



Superior Clamping and Gripping

Product Information

Universal swivel head SRH-plus

Fast. Robust. High Performance. Universal swivel head SRH-plus

Swivel head for simultaneous loading and unloading of workpieces with integrated fluid and electrical 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

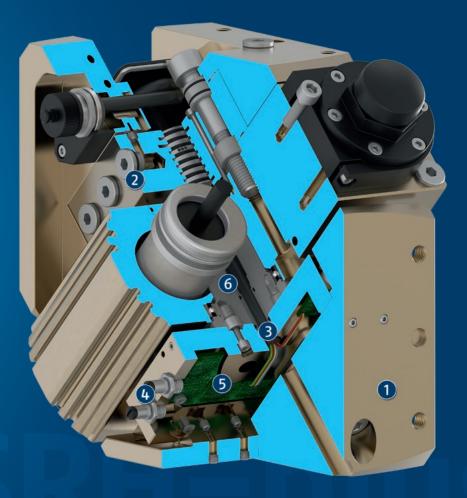
Choice of electronic magnetic sensors or inductive proximity sensors for absolute variability of position monitoring





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 Media feed-through MDF guided up to the screw-on surfaces of the swivel head
- ③ Electrical feed-through EDF completely integrated, for sensor, acuator signal, and energy transmission
- Connectors
 for the use of the integrated electric feed-through
- Distributor board for bundling the input lines
- 6 Drive principle of pinions and racks for powerful swiveling and a robust and reliable module

SCHUNK

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, 0-rings for direct connection, assembly and operating manual with manufacturer's declaration

Warranty: 24 months

Service life characteristics: on request

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

Customized angle of rotation: 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.

Swiveling 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 included and are to be considered when cycle times are calculated.



Application example

Swivel head with double parallel gripper for simultaneous loading and unloading of workpieces in a machine.

- 2-finger parallel gripper JGP with workpiece-specific gripper fingers
- 2 Swivel head SRH-plus
- Over the second seco

SCHUNK offers more ...

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





Tor more information on these products can be found on the following product pages or at schunk.com.

Options and special information

For particularly damping-intensive rotary movements, additional, external shock absorbers can be fitted. Please ask for details.

On request, we can also provide our electric feed-throughs with M5 or M12 connection sockets. On request, the electric feed-throughs can also be used to transmit bus signals.

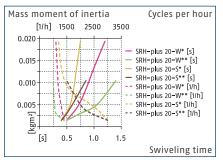
Please note that suitable emergency stop scenarios (e.g. controlled shut down) and restarting scenarios (e.g. pressure build-up valves, appropriate valve switching sequences) are needed for all pneumatic actuators.

Cutting off the pressure in an uncontrolled manner could lead to undefined states and behavior.



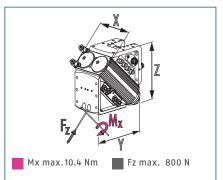


Max. admissible inertia J



The diagrams are valid for applications with a symmetrical design (*) to the swivel axis: one-sided centrically arranged to one mounting face (**), and with an operating pressure of 6 bar. The mass moment of inertia always refers to the swiveling axis. The cycle times can be adjusted via throttling and adjustment of the shock absorber's stroke. Otherwise the lifetime may reduce. On request, we are glad to assist you in designing other applications. Please contact us.

Dimensions and maximum loads



The indicated moments and forces are statical values and may appear simultaneously. Throttling has to be done for ensuring that the rotary movement takes place without impact or bouncing. Otherwise the service life reduces.

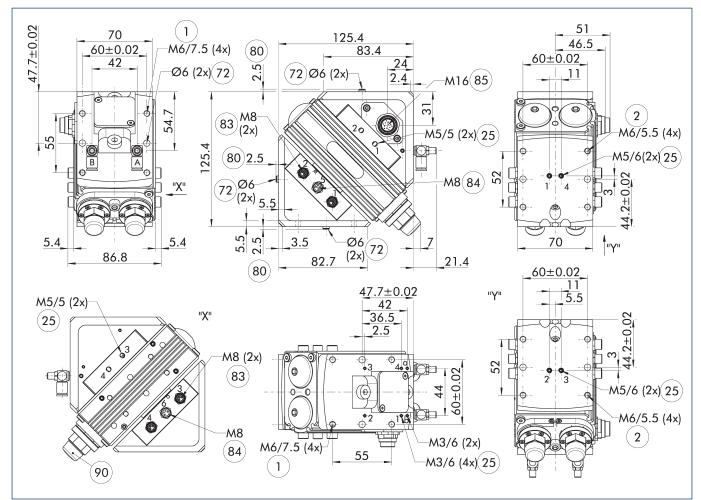
Technical data

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
IP protection class		67	67	67	67	67	67
Weight	[kg]	2.1	2.1	2.2	2.2	2.2	2.2
Fluid consumption (2x nom. 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
Min./nom./max. operating pressure	[bar]	3/6/8	3/6/8	3/6/8	3/6/8	3/6/8	3/6/8
Diameter of connecting hose		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 fluid 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
No. of E-fittings on the output end				6	6	6	6
Size of the E-connections on the output end				M8	M8	M8	M8
Max. voltage	[V]			24	24	24	24
Max. current per wire	[A]			1	1	1	1
Max. current	[A]			1	1	1	1
Dimensions X x Y x Z	[mm]	76 x 132 x 133.6	76 x 132 x 133.6				

① All units are also available in an FKM version. Please contact us for details.

