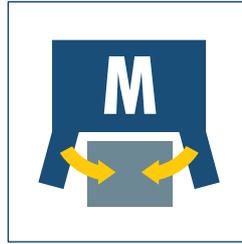




Sizes
10 .. 40



Weight
0.042 kg .. 0.845 kg



Gripping moment
0.22 Nm .. 8.65 Nm



Opening angle per finger
20°



Workpiece weight
0.06 kg .. 1.1 kg

Application example



Handling module for discharging inspection components from the assembly belt

1 2-Finger Angular Gripper LGW 16

2 FST-S 10-61 Mini-slide

Universal Angular Gripper

Universal Angular Gripper for small to medium-sized workpieces with excellent cost/performance ratio

Area of application

Clean surrounding for example an assembly area

Your advantages and benefits

Function optimized gripper type

for maximum cost effectiveness

Stable cinematics

for high power transmission and synchronized gripping

Matching SCHUNK C-slot switch

for a process reliable position interrogation

Hard-anodized or hardened functional components

for long lifetime

Centering sleeves

for an repeat accurate exchange of grippers and fingers

Compact dimensions

for minimized disturbing contours



General information on the series

Working principle

double actuated, guided cinematics

Housing material

Aluminum alloy, hard-anodized

Base jaw material

Aluminum alloy, hard-anodized

Actuation

Pneumatic, with filtered compressed air (10 µm): Dry, lubricated or non-lubricated
 Pressure medium: Requirements on quality of the compressed air according to
 DIN ISO 8573-1: 6 4 4.

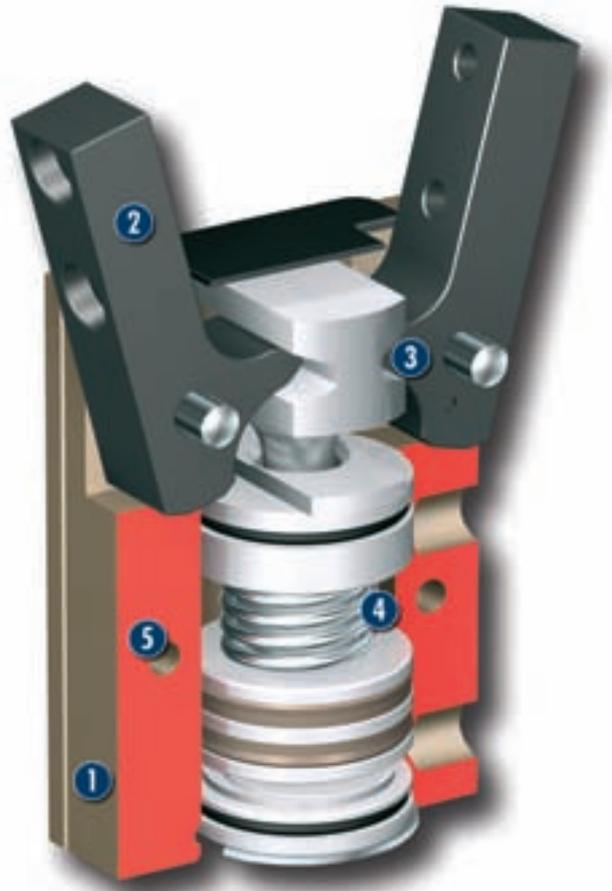
Warranty

24 months

Scope of delivery

Swivel fittings, centering sleeves, assembly and operation manual with manufacturer's declaration

Sectional diagram



- 1 Housing**
weight-optimised through application of hard-anodized, high-strength aluminum alloy
- 2 Base fingers**
for the connection of workpiece-specific gripper fingers
- 3 Kinematics**
precise gear for centric gripping
- 4 Gripping force safety device**
mechanic gripping force maintenance for O.D. gripping
- 5 Centering and mounting possibilities**
for assembly of the gripper to a base area and at the long side

Function description

The piston is moved up or down by means of compressed air. The kinematics use the lever system to convert the vertical motion into the synchronous, rotating movement of the base jaws.

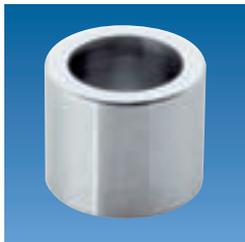
Options and special information

Monitoring with a SCHUNK MMS 22 or RMS 22 sensor is not possible. The use of the recommended sensors MZN and RZN is not compulsory.

Accessories

Accessories from SCHUNK – the suitable supplement for maximum functionality, reliability and performance of all automation modules.

Centering sleeves



Fittings



MZN/RZN magnetic switches



SDV-P pressure maintenance valves



KV/KA sensor cables



V sensor distributors



- ① For the exact size of the required accessories, availability of this size and the designation and ID, please refer to the additional views at the end of the size in question. You will find more detailed information on our accessory range in the "Accessories" catalog section.

General information on the series

Gripping moment

is the arithmetic total of gripping moments for each claw jaw.

Finger length

The finger length is measured from the upper edge of the gripper housing in direction to the main axis. If the max. admissible finger length is exceeded, the speed of motions of the jaws has to be reduced and/or the opening angle has to be diminished, as it is done with heavy fingers. The service life of the gripper can shorten.

Repeat accuracy

is defined as the spread of the limit position after 100 consecutive strokes.

Workpiece weight

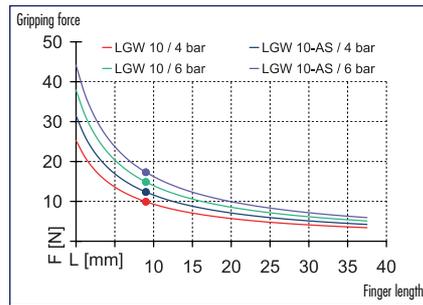
The recommended workpiece weight is calculated for a force-type connection with a coefficient of friction of 0.1 and a safety factor of 2 against slippage of the workpiece on acceleration due to gravity g . Considerably heavier workpiece weights are permitted with form-fit gripping.

