Superior Clamping and Gripping

Product Information

Universal swivel head SRH-plus

Fast. Robust. High Performance.

SRH-plus universal swivel head

for fast loading and unloading tasks, with integrated fluid and electric feed-through

Field of application

used for loading and unloading of tooling machines

Advantages – Your benefits

Complete module with integrated fluid and electric feed-through Eliminating unnecessary interfering contours

High damper performance due to the use of hydraulic shock absorbers this results in a significant reduction of wear and shorter loading times

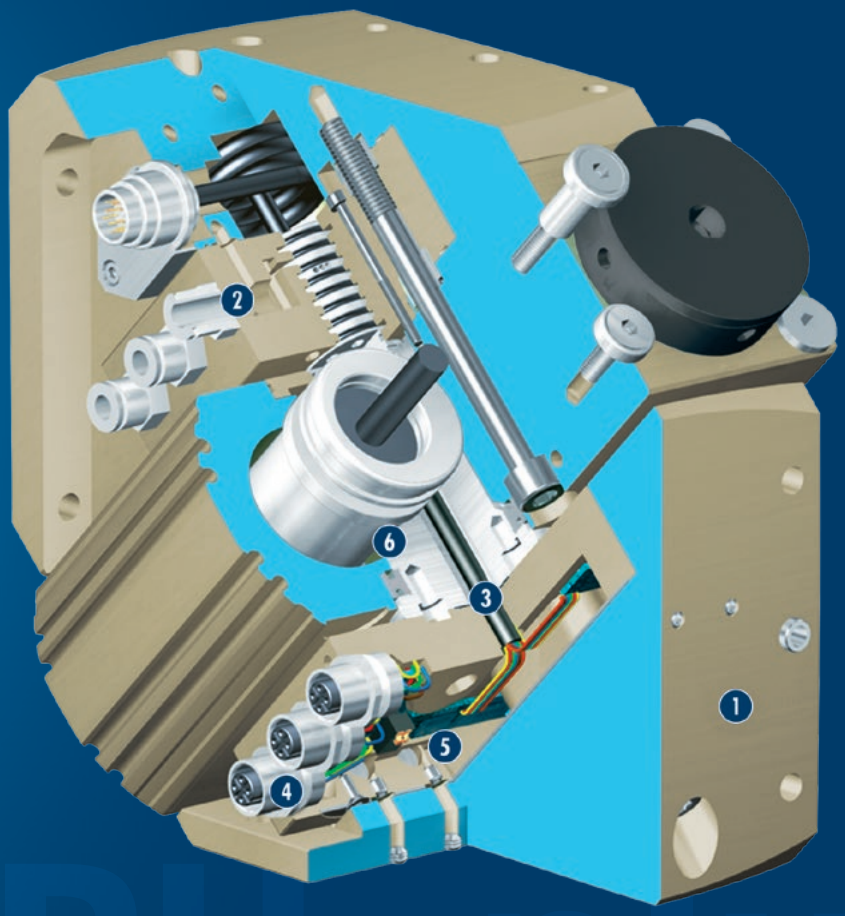
Media feed-through and drive connection via screw connection or hoseless direct connection possible for flexibility in all automation solutions

Choice of electronic magnetic sensors or inductive proximity sensors for absolute variability of position monitoring

Sizes	Weight	Torque	Repeat accuracy	Angle of rotation
Quantity: 7	2.1 .. 21.2 kg	3 .. 69.9 Nm	0.05°	180°

Functional description

When subjected to pressure, the two pneumatic pistons move their end faces in a straight line in their respective bores thus turning the pinion by means of the serrations on their sides.
The pinion is firmly connected to the drive head, and feeds through compressed air and electrical signals.



① **Output side**
for fastening end actuators such as grippers

② **MDF media feed-through**
guided up to the screw-on surfaces of the swivel head

③ **EDF electrical feed-through**
completely integrated, for sensor, acuator signal, and energy transmission

④ **Connectors**
for the use of the integrated electric feed-through

⑤ **Distributor board**
for bundling the input lines

⑥ **Drive principle of pinions and racks**
for powerful swiveling and a robust and reliable module

CAD data, operating manuals and other current product documents can be found online.

General notes about the series

Standard conditions: The technical data shown refers to an environment of 20 °C and atmospheric pressure.

Housing material: Aluminum alloy, anodized

Actuation: pneumatic, with filtered compressed air as per ISO 8573-1:2010 [7:4:4].

Operating principle: Double piston rack and pinion principle

Scope of delivery: Centering sleeves, O-rings for direct connection, assembly and operating manual with manufacturer's declaration

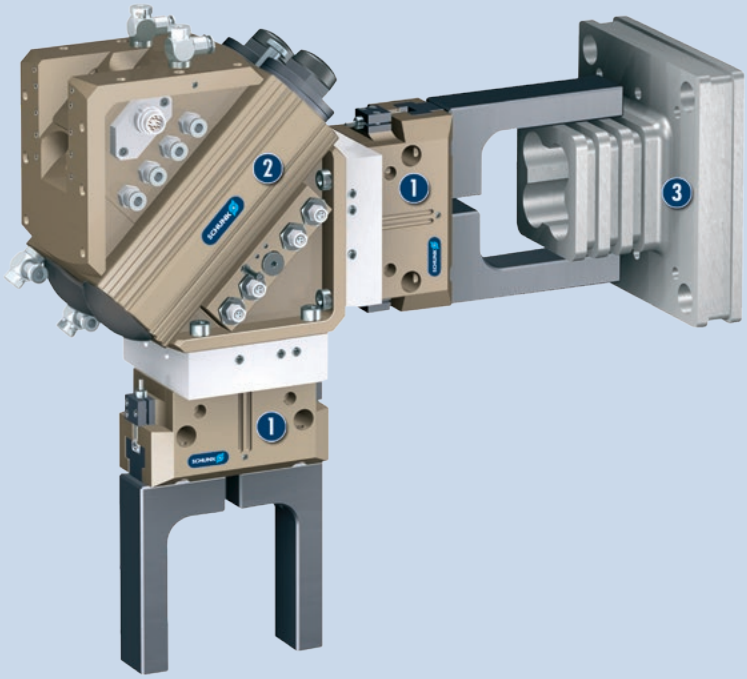
Warranty: 24 months

Repeat accuracy: is defined as a distribution of the end position for 100 consecutive cycles.

Special swivel angle: More swivel angles are available on request.

Torque in the end positions: Please note that the final angular degrees (approx. 2°) before the end position can only be approached using the force of a single drive piston. For this reason, double actuated modules only have about half the rated torque available in this area. An external stop can be used to provide the full torque even in the end positions.

Cycle time: is the rotation time of pinion / flange around the nominal rotation angle. Valve switching times, hose filling times, or PLC reaction times are not a part of this and are to be considered when cycle times are calculated.



Application example

Feeding and assembly device

1. JGP 2-finger parallel gripper with workpiece-specific gripper fingers
2. SRH-plus swivel head
3. Workpiece

SCHUNK offers more ...

The following components make the product SRH-plus even more productive – the suitable addition for the highest functionality, flexibility, reliability, and controlled production.

Centering sleeves

Fittings

MMS magnetic switch

Inductive Proximity Switches

Sensor distributor

PGN-plus universal gripper

Sensor cables

Pressure maintenance valve

PZN-plus universal gripper

Universal angular gripper PWG-plus

DPZ-plus 3-finger centric gripper

DPG-plus sealed universal gripper

ⓘ Additional information regarding the products can be found on the following product pages or at www.schunk.com. Please contact us for further information: SCHUNK technical hotline +49-7133-103-2696

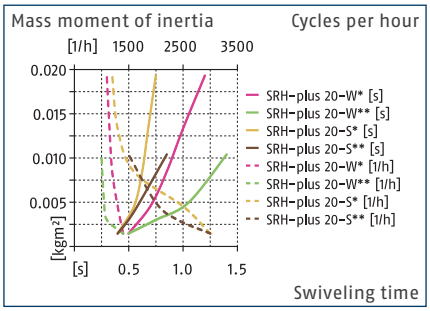
Options and special information

For particularly damping-intensive rotary movements, additional, external shock absorbers can be fitted. Please ask for details.
We are also happy to provide our electrical feed-throughs with M5 or M12 connections on request. On request the electrical feed-throughs can also be used to transmit bus signals.
Please note that suitable emergency stop scenarios (e.g. controlled shut down) and restarting scenarios (e.g. pressure build-up valves, appropriate valve switching sequences) are needed for all pneumatic actuators.
Cutting off the pressure in an uncontrolled manner could lead to undefined states and behavior.

SRH-plus 20

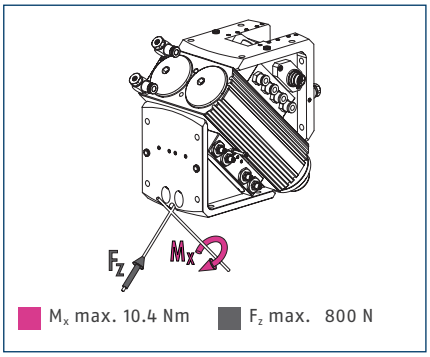
Universal swivel head

Max. admissible inertia J



ⓘ The diagrams are valid for applications with symmetrical loading (*), one-sided centric and symmetric loading (**) and with 6 bar air pressure. The mass moment of inertia is taken relative to the axis of rotation. The cycle times can be adjusted via throttling and adjustment of the shock absorbers. Otherwise the lifetime may reduce. We are glad to assist in designing other applications.

Forces and moments



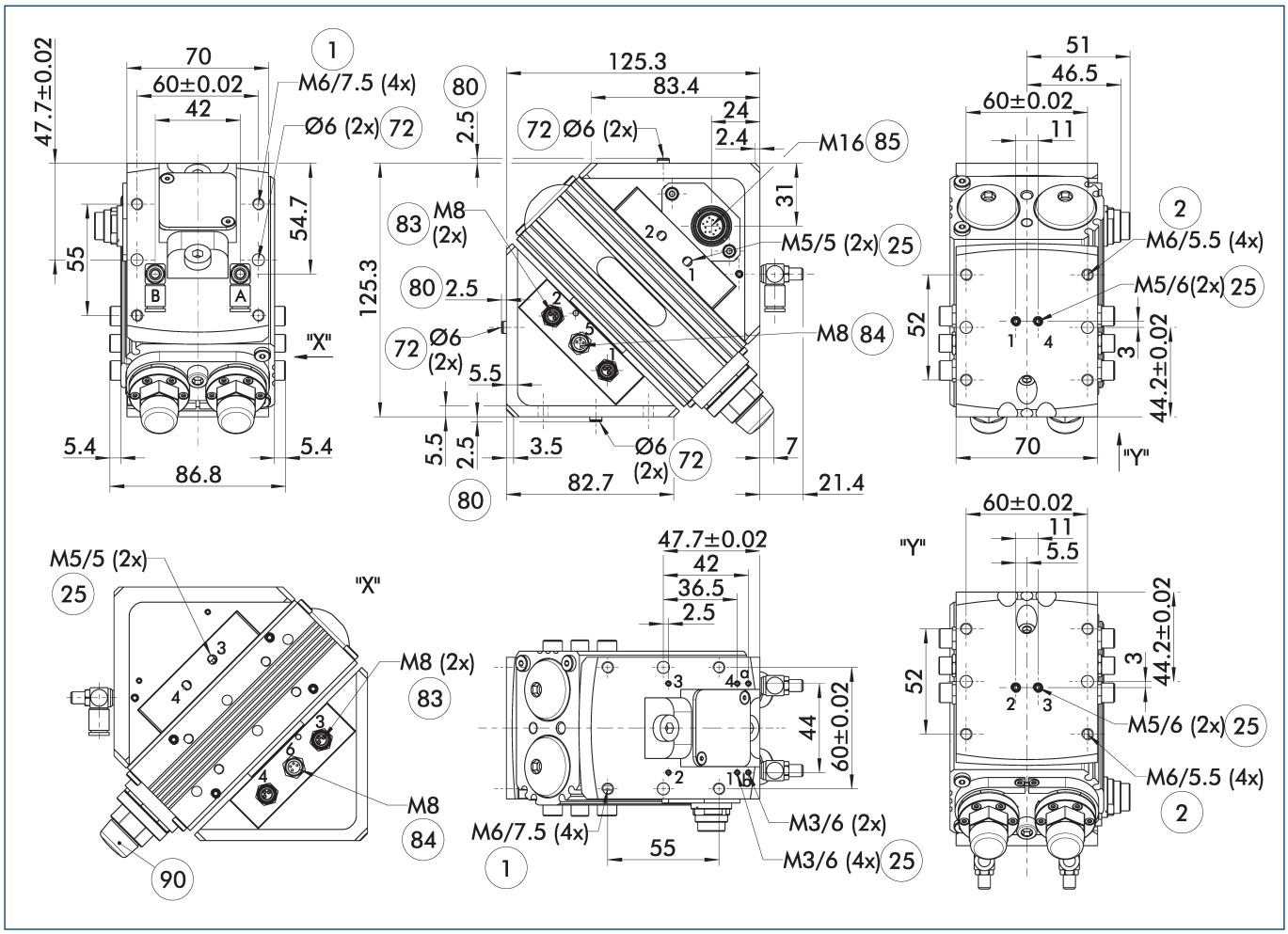
ⓘ The indicated moments and forces are statical values and should not appear simultaneously Throttling has to be done for ensuring that the rotary motion takes place without impact or bouncing. otherwise the service life reduces.

Technical data

Description		SRH-plus 20-W-CB	SRH-plus 20-S-CB	SRH-plus 20-W-M8	SRH-plus 20-S-M8	SRH-plus 20-W-M8-A	SRH-plus 20-S-M8-A
ID		0359243	0359443	0359241	0359441	0359246	0359446
Angle of rotation	[°]	180.0	180.0	180.0	180.0	180.0	180.0
End position adjustability	[°]	3.0	3.0	3.0	3.0	3.0	3.0
Torque	[Nm]	3	3	3	3	3	3
Protection class IP		67	67	67	67	67	67
Weight	[kg]	2.1	2.1	2.2	2.2	2.2	2.2
Fluid consumption (2 x nominal angle)	[cm³]	60.0	60.0	60.0	60.0	60.0	60.0
Swivel time without a payload	[s]	0.5	0.4	0.5	0.4	0.5	0.4
Nominal operating pressure	[bar]	6.0	6.0	6.0	6.0	6.0	6.0
min./max. operating pressure	[bar]	3/8	3/8	3/8	3/8	3/8	3/8
Diameter of connecting hose		6 x 3.9 x 1.05	6 x 3.9 x 1.05	6 x 3.9 x 1.05	6 x 3.9 x 1.05	6 x 3.9 x 1.05	6 x 3.9 x 1.05
No. of fluid feed-throughs		4	4	4	4	4	4
max. pressure in the air feed-through	[bar]	8	8	8	8	8	8
min./max. ambient temperature	[°C]	5/60	5/60	5/60	5/60	5/60	5/60
Repeat accuracy	[°]	0.05	0.05	0.05	0.05	0.05	0.05
Number of E-fittings on the output end				6	6	6	6
Size of the E-connections on the output end				M8	M8	M8	M8
Number of wires				10.0	10.0	10.0	10.0
max. voltage	[V]			24	24	24	24
Max. current per wire	[A]			1	1	1	1
max. total current	[A]			1	1	1	1

ⓘ All modules are also available in a Viton version. Please contact us for details.

Main view



The main view shows the SRH-plus version with the EDF electric feed-through. The swivel head is drawn in the left end position (0°) and rotates 180° clockwise (when viewing the output side)

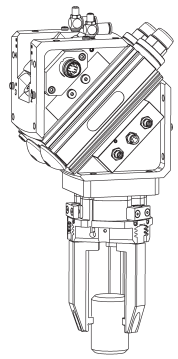
ⓘ The SDV-P pressure maintenance valve can be used to maintain the position in the case of a loss of pressure (see "Accessories" catalog section).

A, a Main / direct connection, swivel unit clockwise turning

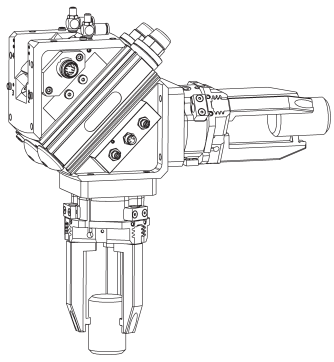
B, b Main / direct connection, swivel unit counterclockwise turning

(1) Connection swivel unit
(2) Attachment connection
(25) Fluid feed-through
(72) Fit for centering sleeves
(80) Depth of the centering sleeve hole in the counter part
(83) Input for 3 pole sensor feed-through
(84) Input for 4 pole sensor feed-through
(85) Sensor feed-through output
(90) Cover caps

One-sided loading



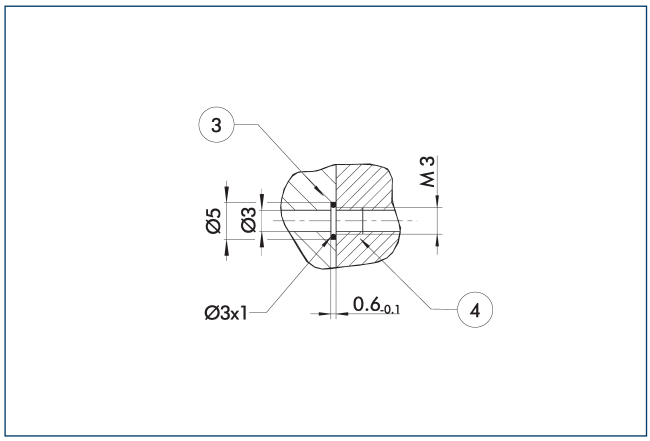
Two-sided loading



SRH-plus 20

Universal swivel head

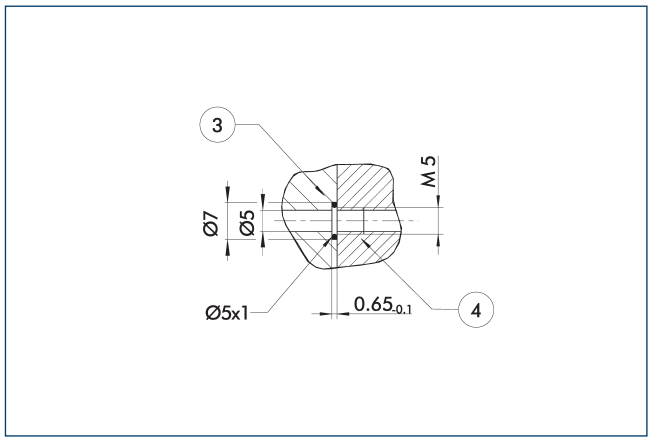
Hose-free direct connection M3



(3) Adapter (4) Rotary unit

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

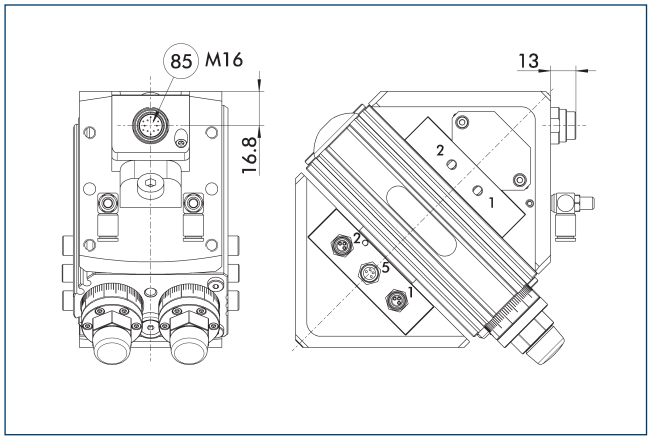
Hose-free direct connection M5



(3) Adapter (4) Rotary unit

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

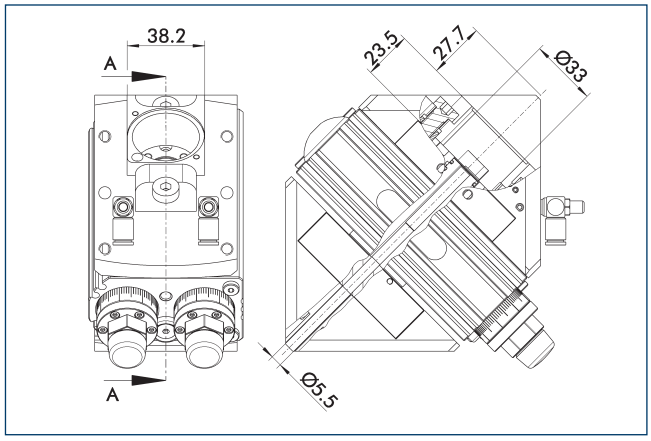
Axial cable connection (Version A)



(85) Sensor feed-through output

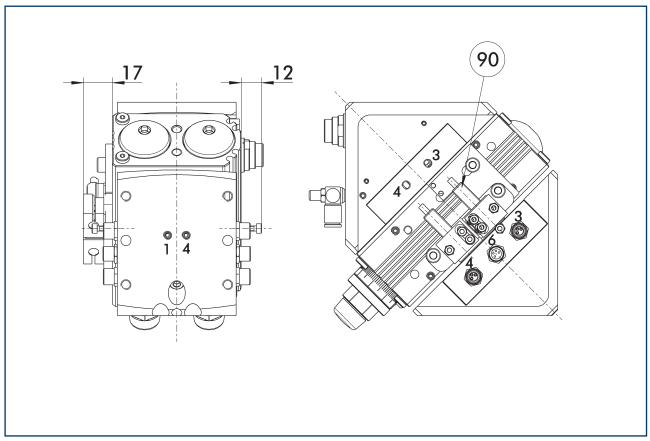
The SRH-plus version with axial cable outlet (-A) is designed for applications where a lateral interfering contour is not acceptable.