Universal swivel head

Main view



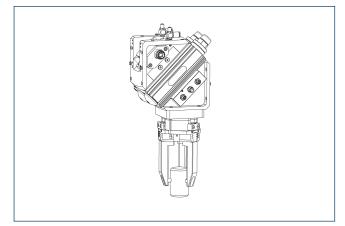
The main view shows the SRH-plus version with the EDF electric feed-through. The swivel head is drawn in the left end position (0°) and rotates 180° clockwise (when viewing the output side)

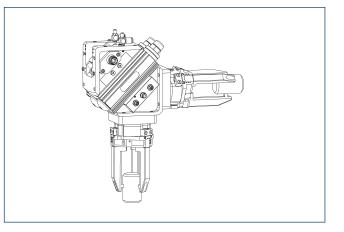
- () The SDV-P pressure maintenance valve can be used to maintain the position in the case of a loss of pressure (see "Accessories" catalog section).
- A, a Main / direct connection, rotary actuator rotates clockwise
- B, b Main / direct connection, rotary actuator rotates counterclockwise
- (1) Connection swivel unit
- (2) Attachment connection
- (25) Fluid feed-through

Two-sided loading

- (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

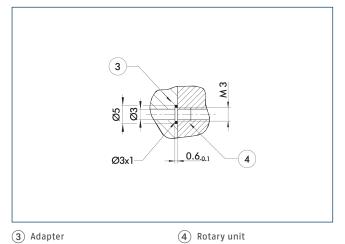
One-sided loading





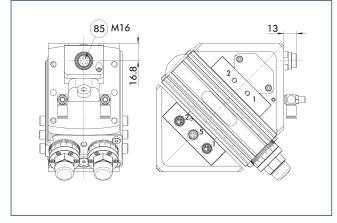
Universal swivel head

Hose-free direct connection M3



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

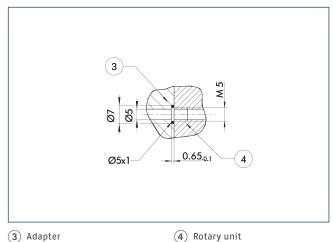
Axial cable connection (Version A)



(85) Sensor feed-through output

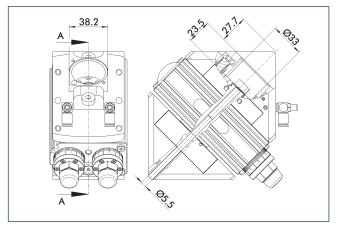
The SRH-plus version with axial cable outlet (-A) is designed for applications where a lateral interfering contour is not acceptable.

Hose-free direct connection M5



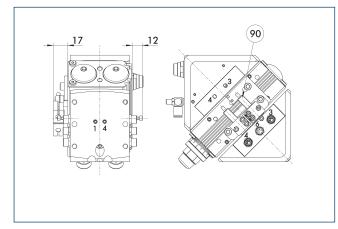
The direct connection is used for supplying compressed air without hoses. Instead, the pressure medium is fed through bore-holes in the mounting plate.

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



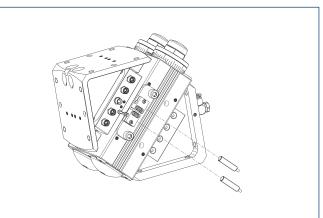
90 Sensor IN ...

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

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

① This attachment kit needs to be ordered optionally as an accessory.

Inductive proximity switches



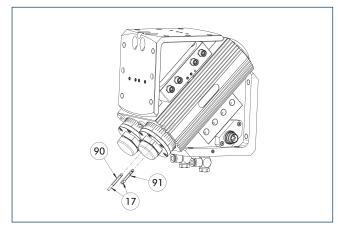
End position monitoring can be mounted with an attachment kit.

Description	ID	Often combined	
Attachment kit for proxi	mity switch		
AS-SRH-plus 20/25	0359200		
Inductive proximity swit	tches		
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 cable 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.

Universal swivel head

Electronic magnetic switch MMS



(17) Cable outlet

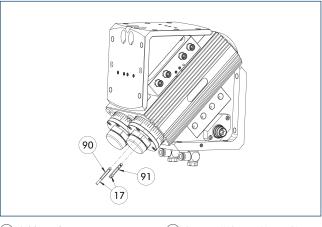
(91) Sensor MMS 22...-SA

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 o	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 plug/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 (closer/S) are required for each swivel head. On option, extension cables are required.