Closing and opening times

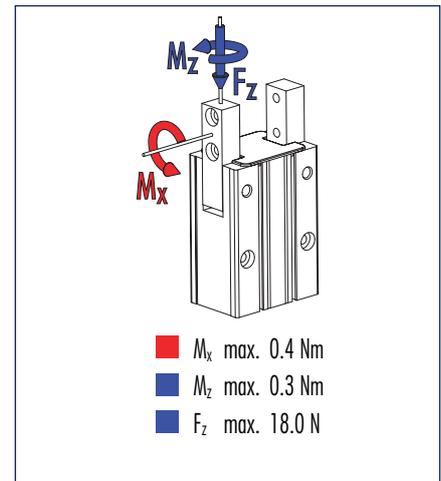
Closing and opening times are purely the times that the base jaws or fingers are in motion. Valve switching times, hose filling times or PLC reaction times are not included in the above times and must be taken into consideration when determining cycle times.



Gripping force, O.D. gripping



Finger load

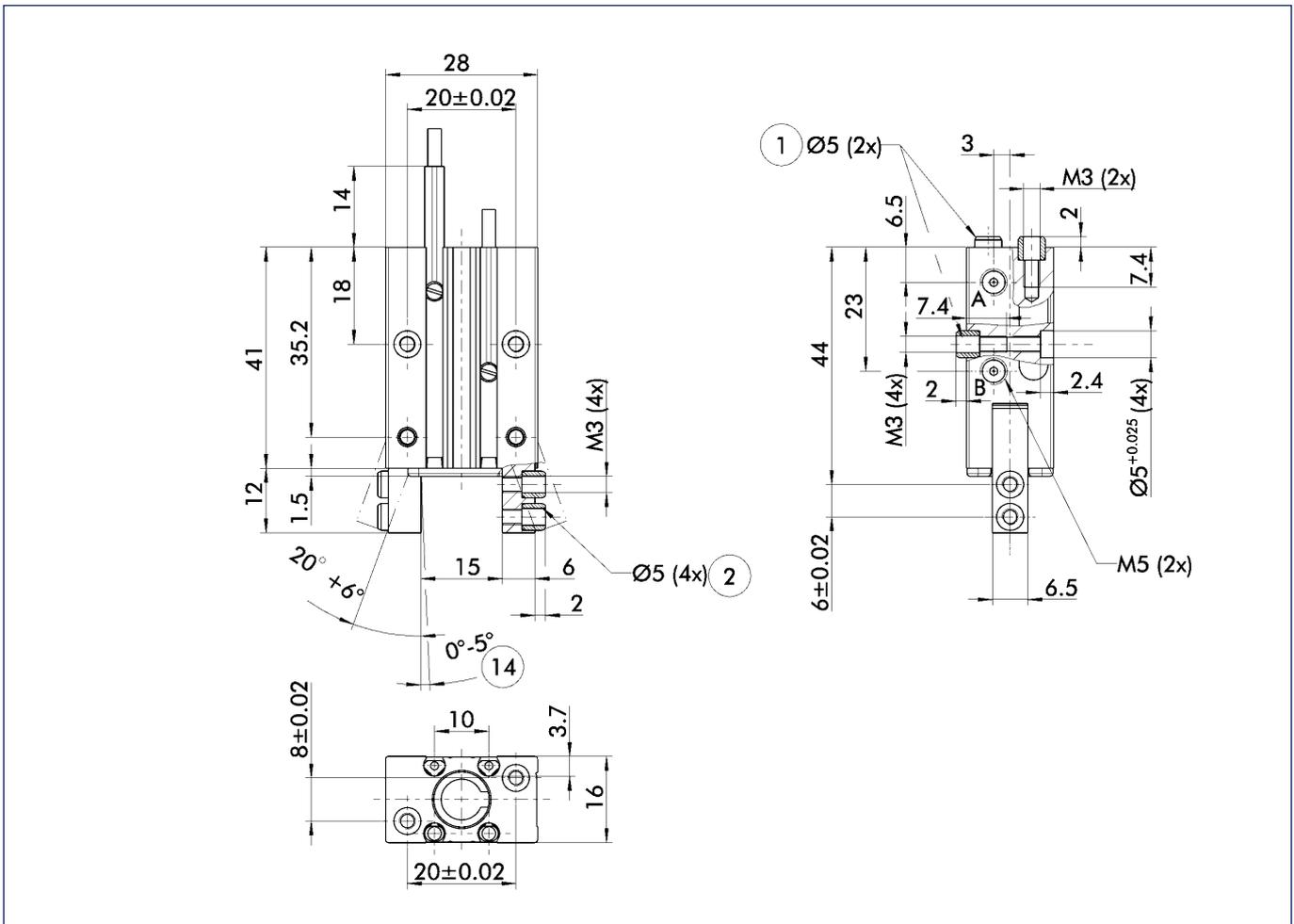


ⓘ Moments and forces apply per base jaw and may occur simultaneously. If the max. permitted finger weight is exceeded, it is imperative to throttle the air pressure so that the jaw movement occurs without any hitting or bouncing. Service life may be reduced.

Technical data

Description		LGW 10	LGW 10-AS
	ID	0312950	0312951
Opening angle per jaw	[°]	20.0	20.0
Opening angle per jaw up to	[°]	2.0	2.0
Closing moment	[Nm]	0.22	0.28
Closing moment ensured by spring	[Nm]		0.06
Weight	[kg]	0.042	0.043
Recommended workpiece weight	[kg]	0.085	0.085
Air consumption per double stroke	[cm ³]	0.7	0.7
Nominal pressure	[bar]	6.0	6.0
Minimum pressure	[bar]	2.0	4.0
Maximum pressure	[bar]	8.0	6.5
Closing time	[s]	0.02	0.02
Opening time	[s]	0.02	0.03
Max. permitted finger length	[mm]	25.0	25.0
Max. permitted weight per finger	[kg]	0.04	0.04
IP rating		40	40
Min. ambient temperature	[°C]	-10.0	-10.0
Température ambiante max.	[°C]	90.0	90.0
Repeat accuracy	[mm]	0.02	0.02