Center Bore (Version CB)



The CB Version with a central through hole comes without the EDF integrated electrical feed- through, and allows for the relocation of wires through the swivel head by the customer. Please note that improper wire relocation often leads to wire damage. The swivel head with the integrated EDF electrical feed-through is long lasting and reliable.

Attachment kit for proximity switch



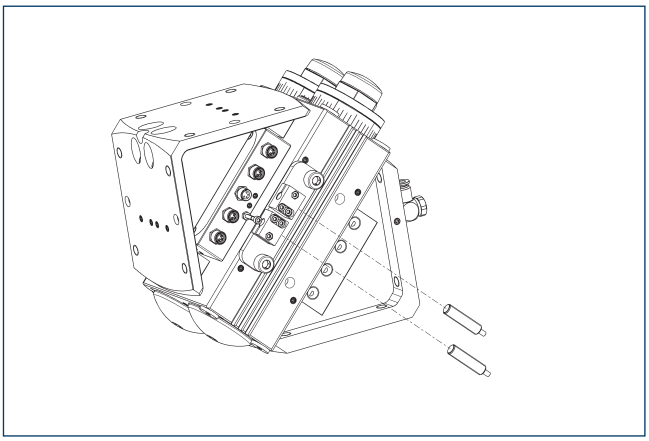
(90) Sensor IN ...

The attachment kit consists of brackets, control cams, and appropriate fastening materials. The proximity switches must be ordered separately.

Description	ID	
Attachment kit for proximity switch		
AS-SRH-plus 20/25	0359200	

ⓘ This attachment kit needs to be ordered optionally as an accessory.

Inductive Proximity Switches



End position monitoring can be mounted with an attachment kit.

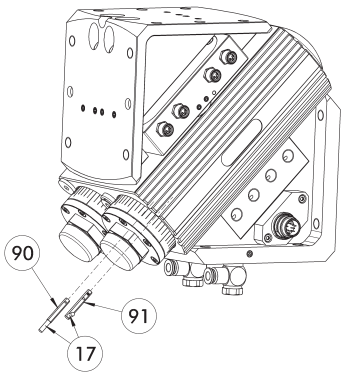
Description	ID	Often combined
Attachment kit for proximity switch		
AS-SRH-plus 20/25	0359200	
Inductive Proximity Switches		
IN 80-S-M12	0301578	
IN 80-S-M8	0301478	●
IN-C 80-S-M8-PNP	0301475	
INK 80-S	0301550	
INK 80-SL	0301579	
Inductive proximity switch with lateral outlet		
IN 80-S-M12-SA	0301587	
IN 80-S-M8-SA	0301483	●
INK 80-S-SA	0301566	

ⓘ Two sensors (closer/S) are required for each swivel head. On option, extension cables are required.

SRH-plus 20

Universal swivel head

Electronic magnetic switches MMS



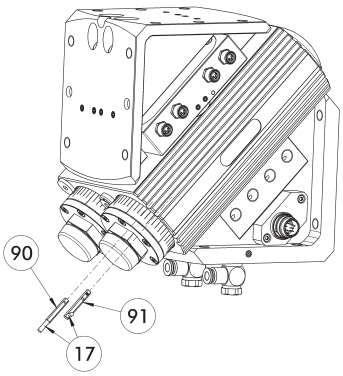
(17) Cable outlet
(91) Sensor MMS 22...-SA
(90) Sensor MMS 22..

End position monitoring for mounting in the C-slot.

Description	ID	Often combined
Electronic magnetic switches MMS		
MMS 22-S-M8-PNP	0301032	●
MMSK 22-S-PNP	0301034	
MMS electronic magnetic switches with lateral outlet		
MMS 22-S-M8-PNP-SA	0301042	●
MMSK 22-S-PNP-SA	0301044	
Cable extension		
KV BW08-SG08 3P-0030-PNP	0301495	
KV BW08-SG08 3P-0100-PNP	0301496	
KV BW08-SG08 3P-0200-PNP	0301497	●
clip for plug/socket		
CLI-M8	0301463	
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	
Sensor distributor		
V2-M8	0301775	●
V4-M8	0301746	
V8-M8	0301751	

ⓘ Two sensors (closer/S) are required for each swivel head. On option, extension cables are required.

Programmable magnetic switches MMS PI1



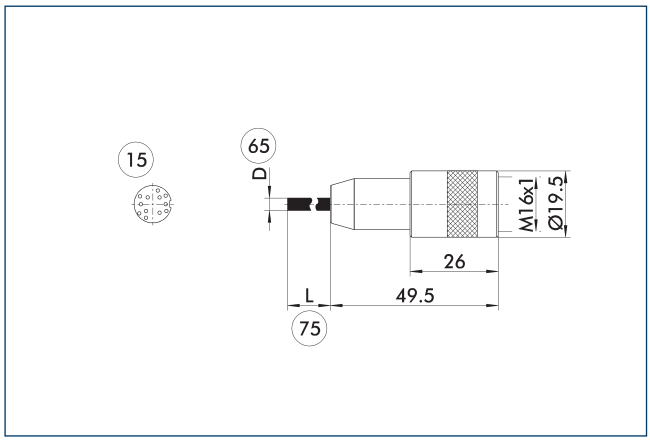
(17) Cable outlet
(91) Sensor MMS 22 ..-PI1-...-SA
(90) Sensor MMS 22 PI1-...

Position monitoring with one programmable position per sensor and electronics integrated in the sensor. Can be programmed using MT magnetic teaching tool (included in scope of delivery) or ST plug teaching tool (optional). End position monitoring is mounted 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 switches MMS PI1		
MMS 22-PI1-S-M8-PNP	0301160	●
MMSK 22-PI1-S-PNP	0301162	
Programmable magnetic switches MMS PI1 with lateral cable outlet		
MMS 22-PI1-S-M8-PNP-SA	0301166	●
MMSK 22-PI1-S-PNP-SA	0301168	
Programmable magnetic switches MMS PI1 with stainless steel housing		
MMS 22-PI1-S-M8-PNP-HD	0301110	●
MMSK 22-PI1-S-PNP-HD	0301112	

ⓘ Two sensors (closer/S) are required for each unit and extension cables are available as an option. For sensor cables, note the minimum permissible bending radii. These are generally 35 mm.

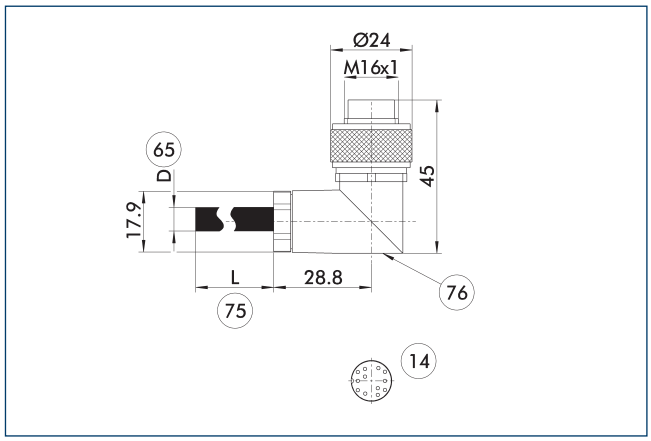
KA BG16-L main view



15 Socket
65 Cable diameter
75 Cable length

Description	ID	Length	Connector control cabinet side
		[m]	
Connection cables			
KA BG16-L 12P-1000	0301801	10	open wire strands

Main view KA SW 16-L



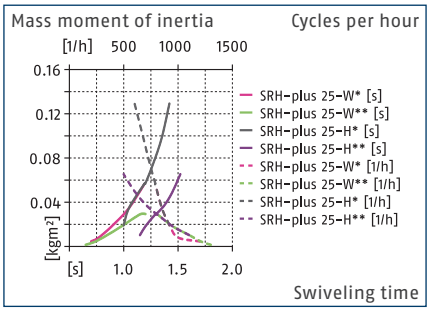
14 Connector
65 Cable diameter
75 Cable length
76 LED

Description	ID	L1	Wire-Ø
		[m]	[mm²]
Robot side			
KA BW16-L 12P-0500	0323005	5	0.14

SRH-plus 25

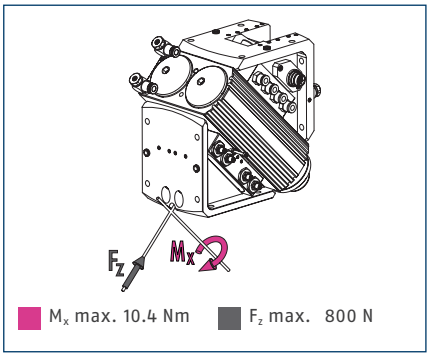
Universal swivel head

Max. admissible inertia J



ⓘ The diagrams are valid for applications with symmetrical loading (*), one-sided centric and symmetric loading (**) and with 6 bar air pressure. The mass moment of inertia is taken relative to the axis of rotation. The cycle times can be adjusted via throttling and adjustment of the shock absorbers. Otherwise the lifetime may reduce. We are glad to assist in designing other applications.

Forces and moments



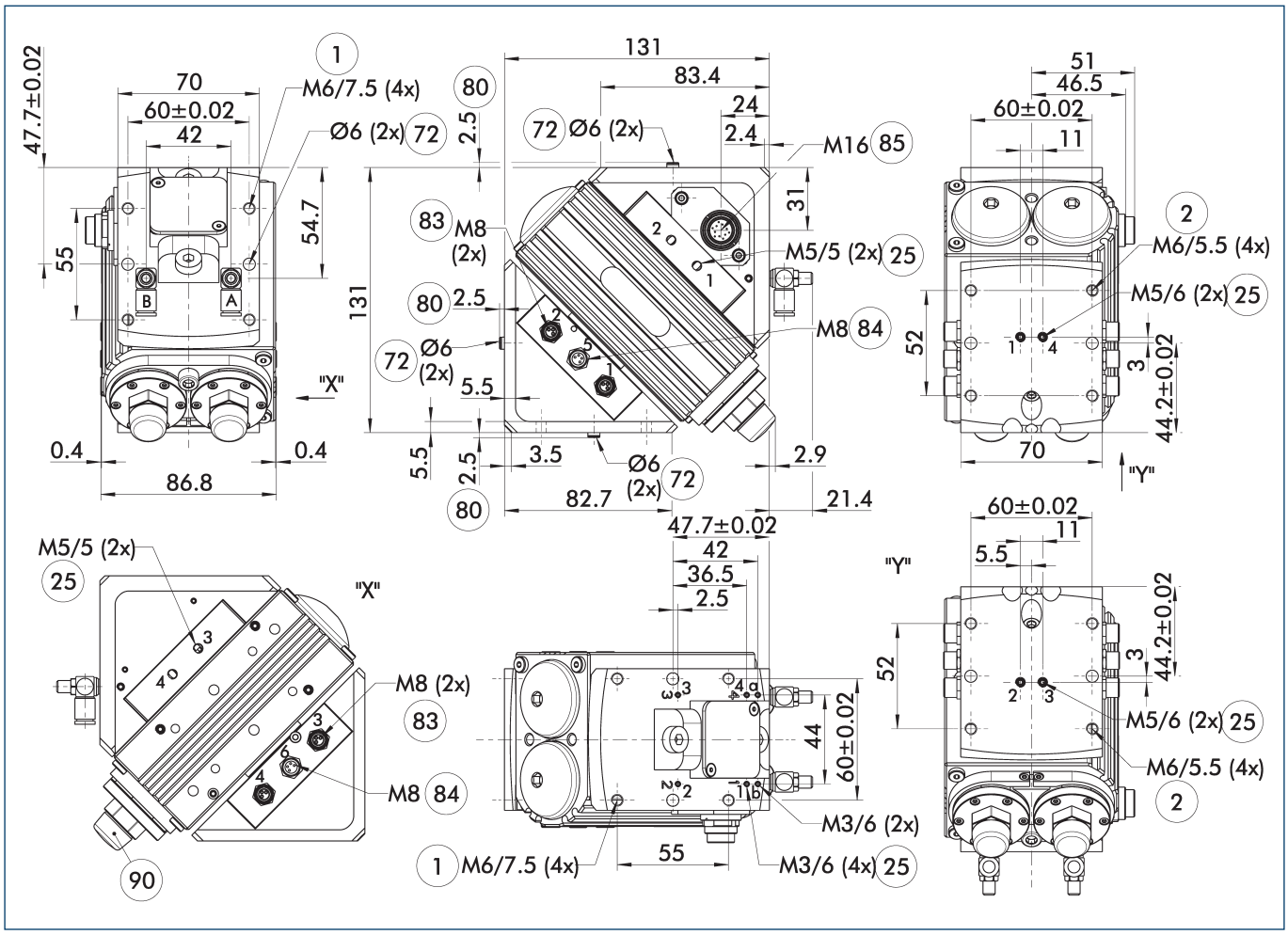
ⓘ The indicated moments and forces are statical values and should not appear simultaneously Throttling has to be done for ensuring that the rotary motion takes place without impact or bouncing. otherwise the service life reduces.

Technical data

Description		SRH-plus 25-H-CB	SRH-plus 25-W-CB	SRH-plus 25-W-M8	SRH-plus 25-H-M8	SRH-plus 25-W-M8-A	SRH-plus 25-H-M8-A
ID		0359353	0359253	0359251	0359351	0359256	0359356
Angle of rotation	[°]	180.0	180.0	180.0	180.0	180.0	180.0
End position adjustability	[°]	3.0	3.0	3.0	3.0	3.0	3.0
Torque	[Nm]	4.6	4.6	4.6	4.6	4.6	4.6
Protection class IP		67	67	67	67	67	67
Weight	[kg]	2.5	2.5	2.6	2.6	2.6	2.6
Fluid consumption (2 x nominal angle)	[cm³]	88.0	88.0	88.0	88.0	88.0	88.0
Swivel time without a payload	[s]	1.1	0.7	0.7	1.1	0.7	1.1
Nominal operating pressure	[bar]	6.0	6.0	6.0	6.0	6.0	6.0
min./max. operating pressure	[bar]	3/8	3/8	3/8	3/8	3/8	3/8
Diameter of connecting hose		6 x 3.9 x 1.05	6 x 3.9 x 1.05	6 x 3.9 x 1.05	6 x 3.9 x 1.05	6 x 3.9 x 1.05	6 x 3.9 x 1.05
No. of fluid feed-throughs		4	4	4	4	4	4
max. pressure in the air feed-through	[bar]	8	8	8	8	8	8
min./max. ambient temperature	[°C]	5/60	5/60	5/60	5/60	5/60	5/60
Repeat accuracy	[°]	0.05	0.05	0.05	0.05	0.05	0.05
Number of E-fittings on the output end				6	6	6	6
Size of the E-connections on the output end				M8	M8	M8	M8
Number of wires				10.0	10.0	10.0	10.0
max. voltage	[V]			24	24	24	24
Max. current per wire	[A]			1	1	1	1
max. total current	[A]			1	1	1	1

ⓘ All modules are also available in a Viton version. Please contact us for details.

Main view



The main view shows the SRH-plus version with the EDF electric feed-through. The swivel head is drawn in the left end position (0°) and rotates 180° clockwise (when viewing the output side)

ⓘ The SDV-P pressure maintenance valve can be used to maintain the position in the case of a loss of pressure (see "Accessories" catalog section).