Programmable magnetic switch MMS 22-Pl1



(17) Cable outlet

(91) Sensor MMS 22 ..- PI1-...-SA

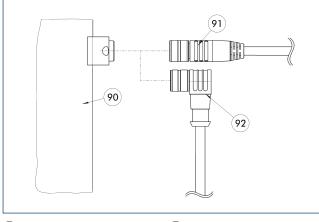
(90) Sensor MMS 22 PI1-...

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) 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	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.

Connection cables



(90) Electrical connection component

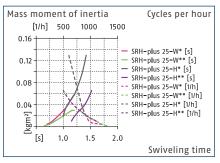
(91) Cable with straight connector(92) Cable with angled connector

Description	ID	Length
		[m]
Connection cables		
KA BG16-L 12P-1000	0301801	10
KA BW16-L 12P-0500	0323005	5

BG stands for a connection cable with a straight female connector and BW for an angled female connector.SG stands for a connection cable with a straight male connector and SW for an angled male connector.

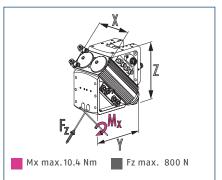


Max. admissible inertia J



The diagrams are valid for applications with a symmetrical design (*) to the swivel axis: one-sided centrically arranged to one mounting face (**), and with an operating pressure of 6 bar. The mass moment of inertia always refers to the swiveling axis. The cycle times can be adjusted via throttling and adjustment of the shock absorber's stroke. Otherwise the lifetime may reduce. On request, we are glad to assist you in designing other applications. Please contact us.

Dimensions and maximum loads



The indicated moments and forces are statical values and may appear simultaneously. Throttling has to be done for ensuring that the rotary movement takes place without impact or bouncing. Otherwise the service life reduces.

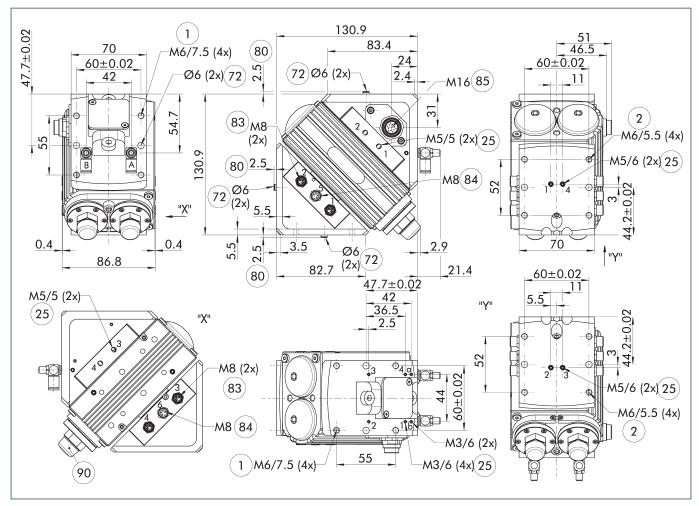
Technical data

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
IP protection class		67	67	67	67	67	67
Weight	[kg]	2.5	2.5	2.6	2.6	2.6	2.6
Fluid consumption (2x nom. angle)	[cm ³]	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
Min./nom./max. operating pressure	[bar]	3/6/8	3/6/8	3/6/8	3/6/8	3/6/8	3/6/8
Diameter of connecting hose		6 x 3.9 x 1.05					
No. of fluid feed-throughs		4	4	4	4	4	4
Max. pressure fluid 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
No. of E-fittings on the output end				6	6	6	6
Size of the E-connections on the output end				M8	M8	M8	M8
Max. voltage	[V]			24	24	24	24
Max. current per wire	[A]			1	1	1	1
Max. current	[A]			1	1	1	1
Dimensions X x Y x Z	[mm]	86.8 x 133.9 x 135.5					

① All units are also available in an FKM version. Please contact us for details.

Universal swivel head

Main view



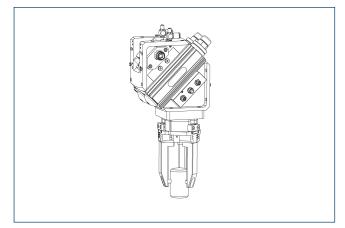
The main view shows the SRH-plus version with the EDF electric feed-through. The swivel head is drawn in the left end position (0°) and rotates 180° clockwise (when viewing the output side)

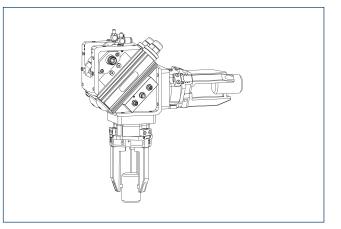
- () The SDV-P pressure maintenance valve can be used to maintain the position in the case of a loss of pressure (see "Accessories" catalog section).
- A, a Main / direct connection, rotary actuator rotates clockwise
- B, b Main / direct connection, rotary actuator rotates counterclockwise
- (1) Connection swivel unit
- (2) Attachment connection
- (25) Fluid feed-through