Main views

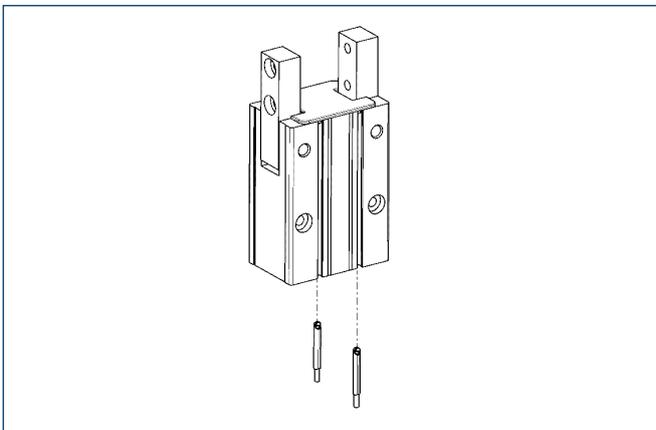


The drawing shows the gripper in the basic version with closed jaws, the dimensions do not include the options described below.

① The SDV-P pressure maintenance valve can also be used (see "Accessories" catalog section) for I.D. or O.D. gripping as an alternative or in addition to the spring-loaded, mechanical gripping force safety device.

- A,a Main/direct connection, gripper opening
- B,b Main/direct connection, gripper closing
- ① Gripper connection
- ② Finger connection
- ⑭ Clamping reserve per finger

Sensor System



Electronic magnetic switches / Reed Switches, for direct mounting

Description	ID
MZN 1-06VPS-KRD	0312990
RZN 1-05ZRS-KRD	0312991

① Two sensors (NO contacts) are required for each gripper, plus extension cables as an option.

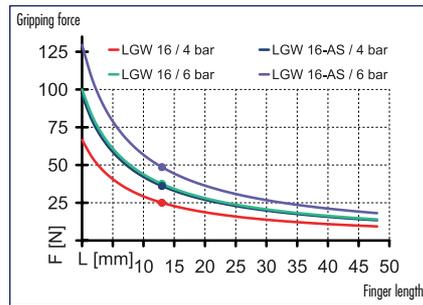
Extension cables for proximity switches/magnetic switches

Description	ID
KA BG08-L 3P-0300-PNP	0301622
KA BW08-L 3P-0300-PNP	0301594
KA BW08-L 3P-0500-PNP	0301502
KV BW08-SG08 3P-0030-PNP	0301495
KV BW08-SG08 3P-0100-PNP	0301496
KV BW08-SG08 3P-0200-PNP	0301497

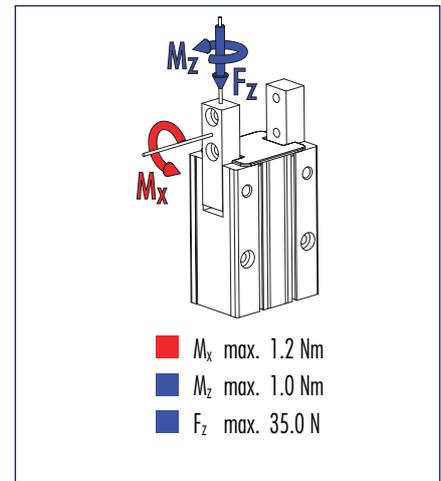
① Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.



