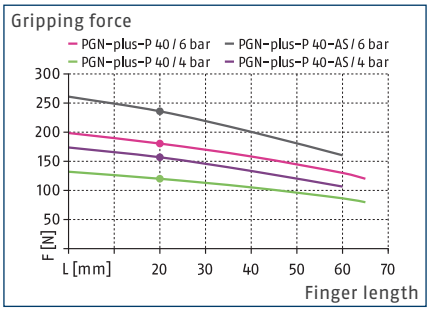
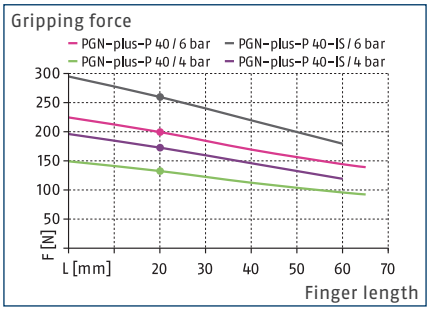
PGN-plus-P 40

Universal gripper

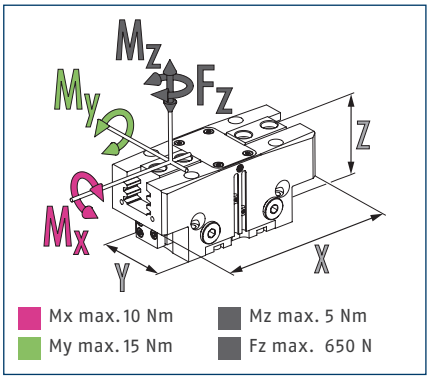
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



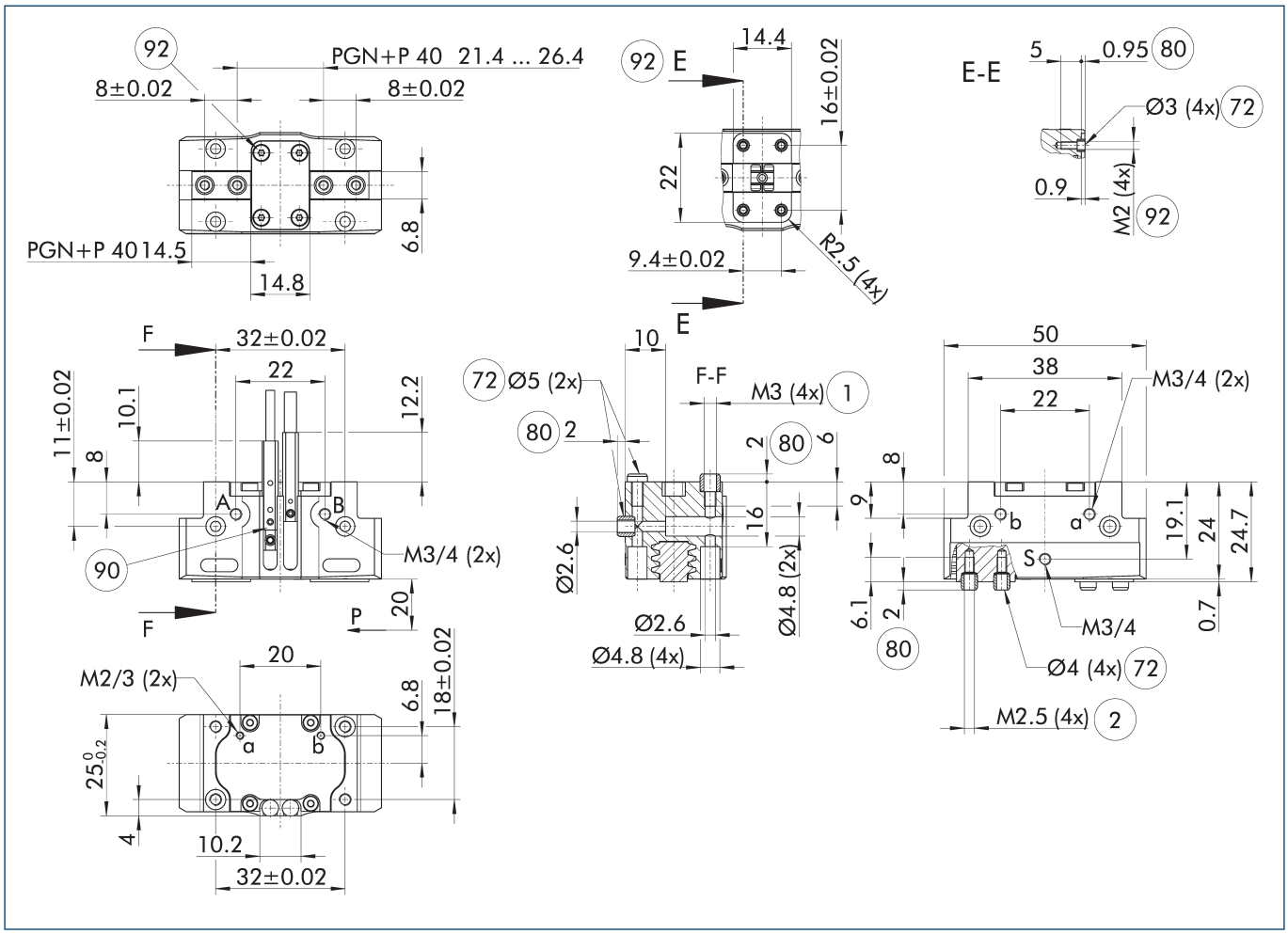
ⓘ The indicated moments and forces are statical values, apply for each base jaw and may appear simultaneously. Loads may additionally occur to the moment produced by the gripping force itself.