Two-sided loading

- (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

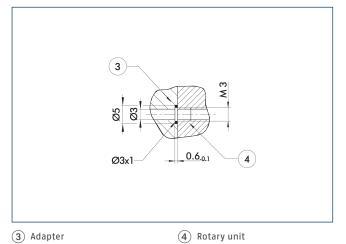
One-sided loading





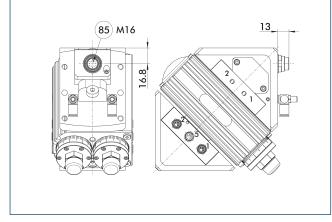
Universal swivel head

Hose-free direct connection M3



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

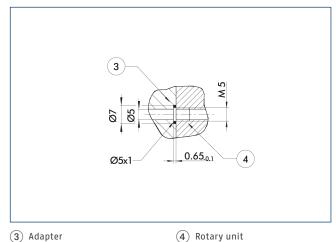
Axial cable connection (Version A)



(85) Sensor feed-through output

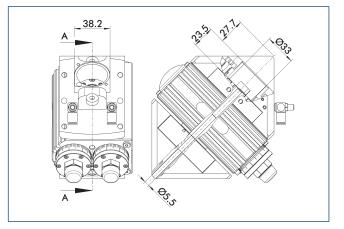
The SRH-plus version with axial cable outlet (-A) is designed for applications where a lateral interfering contour is not acceptable.

Hose-free direct connection M5



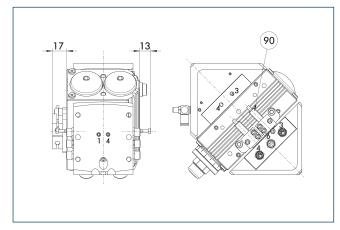
The direct connection is used for supplying compressed air without hoses. Instead, the pressure medium is fed through bore-holes in the mounting plate.

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



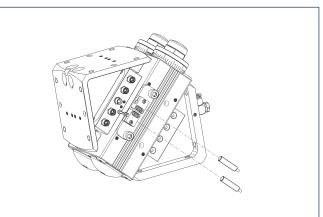
90 Sensor IN ...

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

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

① This attachment kit needs to be ordered optionally as an accessory.

Inductive proximity switches



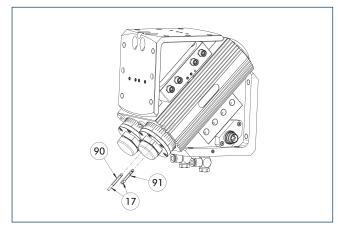
End position monitoring can be mounted with an attachment kit.

Description	ID	Often combined		
Attachment kit for proxi	mity switch			
AS-SRH-plus 20/25	0359200			
Inductive proximity swit	ches			
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 swit	Inductive proximity switch with lateral cable 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.

Universal swivel head

Electronic magnetic switch MMS



(17) Cable outlet

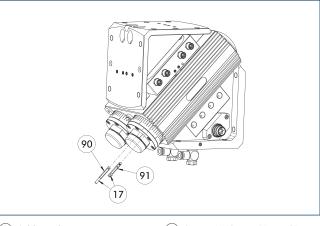
(91) Sensor MMS 22...-SA

90 Sensor MMS 22..

0					
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 of	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 plug/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 (closer/S) are required for each swivel head. On option, extension cables are required.

Programmable magnetic switch MMS 22-Pl1



(17) Cable outlet

(91) Sensor MMS 22 ..- PI1-...-SA

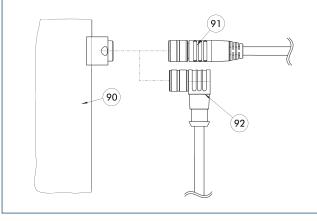
(90) Sensor MMS 22 PI1-...

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) 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	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.

Connection cables



(90) Electrical connection component

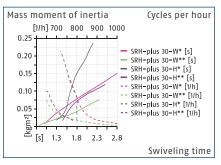
(91) Cable with straight connector(92) Cable with angled connector

Description	ID	Length
		[m]
Connection cables		
KA BG16-L 12P-1000	0301801	10
KA BW16-L 12P-0500	0323005	5

BG stands for a connection cable with a straight female connector and BW for an angled female connector.SG stands for a connection cable with a straight male connector and SW for an angled male connector.

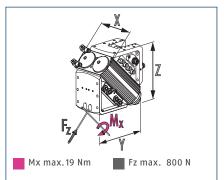


Max. admissible inertia J



The diagrams are valid for applications with a symmetrical design (*) to the swivel axis: one-sided centrically arranged to one mounting face (**), and with an operating pressure of 6 bar. The mass moment of inertia always refers to the swiveling axis. The cycle times can be adjusted via throttling and adjustment of the shock absorber's stroke. Otherwise the lifetime may reduce. On request, we are glad to assist you in designing other applications. Please contact us.

Dimensions and maximum loads



The indicated moments and forces are statical values and may appear simultaneously. Throttling has to be done for ensuring that the rotary movement takes place without impact or bouncing. Otherwise the service life reduces.