Gripping force, O.D. gripping



Finger load

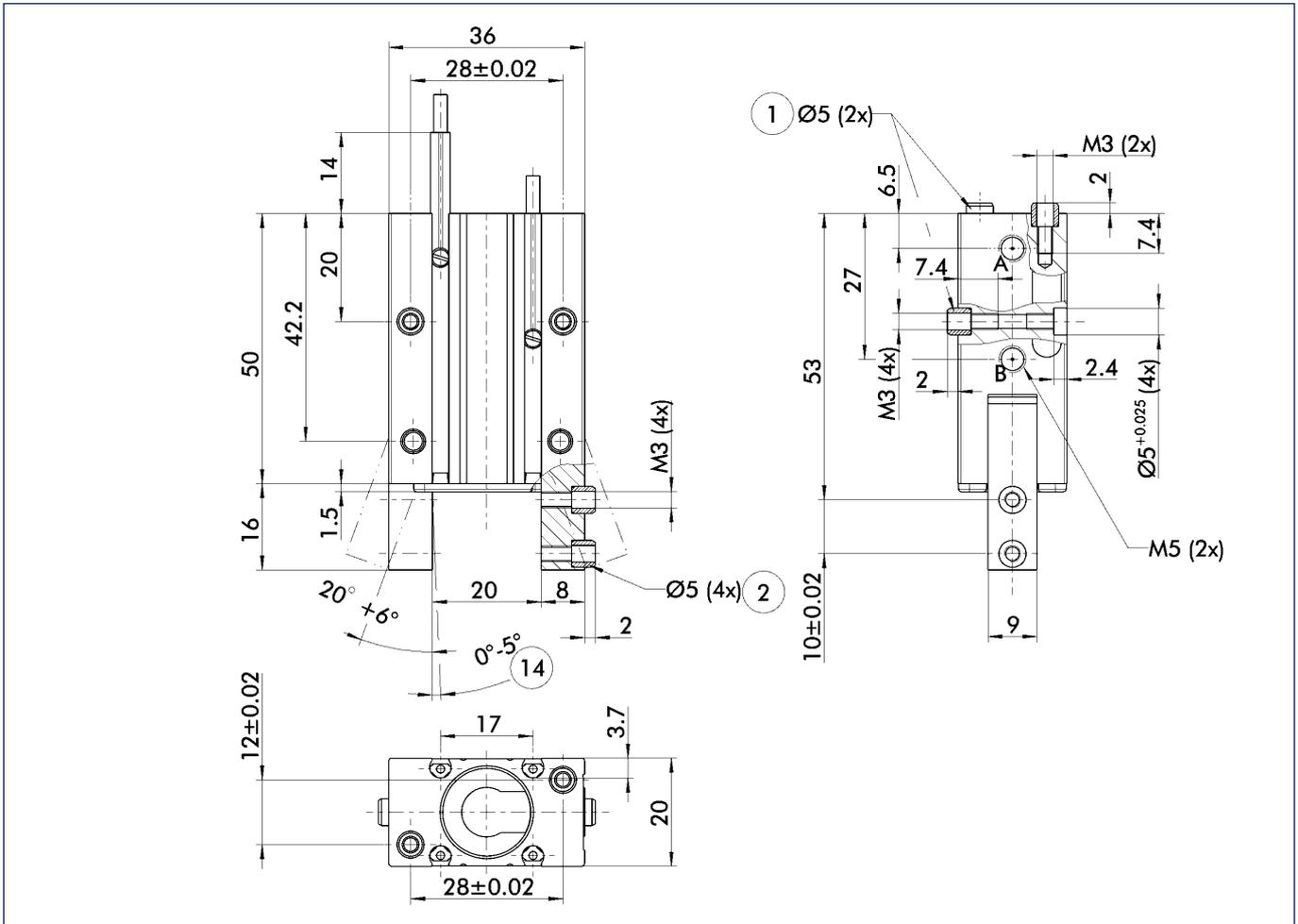


ⓘ Moments and forces apply per base jaw and may occur simultaneously. If the max. permitted finger weight is exceeded, it is imperative to throttle the air pressure so that the jaw movement occurs without any hitting or bouncing. Service life may be reduced.

Technical data

Description		LGW 16	LGW 16-AS
	ID	0312952	0312953
Opening angle per jaw	[°]	20.0	20.0
Opening angle per jaw up to	[°]	2.0	2.0
Closing moment	[Nm]	0.78	1.0
Closing moment ensured by spring	[Nm]		0.22
Weight	[kg]	0.088	0.091
Recommended workpiece weight	[kg]	0.19	0.19
Air consumption per double stroke	[cm ³]	2.3	2.3
Nominal pressure	[bar]	6.0	6.0
Minimum pressure	[bar]	2.0	4.0
Maximum pressure	[bar]	8.0	6.5
Closing time	[s]	0.03	0.025
Opening time	[s]	0.02	0.03
Max. permitted finger length	[mm]	32.0	32.0
Max. permitted weight per finger	[kg]	0.05	0.05
IP rating		40	40
Min. ambient temperature	[°C]	-10.0	-10.0
Température ambiante max.	[°C]	90.0	90.0
Repeat accuracy	[mm]	0.02	0.02

Main views

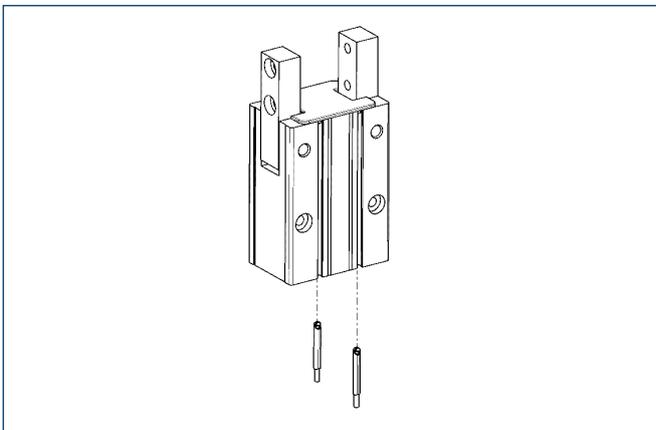


The drawing shows the gripper in the basic version with closed jaws, the dimensions do not include the options described below.

① The SDV-P pressure maintenance valve can also be used (see "Accessories" catalog section) for I.D. or O.D. gripping as an alternative or in addition to the spring-loaded, mechanical gripping force safety device.

- A,a Main/direct connection, gripper opening
- B,b Main/direct connection, gripper closing
- ① Gripper connection
- ② Finger connection
- ⑭ Clamping reserve per finger

Sensor System



Electronic magnetic switches / Reed Switches, for direct mounting

Description	ID
MZN 1-06VPS-KRD	0312990
RZN 1-05ZRS-KRD	0312991

① Two sensors (NO contacts) are required for each gripper, plus extension cables as an option.

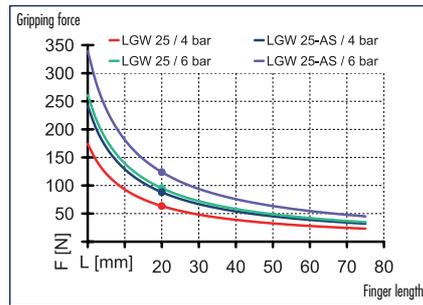
Extension cables for proximity switches/magnetic switches

Description	ID
KA BG08-L 3P-0300-PNP	0301622
KA BW08-L 3P-0300-PNP	0301594
KA BW08-L 3P-0500-PNP	0301502
KV BW08-SG08 3P-0030-PNP	0301495
KV BW08-SG08 3P-0100-PNP	0301496
KV BW08-SG08 3P-0200-PNP	0301497

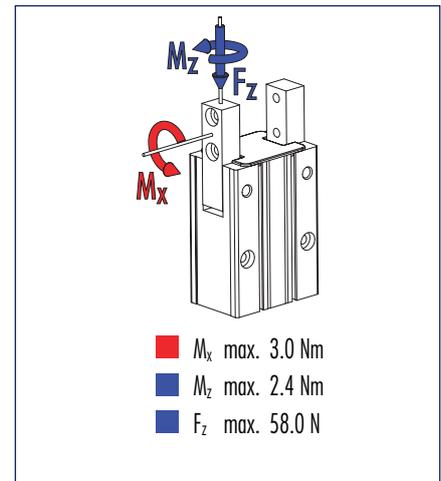
① Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.