A, a Main / direct connection, swivel unit clockwise turning

B, b Main / direct connection, swivel unit counterclockwise turning

(1) Connection swivel unit

(2) Attachment connection

(25) Fluid feed-through

(72) Fit for centering sleeves

(80) Depth of the centering sleeve hole in the counter part

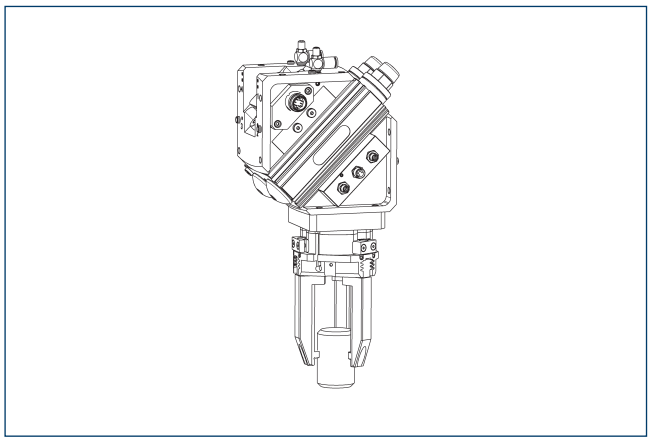
(83) Input for 3 pole sensor feed-through

(84) Input for 4 pole sensor feed-through

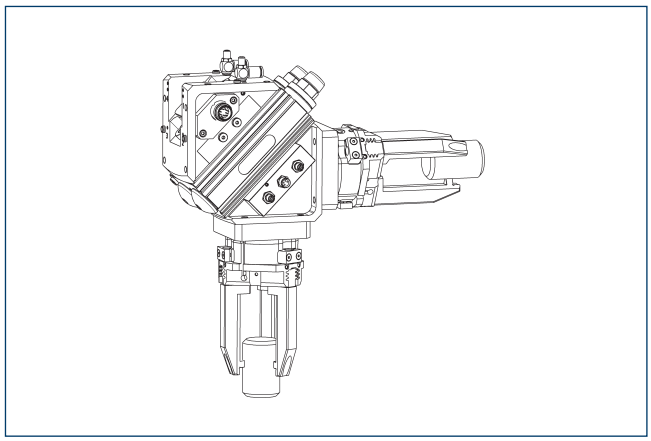
(85) Sensor feed-through output

(90) Cover caps

One-sided loading



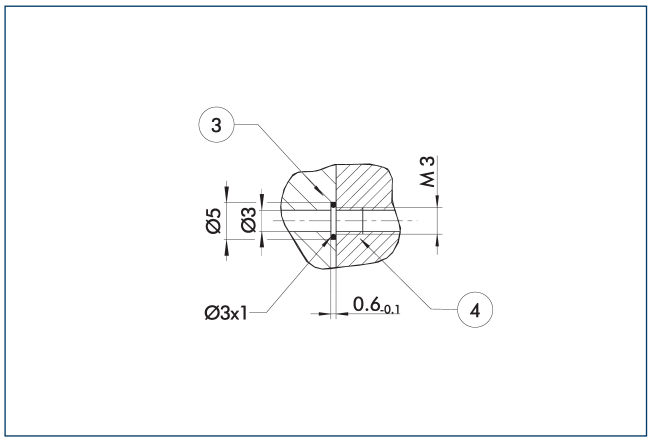
Two-sided loading



SRH-plus 25

Universal swivel head

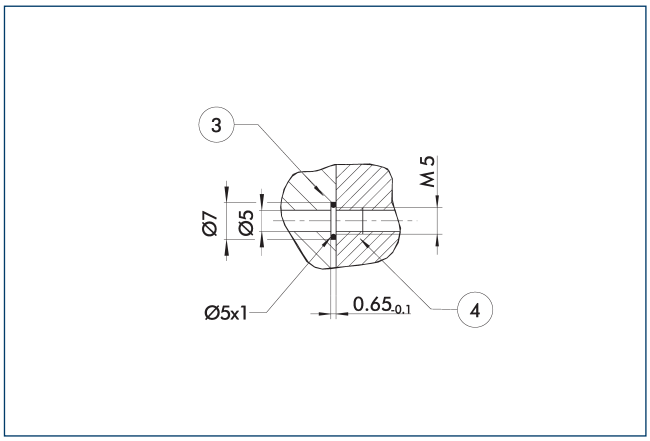
Hose-free direct connection M3



(3) Adapter (4) Rotary unit

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

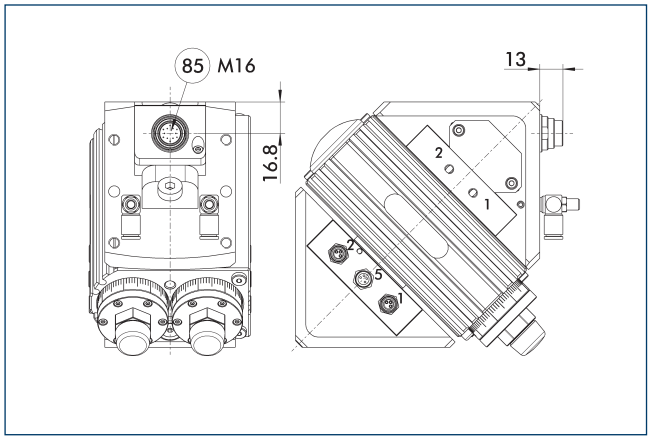
Hose-free direct connection M5



(3) Adapter (4) Rotary unit

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

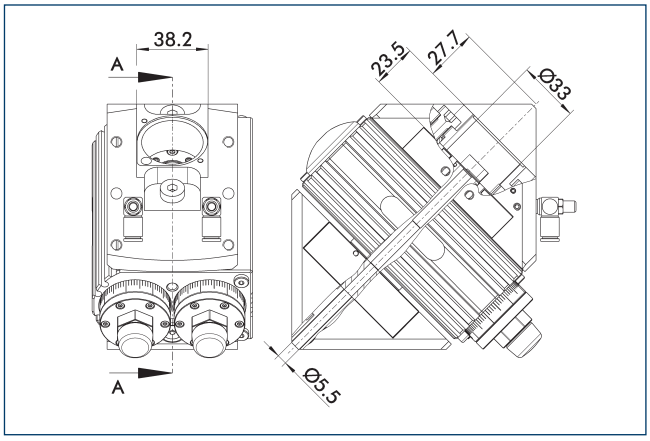
Axial cable connection (Version A)



(85) Sensor feed-through output

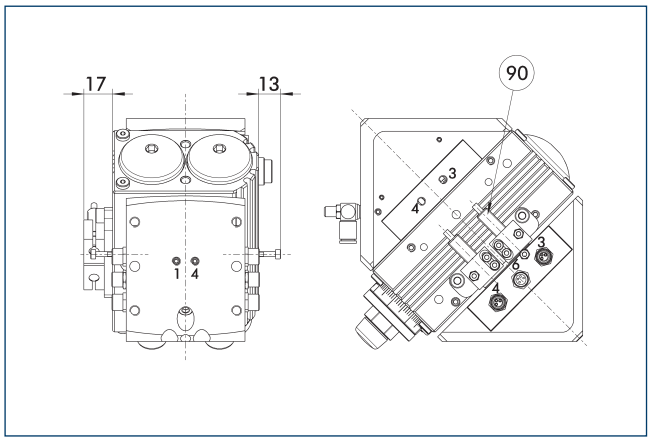
The SRH-plus version with axial cable outlet (-A) is designed for applications where a lateral interfering contour is not acceptable.

Center Bore (Version CB)



The CB Version with a central through hole comes without the EDF integrated electrical feed- through, and allows for the relocation of wires through the swivel head by the customer. Please note that improper wire relocation often leads to wire damage. The swivel head with the integrated EDF electrical feed-through is long lasting and reliable.

Attachment kit for proximity switch



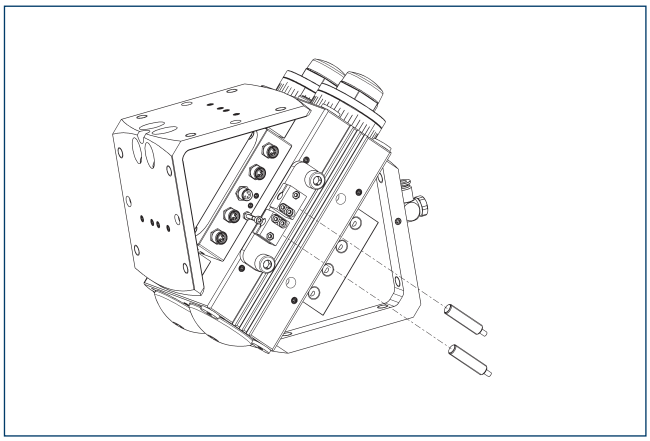
(90) Sensor IN ...

The attachment kit consists of brackets, control cams, and appropriate fastening materials. The proximity switches must be ordered separately.

Description	ID	
Attachment kit for proximity switch		
AS-SRH-plus 20/25	0359200	

ⓘ This attachment kit needs to be ordered optionally as an accessory.

Inductive Proximity Switches



End position monitoring can be mounted with an attachment kit.

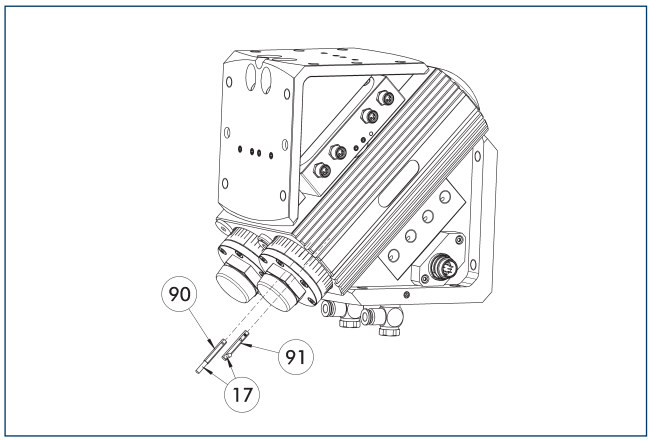
Description	ID	Often combined
Attachment kit for proximity switch		
AS-SRH-plus 20/25	0359200	
Inductive Proximity Switches		
IN 80-S-M12	0301578	
IN 80-S-M8	0301478	●
IN-C 80-S-M8-PNP	0301475	
INK 80-S	0301550	
INK 80-SL	0301579	
Inductive proximity switch with lateral outlet		
IN 80-S-M12-SA	0301587	
IN 80-S-M8-SA	0301483	●
INK 80-S-SA	0301566	

ⓘ Two sensors (closer/S) are required for each swivel head. On option, extension cables are required.

SRH-plus 25

Universal swivel head

Electronic magnetic switches MMS



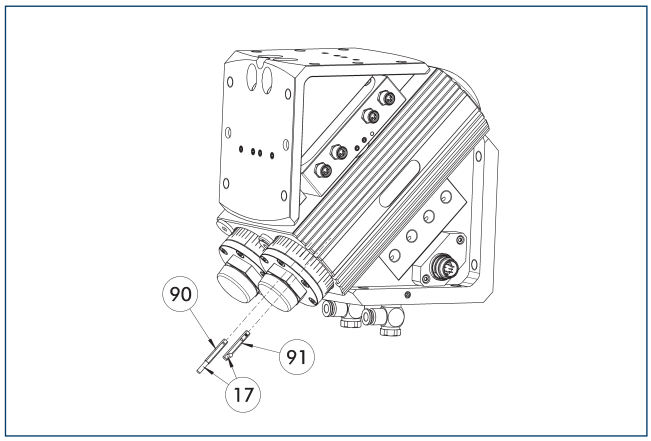
(17) Cable outlet
(91) Sensor MMS 22...-SA
(90) Sensor MMS 22..

End position monitoring for mounting in the C-slot.

Description	ID	Often combined
Electronic magnetic switches MMS		
MMS 22-S-M8-PNP	0301032	●
MMSK 22-S-PNP	0301034	
MMS electronic magnetic switches with lateral outlet		
MMS 22-S-M8-PNP-SA	0301042	●
MMSK 22-S-PNP-SA	0301044	
Cable extension		
KV BW08-SG08 3P-0030-PNP	0301495	
KV BW08-SG08 3P-0100-PNP	0301496	
KV BW08-SG08 3P-0200-PNP	0301497	●
clip for plug/socket		
CLI-M8	0301463	
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	
Sensor distributor		
V2-M8	0301775	●
V4-M8	0301746	
V8-M8	0301751	

ⓘ Two sensors (closer/S) are required for each swivel head. On option, extension cables are required.

Programmable magnetic switches MMS PI1



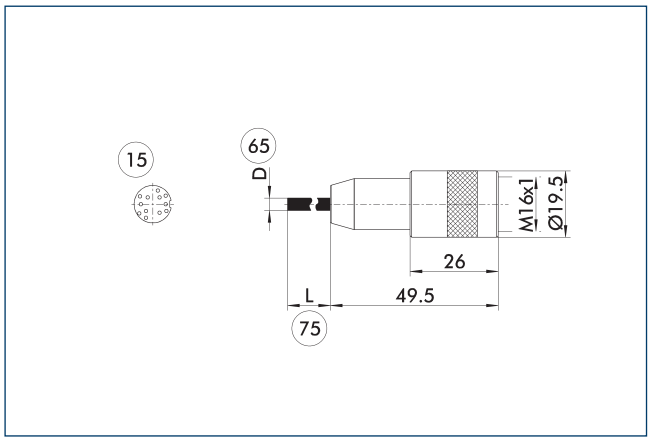
(17) Cable outlet
(91) Sensor MMS 22 ..-PI1-...-SA
(90) Sensor MMS 22 PI1-...

Position monitoring with one programmable position per sensor and electronics integrated in the sensor. Can be programmed using MT magnetic teaching tool (included in scope of delivery) or ST plug teaching tool (optional). End position monitoring is mounted 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 switches MMS PI1		
MMS 22-PI1-S-M8-PNP	0301160	●
MMSK 22-PI1-S-PNP	0301162	
Programmable magnetic switches MMS PI1 with lateral cable outlet		
MMS 22-PI1-S-M8-PNP-SA	0301166	●
MMSK 22-PI1-S-PNP-SA	0301168	
Programmable magnetic switches MMS PI1 with stainless steel housing		
MMS 22-PI1-S-M8-PNP-HD	0301110	●
MMSK 22-PI1-S-PNP-HD	0301112	

ⓘ Two sensors (closer/S) are required for each unit and extension cables are available as an option. For sensor cables, note the minimum permissible bending radii. These are generally 35 mm.

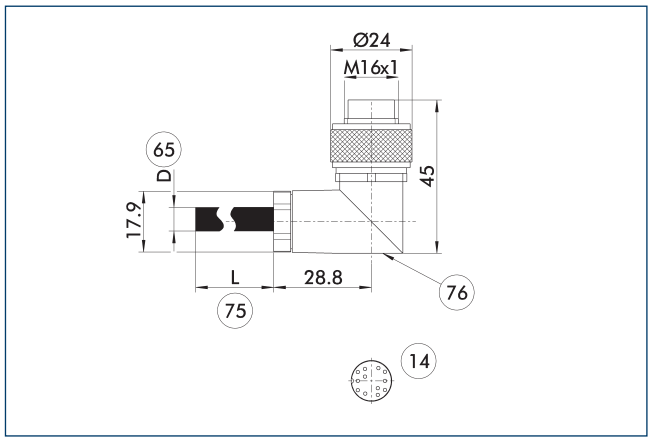
KA BG16-L main view



(15) Socket
(65) Cable diameter
(75) Cable length

Description	ID	Length	Connector control cabinet side
		[m]	
Connection cables			
KA BG16-L 12P-1000	0301801	10	open wire strands

Main view KA SW 16-L



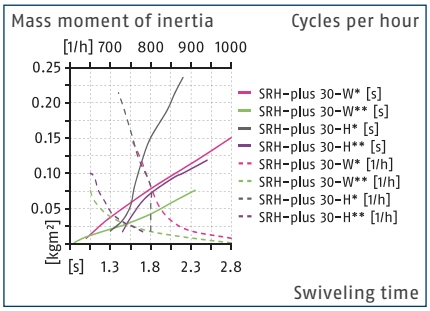
(14) Connector
(65) Cable diameter
(75) Cable length
(76) LED

Description	ID	L1	Wire-Ø
		[m]	[mm²]
Robot side			
KA BW16-L 12P-0500	0323005	5	0.14

SRH-plus 30

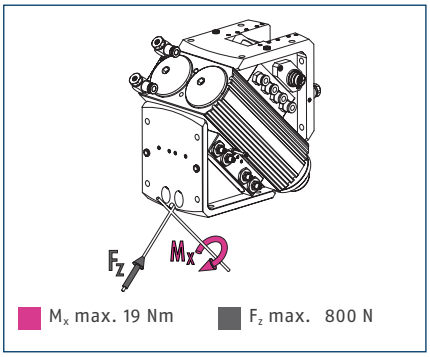
Universal swivel head

Max. admissible inertia J



ⓘ The diagrams are valid for applications with symmetrical loading (*), one-sided centric and symmetric loading (**) and with 6 bar air pressure. The mass moment of inertia is taken relative to the axis of rotation. The cycle times can be adjusted via throttling and adjustment of the shock absorbers. Otherwise the lifetime may reduce. We are glad to assist in designing other applications.

Forces and moments



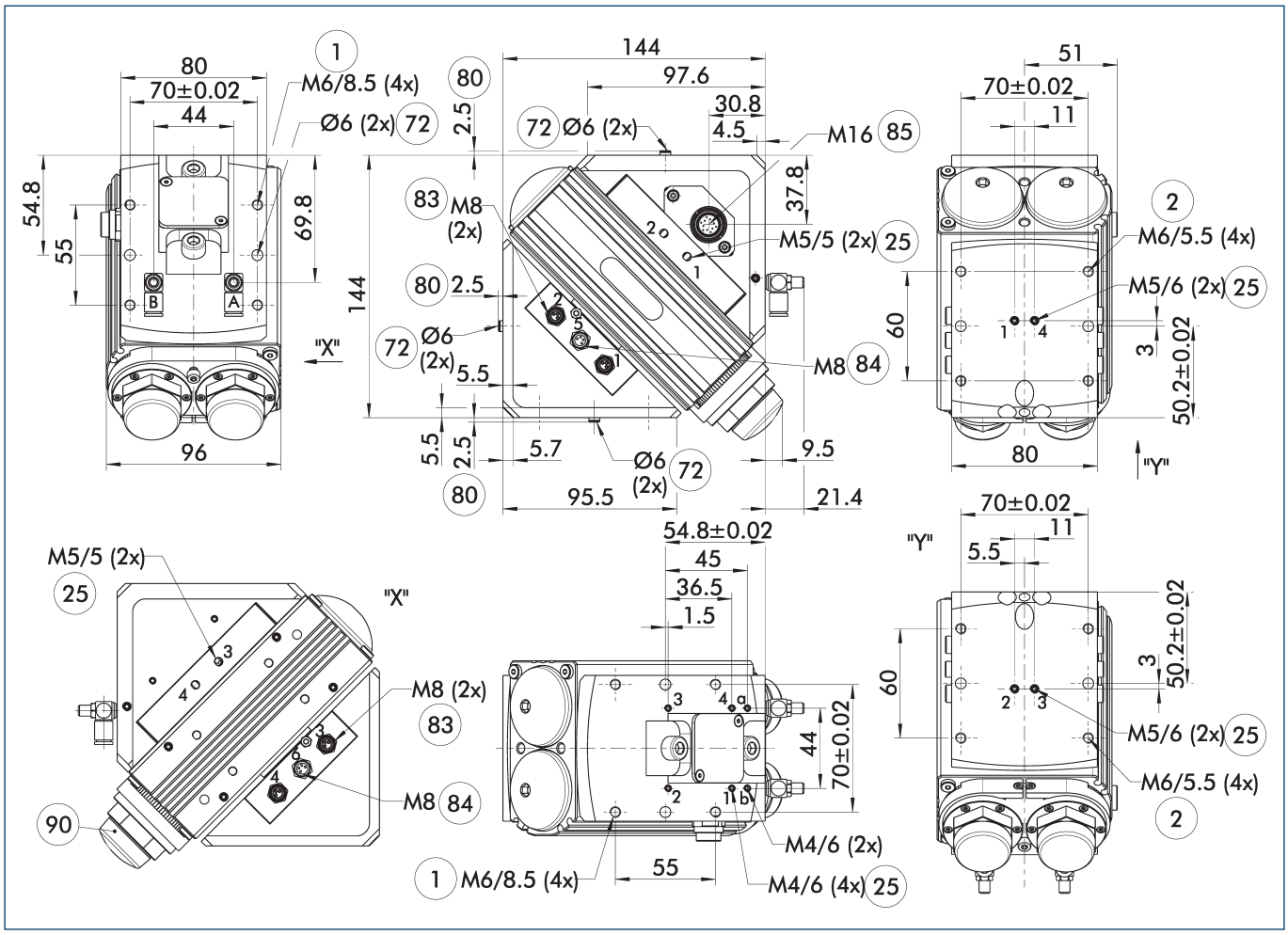
ⓘ The indicated moments and forces are statical values and should not appear simultaneously Throttling has to be done for ensuring that the rotary motion takes place without impact or bouncing. otherwise the service life reduces.

Technical data

Description		SRH-plus 30-W-CB	SRH-plus 30-H-CB	SRH-plus 30-W-M8	SRH-plus 30-H-M8	SRH-plus 30-W-M8-A	SRH-plus 30-H-M8-A
ID		0359263	0359363	0359261	0359361	0359266	0359366
Angle of rotation	[°]	180.0	180.0	180.0	180.0	180.0	180.0
End position adjustability	[°]	3.0	3.0	3.0	3.0	3.0	3.0
Torque	[Nm]	9.5	9.5	9.5	9.5	9.5	9.5
Protection class IP		67	67	67	67	67	67
Weight	[kg]	4.3	4.3	4.5	4.5	4.6	4.6
Fluid consumption (2 x nominal angle)	[cm³]	145.0	145.0	145.0	145.0	145.0	145.0
Swivel time without a payload	[s]	0.9	1.4	0.9	1.4	0.9	1.4
Nominal operating pressure	[bar]	6.0	6.0	6.0	6.0	6.0	6.0
min./max. operating pressure	[bar]	3/8	3/8	3/8	3/8	3/8	3/8
Diameter of connecting hose		6 x 3.9 x 1.05	6 x 3.9 x 1.05	6 x 3.9 x 1.05	6 x 3.9 x 1.05	6 x 3.9 x 1.05	6 x 3.9 x 1.05
No. of fluid feed-throughs		4	4	4	4	4	4
max. pressure in the air feed-through	[bar]	8	8	8	8	8	8
min./max. ambient temperature	[°C]	5/60	5/60	5/60	5/60	5/60	5/60
Repeat accuracy	[°]	0.05	0.05	0.05	0.05	0.05	0.05
Number of E-fittings on the output end				6	6	6	6
Size of the E-connections on the output end				M8	M8	M8	M8
Number of wires				10.0	10.0	10.0	10.0
max. voltage	[V]			24	24	24	24
Max. current per wire	[A]			1	1	1	1
max. total current	[A]			1	1	1	1

ⓘ All modules are also available in a Viton version. Please contact us for details.