Technical data

Description		PGN-plus-P 40	PGN-plus-P 40-AS	PGN-plus-P 40-IS
ID		0318448	0318450	0318452
Stroke per jaw	[mm]	2.5	2.5	2.5
Closing/opening force	[N]	180/200	235/-	-/260
Min. spring force	[N]		55	60
Weight	[kg]	0.08	0.1	0.1
Recommended workpiece weight	[kg]	0.9	0.9	0.9
Cylinder volume per double stroke	[cm³]	4	8	10
Min./nom./max. operating pressure	[bar]	2.5/6/8	4/6/6.5	4/6/6.5
Min./max. air purge pressure	[bar]	0.5/1	0.5/1	0.5/1
Closing/opening time	[s]	0.015/0.015	0.015/0.03	0.03/0.015
Closing/opening time with spring	[s]		0.03	0.03
Max. permissible finger length	[mm]	65	60	60
Max. permissible weight per finger	[kg]	0.12	0.12	0.12
IP protection class		40	40	40
Min./max. ambient temperature	[°C]	5/90	5/90	5/90
Repeat accuracy	[mm]	0.01	0.01	0.01
Dimensions X x Y x Z	[mm]	50 x 25 x 24.7	50 x 25 x 33.7	50 x 25 x 33.7
Options and their characteristics				
Dustproof version		1317458	1317463	1317466
IP protection class		64	64	64
Weight	[kg]	0.1	0.12	0.12
Corrosion-protected version		1317436	1317437	1317439
High-temperature version		1317423	1317428	1317431
Min./max. ambient temperature	[°C]	5/130	5/130	5/130
Precision version		1317451	1317454	

ⓘ It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

Main view

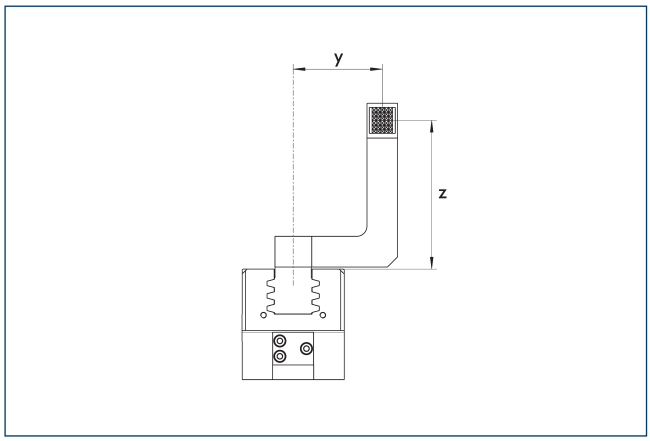


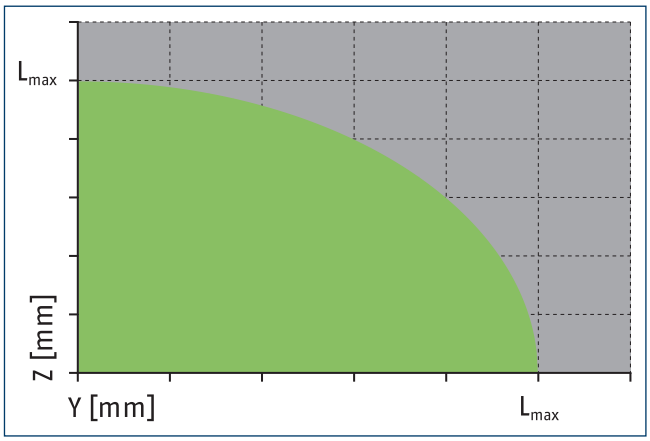
The drawing shows the gripper in the basic version with closed jaws, without dimensional consideration of the options described below.

ⓘ As an alternative/in addition to spring-assisted mechanical gripping force maintenance, the SDV-P pressure maintenance valve can be used for I.D. and O.D. gripping (see "Accessories" section of catalog).