Gripping force, O.D. gripping



Finger load

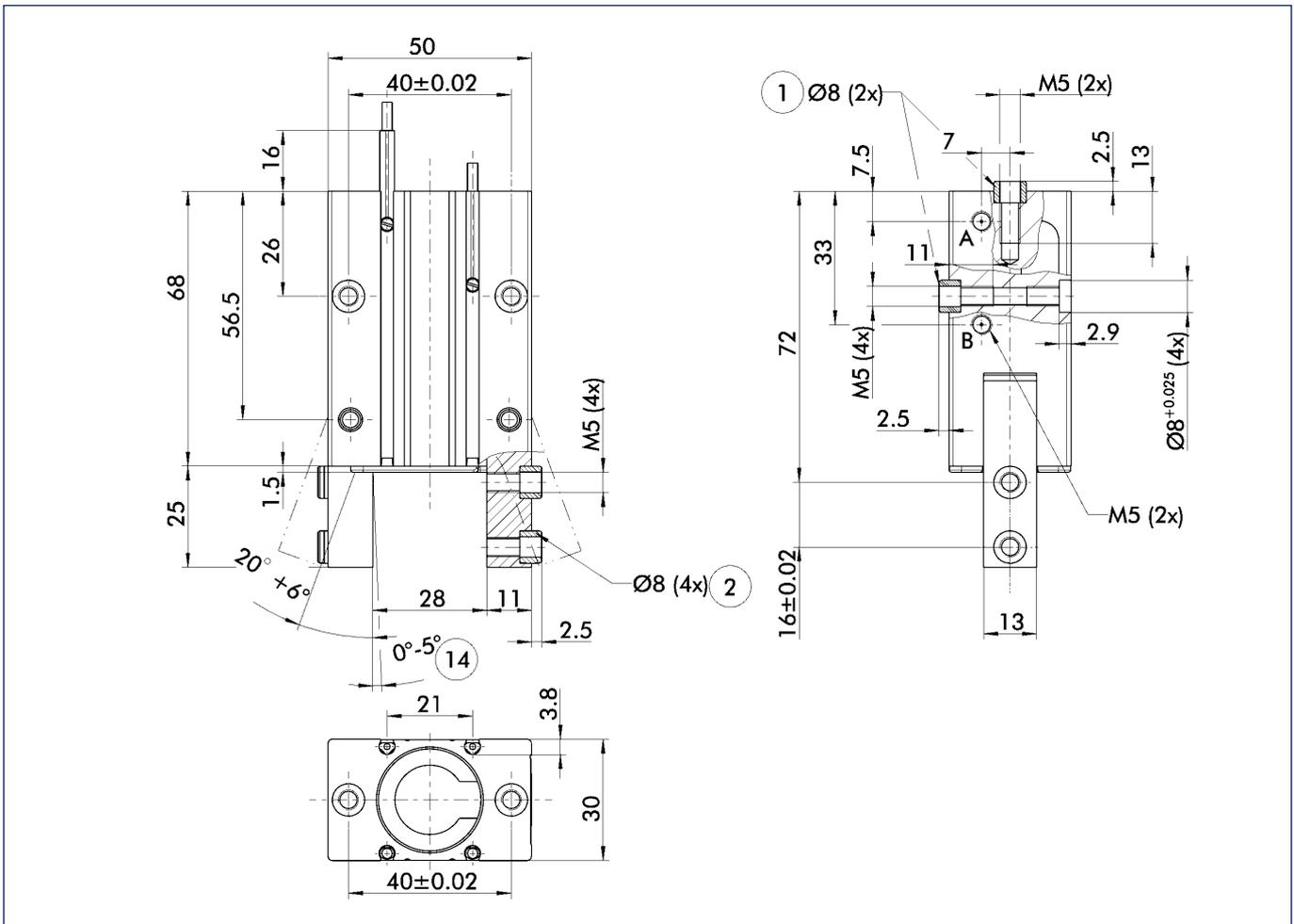


① Moments and forces apply per base jaw and may occur simultaneously. If the max. permitted finger weight is exceeded, it is imperative to throttle the air pressure so that the jaw movement occurs without any hitting or bouncing. Service life may be reduced.

Technical data

Description		LGW 25	LGW 25-AS
	ID	0312954	0312955
Opening angle per jaw	[°]	20.0	20.0
Opening angle per jaw up to	[°]	2.0	2.0
Closing moment	[Nm]	3.2	4.1
Closing moment ensured by spring	[Nm]		0.9
Weight	[kg]	0.25	0.255
Recommended workpiece weight	[kg]	0.5	0.5
Air consumption per double stroke	[cm ³]	9.0	9.0
Nominal pressure	[bar]	6.0	6.0
Minimum pressure	[bar]	2.0	4.0
Maximum pressure	[bar]	8.0	6.5
Closing time	[s]	0.045	0.06
Opening time	[s]	0.04	0.07
Max. permitted finger length	[mm]	50.0	50.0
Max. permitted weight per finger	[kg]	0.1	0.1
IP rating		40	40
Min. ambient temperature	[°C]	-10.0	-10.0
Température ambiante max.	[°C]	90.0	90.0
Repeat accuracy	[mm]	0.02	0.02

Main views

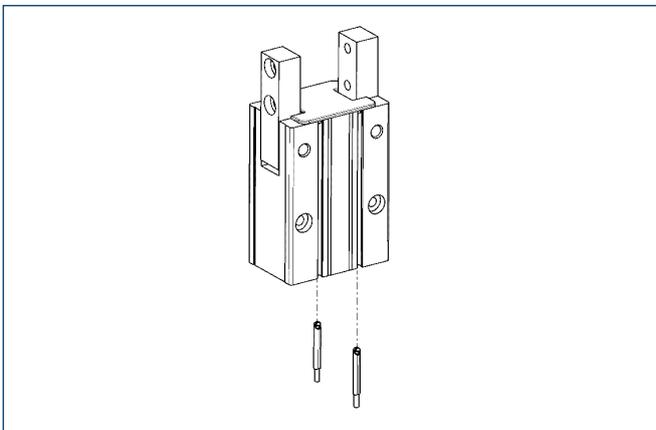


The drawing shows the gripper in the basic version with closed jaws, the dimensions do not include the options described below.

① The SDV-P pressure maintenance valve can also be used (see "Accessories" catalog section) for I.D. or O.D. gripping as an alternative or in addition to the spring-loaded, mechanical gripping force safety device.