Main view



The main view shows the SRH-plus version with the EDF electric feed-through. The swivel head is drawn in the left end position (0°) and rotates 180° clockwise (when viewing the output side)

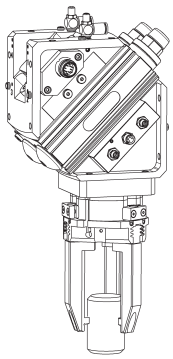
ⓘ The SDV-P pressure maintenance valve can be used to maintain the position in the case of a loss of pressure (see "Accessories" catalog section).

A, a Main / direct connection, swivel unit clockwise turning

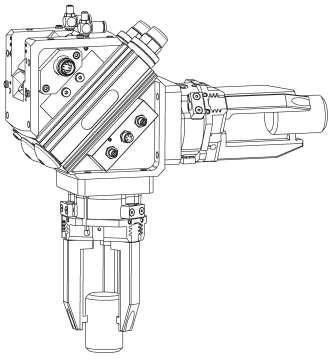
B, b Main / direct connection, swivel unit counterclockwise turning

(1) Connection swivel unit
(2) Attachment connection
(25) Fluid feed-through
(72) Fit for centering sleeves
(80) Depth of the centering sleeve hole in the counter part
(83) Input for 3 pole sensor feed-through
(84) Input for 4 pole sensor feed-through
(85) Sensor feed-through output
(90) Cover caps

One-sided loading



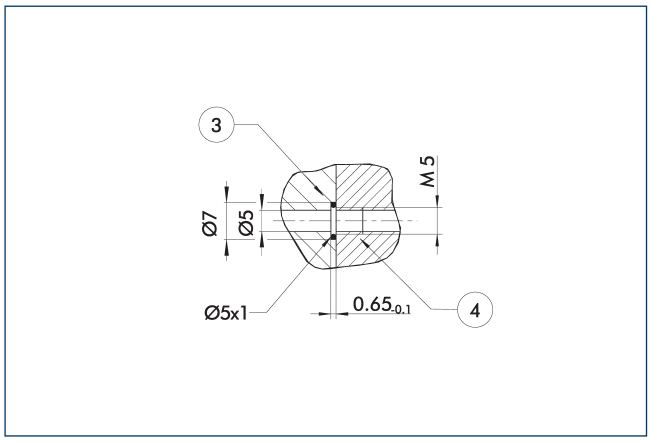
Two-sided loading



SRH-plus 30

Universal swivel head

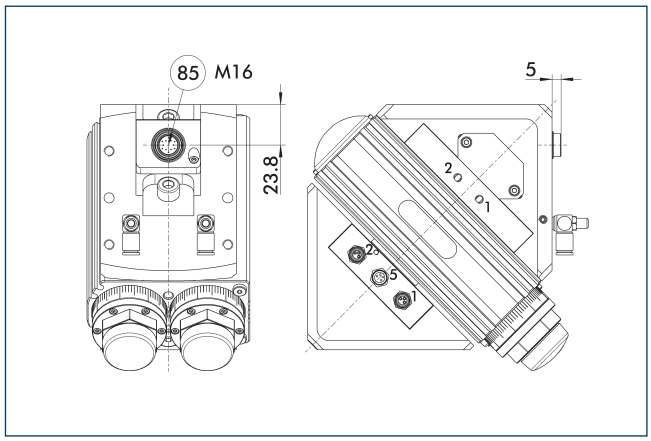
Hose-free direct connection M5



(3) Adapter (4) Rotary unit

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

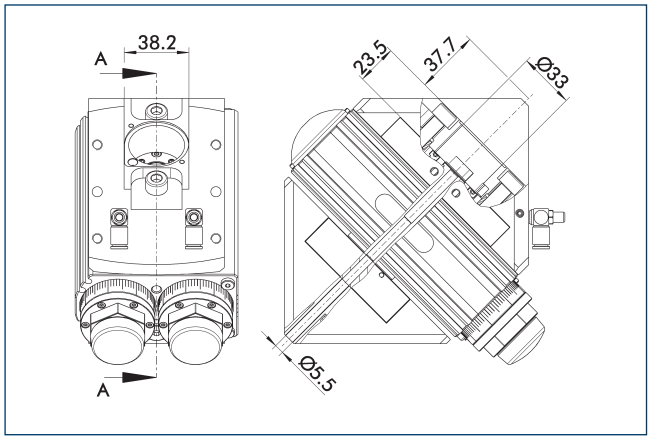
Axial cable connection (Version A)



(85) Sensor feed-through output

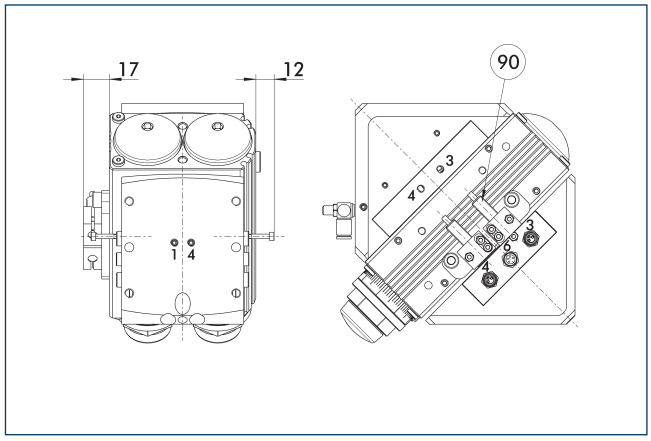
The SRH-plus version with axial cable outlet (-A) is designed for applications where a lateral interfering contour is not acceptable.

Center Bore (Version CB)



The CB Version with a central through hole comes without the EDF integrated electrical feed- through, and allows for the relocation of wires through the swivel head by the customer. Please note that improper wire relocation often leads to wire damage. The swivel head with the integrated EDF electrical feed-through is long lasting and reliable.

Attachment kit for proximity switch



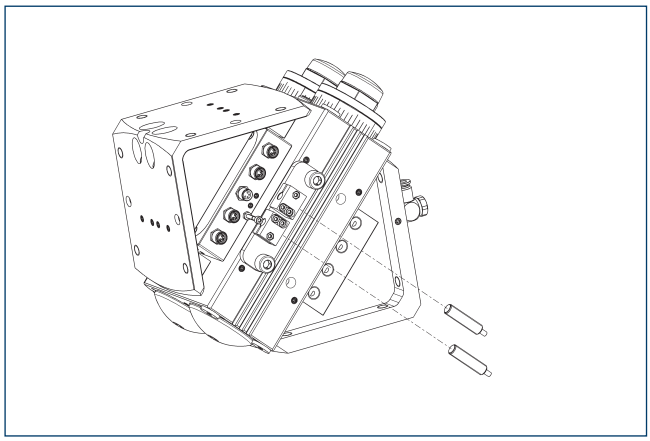
(90) Sensor IN ...

The attachment kit consists of brackets, control cams, and appropriate fastening materials. The proximity switches must be ordered separately.

Description	ID	
Attachment kit for proximity switch		
AS-SRH-plus 30/35	0359201	

ⓘ This attachment kit needs to be ordered optionally as an accessory.

Inductive Proximity Switches

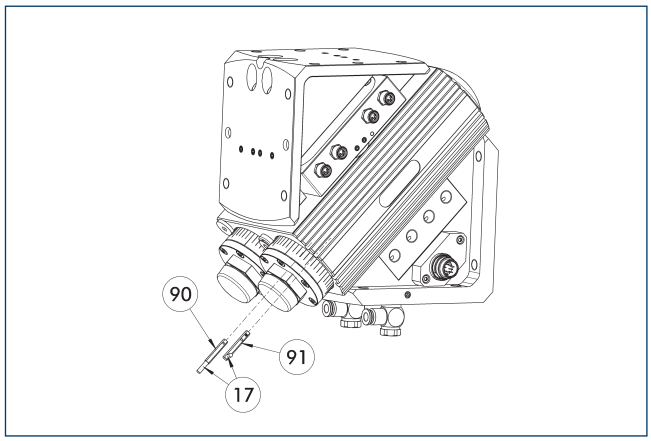


End position monitoring can be mounted with an attachment kit.

Description	ID	Often combined
Attachment kit for proximity switch		
AS-SRH-plus 30/35	0359201	
Inductive Proximity Switches		
IN 80-S-M12	0301578	
IN 80-S-M8	0301478	●
IN-C 80-S-M8-PNP	0301475	
INK 80-S	0301550	
INK 80-SL	0301579	
Inductive proximity switch with lateral outlet		
IN 80-S-M12-SA	0301587	
IN 80-S-M8-SA	0301483	●
INK 80-S-SA	0301566	

ⓘ Two sensors (closer/S) are required for each swivel head. On option, extension cables are required.

Electronic magnetic switches MMS



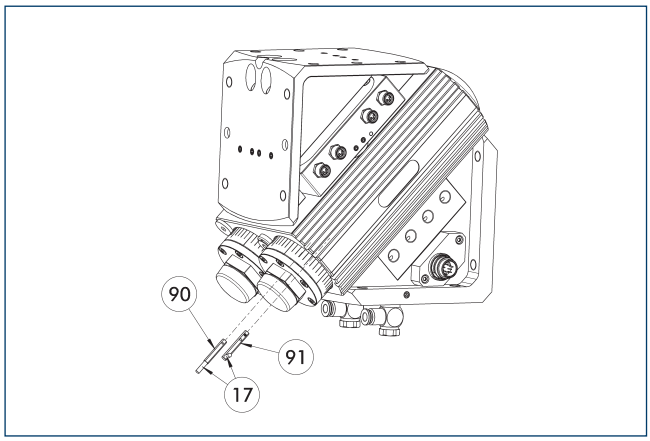
⑰ Cable outlet
⑨① Sensor MMS 22...-SA
⑨⓪ Sensor MMS 22..

End position monitoring for mounting in the C-slot.

Description	ID	Often combined
Electronic magnetic switches MMS		
MMS 22-S-M8-PNP	0301032	●
MMSK 22-S-PNP	0301034	
MMS electronic magnetic switches with lateral outlet		
MMS 22-S-M8-PNP-SA	0301042	●
MMSK 22-S-PNP-SA	0301044	
Cable extension		
KV BW08-SG08 3P-0030-PNP	0301495	
KV BW08-SG08 3P-0100-PNP	0301496	
KV BW08-SG08 3P-0200-PNP	0301497	●
clip for plug/socket		
CLI-M8	0301463	
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	
Sensor distributor		
V2-M8	0301775	●
V4-M8	0301746	
V8-M8	0301751	

ⓘ Two sensors (closer/S) are required for each swivel head. On option, extension cables are required.

Programmable magnetic switches MMS PI1



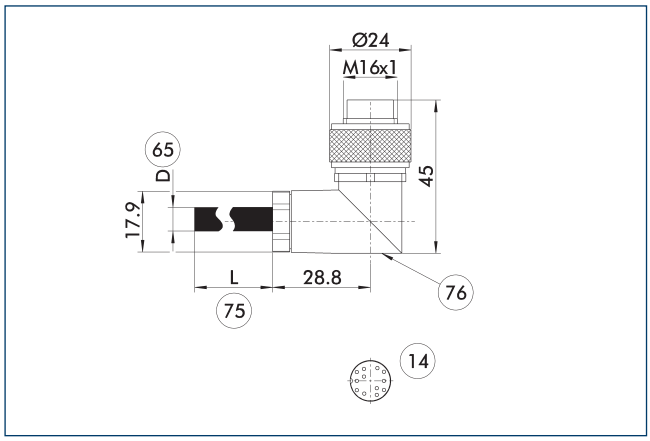
(17) Cable outlet
(91) Sensor MMS 22 ..-PI1-...-SA
(90) Sensor MMS 22 PI1-...

Position monitoring with one programmable position per sensor and electronics integrated in the sensor. Can be programmed using MT magnetic teaching tool (included in scope of delivery) or ST plug teaching tool (optional). End position monitoring is mounted 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 switches MMS PI1		
MMS 22-PI1-S-M8-PNP	0301160	●
MMSK 22-PI1-S-PNP	0301162	
Programmable magnetic switches MMS PI1 with lateral cable outlet		
MMS 22-PI1-S-M8-PNP-SA	0301166	●
MMSK 22-PI1-S-PNP-SA	0301168	
Programmable magnetic switches MMS PI1 with stainless steel housing		
MMS 22-PI1-S-M8-PNP-HD	0301110	●
MMSK 22-PI1-S-PNP-HD	0301112	

ⓘ Two sensors (closer/S) are required for each unit and extension cables are available as an option. For sensor cables, note the minimum permissible bending radii. These are generally 35 mm.

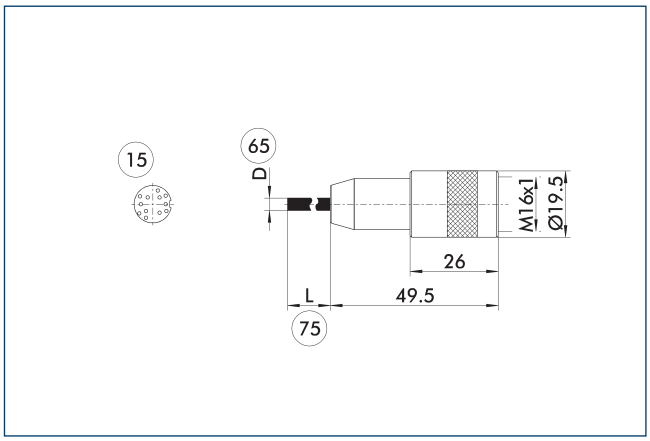
Main view KA SW 16-L



(14) Connector
(65) Cable diameter
(75) Cable length
(76) LED

Description	ID	L1	Wire-Ø
		[m]	[mm²]
Robot side			
KA BW16-L 12P-0500	0323005	5	0.14

KA BG16-L main view



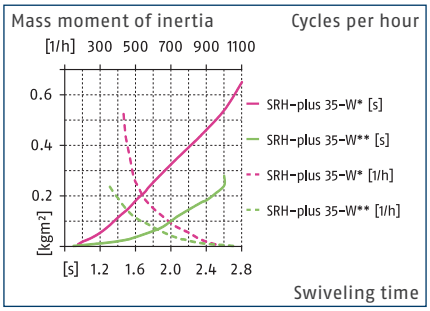
(15) Socket
(65) Cable diameter
(75) Cable length

Description	ID	Length	Connector control cabinet side
		[m]	
Connection cables			
KA BG16-L 12P-1000	0301801	10	open wire strands

SRH-plus 35

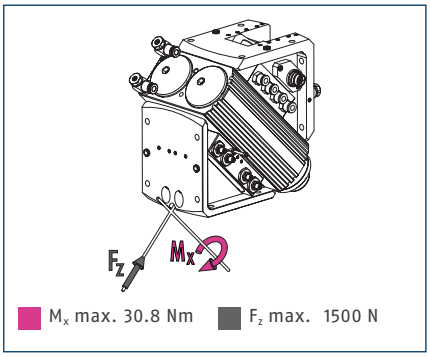
Universal swivel head

Max. admissible inertia J



ⓘ The diagrams are valid for applications with symmetrical loading (*), one-sided centric and symmetric loading (**) and with 6 bar air pressure. The mass moment of inertia is taken relative to the axis of rotation. The cycle times can be adjusted via throttling and adjustment of the shock absorbers. Otherwise the lifetime may reduce. We are glad to assist in designing other applications.

Forces and moments



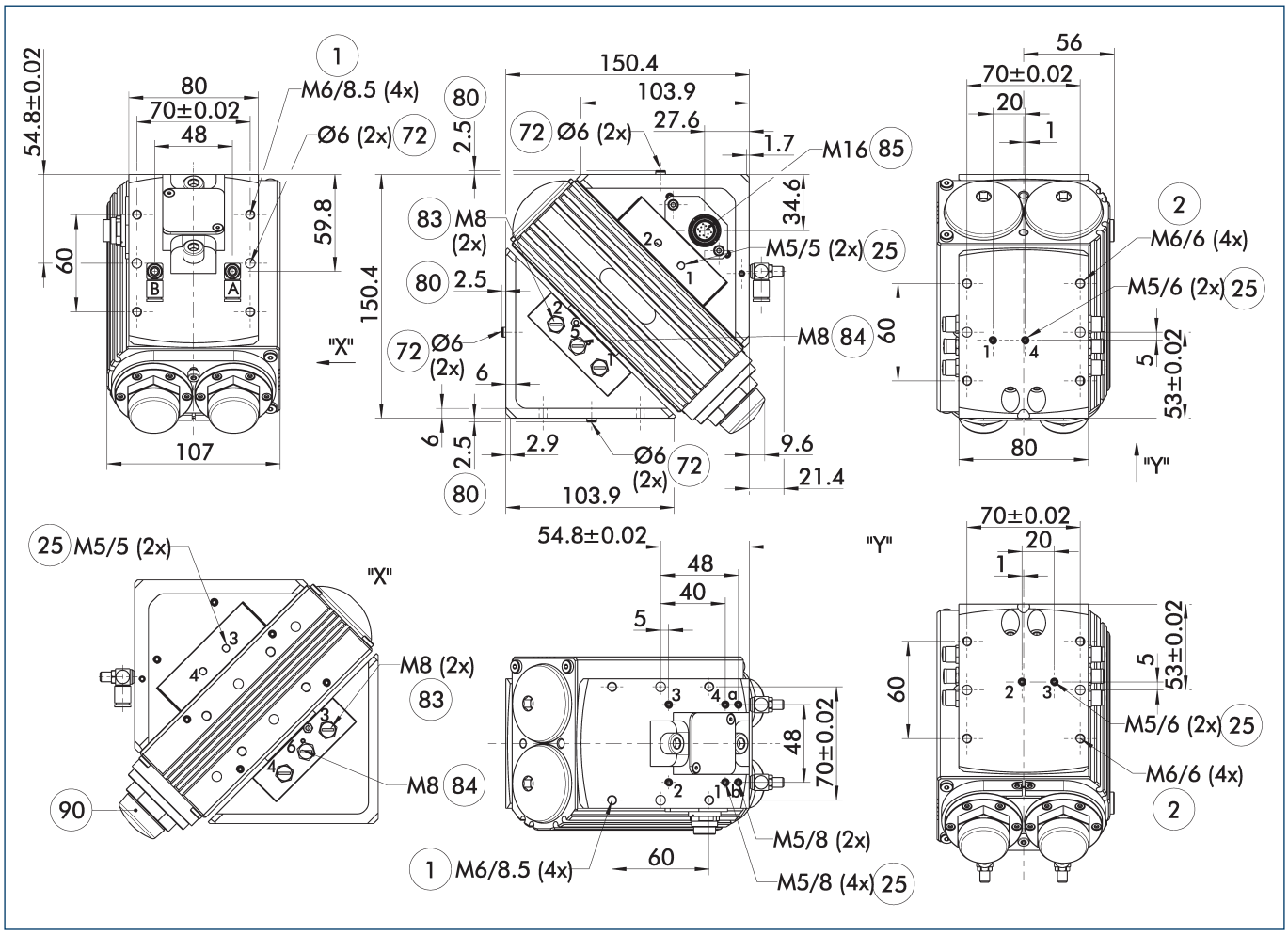
ⓘ The indicated moments and forces are statical values and should not appear simultaneously Throttling has to be done for ensuring that the rotary motion takes place without impact or bouncing. otherwise the service life reduces.