A, a Main / direct connection, gripper opening
B, b Main / direct connection, gripper closing
S Air purge connection
(1) Gripper connection
(2) Finger connection
(72) Fit for centering sleeves
(80) Depth of the centering sleeve hole in the counter part
(90) Sensor MMS 22..
(92) Screw connection with centering for customized mounting (these centering sleeves are not included in the scope of delivery)

Maximum permitted finger projection



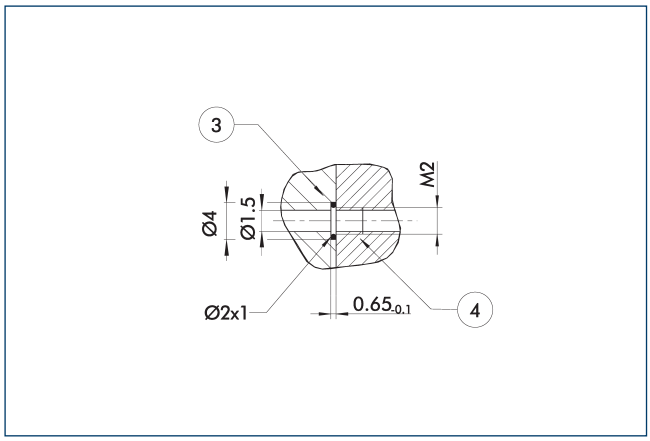


Permitted range

Inadmissible range

L^{max} is equivalent to the maximum permitted finger length, see the technical data table.

Hose-free direct connection M2

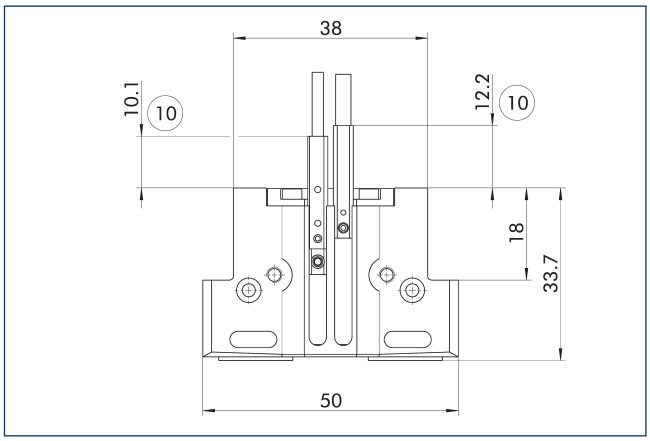


(3) Adapter

(4) Grippers

The direct connection is used for supplying compressed air without hoses. Instead, the pressure medium is fed through bore-holes in the mounting plate.

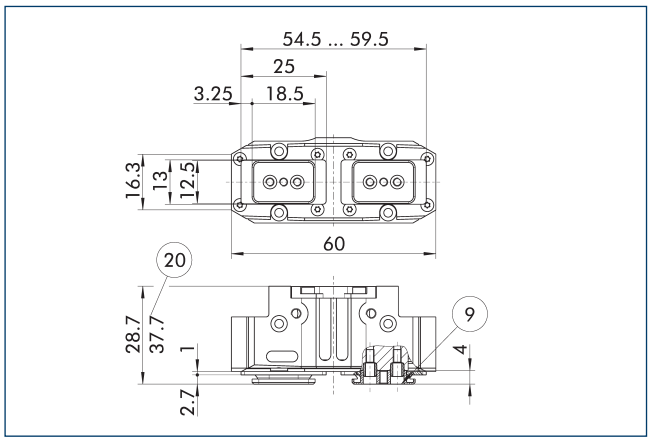
Gripping force maintenance version AS/IS



(10) Projection applies only for AS version

The mechanical gripping force maintenance device ensures that a minimum clamping force will be applied even if there is a drop in pressure. In the AS/S variant this acts as a closing force, in the IS variant as an opening force. Besides this, gripping force maintenance can be used to increase gripping force or for single actuated gripping.

Dustproof version



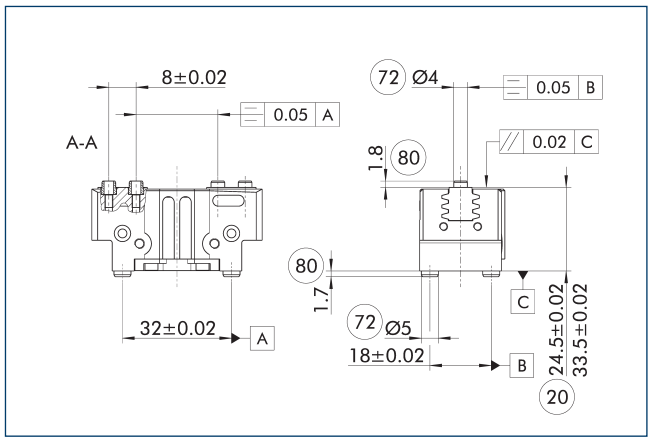
(9) For mounting screw connection diagram, see basic version
(20) For version AS/IS

The "dustproof" option increases the degree of protection against penetrating substances. The assembly diagram shifts by the height of the intermediate jaw. The finger length is still measured from the upper edge of the gripper housing.

