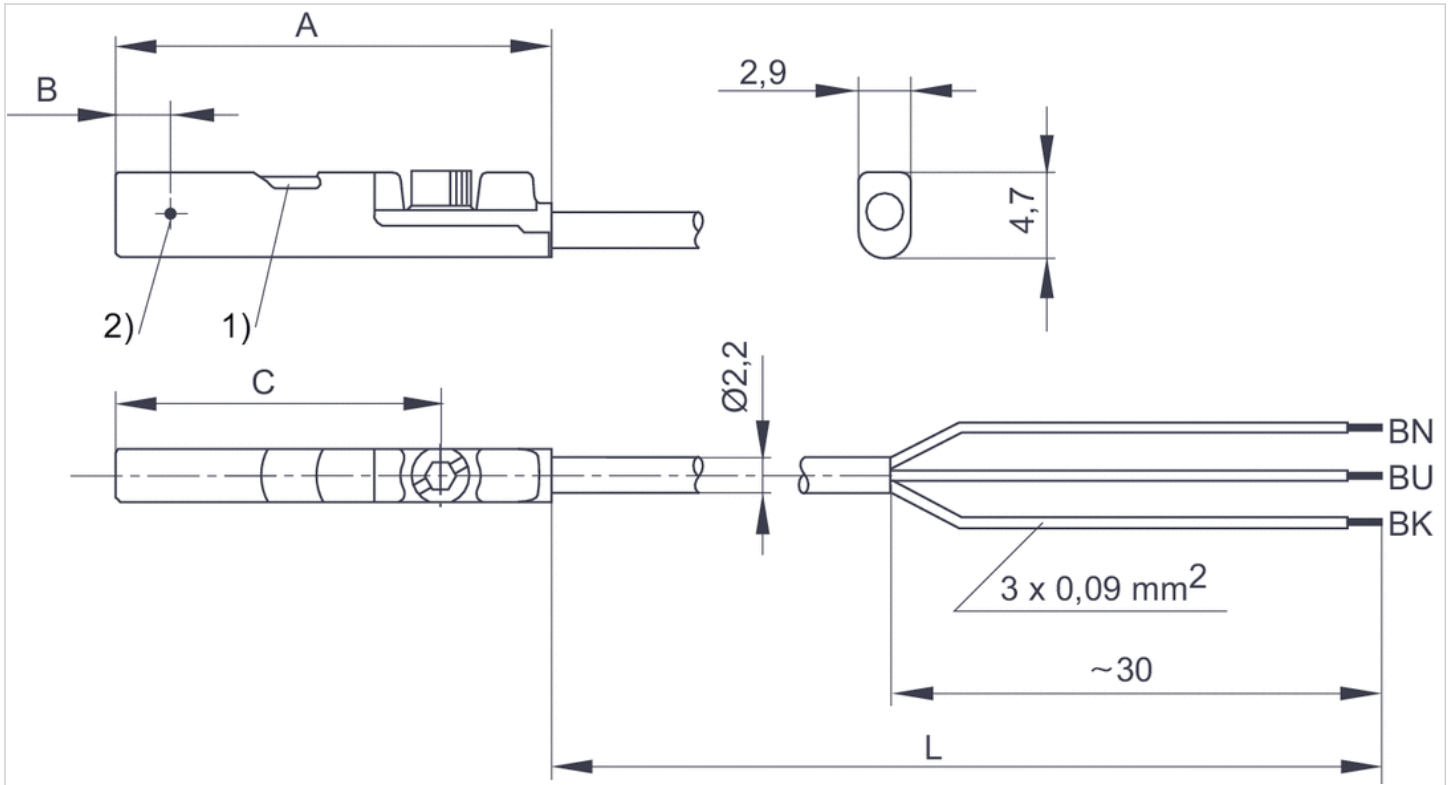
The max. switching capacity must not be exceeded.

## Technical information

| Material     |                                   |
|--------------|-----------------------------------|
| Housing      | Polyamide, fiber-glass reinforced |
| Cable sheath | Polyurethane                      |

## Dimensions

### Dimensions



1) LED 2) Switching point

L = cable length BN = brown, BK = black, BU = blue

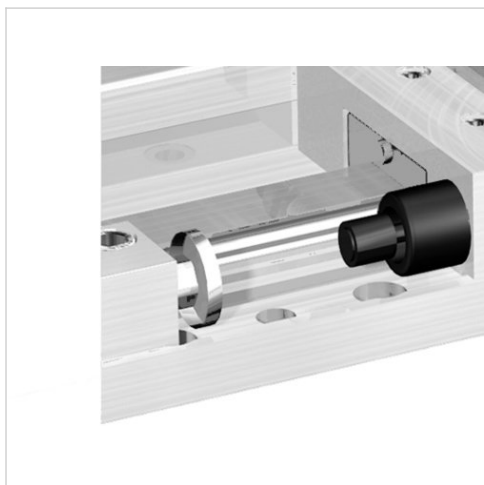
## Dimensions

| Part No.   | A    | B   | C    |
|------------|------|-----|------|
| R412019488 | 26.3 | 6.3 | 20.3 |
| R412019489 | 26.3 | 6.3 | 20.3 |
| R412019680 | 23.7 | 2.8 | 17.7 |
| R412019681 | 23.7 | 2.8 | 17.7 |
| R412019684 | 23.7 | 2.8 | 17.7 |
| R412019685 | 23.7 | 2.8 | 17.7 |



# Kit for shock absorber end stop adjustment

- for series GSU-16, GSU-25



## Technical data

| Part No.   | for series |
|------------|------------|
| R402001207 | GSU-16     |
| R402001208 | GSU-25     |

The kit contains two stop sleeves and two stop screws., The stop sleeve replaces the mounting nut on the shock absorber.

## Dimensions

| Part No.   | For series |
|------------|------------|
| R402001207 | GSU-16     |
| R402001208 | GSU-25     |