Technical data

Description		SRH-plus 35-W-CB	SRH-plus 35-W-M8	SRH-plus 35-W-M8-A
ID		0359273	0359271	0359276
Angle of rotation	[°]	180.0	180.0	180.0
End position adjustability	[°]	3.0	3.0	3.0
Torque	[Nm]	13.3	13.3	13.3
Protection class IP		67	67	67
Weight	[kg]	4.2	4.3	4.3
Fluid consumption (2 x nominal angle)	[cm³]	216.0	216.0	216.0
Swivel time without a payload	[s]	0.9	0.9	0.9
Nominal operating pressure	[bar]	6.0	6.0	6.0
min./max. operating pressure	[bar]	3/8	3/8	3/8
Diameter of connecting hose		6 x 3.9 x 1.05	6 x 3.9 x 1.05	6 x 3.9 x 1.05
No. of fluid feed-throughs		4	4	4
max. pressure in the air feed-through	[bar]	8	8	8
min./max. ambient temperature	[°C]	5/60	5/60	5/60
Repeat accuracy	[°]	0.05	0.05	0.05
Number of E-fittings on the output end			6	6
Size of the E-connections on the output end			M8	M8
Number of wires			10.0	10.0
max. voltage	[V]		24	24
Max. current per wire	[A]		1	1
max. total current	[A]		1	1

ⓘ All modules are also available in a Viton version. Please contact us for details.

Main view



The main view shows the SRH-plus version with the EDF electric feed-through. The swivel head is drawn in the left end position (0°) and rotates 180° clockwise (when viewing the output side)

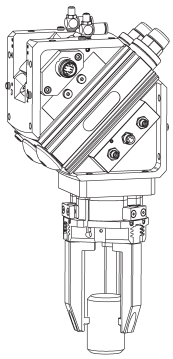
ⓘ The SDV-P pressure maintenance valve can be used to maintain the position in the case of a loss of pressure (see "Accessories" catalog section).

A, a Main / direct connection, swivel unit clockwise turning

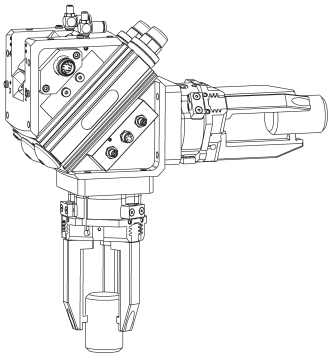
B, b Main / direct connection, swivel unit counterclockwise turning

(1) Connection swivel unit
(2) Attachment connection
(25) Fluid feed-through
(72) Fit for centering sleeves
(80) Depth of the centering sleeve hole in the counter part
(83) Input for 3 pole sensor feed-through
(84) Input for 4 pole sensor feed-through
(85) Sensor feed-through output
(90) Cover caps

One-sided loading



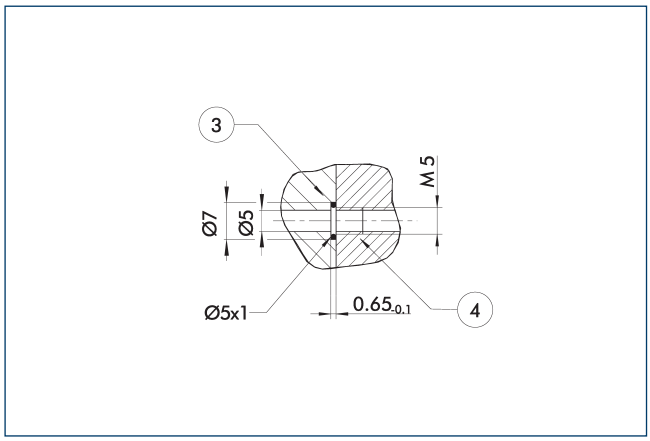
Two-sided loading



SRH-plus 35

Universal swivel head

Hose-free direct connection M5

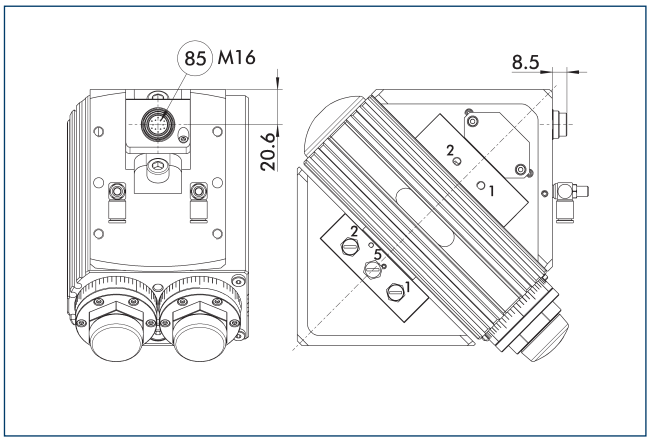


(3) Adapter

(4) Rotary unit

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

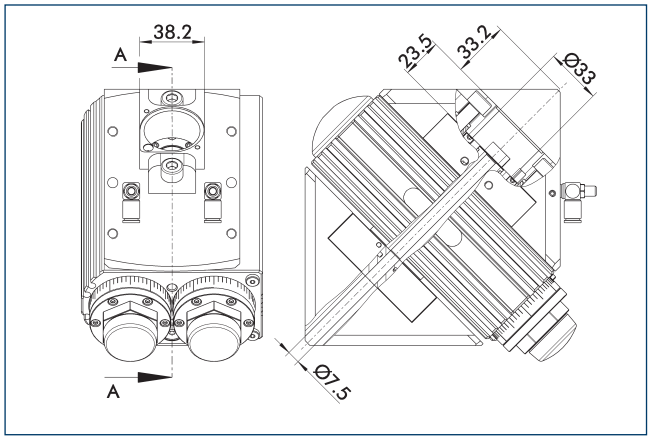
Axial cable connection (Version A)



(85) Sensor feed-through output

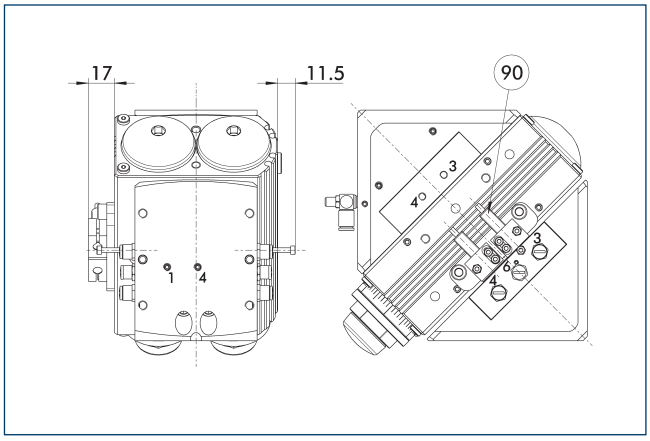
The SRH-plus version with axial cable outlet (-A) is designed for applications where a lateral interfering contour is not acceptable.

Center Bore (Version CB)



The CB Version with a central through hole comes without the EDF integrated electrical feed- through, and allows for the relocation of wires through the swivel head by the customer. Please note that improper wire relocation often leads to wire damage. The swivel head with the integrated EDF electrical feed-through is long lasting and reliable.

Attachment kit for proximity switch



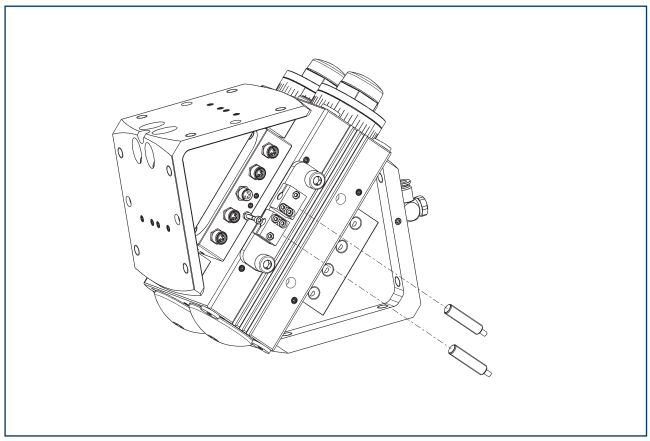
(90) Sensor IN ...

The attachment kit consists of brackets, control cams, and appropriate fastening materials. The proximity switches must be ordered separately.

Description	ID	
Attachment kit for proximity switch		
AS-SRH-plus 30/35	0359201	

ⓘ This attachment kit needs to be ordered optionally as an accessory.

Inductive Proximity Switches

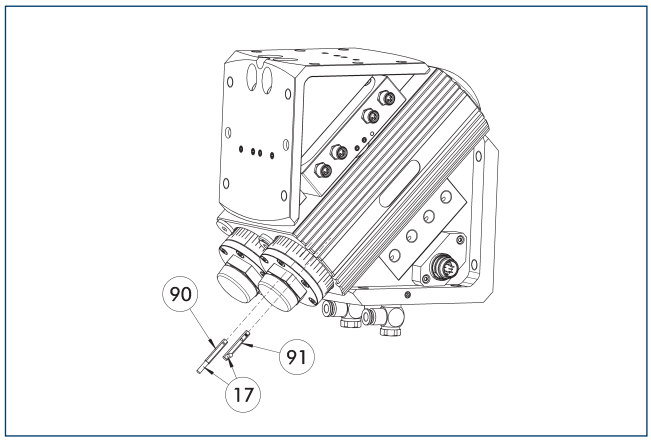


End position monitoring can be mounted with an attachment kit.

Description	ID	Often combined
Attachment kit for proximity switch		
AS-SRH-plus 30/35	0359201	
Inductive Proximity Switches		
IN 80-S-M12	0301578	
IN 80-S-M8	0301478	●
IN-C 80-S-M8-PNP	0301475	
INK 80-S	0301550	
INK 80-SL	0301579	
Inductive proximity switch with lateral outlet		
IN 80-S-M12-SA	0301587	
IN 80-S-M8-SA	0301483	●
INK 80-S-SA	0301566	

ⓘ Two sensors (closer/S) are required for each swivel head. On option, extension cables are required.

Electronic magnetic switches MMS



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

End position monitoring for mounting in the C-slot.

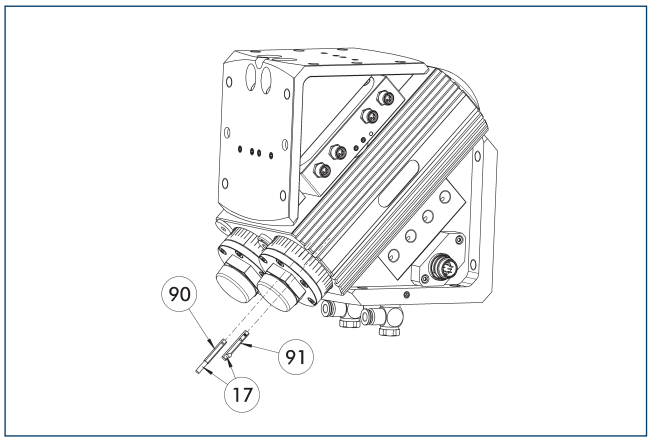
Description	ID	Often combined
Electronic magnetic switches MMS		
MMS 22-S-M8-PNP	0301032	●
MMSK 22-S-PNP	0301034	
MMS electronic magnetic switches with lateral outlet		
MMS 22-S-M8-PNP-SA	0301042	●
MMSK 22-S-PNP-SA	0301044	
Cable extension		
KV BW08-SG08 3P-0030-PNP	0301495	
KV BW08-SG08 3P-0100-PNP	0301496	
KV BW08-SG08 3P-0200-PNP	0301497	●
clip for plug/socket		
CLI-M8	0301463	
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	
Sensor distributor		
V2-M8	0301775	●
V4-M8	0301746	
V8-M8	0301751	

ⓘ Two sensors (closer/S) are required for each swivel head. On option, extension cables are required.

SRH-plus 35

Universal swivel head

Programmable magnetic switches MMS PI1



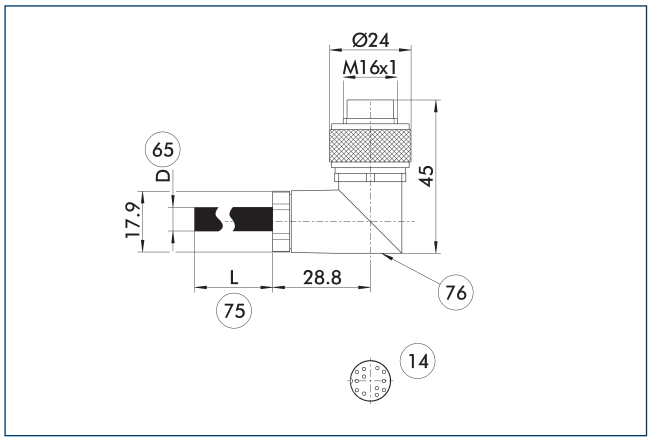
(17) Cable outlet
(90) Sensor MMS 22 PI1-...
(91) Sensor MMS 22 ..-PI1-...-SA

Position monitoring with one programmable position per sensor and electronics integrated in the sensor. Can be programmed using MT magnetic teaching tool (included in scope of delivery) or ST plug teaching tool (optional). End position monitoring is mounted 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 switches MMS PI1		
MMS 22-PI1-S-M8-PNP	0301160	●
MMSK 22-PI1-S-PNP	0301162	
Programmable magnetic switches MMS PI1 with lateral cable outlet		
MMS 22-PI1-S-M8-PNP-SA	0301166	●
MMSK 22-PI1-S-PNP-SA	0301168	
Programmable magnetic switches MMS PI1 with stainless steel housing		
MMS 22-PI1-S-M8-PNP-HD	0301110	●
MMSK 22-PI1-S-PNP-HD	0301112	

ⓘ Two sensors (closer/S) are required for each unit and extension cables are available as an option. For sensor cables, note the minimum permissible bending radii. These are generally 35 mm.

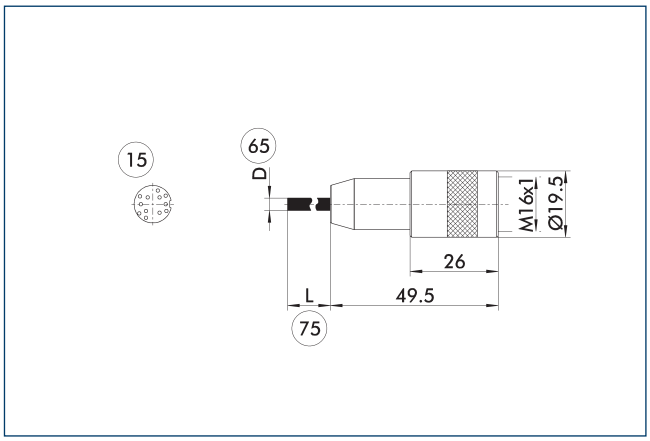
Main view KA SW 16-L



(14) Connector
(65) Cable diameter
(75) Cable length
(76) LED

Description	ID	L1	Wire-Ø
		[m]	[mm²]
Robot side			
KA BW16-L 12P-0500	0323005	5	0.14

KA BG16-L main view



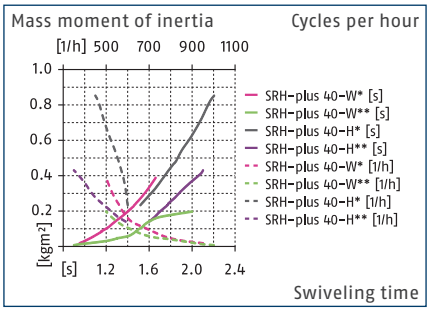
(15) Socket
(65) Cable diameter
(75) Cable length

Description	ID	Length	Connector control cabinet side
		[m]	
Connection cables			
KA BG16-L 12P-1000	0301801	10	open wire strands

SRH-plus 40

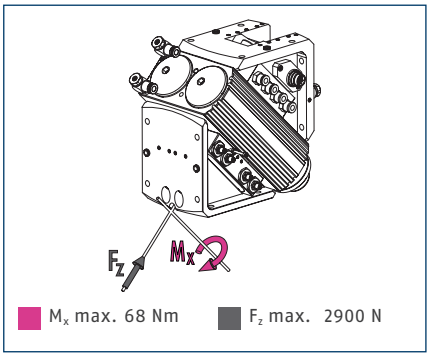
Universal swivel head

Max. admissible inertia J



ⓘ The diagrams are valid for applications with symmetrical loading (*), one-sided centric and symmetric loading (**) and with 6 bar air pressure. The mass moment of inertia is taken relative to the axis of rotation. The cycle times can be adjusted via throttling and adjustment of the shock absorbers. Otherwise the lifetime may reduce. We are glad to assist in designing other applications.

Forces and moments



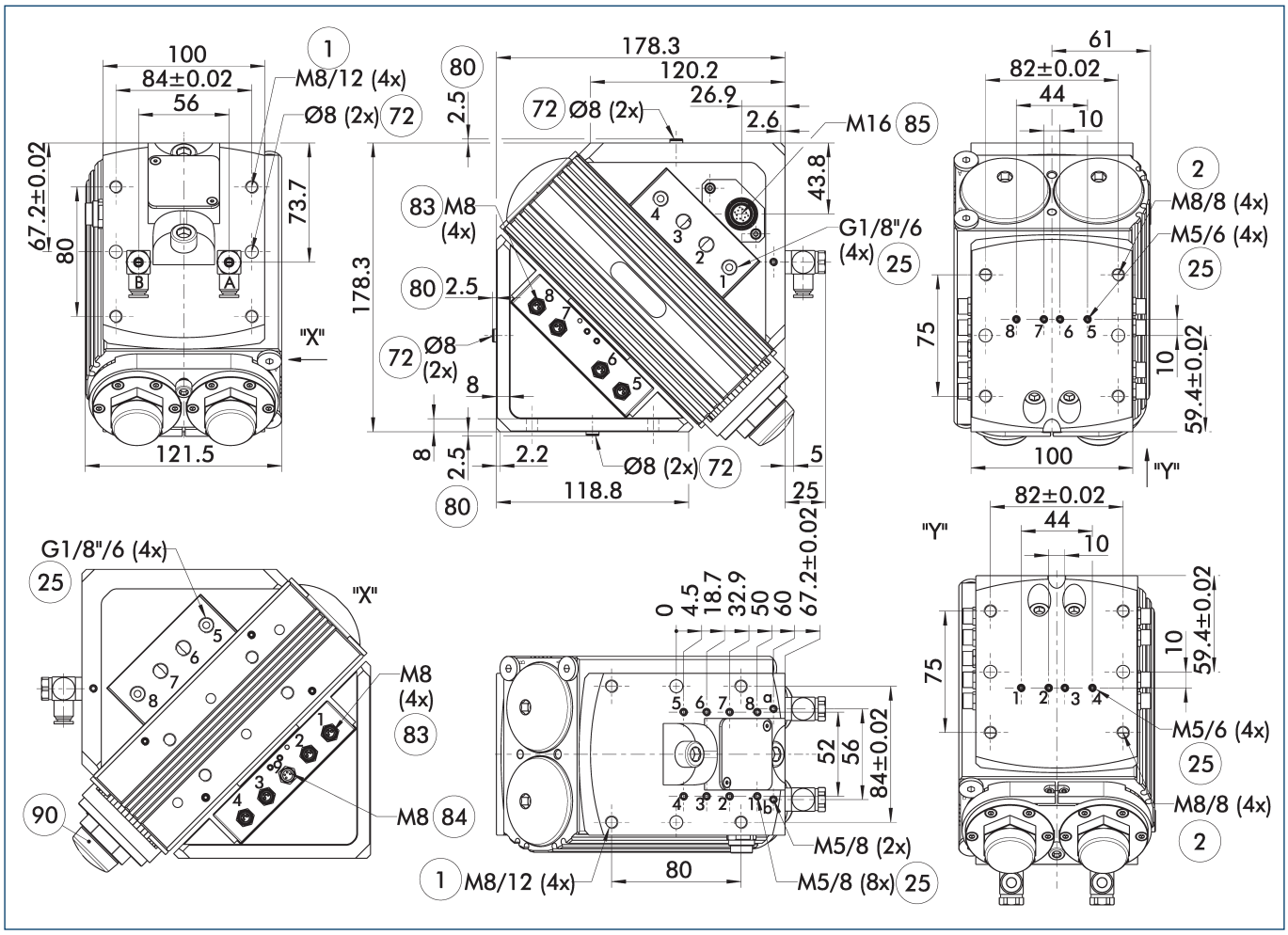
ⓘ The indicated moments and forces are statical values and should not appear simultaneously Throttling has to be done for ensuring that the rotary motion takes place without impact or bouncing. otherwise the service life reduces.