Description	ID	
Dust cover		
SAD PGN-plus-P 40	1347469	

ⓘ The "dustproof" option can either be ordered as a pre-mounted gripper version or can be retrofitted to the gripper using the "SAD PGN-plus-P" retrofit kit.

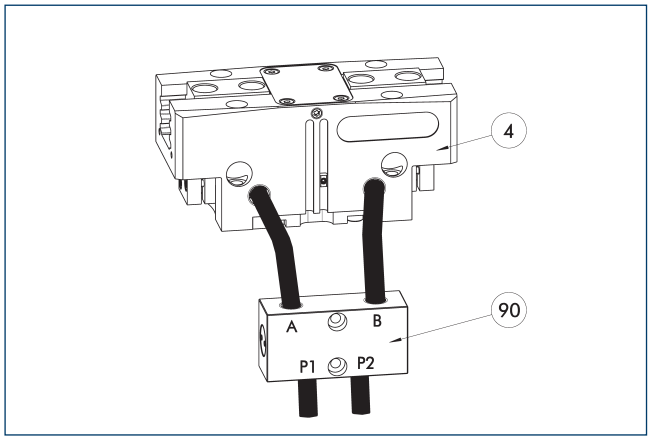
Precision version



(20) For version AS/IS
(72) Fit for centering sleeves
(80) Depth of the centering sleeve hole in the counter part

The indicated tolerances just refer to the variants of precision versions shown in the chart of technical specifications. All other variants of precision versions are available on request.

SDV-P pressure maintenance valve



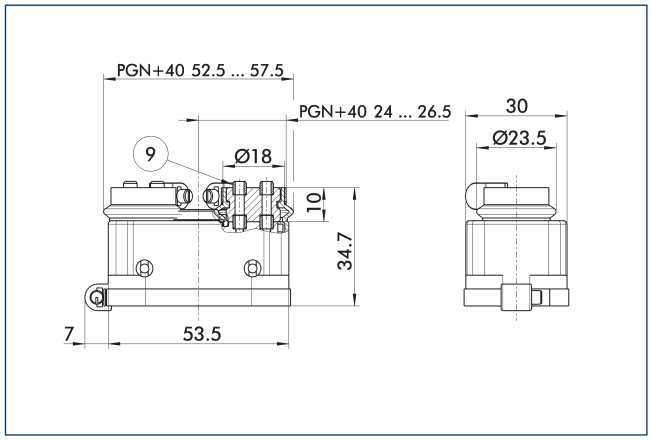
(4) Grippers
(90) SDV-P pressure maintenance valve

The SDV-P pressure maintenance valve ensures in emergency STOP situations that the pressure in the piston chamber of pneumatic gripper, swivel, linear, and quick-change modules is temporarily maintained.

Description	ID	Recommended hose diameter
		[mm]
Pressure maintenance valve		
SDV-P 04	0403130	6
Pressure maintenance valve with air bleed screw		
SDV-P 04-E	0300120	6

ⓘ In order to achieve the specified closing and opening time for each gripper variant, the recommended hose diameter must be used. The direct allocation of the respective variant of the gripper for the respective SDV-P can be found at schunk.com.

Protective cover HUE PGN-plus 40



(9) For mounting screw connection diagram, see basic version

The HUE protective cover fully protects the gripper against external influences. The cover is suitable for applications of up to IP65 if an additional sealing of the cover bottom is provided. For detailed information, please see the HUE series. The connection diagram shifts by the height of the intermediate jaw.

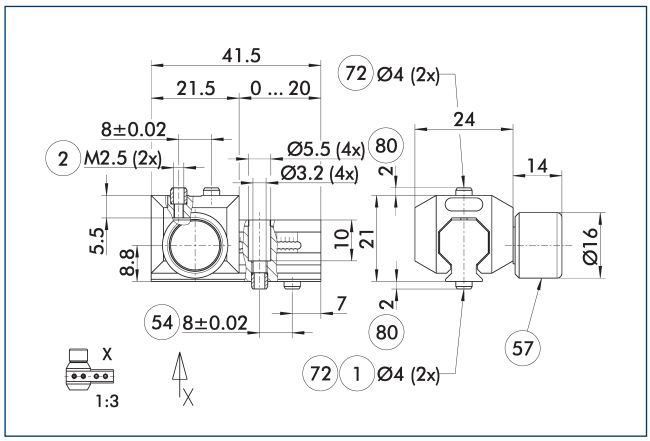
Description	ID	IP protection class
Protection cover		
HUE PGN-plus 40	0371490	65

ⓘ The HUE protective cover is not suitable for use on grippers with gripping force maintenance. An inductive monitoring of the gripper in connection with the HUE protective cover is not possible. SCHUNK recommends the use of magnetic sensors that are approved for the respective gripper variant.

PGN-plus-P 40

Universal gripper

UZB 40 universal intermediate jaw



(1) Gripper connection
(2) Finger connection
(54) Optional right or left connection
(57) Locking
(72) Fit for centering sleeves
(80) Depth of the centering sleeve hole in the counter part

The drawing shows the UZB universal intermediate jaw.