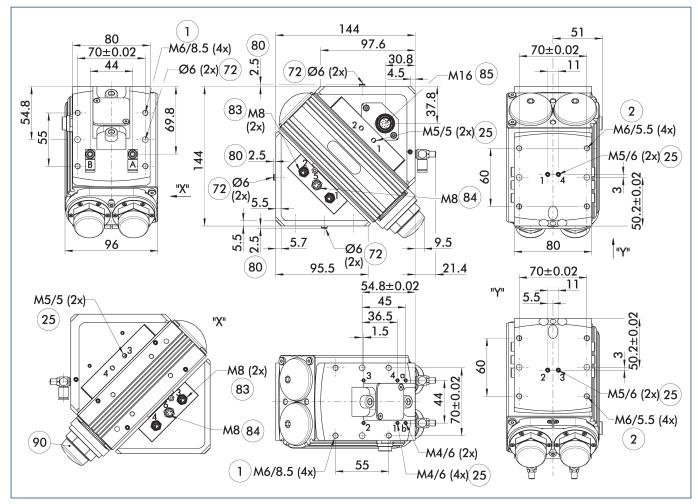
Technical data

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
IP protection class		67	67	67	67	67	67
Weight	[kg]	4.3	4.3	4.5	4.5	4.6	4.6
Fluid consumption (2x nom. 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
Min./nom./max. operating pressure	[bar]	3/6/8	3/6/8	3/6/8	3/6/8	3/6/8	3/6/8
Diameter of connecting hose		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 fluid 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
No. of E-fittings on the output end				6	6	6	6
Size of the E-connections on the output end				M8	M8	M8	M8
Max. voltage	[V]			24	24	24	24
Max. current per wire	[A]			1	1	1	1
Max. current	[A]			1	1	1	1
Dimensions X x Y x Z	[mm]	96 x 153.7 x 156.2	96 x 153.7 x 156.2				

① All units are also available in an FKM version. Please contact us for details.

Universal swivel head

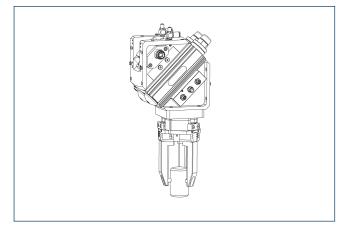
Main view

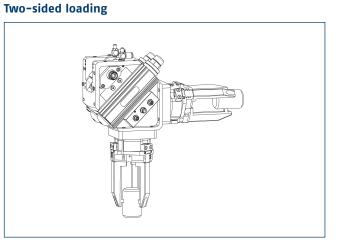


The main view shows the SRH-plus version with the EDF electric feed-through. The swivel head is drawn in the left end position (0°) and rotates 180° clockwise (when viewing the output side)

- ① 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, rotary actuator rotates clockwise
- B, b Main / direct connection, rotary actuator rotates counterclockwise
- (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

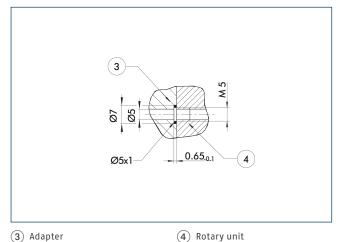
One-sided loading





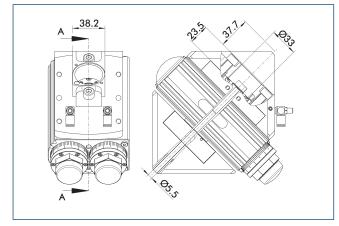
Universal swivel head

Hose-free direct connection M5



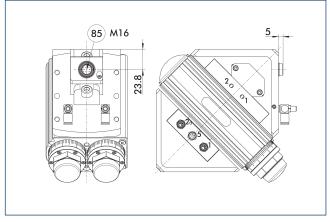
The direct connection is used for supplying compressed air without hoses. Instead, the pressure medium is fed through bore-holes in the mounting plate.

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.

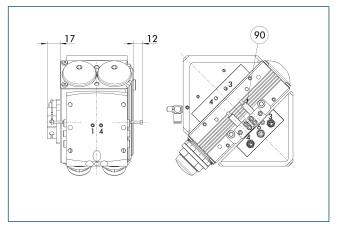
Axial cable connection (Version A)



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.

Attachment kit for proximity switch



90 Sensor IN ...

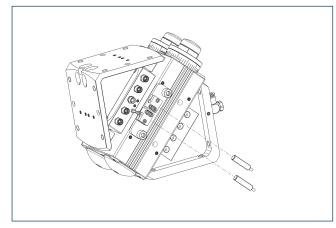
The attachment kit consists of brackets, control cams, and appropriate fastening materials. The proximity switches must be ordered separately.

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

 $\ensuremath{\textcircled{}}$ This attachment kit needs to be ordered optionally as an accessory.