Technical data

Description		SRH-plus 40-W-CB	SRH-plus 40-H-CB	SRH-plus 40-W-M8	SRH-plus 40-H-M8	SRH-plus 40-W-M8-A	SRH-plus 40-H-M8-A
ID		0359283	0359383	0359281	0359381	0359286	0359386
Angle of rotation	[°]	180.0	180.0	180.0	180.0	180.0	180.0
End position adjustability	[°]	3.0	3.0	3.0	3.0	3.0	3.0
Torque	[Nm]	19.1	19.1	19.1	19.1	19.1	19.1
Protection class IP		67	67	67	67	67	67
Weight	[kg]	6.7	6.7	6.9	6.9	6.9	6.9
Fluid consumption (2 x nominal angle)	[cm³]	336.0	336.0	336.0	336.0	336.0	336.0
Swivel time without a payload	[s]	0.9	1.6	0.9	1.6	0.9	1.6
Nominal operating pressure	[bar]	6.0	6.0	6.0	6.0	6.0	6.0
min./max. operating pressure	[bar]	3/8	3/8	3/8	3/8	3/8	3/8
Diameter of connecting hose		6 x 3.9 x 1.05	6 x 3.9 x 1.05	6 x 3.9 x 1.05	6 x 3.9 x 1.05	6 x 3.9 x 1.05	6 x 3.9 x 1.05
No. of fluid feed-throughs		8	8	8	8	8	8
max. pressure in the air feed-through	[bar]	8	8	8	8	8	8
min./max. ambient temperature	[°C]	5/60	5/60	5/60	5/60	5/60	5/60
Repeat accuracy	[°]	0.05	0.05	0.05	0.05	0.05	0.05
Number of E-fittings on the output end				9	9	9	9
Size of the E-connections on the output end				M8	M8	M8	M8
Number of wires				10.0	10.0	10.0	10.0
max. voltage	[V]			24	24	24	24
Max. current per wire	[A]			1	1	1	1
max. total current	[A]			1	1	1	1

ⓘ All modules are also available in a Viton version. Please contact us for details.

Main view



The main view shows the SRH-plus version with the EDF electric feed-through. The swivel head is drawn in the left end position (0°) and rotates 180° clockwise (when viewing the output side)

ⓘ The SDV-P pressure maintenance valve can be used to maintain the position in the case of a loss of pressure (see "Accessories" catalog section).

A, a Main / direct connection, swivel unit clockwise turning

B, b Main / direct connection, swivel unit counterclockwise turning

(1) Connection swivel unit

(2) Attachment connection

(25) Fluid feed-through

(72) Fit for centering sleeves

(80) Depth of the centering sleeve hole in the counter part

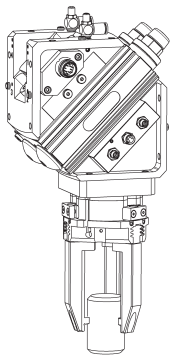
(83) Input for 3 pole sensor feed-through

(84) Input for 4 pole sensor feed-through

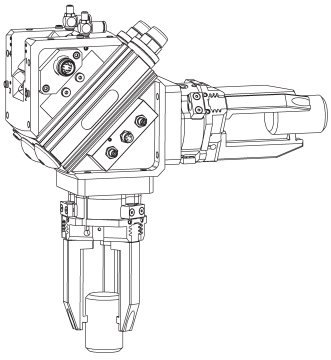
(85) Sensor feed-through output

(90) Cover caps

One-sided loading



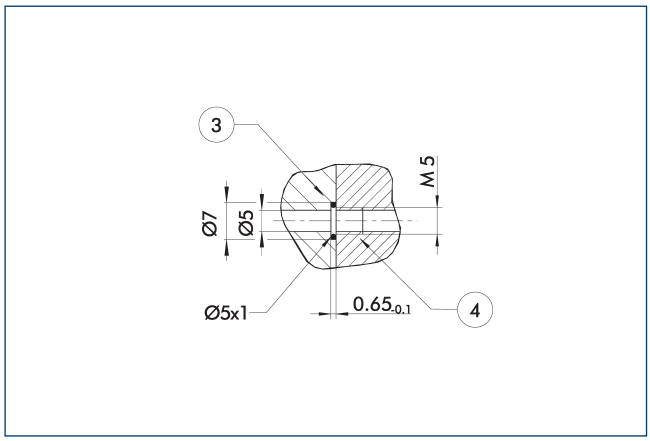
Two-sided loading



SRH-plus 40

Universal swivel head

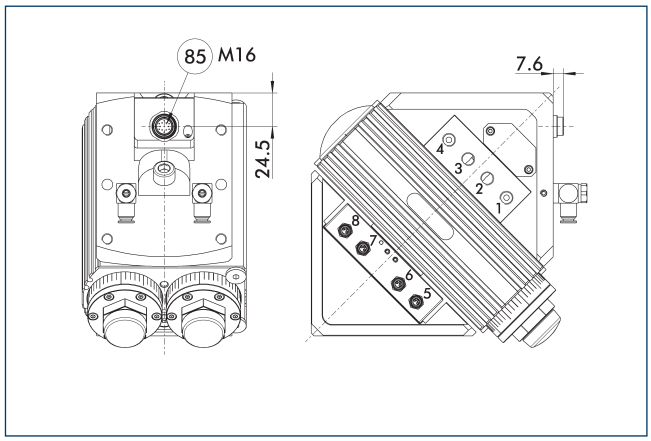
Hose-free direct connection M5



(3) Adapter (4) Rotary unit

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

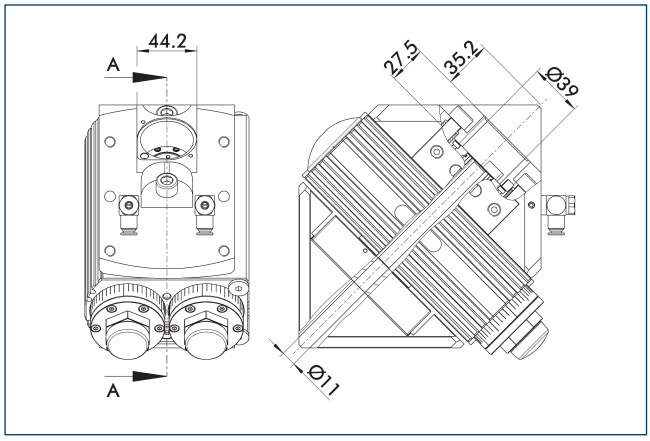
Axial cable connection (Version A)



(85) Sensor feed-through output

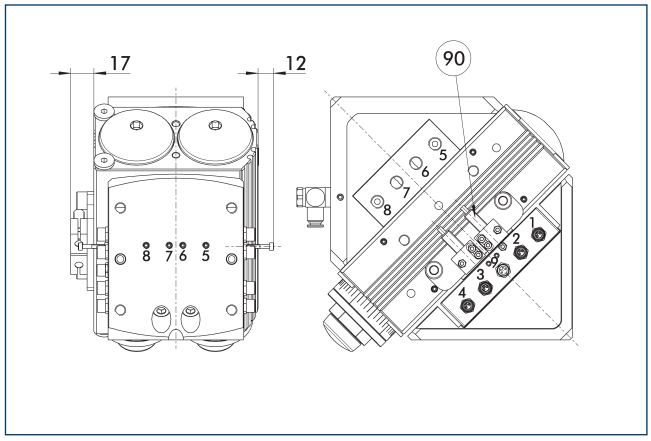
The SRH-plus version with axial cable outlet (-A) is designed for applications where a lateral interfering contour is not acceptable.

Center Bore (Version CB)



The CB Version with a central through hole comes without the EDF integrated electrical feed- through, and allows for the relocation of wires through the swivel head by the customer. Please note that improper wire relocation often leads to wire damage. The swivel head with the integrated EDF electrical feed-through is long lasting and reliable.

Attachment kit for proximity switch



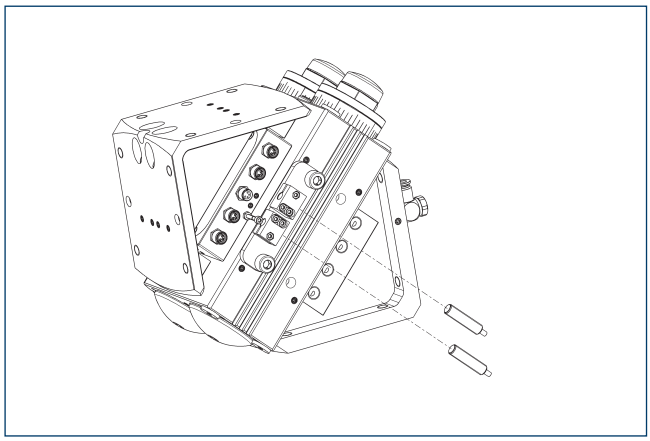
(90) Sensor IN ...

The attachment kit consists of brackets, control cams, and appropriate fastening materials. The proximity switches must be ordered separately.

Description	ID	
Attachment kit for proximity switch		
AS-SRH-plus 40	0359202	

ⓘ This attachment kit needs to be ordered optionally as an accessory.

Inductive Proximity Switches

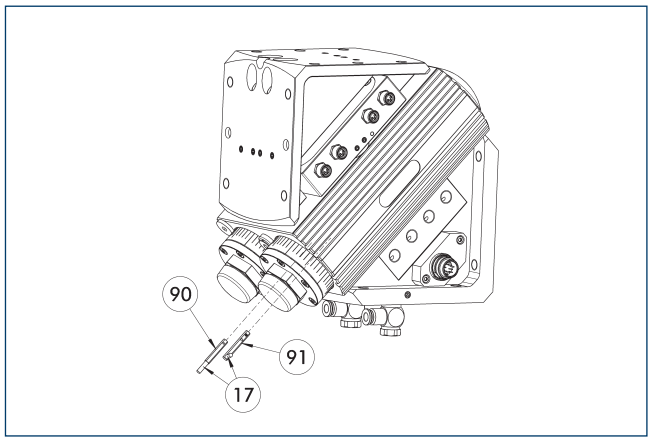


End position monitoring can be mounted with an attachment kit.

Description	ID	Often combined
Attachment kit for proximity switch		
AS-SRH-plus 40	0359202	
Inductive Proximity Switches		
IN 80-S-M12	0301578	
IN 80-S-M8	0301478	●
IN-C 80-S-M8-PNP	0301475	
INK 80-S	0301550	
INK 80-SL	0301579	
Inductive proximity switch with lateral outlet		
IN 80-S-M12-SA	0301587	
IN 80-S-M8-SA	0301483	●
INK 80-S-SA	0301566	

ⓘ Two sensors (closer/S) are required for each swivel head. On option, extension cables are required.

Electronic magnetic switches MMS



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

End position monitoring for mounting in the C-slot.

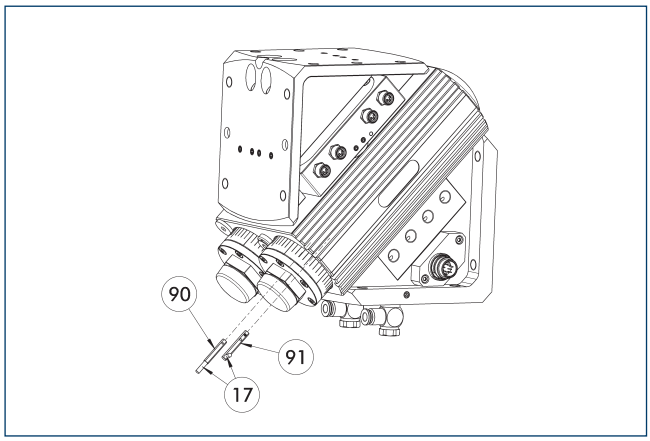
Description	ID	Often combined
Electronic magnetic switches MMS		
MMS 22-S-M8-PNP	0301032	●
MMSK 22-S-PNP	0301034	
MMS electronic magnetic switches with lateral outlet		
MMS 22-S-M8-PNP-SA	0301042	●
MMSK 22-S-PNP-SA	0301044	
Cable extension		
KV BW08-SG08 3P-0030-PNP	0301495	
KV BW08-SG08 3P-0100-PNP	0301496	
KV BW08-SG08 3P-0200-PNP	0301497	●
clip for plug/socket		
CLI-M8	0301463	
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	
Sensor distributor		
V2-M8	0301775	●
V4-M8	0301746	
V8-M8	0301751	

ⓘ Two sensors (closer/S) are required for each swivel head. On option, extension cables are required.

SRH-plus 40

Universal swivel head

Programmable magnetic switches MMS PI1



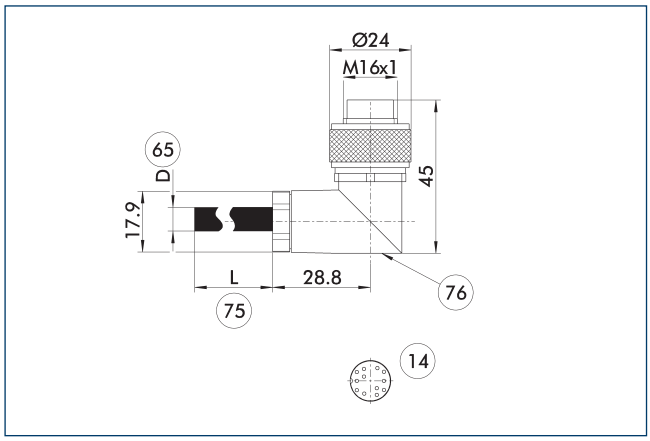
(17) Cable outlet
(91) Sensor MMS 22 ..-PI1-...-SA
(90) Sensor MMS 22 PI1-...

Position monitoring with one programmable position per sensor and electronics integrated in the sensor. Can be programmed using MT magnetic teaching tool (included in scope of delivery) or ST plug teaching tool (optional). End position monitoring is mounted 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 switches MMS PI1		
MMS 22-PI1-S-M8-PNP	0301160	●
MMSK 22-PI1-S-PNP	0301162	
Programmable magnetic switches MMS PI1 with lateral cable outlet		
MMS 22-PI1-S-M8-PNP-SA	0301166	●
MMSK 22-PI1-S-PNP-SA	0301168	
Programmable magnetic switches MMS PI1 with stainless steel housing		
MMS 22-PI1-S-M8-PNP-HD	0301110	●
MMSK 22-PI1-S-PNP-HD	0301112	

ⓘ Two sensors (closer/S) are required for each unit and extension cables are available as an option. For sensor cables, note the minimum permissible bending radii. These are generally 35 mm.

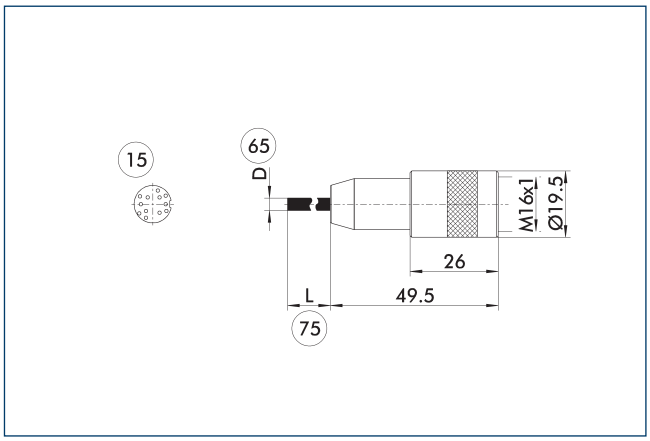
Main view KA SW 16-L



(14) Connector
(65) Cable diameter
(75) Cable length
(76) LED

Description	ID	L1	Wire-Ø
		[m]	[mm²]
Robot side			
KA BW16-L 12P-0500	0323005	5	0.14

KA BG16-L main view



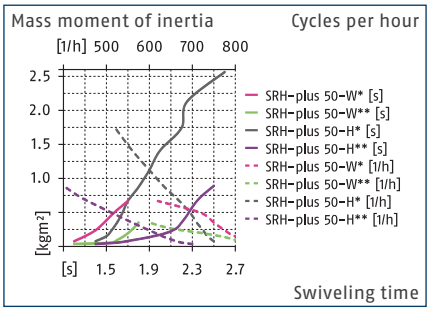
(15) Socket
(65) Cable diameter
(75) Cable length

Description	ID	Length	Connector control cabinet side
		[m]	
Connection cables			
KA BG16-L 12P-1000	0301801	10	open wire strands

SRH-plus 50

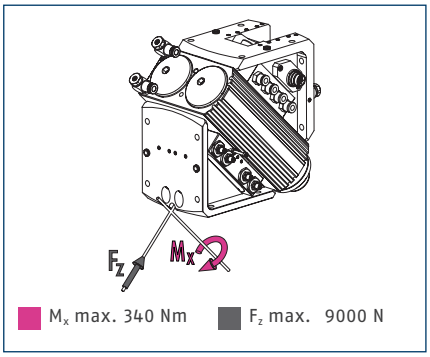
Universal swivel head

Max. admissible inertia J



ⓘ The diagrams are valid for applications with symmetrical loading (*), one-sided centric and symmetric loading (**) and with 6 bar air pressure. The mass moment of inertia is taken relative to the axis of rotation. The cycle times can be adjusted via throttling and adjustment of the shock absorbers. Otherwise the lifetime may reduce. We are glad to assist in designing other applications.