Description	ID	Grid dimension
		[mm]
Universal intermediate jaw		
UZB 40	0300040	1
Finger blank		
ABR-PGZN-plus 40	0300008	
SBR-PGZN-plus 40	0300018	

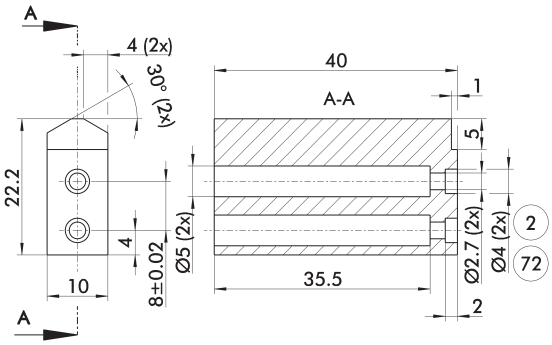
ⓘ If the operating pressure is higher than 6 bar, suitability for use beyond the application limits must be checked.

Fields of application

Series	Size	Variant	Suitability
PGN-plus-P	40	-1 (6 bar)	■■■■
PGN-plus-P	40	-1-AS/1-IS (6 bar)	■■□□
Legend			
■■■■	Can be combined without restrictions		
■■□□	Use with restrictions (see loading limits)		
□□□□	cannot be combined		

The load limits for describing the application limits can be found in the catalog chapter of the corresponding accessories.

Finger blanks ABR/SBR-PGZN-plus 40

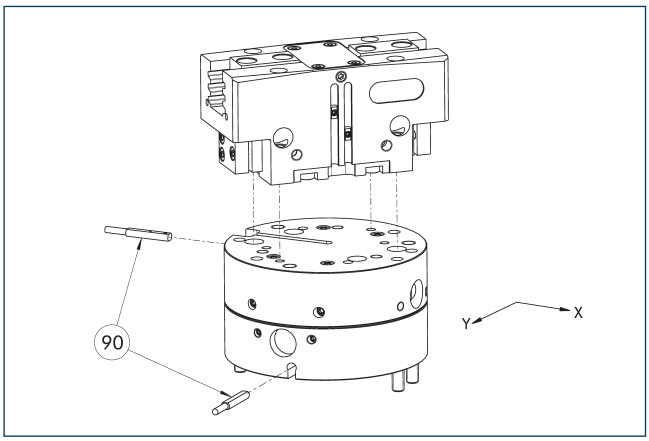


(2) Finger connection
(72) Fit for centering sleeves

The drawing shows the finger blank which can be reworked by the customer.

Description	ID	Material	Scope of delivery
Finger blank			
ABR-PGZN-plus 40	0300008	Aluminum (3.4365)	1
SBR-PGZN-plus 40	0300018	Steel (1.7131)	1

Compensation unit AGE-F



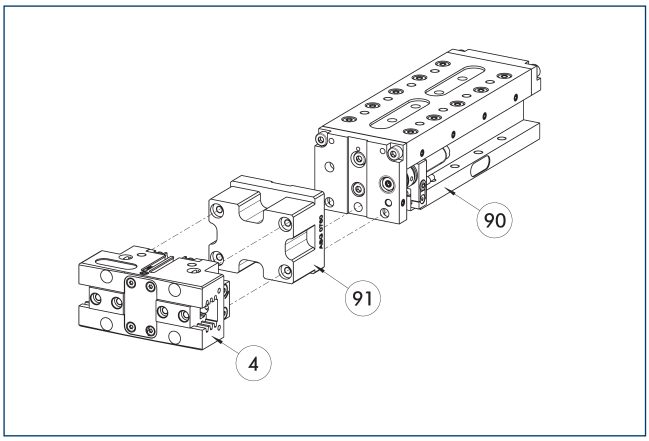
(90) Monitoring

The unit has direct connection possibilities for different grippers of the PGN-plus, PGN-plus-P and PZN-plus series. For more detailed information, please refer to the main view.

Description	ID	Compensation XY	Reset force	Often combined
		[mm]	[N]	
Compensation unit				
AGE-F-XY-031-1	0324900	± 1.5	1.5	
AGE-F-XY-031-2	0324901	± 1.5	4	
AGE-F-XY-031-3	0324902	± 1.5	5.5	●

ⓘ Due to the interfering contour, monitoring of the gripper is not possible.

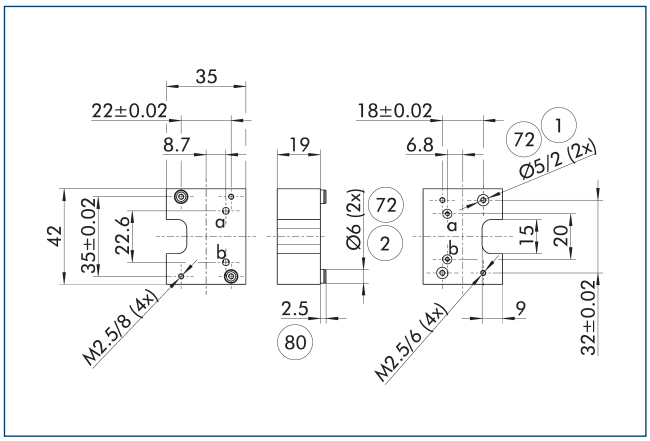
Modular Assembly Automation



(4) Grippers
(90) Linear module CLM/KLM/LM/ELP/ELM/ELS/HLM
(91) ASG adapter plate

Grippers and linear modules can be combined with standard adapter plates from the modular assembly system. For more information see our main catalog "Modular Assembly Automation".