- A,a Main/direct connection, gripper opening
- B,b Main/direct connection, gripper closing
- ① Gripper connection
- ② Finger connection
- ⑭ Clamping reserve per finger

Sensor System



Electronic magnetic switches / Reed Switches, for direct mounting

Description	ID
MZN 1-06VPS-KRD	0312990
RZN 1-05ZRS-KRD	0312991

① Two sensors (NO contacts) are required for each gripper, plus extension cables as an option.

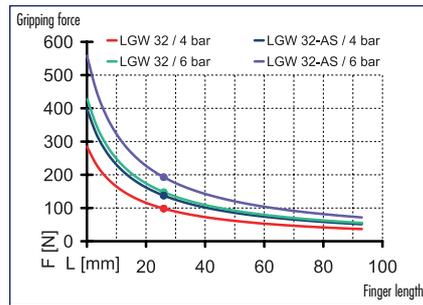
Extension cables for proximity switches/magnetic switches

Description	ID
KA BG08-L 3P-0300-PNP	0301622
KA BW08-L 3P-0300-PNP	0301594
KA BW08-L 3P-0500-PNP	0301502
KV BW08-SG08 3P-0030-PNP	0301495
KV BW08-SG08 3P-0100-PNP	0301496
KV BW08-SG08 3P-0200-PNP	0301497

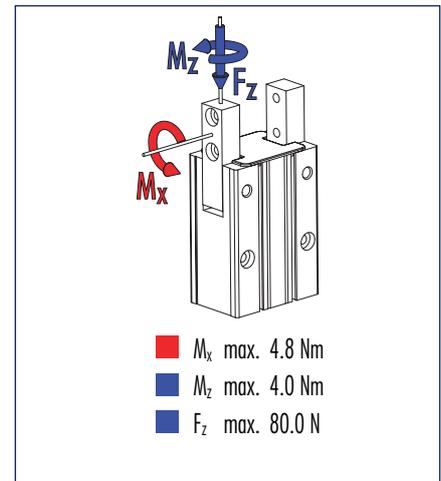
① Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.



Gripping force, O.D. gripping



Finger load

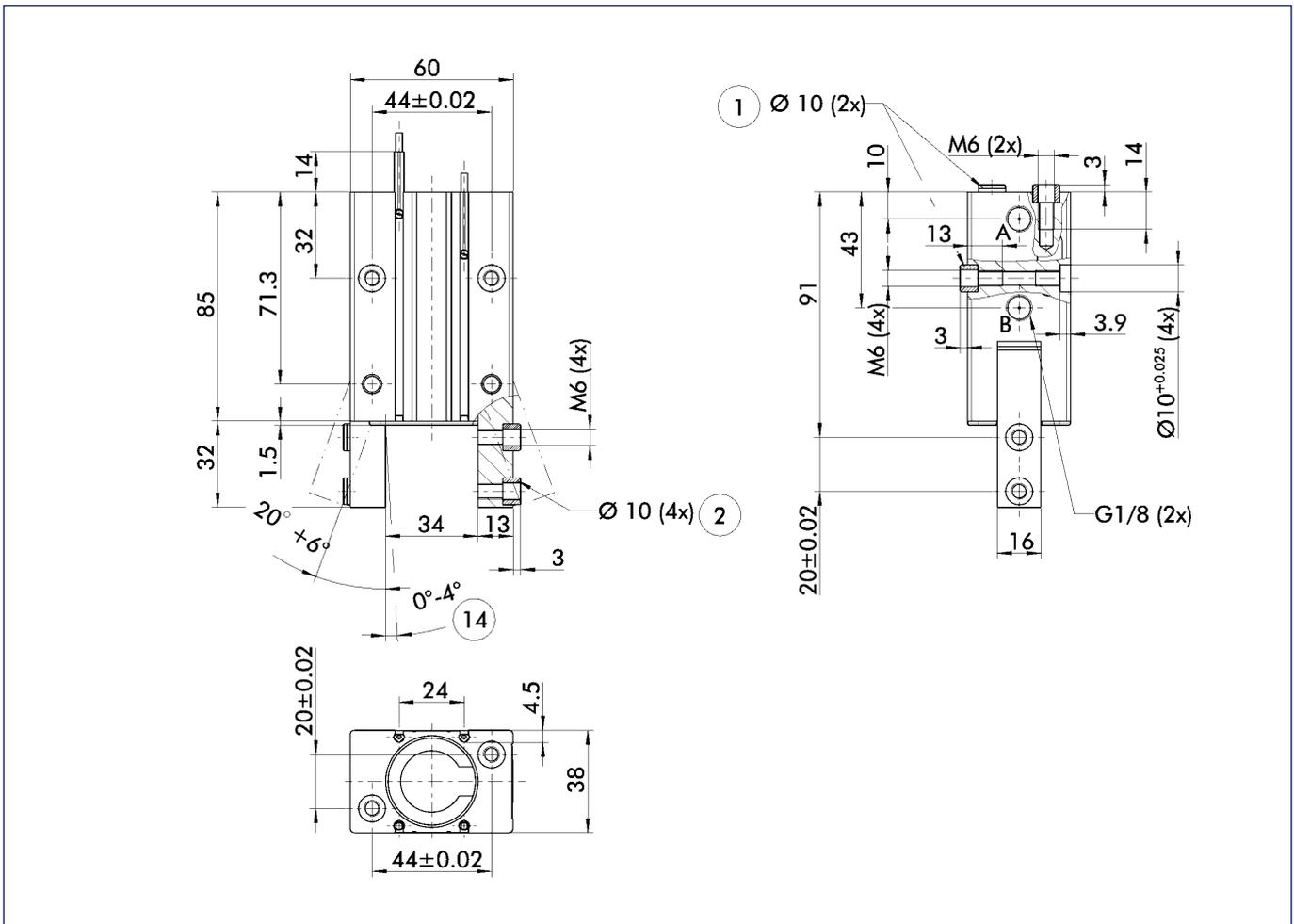


ⓘ Moments and forces apply per base jaw and may occur simultaneously. If the max. permitted finger weight is exceeded, it is imperative to throttle the air pressure so that the jaw movement occurs without any hitting or bouncing. Service life may be reduced.