Forces and moments



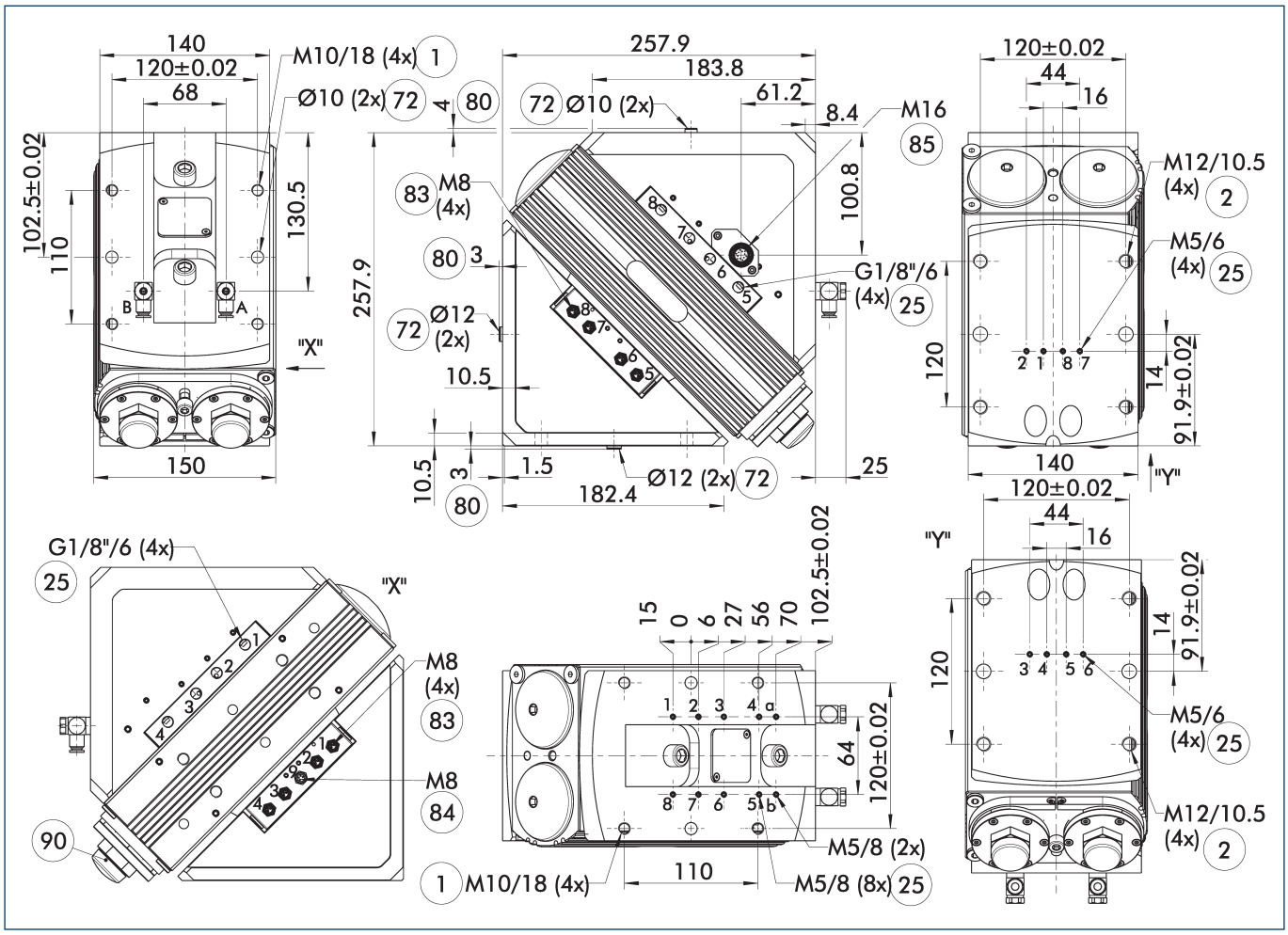
ⓘ The indicated moments and forces are statical values and should not appear simultaneously Throttling has to be done for ensuring that the rotary motion takes place without impact or bouncing. otherwise the service life reduces.

Technical data

Description		SRH-plus 50-W-CB	SRH-plus 50-H-CB	SRH-plus 50-W-M8	SRH-plus 50-H-M8	SRH-plus 50-W-M8-A	SRH-plus 50-H-M8-A
ID		0359293	0359393	0359291	0359391	0359296	0359396
Angle of rotation	[°]	180.0	180.0	180.0	180.0	180.0	180.0
End position adjustability	[°]	3.0	3.0	3.0	3.0	3.0	3.0
Torque	[Nm]	50.2	50.2	50.2	50.2	50.2	50.2
Protection class IP		67	67	67	67	67	67
Weight	[kg]	17.3	17.3	17.6	17.6	17.6	17.6
Fluid consumption (2 x nominal angle)	[cm³]	776.0	776.0	776.0	776.0	776.0	776.0
Swivel time without a payload	[s]	1.2	1.4	1.2	1.4	1.2	1.4
Nominal operating pressure	[bar]	6.0	6.0	6.0	6.0	6.0	6.0
min./max. operating pressure	[bar]	3/8	3/8	3/8	3/8	3/8	3/8
Diameter of connecting hose		6 x 3.9 x 1.05	6 x 3.9 x 1.05	6 x 3.9 x 1.05	6 x 3.9 x 1.05	6 x 3.9 x 1.05	6 x 3.9 x 1.05
No. of fluid feed-throughs		8	8	8	8	8	8
max. pressure in the air feed-through	[bar]	8	8	8	8	8	8
min./max. ambient temperature	[°C]	5/60	5/60	5/60	5/60	5/60	5/60
Repeat accuracy	[°]	0.05	0.05	0.05	0.05	0.05	0.05
Number of E-fittings on the output end				9	9	9	9
Size of the E-connections on the output end				M8	M8	M8	M8
Number of wires				10.0	10.0	10.0	10.0
max. voltage	[V]			24	24	24	24
Max. current per wire	[A]			1	1	1	1
max. total current	[A]			1	1	1	1

ⓘ All modules are also available in a Viton version. Please contact us for details.

Main view



The main view shows the SRH-plus version with the EDF electric feed-through. The swivel head is drawn in the left end position (0°) and rotates 180° clockwise (when viewing the output side)

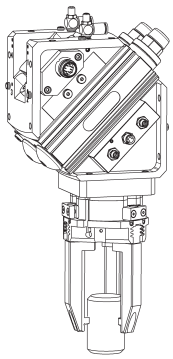
ⓘ The SDV-P pressure maintenance valve can be used to maintain the position in the case of a loss of pressure (see "Accessories" catalog section).

A, a Main / direct connection, swivel unit clockwise turning

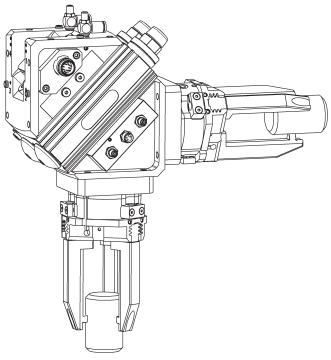
B, b Main / direct connection, swivel unit counterclockwise turning

(1) Connection swivel unit
(2) Attachment connection
(25) Fluid feed-through
(72) Fit for centering sleeves
(80) Depth of the centering sleeve hole in the counter part
(83) Input for 3 pole sensor feed-through
(84) Input for 4 pole sensor feed-through
(85) Sensor feed-through output
(90) Cover caps

One-sided loading



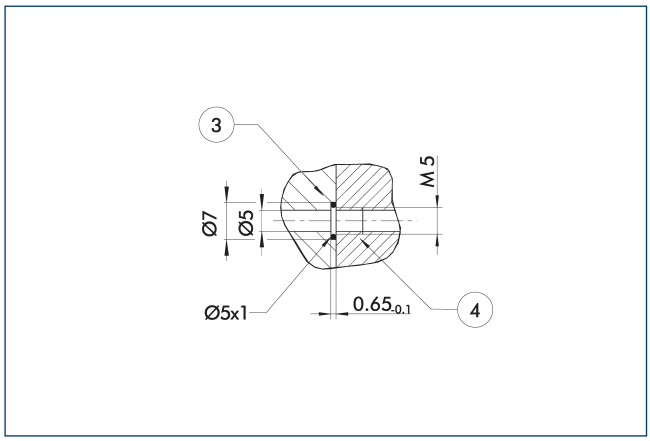
Two-sided loading



SRH-plus 50

Universal swivel head

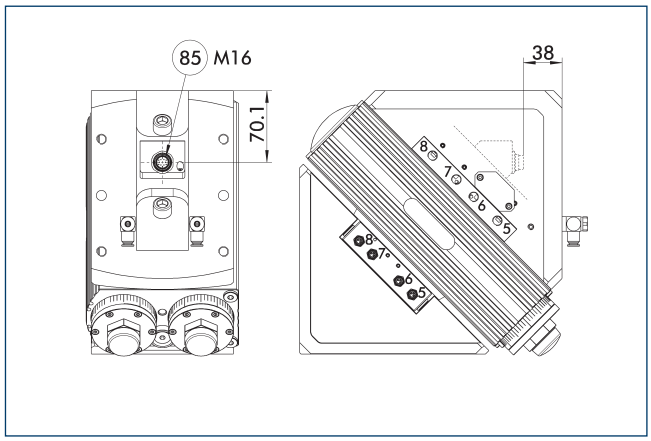
Hose-free direct connection M5



(3) Adapter (4) Rotary unit

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

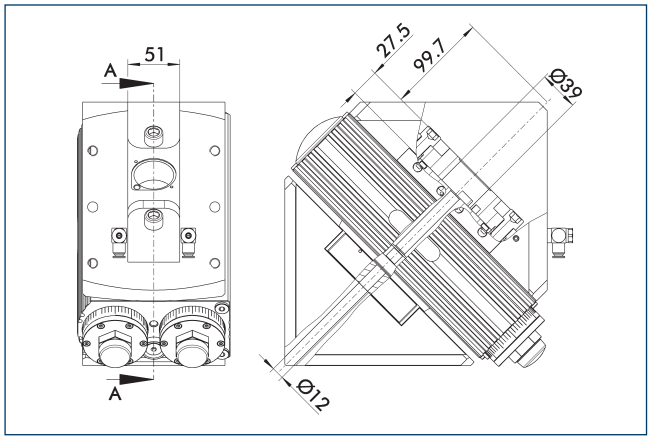
Axial cable connection (Version A)



(85) Sensor feed-through output

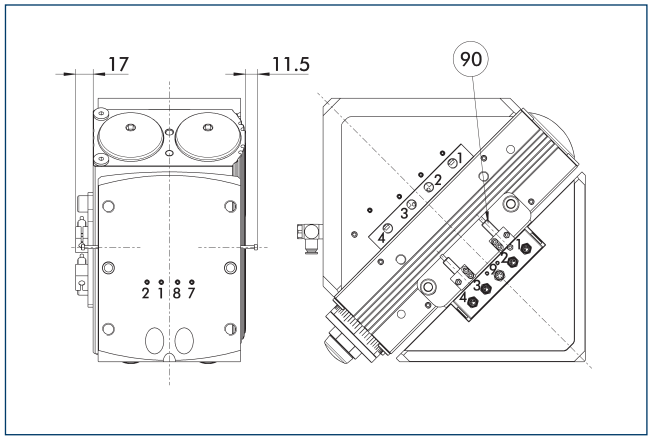
The SRH-plus version with axial cable outlet (-A) is designed for applications where a lateral interfering contour is not acceptable.

Center Bore (Version CB)



The CB Version with a central through hole comes without the EDF integrated electrical feed- through, and allows for the relocation of wires through the swivel head by the customer. Please note that improper wire relocation often leads to wire damage. The swivel head with the integrated EDF electrical feed-through is long lasting and reliable.

Attachment kit for proximity switch



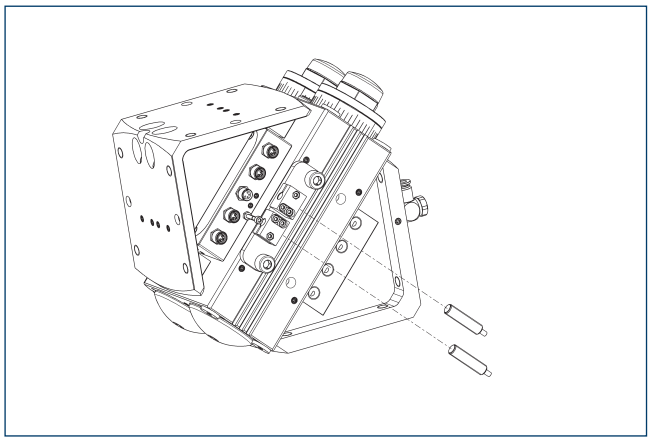
(90) Sensor IN ...

The attachment kit consists of brackets, control cams, and appropriate fastening materials. The proximity switches must be ordered separately.

Description	ID	
Attachment kit for proximity switch		
AS-SRH-plus 50/60	0359203	

ⓘ This attachment kit needs to be ordered optionally as an accessory.

Inductive Proximity Switches

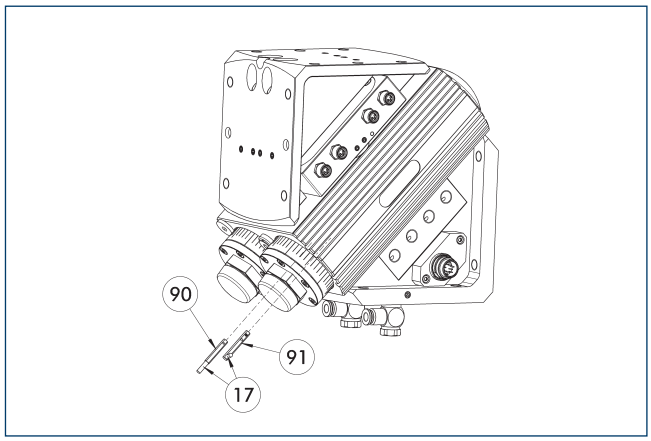


End position monitoring can be mounted with an attachment kit.

Description	ID	Often combined
Attachment kit for proximity switch		
AS-SRH-plus 50/60	0359203	
Inductive Proximity Switches		
IN 80-S-M12	0301578	
IN 80-S-M8	0301478	●
IN-C 80-S-M8-PNP	0301475	
INK 80-S	0301550	
INK 80-SL	0301579	
Inductive proximity switch with lateral outlet		
IN 80-S-M12-SA	0301587	
IN 80-S-M8-SA	0301483	●
INK 80-S-SA	0301566	

ⓘ Two sensors (closer/S) are required for each swivel head. On option, extension cables are required.

Electronic magnetic switches MMS



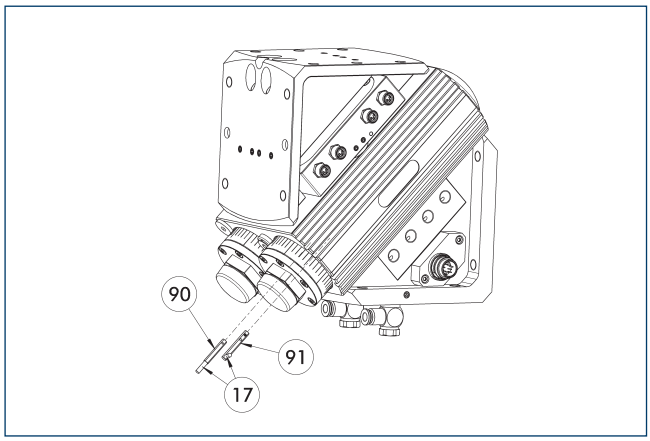
⑰ Cable outlet
⑨① Sensor MMS 22...-SA
⑨⓪ Sensor MMS 22..

End position monitoring for mounting in the C-slot.

Description	ID	Often combined
Electronic magnetic switches MMS		
MMS 22-S-M8-PNP	0301032	●
MMSK 22-S-PNP	0301034	
MMS electronic magnetic switches with lateral outlet		
MMS 22-S-M8-PNP-SA	0301042	●
MMSK 22-S-PNP-SA	0301044	
Cable extension		
KV BW08-SG08 3P-0030-PNP	0301495	
KV BW08-SG08 3P-0100-PNP	0301496	
KV BW08-SG08 3P-0200-PNP	0301497	●
clip for plug/socket		
CLI-M8	0301463	
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	
Sensor distributor		
V2-M8	0301775	●
V4-M8	0301746	
V8-M8	0301751	

ⓘ Two sensors (closer/S) are required for each swivel head. On option, extension cables are required.

Programmable magnetic switches MMS PI1



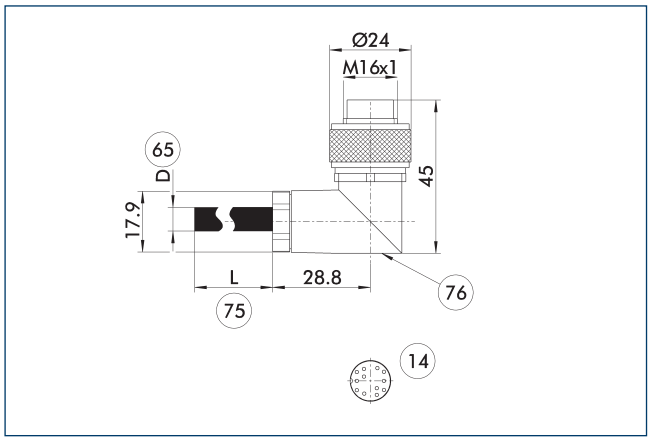
(17) Cable outlet
(91) Sensor MMS 22 ..-PI1-...-SA
(90) Sensor MMS 22 PI1-...

Position monitoring with one programmable position per sensor and electronics integrated in the sensor. Can be programmed using MT magnetic teaching tool (included in scope of delivery) or ST plug teaching tool (optional). End position monitoring is mounted 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 switches MMS PI1		
MMS 22-PI1-S-M8-PNP	0301160	●
MMSK 22-PI1-S-PNP	0301162	
Programmable magnetic switches MMS PI1 with lateral cable outlet		
MMS 22-PI1-S-M8-PNP-SA	0301166	●
MMSK 22-PI1-S-PNP-SA	0301168	
Programmable magnetic switches MMS PI1 with stainless steel housing		
MMS 22-PI1-S-M8-PNP-HD	0301110	●
MMSK 22-PI1-S-PNP-HD	0301112	

ⓘ Two sensors (closer/S) are required for each unit and extension cables are available as an option. For sensor cables, note the minimum permissible bending radii. These are generally 35 mm.

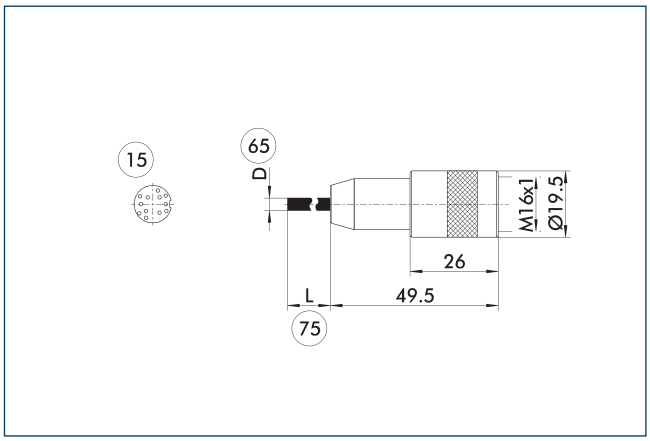
Main view KA SW 16-L



(14) Connector
(65) Cable diameter
(75) Cable length
(76) LED

Description	ID	L1	Wire-Ø
		[m]	[mm²]
Robot side			
KA BW16-L 12P-0500	0323005	5	0.14

KA BG16-L main view



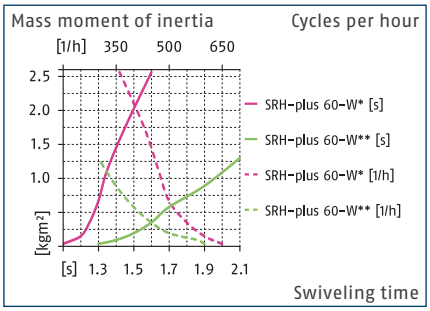
(15) Socket
(65) Cable diameter
(75) Cable length

Description	ID	Length	Connector control cabinet side
		[m]	
Connection cables			
KA BG16-L 12P-1000	0301801	10	open wire strands

SRH-plus 60

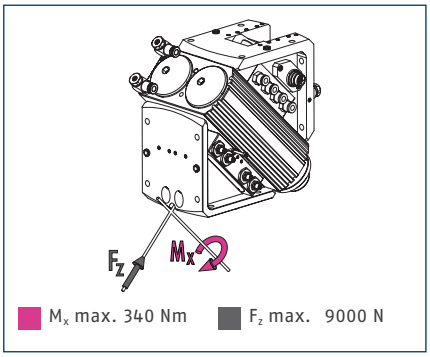
Universal swivel head

Max. admissible inertia J



ⓘ The diagrams are valid for applications with symmetrical loading (*), one-sided centric and symmetric loading (**) and with 6 bar air pressure. The mass moment of inertia is taken relative to the axis of rotation. The cycle times can be adjusted via throttling and adjustment of the shock absorbers. Otherwise the lifetime may reduce. We are glad to assist in designing other applications.