Adapter plate for PGN-plus 40

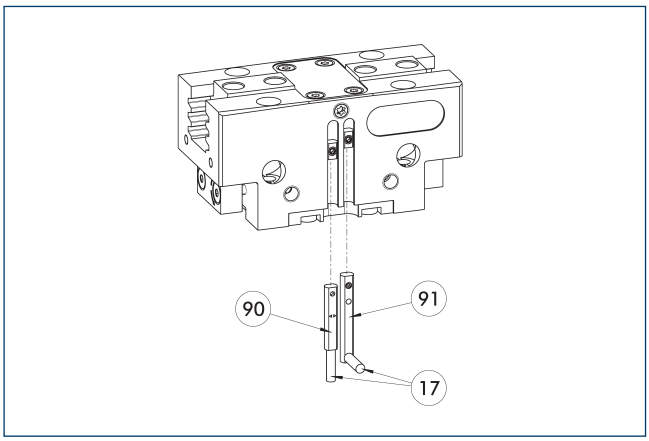


(1) Robot-side connection
(2) Tool-side connection
(72) Fit for centering sleeves
(80) Depth of the centering sleeve hole in the counter part

The adapter plate has integrated air feed-throughs in order to be able to use the hose-free direct connection of the appropriate gripper.

Description	ID	
Tool side		
A-CWA-050-040-P	0305754	

Electronic magnetic switch MMS



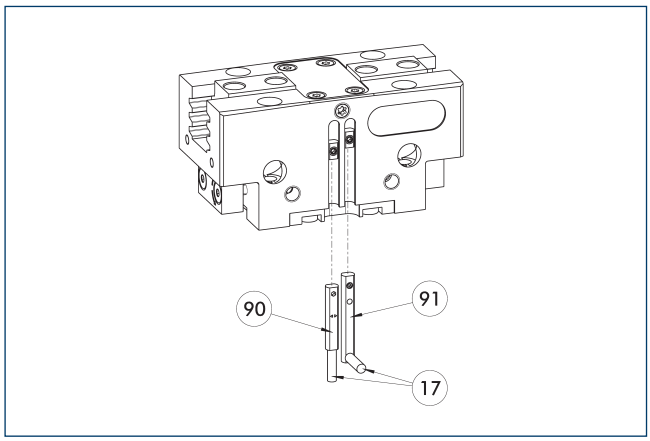
(17) Cable outlet
(91) Sensor MMS 22...-SA
(90) Sensor MMS 22..

End position monitoring for mounting in the C-slot.

Description	ID	Often combined
Electronic magnetic switch		
MMS 22-S-M8-PNP	0301032	●
MMSK 22-S-PNP	0301034	
Electronic magnetic switches with lateral cable outlet		
MMS 22-S-M8-PNP-SA	0301042	●
MMSK 22-S-PNP-SA	0301044	
Connection cables		
KA BG08-L 3P-0300-PNP	0301622	●
KA BG08-L 3P-0500-PNP	0301623	
KA BW08-L 3P-0300-PNP	0301594	
KA BW08-L 3P-0500-PNP	0301502	
Clip for connector/socket		
CLI-M8	0301463	
Cable extension		
KV BW08-SG08 3P-0030-PNP	0301495	
KV BW08-SG08 3P-0100-PNP	0301496	
KV BW08-SG08 3P-0200-PNP	0301497	●
Sensor distributor		
V2-M8	0301775	●
V4-M8	0301746	
V8-M8	0301751	

ⓘ Two sensors are required per unit for monitoring two positions. On option, extension cables and sensor distributors are available. Additional product variants of the sensor, and further information and technical data can be found in the catalog chapter sensor system.

Programmable magnetic switch MMS 22-PI1



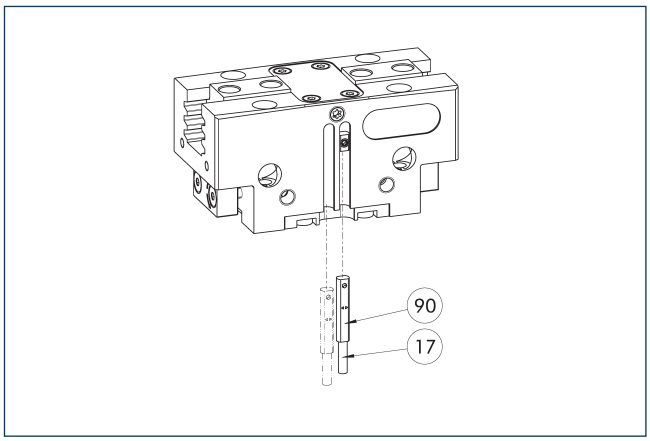
(17) Cable outlet
(91) Sensor MMS 22 ..-PI1-...-SA
(90) Sensor MMS 22 PI1-...