Technical data

Description	LGW 32		LGW 32-AS	
	ID	0312956	ID	0312957
Opening angle per jaw	[°]	20.0		20.0
Opening angle per jaw up to	[°]	2.0		2.0
Closing moment	[Nm]	5.6		7.4
Closing moment ensured by spring	[Nm]			1.8
Weight	[kg]	0.46		0.466
Recommended workpiece weight	[kg]	0.7		0.7
Air consumption per double stroke	[cm ³]	16.1		16.1
Nominal pressure	[bar]	6.0		6.0
Minimum pressure	[bar]	2.0		4.0
Maximum pressure	[bar]	8.0		6.5
Closing time	[s]	0.05		0.06
Opening time	[s]	0.055		0.07
Max. permitted finger length	[mm]	62.0		62.0
Max. permitted weight per finger	[kg]	0.13		0.13
IP rating		40		40
Min. ambient temperature	[°C]	-10.0		-10.0
Température ambiante max.	[°C]	90.0		90.0
Repeat accuracy	[mm]	0.02		0.02

Main views

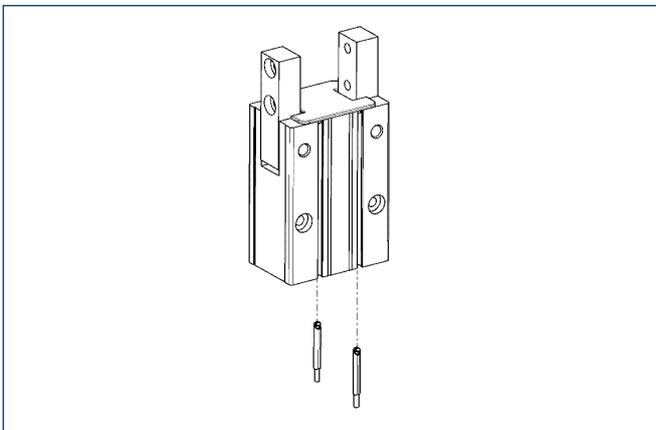


The drawing shows the gripper in the basic version with closed jaws, the dimensions do not include the options described below.

① The SDV-P pressure maintenance valve can also be used (see "Accessories" catalog section) for I.D. or O.D. gripping as an alternative or in addition to the spring-loaded, mechanical gripping force safety device.

- A,a Main/direct connection, gripper opening
- B,b Main/direct connection, gripper closing
- ① Gripper connection
- ② Finger connection
- ⑭ Clamping reserve per finger

Sensor System



Electronic magnetic switches / Reed Switches, for direct mounting

Description	ID
MZN 1-06VPS-KRD	0312990
RZN 1-05ZRS-KRD	0312991

① Two sensors (NO contacts) are required for each gripper, plus extension cables as an option.

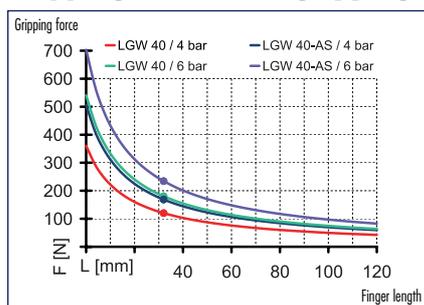
Extension cables for proximity switches/magnetic switches

Description	ID
KA BG08-L 3P-0300-PNP	0301622
KA BW08-L 3P-0300-PNP	0301594
KA BW08-L 3P-0500-PNP	0301502
KV BW08-SG08 3P-0030-PNP	0301495
KV BW08-SG08 3P-0100-PNP	0301496
KV BW08-SG08 3P-0200-PNP	0301497

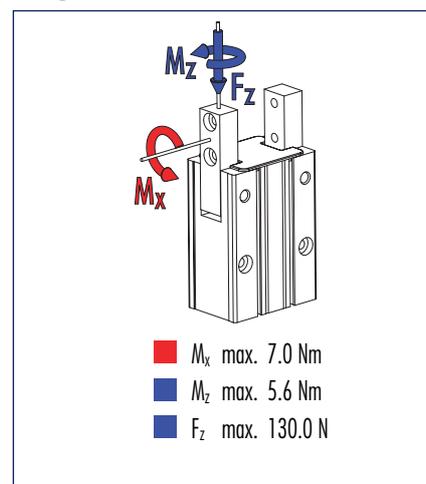
① Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.