Universal swivel head

Inductive proximity switches

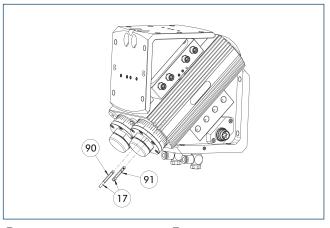


End position monitoring can be mounted with an attachment kit.

Description	ID	Often combined		
Attachment kit for proxi	Attachment kit for proximity switch			
AS-SRH-plus 30/35	0359201			
Inductive proximity swit	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 swit	Inductive proximity switch with lateral cable outlet			
IN 80-S-M12-SA	0301587			
IN 80-S-M8-SA	0301483	•		
INK 80-S-SA	0301566			

 $\ensuremath{\textcircled{}}$ Two sensors (closer/S) are required for each swivel head. On option, extension cables are required.

Electronic magnetic switch MMS



(17) Cable outlet

(91) Sensor MMS 22...-SA

90 Sensor MMS 22..

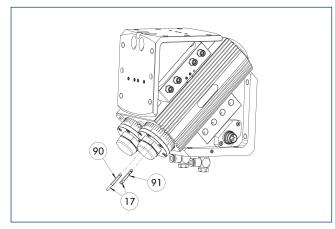
End position monitoring for mounting in the C-slot.

Description	ID	Often combined
Electronic magnetic switch		
MMS 22-S-M8-PNP	0301032	•
MMSK 22-S-PNP	0301034	
Electronic magnetic switches with	lateral cable o	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 plug/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 (closer/S) are required for each swivel head. On option, extension cables are required.

Universal swivel head

Programmable magnetic switch MMS 22-PI1



(17) Cable outlet

(91) Sensor MMS 22 ..- PI1-...-SA

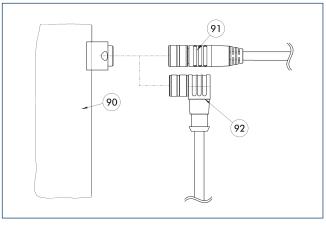
(90) Sensor MMS 22 PI1-...

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) 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.

Connection cables



90 Electrical connection component

(91) Cable with straight connector(92) Cable with angled connector

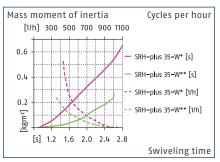
Description	ID	Length
		[m]
Connection cables		
KA BG16-L 12P-1000	0301801	10
KA BW16-L 12P-0500	0323005	5

③ BG stands for a connection cable with a straight female connector and BW for an angled female connector.SG stands for a connection cable with a straight male connector and SW for an angled male connector.



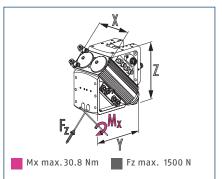


Max. admissible inertia J



The diagrams are valid for applications with a symmetrical design (*) to the swivel axis: one-sided centrically arranged to one mounting face (**), and with an operating pressure of 6 bar. The mass moment of inertia always refers to the swiveling axis. The cycle times can be adjusted via throttling and adjustment of the shock absorber's stroke. Otherwise the lifetime may reduce. On request, we are glad to assist you in designing other applications. Please contact us.

Dimensions and maximum loads



The indicated moments and forces are statical values and may appear simultaneously. Throttling has to be done for ensuring that the rotary movement takes place without impact or bouncing. Otherwise the service life reduces.

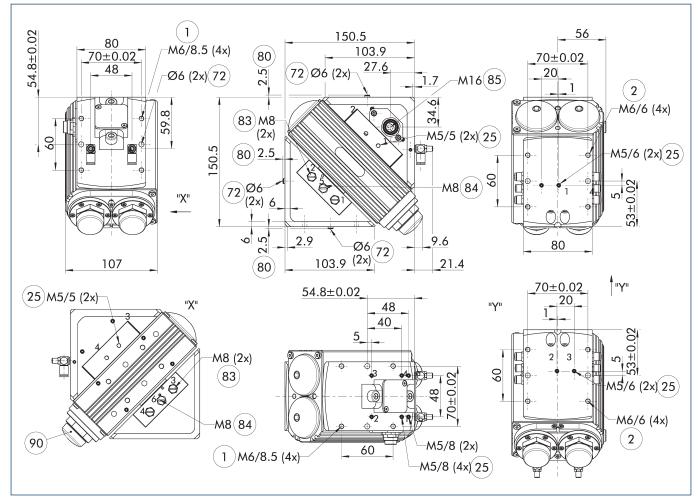
Technical data

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
IP protection class		67	67	67
Weight	[kg]	4.2	4.3	4.3
Fluid consumption (2x nom. angle)	[cm ³]	216.0	216.0	216.0
Swivel time without a payload	[s]	0.9	0.9	0.9
Min./nom./max. operating pressure	[bar]	3/6/8	3/6/8	3/6/8
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 fluid 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
No. of E-fittings on the output end			6	6
Size of the E-connections on the output end			M8	M8
Max. voltage	[V]		24	24
Max. current per wire	[A]		1	1
Max. current	[A]		1	1
Dimensions X x Y x Z	[mm]	107 x 156 x 159.8	107 x 156 x 159.8	107 x 156 x 159.8

① All units are also available in an FKM version. Please contact us for details.