Forces and moments



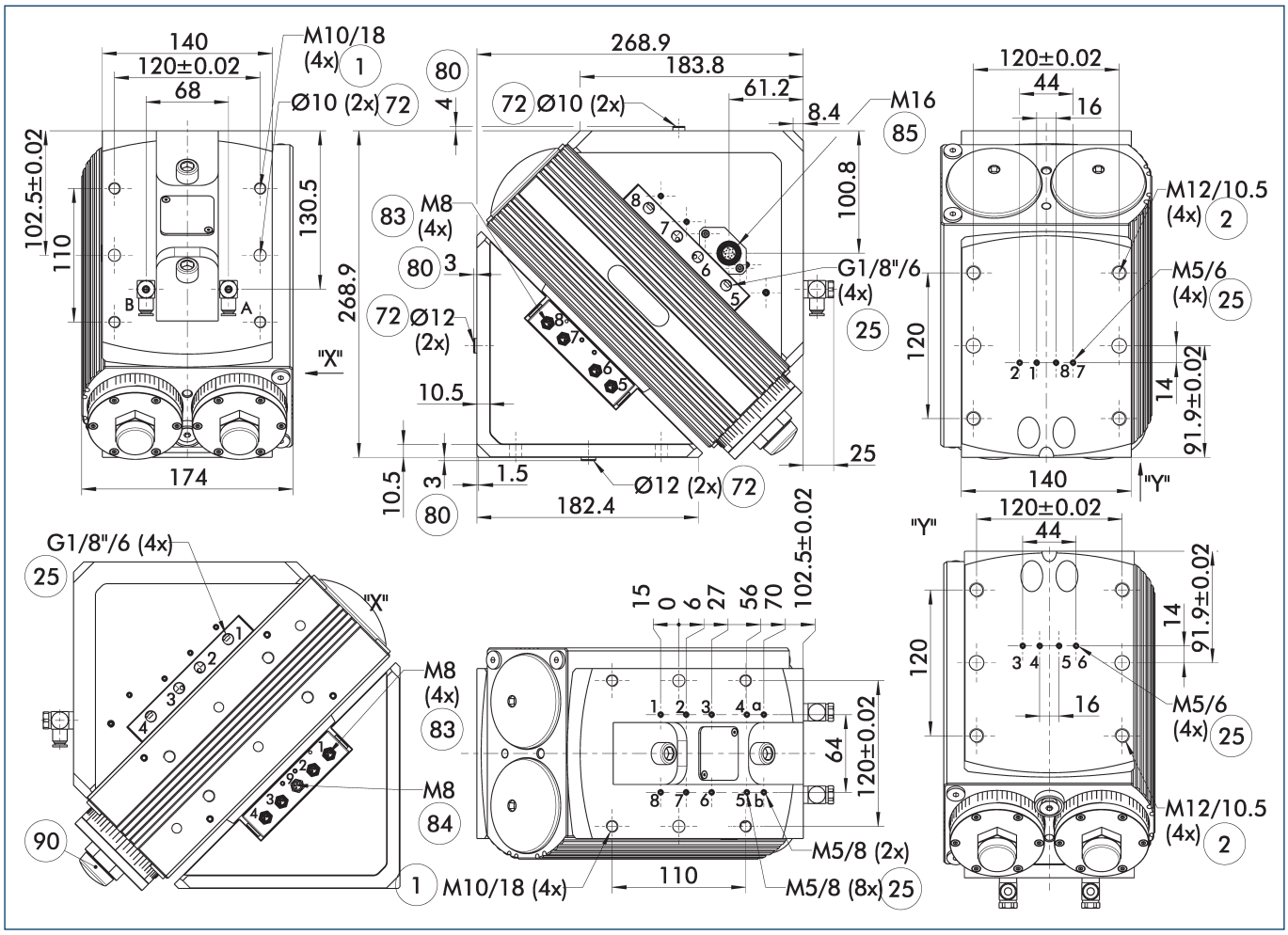
ⓘ The indicated moments and forces are statical values and should not appear simultaneously Throttling has to be done for ensuring that the rotary motion takes place without impact or bouncing. otherwise the service life reduces.

Technical data

Description		SRH-plus 60-W-CB	SRH-plus 60-W-M8	SRH-plus 60-W-M8-A
ID		0359333	0359331	0359336
Angle of rotation	[°]	180.0	180.0	180.0
End position adjustability	[°]	3.0	3.0	3.0
Torque	[Nm]	69.9	69.9	69.9
Protection class IP		67	67	67
Weight	[kg]	19.9	21.2	21.2
Fluid consumption (2 x nominal angle)	[cm³]	1120.0	1120.0	1120.0
Swivel time without a payload	[s]	1.3	1.3	1.3
Nominal operating pressure	[bar]	6.0	6.0	6.0
min./max. operating pressure	[bar]	3/8	3/8	3/8
Diameter of connecting hose		6 x 3.9 x 1.05	6 x 3.9 x 1.05	6 x 3.9 x 1.05
No. of fluid feed-throughs		8	8	8
max. pressure in the air feed-through	[bar]	8	8	8
min./max. ambient temperature	[°C]	5/60	5/60	5/60
Repeat accuracy	[°]	0.05	0.05	0.05
Number of E-fittings on the output end			9	9
Size of the E-connections on the output end			M8	M8
Number of wires			10.0	10.0
max. voltage	[V]		24	24
Max. current per wire	[A]		1	1
max. total current	[A]		1	1

ⓘ All modules are also available in a Viton version. Please contact us for details.

Main view



The main view shows the SRH-plus version with the EDF electric feed-through. The swivel head is drawn in the left end position (0°) and rotates 180° clockwise (when viewing the output side)

ⓘ The SDV-P pressure maintenance valve can be used to maintain the position in the case of a loss of pressure (see "Accessories" catalog section).

A, a Main / direct connection, swivel unit clockwise turning

B, b Main / direct connection, swivel unit counterclockwise turning

(1) Connection swivel unit

(2) Attachment connection

(25) Fluid feed-through

(72) Fit for centering sleeves

(80) Depth of the centering sleeve hole in the counter part

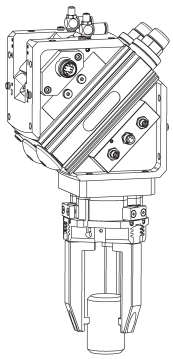
(83) Input for 3 pole sensor feed-through

(84) Input for 4 pole sensor feed-through

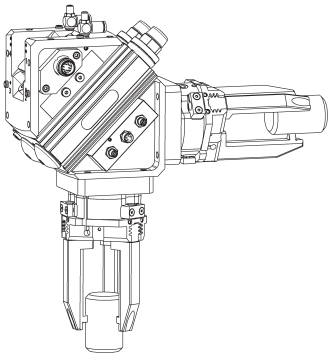
(85) Sensor feed-through output

(90) Cover caps

One-sided loading



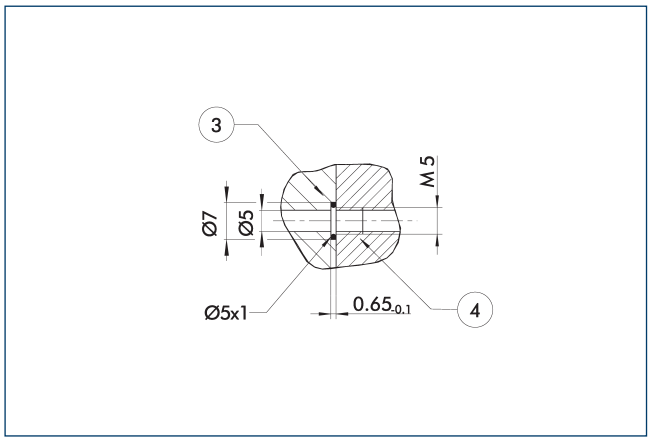
Two-sided loading



SRH-plus 60

Universal swivel head

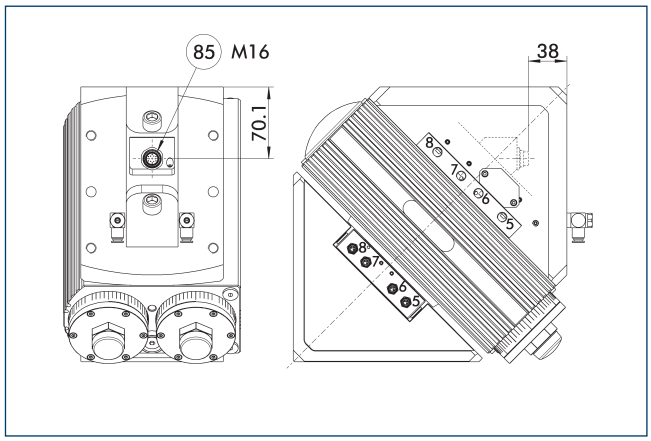
Hose-free direct connection M5



(3) Adapter (4) Rotary unit

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

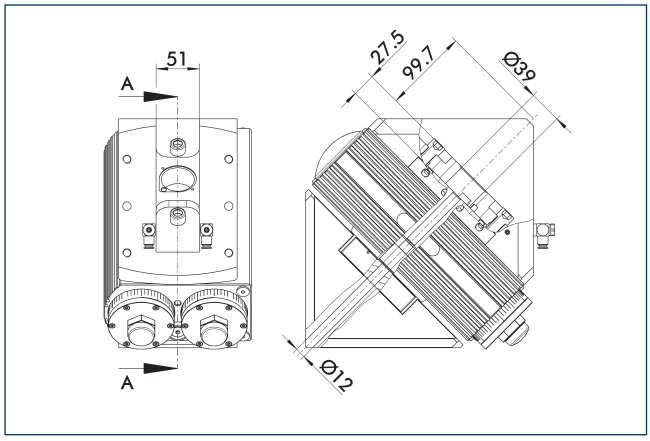
Axial cable connection (Version A)



(85) Sensor feed-through output

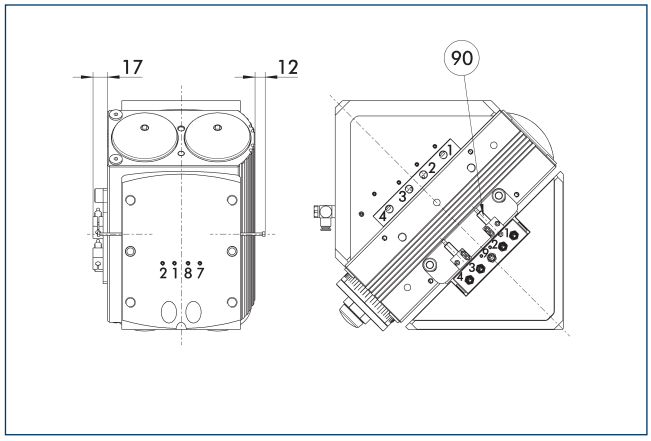
The SRH-plus version with axial cable outlet (-A) is designed for applications where a lateral interfering contour is not acceptable.

Center Bore (Version CB)



The CB Version with a central through hole comes without the EDF integrated electrical feed- through, and allows for the relocation of wires through the swivel head by the customer. Please note that improper wire relocation often leads to wire damage. The swivel head with the integrated EDF electrical feed-through is long lasting and reliable.

Attachment kit for proximity switch



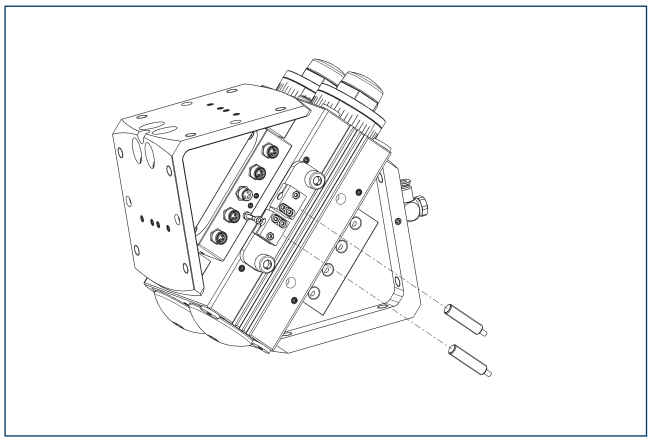
(90) Sensor IN ...

The attachment kit consists of brackets, control cams, and appropriate fastening materials. The proximity switches must be ordered separately.

Description	ID	
Attachment kit for proximity switch		
AS-SRH-plus 50/60	0359203	

ⓘ This attachment kit needs to be ordered optionally as an accessory.

Inductive Proximity Switches

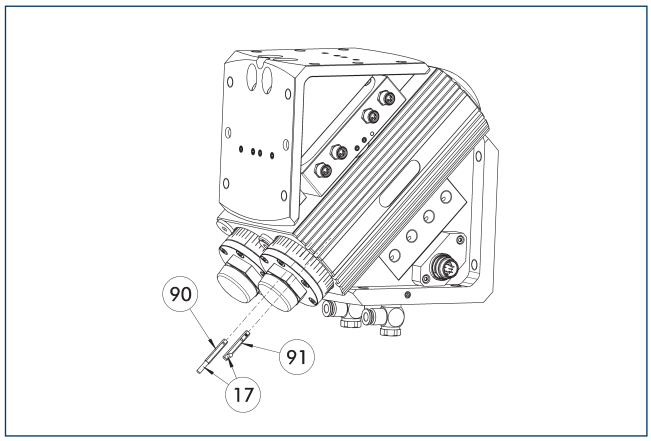


End position monitoring can be mounted with an attachment kit.

Description	ID	Often combined
Attachment kit for proximity switch		
AS-SRH-plus 50/60	0359203	
Inductive Proximity Switches		
IN 80-S-M12	0301578	
IN 80-S-M8	0301478	●
IN-C 80-S-M8-PNP	0301475	
INK 80-S	0301550	
INK 80-SL	0301579	
Inductive proximity switch with lateral outlet		
IN 80-S-M12-SA	0301587	
IN 80-S-M8-SA	0301483	●
INK 80-S-SA	0301566	

ⓘ Two sensors (closer/S) are required for each swivel head. On option, extension cables are required.

Electronic magnetic switches MMS



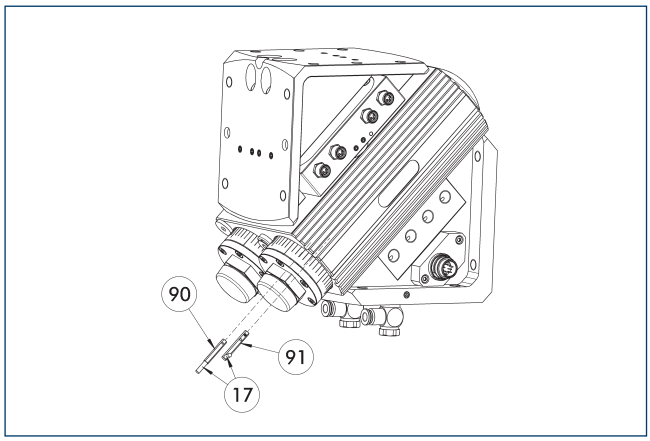
(17) Cable outlet
(91) Sensor MMS 22...-SA
(90) Sensor MMS 22..

End position monitoring for mounting in the C-slot.

Description	ID	Often combined
Electronic magnetic switches MMS		
MMS 22-S-M8-PNP	0301032	●
MMSK 22-S-PNP	0301034	
MMS electronic magnetic switches with lateral outlet		
MMS 22-S-M8-PNP-SA	0301042	●
MMSK 22-S-PNP-SA	0301044	
Cable extension		
KV BW08-SG08 3P-0030-PNP	0301495	
KV BW08-SG08 3P-0100-PNP	0301496	
KV BW08-SG08 3P-0200-PNP	0301497	●
clip for plug/socket		
CLI-M8	0301463	
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	
Sensor distributor		
V2-M8	0301775	●
V4-M8	0301746	
V8-M8	0301751	

ⓘ Two sensors (closer/S) are required for each swivel head. On option, extension cables are required.

Programmable magnetic switches MMS PI1



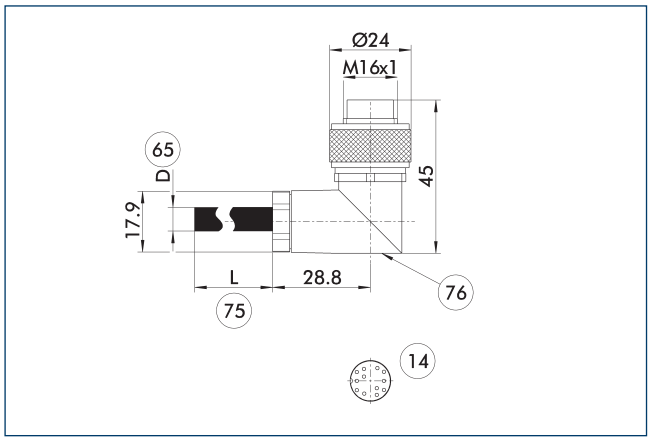
(17) Cable outlet
(91) Sensor MMS 22 ..-PI1-...-SA
(90) Sensor MMS 22 PI1-...

Position monitoring with one programmable position per sensor and electronics integrated in the sensor. Can be programmed using MT magnetic teaching tool (included in scope of delivery) or ST plug teaching tool (optional). End position monitoring is mounted 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 switches MMS PI1		
MMS 22-PI1-S-M8-PNP	0301160	●
MMSK 22-PI1-S-PNP	0301162	
Programmable magnetic switches MMS PI1 with lateral cable outlet		
MMS 22-PI1-S-M8-PNP-SA	0301166	●
MMSK 22-PI1-S-PNP-SA	0301168	
Programmable magnetic switches MMS PI1 with stainless steel housing		
MMS 22-PI1-S-M8-PNP-HD	0301110	●
MMSK 22-PI1-S-PNP-HD	0301112	

ⓘ Two sensors (closer/S) are required for each unit and extension cables are available as an option. For sensor cables, note the minimum permissible bending radii. These are generally 35 mm.

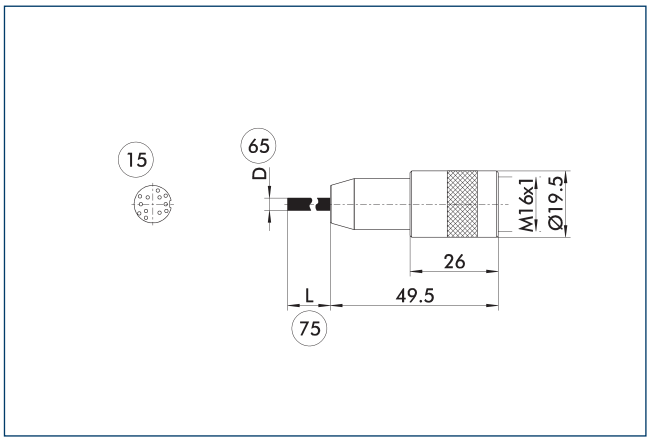
Main view KA SW 16-L



(14) Connector
(65) Cable diameter
(75) Cable length
(76) LED

Description	ID	L1	Wire-Ø
		[m]	[mm²]
Robot side			
KA BW16-L 12P-0500	0323005	5	0.14

KA BG16-L main view



(15) Socket
(65) Cable diameter
(75) Cable length

Description	ID	Length	Connector control cabinet side
		[m]	
Connection cables			
KA BG16-L 12P-1000	0301801	10	open wire strands

SCHUNK GmbH & Co. KG
Spann- und Greiftechnik

Bahnhofstr. 106 – 134
D-74348 Lauffen/Neckar
Tel. +49-7133-103-0
Fax +49-7133-103-2239
info@de.schunk.com
www.schunk.com

www.youtube.com/SCHUNKHQ
www.twitter.com/SCHUNK_HQ
www.facebook.com/SCHUNK.HQ

Jens Lehmann, German goalkeeper legend, SCHUNK brand ambassador since 2012 for precise gripping and safe holding.
www.gb.schunk.com/Lehmann