Gripping force, O.D. gripping



Finger load

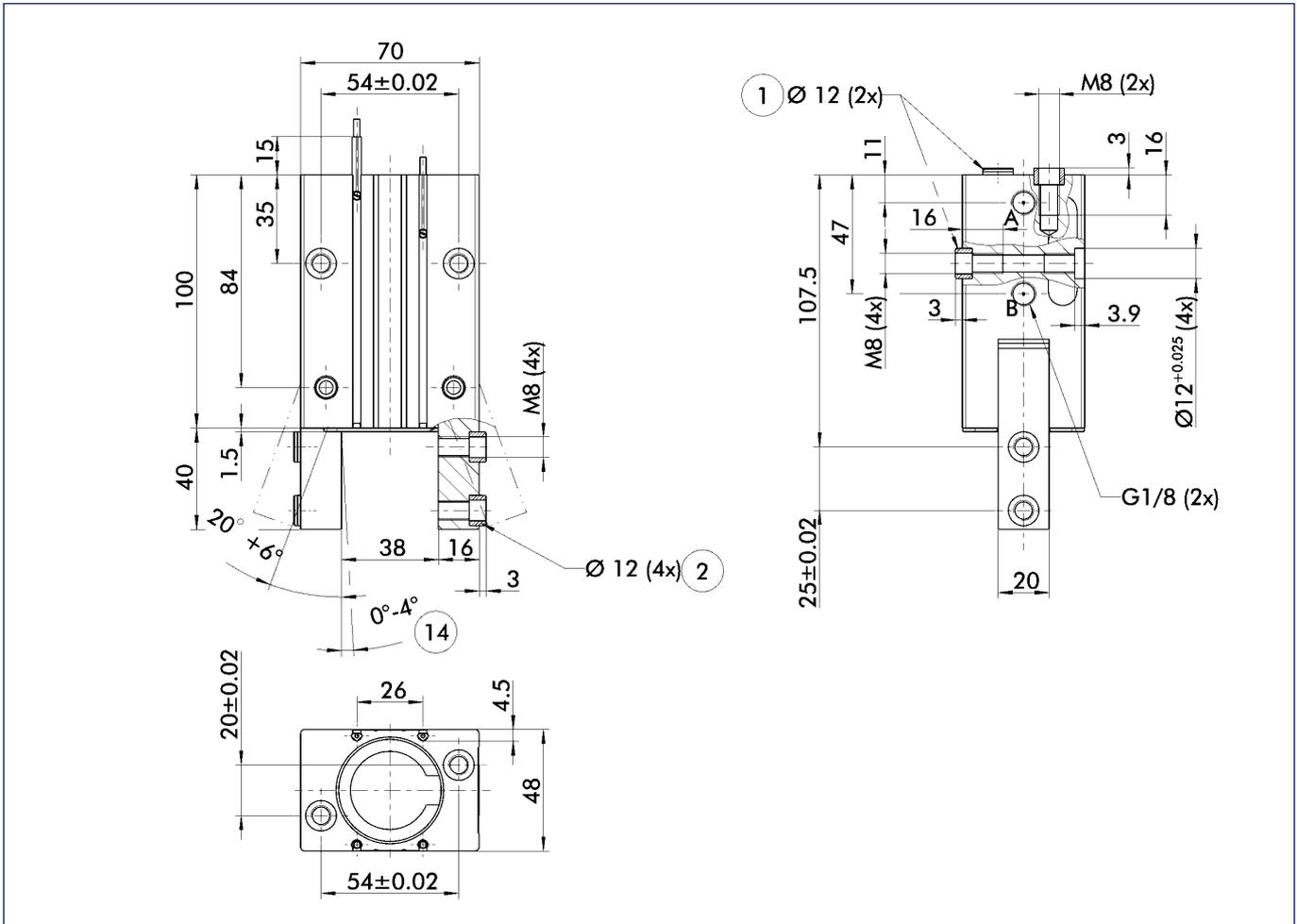


① Moments and forces apply per base jaw and may occur simultaneously. If the max. permitted finger weight is exceeded, it is imperative to throttle the air pressure so that the jaw movement occurs without any hitting or bouncing. Service life may be reduced.

Technical data

Description	LGW 40		LGW 40-AS	
	ID	0312958	ID	0312959
Opening angle per jaw	[°]	20.0	20.0	20.0
Opening angle per jaw up to	[°]	2.0	2.0	2.0
Closing moment	[Nm]	8.6	11.2	11.2
Closing moment ensured by spring	[Nm]		2.6	2.6
Weight	[kg]	0.83	0.845	0.845
Recommended workpiece weight	[kg]	0.85	0.85	0.85
Air consumption per double stroke	[cm ³]	31.0	31.0	31.0
Nominal pressure	[bar]	6.0	6.0	6.0
Minimum pressure	[bar]	2.0	4.0	4.0
Maximum pressure	[bar]	8.0	6.5	6.5
Closing time	[s]	0.055	0.06	0.06
Opening time	[s]	0.055	0.09	0.09
Max. permitted finger length	[mm]	80.0	80.0	80.0
Max. permitted weight per finger	[kg]	0.22	0.22	0.22
IP rating		40	40	40
Min. ambient temperature	[°C]	-10.0	-10.0	-10.0
Température ambiante max.	[°C]	90.0	90.0	90.0
Repeat accuracy	[mm]	0.02	0.02	0.02

Main views

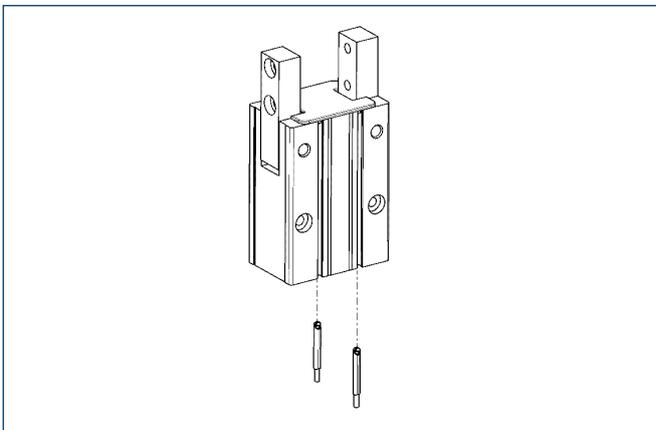


The drawing shows the gripper in the basic version with closed jaws, the dimensions do not include the options described below.

① The SDV-P pressure maintenance valve can also be used (see "Accessories" catalog section) for I.D. or O.D. gripping as an alternative or in addition to the spring-loaded, mechanical gripping force safety device.

- A,a Main/direct connection, gripper opening
- B,b Main/direct connection, gripper closing
- ① Gripper connection
- ② Finger connection
- ⑭ Clamping reserve per finger

Sensor System



Electronic magnetic switches / Reed Switches, for direct mounting

Description	ID
MZN 1-06VPS-KRD	0312990
RZN 1-05ZRS-KRD	0312991

① Two sensors (NO contacts) are required for each gripper, plus extension cables as an option.

Extension cables for proximity switches/magnetic switches

Description	ID
KA BG08-L 3P-0300-PNP	0301622
KA BW08-L 3P-0300-PNP	0301594
KA BW08-L 3P-0500-PNP	0301502
KV BW08-SG08 3P-0030-PNP	0301495
KV BW08-SG08 3P-0100-PNP	0301496
KV BW08-SG08 3P-0200-PNP	0301497

① Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.