Universal swivel head

Main view



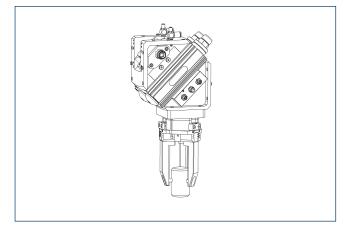
The main view shows the SRH-plus version with the EDF electric feed-through. The swivel head is drawn in the left end position (0°) and rotates 180° clockwise (when viewing the output side)

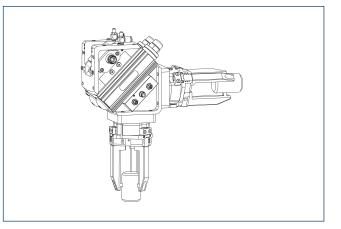
- () The SDV-P pressure maintenance valve can be used to maintain the position in the case of a loss of pressure (see "Accessories" catalog section).
- A, a Main / direct connection, rotary actuator rotates clockwise
- B, b Main / direct connection, rotary actuator rotates counterclockwise
- (1) Connection swivel unit
- (2) Attachment connection
- (25) Fluid feed-through

Two-sided loading

- (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

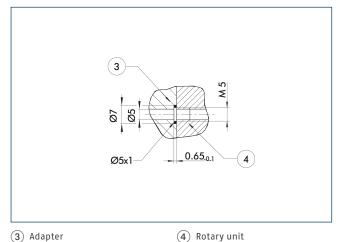
One-sided loading





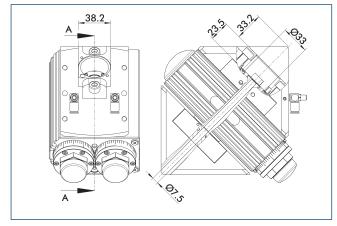
Universal swivel head

Hose-free direct connection M5



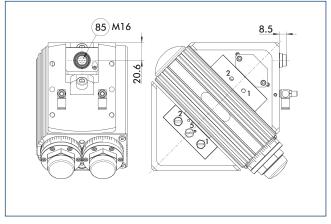
The direct connection is used for supplying compressed air without hoses. Instead, the pressure medium is fed through bore-holes in the mounting plate.

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.

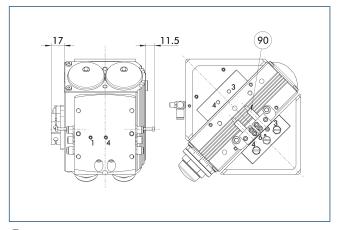
Axial cable connection (Version A)



(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.

Attachment kit for proximity switch



90 Sensor IN ...

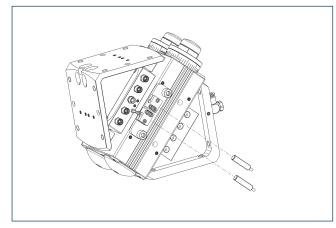
The attachment kit consists of brackets, control cams, and appropriate fastening materials. The proximity switches must be ordered separately.

Descriptio	tion	ID
Attachme	nent kit for pro	ximity switch
AS-SRH-p	-plus 30/35	0359201

① This attachment kit needs to be ordered optionally as an accessory.

Universal swivel head

Inductive proximity switches

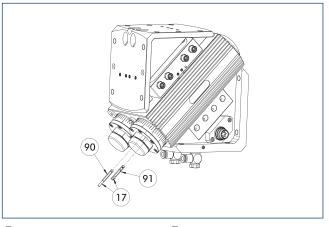


End position monitoring can be mounted with an attachment kit.

Description	ID	Often combined		
Attachment kit for proxi	Attachment kit for proximity switch			
AS-SRH-plus 30/35	0359201			
Inductive proximity swift	ches			
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 swit	Inductive proximity switch with lateral cable 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 switch MMS



(17) Cable outlet

(91) Sensor MMS 22...-SA

90 Sensor MMS 22..

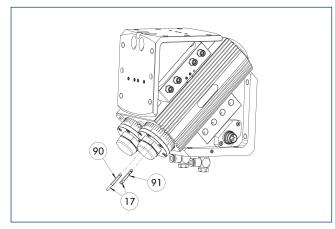
End position monitoring for mounting in the C-slot.

Description	ID	Often combined
Electronic magnetic switch		
MMS 22-S-M8-PNP	0301032	•
MMSK 22-S-PNP	0301034	
Electronic magnetic switches with	lateral cable o	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 plug/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 (closer/S) are required for each swivel head. On option, extension cables are required.

Universal swivel head

Programmable magnetic switch MMS 22-PI1



(17) Cable outlet

(91) Sensor MMS 22 ..- PI1-...-SA

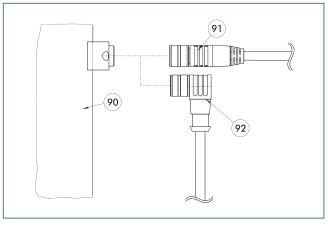
(90) Sensor MMS 22 PI1-...