Position monitoring with one programmable position per sensor and integrated electronic system in the sensor. Can be programmed using MT magnetic teaching tool (included in the scope of delivery, ID 0301030) or ST plug teaching tool (optional). End position monitoring for mounting in the C-slot. If the ST plug teaching tools are listed in the table provided, teaching is only possible with the ST teaching tools.

Description	ID	Often combined
Programmable magnetic switch		
MMS 22-PI1-S-M8-PNP	0301160	●
MMSK 22-PI1-S-PNP	0301162	
Programmable magnetic switch with lateral cable outlet		
MMS 22-PI1-S-M8-PNP-SA	0301166	●
MMSK 22-PI1-S-PNP-SA	0301168	
Programmable magnetic switch with stainless steel housing		
MMS 22-PI1-S-M8-PNP-HD	0301110	●
MMSK 22-PI1-S-PNP-HD	0301112	

ⓘ Two sensors are required per unit for monitoring two positions. On option, extension cables and sensor distributors are available. Additional product variants of the sensor, and further information and technical data can be found in the catalog chapter sensor system.

Programmable magnetic switch MMS 22-PI2



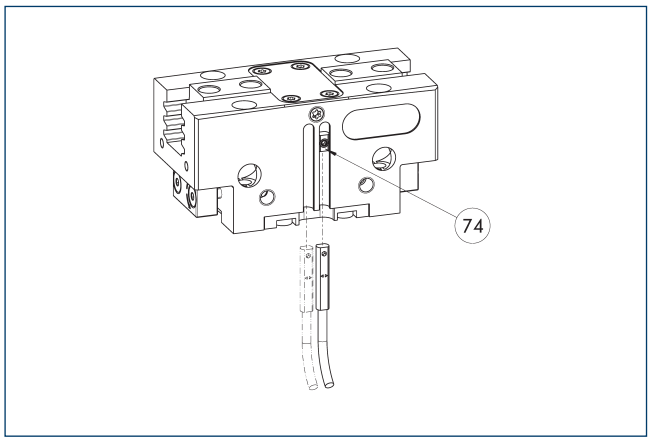
(17) Cable outlet
(90) MMS 22...-PI2-... sensor

Position monitoring with two programmable positions per sensor and electronics integrated in the sensor. Can be programmed using MT magnetic teaching tool (included in the scope of delivery, ID 0301030) or ST plug teaching tool (optional). End position monitoring for mounting in the C-slot. If the ST plug teaching tools are listed in the table provided, teaching is only possible with the ST teaching tools.

Description	ID	Often combined
Programmable magnetic switch		
MMS 22-PI2-S-M8-PNP	0301180	●
MMSK 22-PI2-S-PNP	0301182	
Programmable magnetic switch with lateral cable outlet		
MMS 22-PI2-S-M8-PNP-SA	0301186	●
MMSK 22-PI2-S-PNP-SA	0301188	
Programmable magnetic switch with stainless steel housing		
MMS 22-PI2-S-M8-PNP-HD	0301130	●
MMSK 22-PI2-S-PNP-HD	0301132	

ⓘ One sensor is required per unit for monitoring two positions. Extension cables and sensor distributors are optionally available. Additional product variants of the sensor, and further information and technical data can be found in the catalog chapter sensor systems.

MMS-P programmable magnetic switch



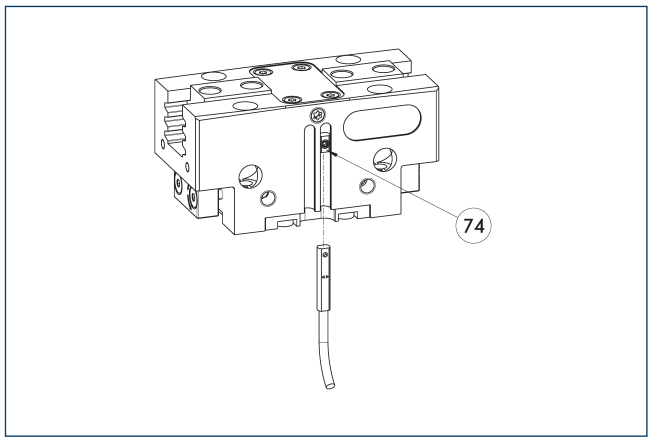
74 Limit stop for sensor

Position monitoring with two programmable positions per sensor. End position monitoring for mounting in the C-slot.

Description	ID	Often combined
Programmable magnetic switch		
MMSK-P 22-S-PNP	0301371	
MMS-P 22-S-M8-PNP	0301370	●
Connection cables		
KA GLN0804-LK-00500-A	0307767	●
KA GLN0804-LK-01000-A	0307768	
KA WLN0804-LK-00500-A	0307765	
KA WLN0804-LK-01000-A	0307766	
Clip for connector/socket		
CLI-M8	0301463	
Sensor distributor		
V2-M8-4P-2XM8-3P	0301380	

ⓘ One sensor is required per unit for monitoring two positions. Extension cables and sensor distributors are optionally available. Additional product variants of the sensor, and further information and technical data can be found in the catalog chapter sensor systems.

Analog position sensor MMS-A



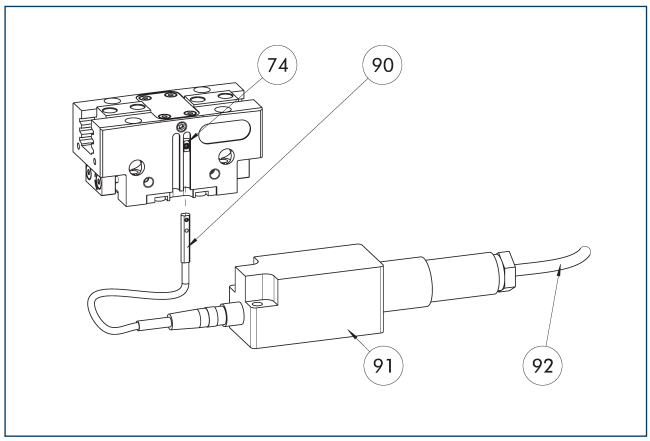
74 Limit stop for sensor

Non-contact measuring, analog multi-position monitoring for any number of positions, easy to assemble in the C-slot. Can be programmed using MT magnetic teaching tool (included in the scope of delivery, ID 0301030) or ST plug teaching tool (optional). End position monitoring for mounting in the C-slot. If the ST plug teaching tools are listed in the chart provided, teaching is only possible with the ST teaching tools.

Description	ID	
Analog position sensor		
MMS 22-A-10V-M08	0315825	
MMS 22-A-10V-M12	0315828	

ⓘ One sensor is required for each gripper. No additional mounting kit is required – the gripper is equipped for use of the sensor by default. Further information and technical data can be found in the catalog chapter sensor systems.

Flexible position sensor with MMS-A



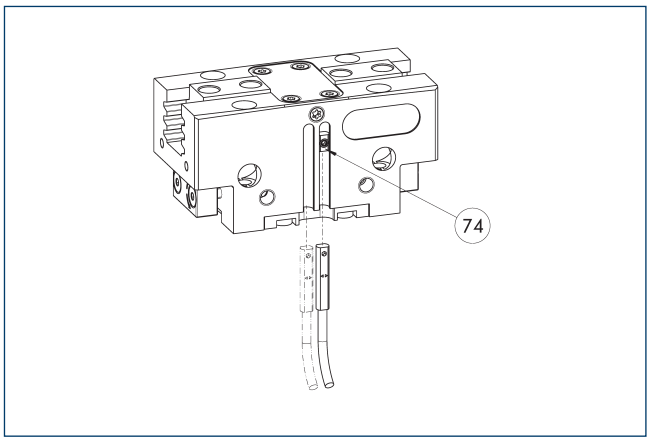
74 Limit stop for sensor
90 MMS 22-A-... sensor
91 FPS-F5 evaluation electronic
92 Connection cables

Flexible position monitoring of up to five positions. Sensor can be taught using MT magnetic teaching tool (included in the scope of delivery, ID 0301030) or ST plug teaching tool (optional). If the ST plug teaching tools are listed in the table provided, teaching is only possible with the ST teaching tools.

Description	ID	
Analog position sensor		
MMS 22-A-05V-M08	0315805	
Evaluation electronics		
FPS-F5	0301805	
Sensor Teaching Tool		
MT-MMS 22-PI	0301030	
Connection cables		
KA BG16-L 12P-1000	0301801	

ⓘ When using an FPS system, one MMS 22-A-05V and one evaluation electronics (FPS-F5) are required per each gripper, as well as an attachment kit (AS), if listed. On option, cable extensions (KV) are available – see catalog chapter "Accessories."

Programmable magnetic switch MMS-IO-Link



74 Limit stop for sensor

Sensor for multi-position monitoring through detection of the complete gripper stroke. The sensor is mounted directly in the C-slot of the gripper. The sensor is programmed for the gripper via the IO-Link interface, Magnet teaching tool MT (included in scope of delivery; ID 0301030) or the ST plug teaching tool (not included in scope of delivery; ID 0301026). An IO-Link master is required for operation.

Description	ID	
Programmable magnetic switch		
MMS 22-IOL-M08	0315830	
MMS 22-IOL-M12	0315835	

ⓘ One sensor is required for each gripper. No additional mounting kit is required – the gripper is equipped for use of the sensor by default. Further information and technical data can be found in the catalog chapter sensor systems.