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) 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.

0 9 9 1 9 1 9 1		8				
Description	ID	Often combined				
Programmable magnetic switch	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.

Connection cables



90 Electrical connection component

(91) Cable with straight connector(92) Cable with angled connector

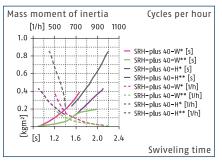
Description	ID	Length
		[m]
Connection cables		
KA BG16-L 12P-1000	0301801	10
KA BW16-L 12P-0500	0323005	5

③ BG stands for a connection cable with a straight female connector and BW for an angled female connector.SG stands for a connection cable with a straight male connector and SW for an angled male connector.



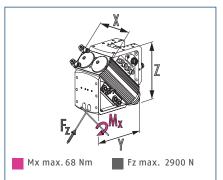


Max. admissible inertia J



The diagrams are valid for applications with a symmetrical design (*) to the swivel axis: one-sided centrically arranged to one mounting face (**), and with an operating pressure of 6 bar. The mass moment of inertia always refers to the swiveling axis. The cycle times can be adjusted via throttling and adjustment of the shock absorber's stroke. Otherwise the lifetime may reduce. On request, we are glad to assist you in designing other applications. Please contact us.

Dimensions and maximum loads



The indicated moments and forces are statical values and may appear simultaneously. Throttling has to be done for ensuring that the rotary movement takes place without impact or bouncing. Otherwise the service life reduces.

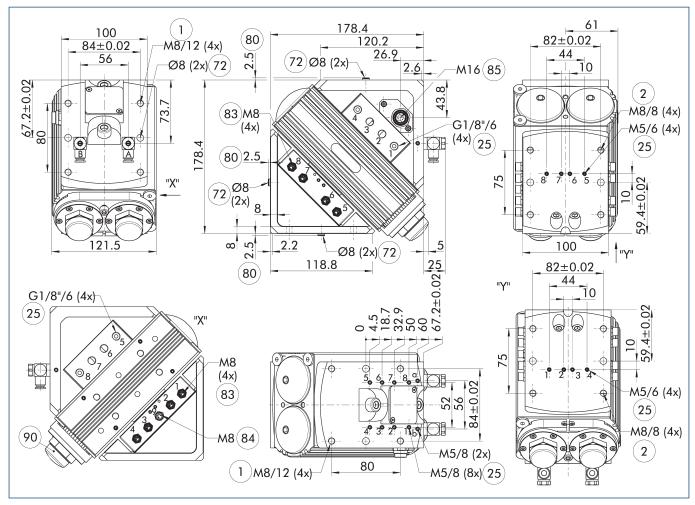
Technical data

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
IP protection class		67	67	67	67	67	67
Weight	[kg]	6.7	6.7	6.9	6.9	6.9	6.9
Fluid consumption (2x nom. 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
Min./nom./max. operating pressure	[bar]	3/6/8	3/6/8	3/6/8	3/6/8	3/6/8	3/6/8
Diameter of connecting hose		6 x 3.9 x 1.05					
No. of fluid feed-throughs		8	8	8	8	8	8
Max. pressure fluid 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
No. of E-fittings on the output end				9	9	9	9
Size of the E-connections on the output end				M8	M8	M8	M8
Max. voltage	[V]			24	24	24	24
Max. current per wire	[A]			1	1	1	1
Max. current	[A]			1	1	1	1
Dimensions X x Y x Z	[mm]	121.5 x 183.9 x 186.9					

① All units are also available in an FKM version. Please contact us for details.

Universal swivel head

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)

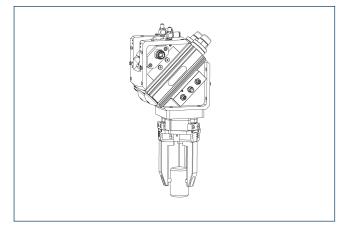
- ① The SDV-P pressure maintenance valve can be used to maintain the position in the case of a loss of pressure (see "Accessories" catalog section).
- A, a Main / direct connection, rotary actuator rotates clockwise
- B, b Main / direct connection, rotary actuator rotates counterclockwise
- (1) Connection swivel unit
- (2) Attachment connection
- (25) Fluid feed-through

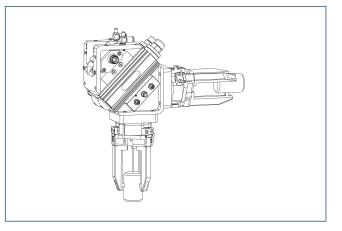
Two-sided loading

(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

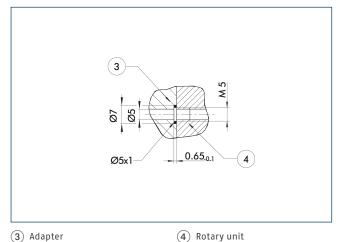
One-sided loading





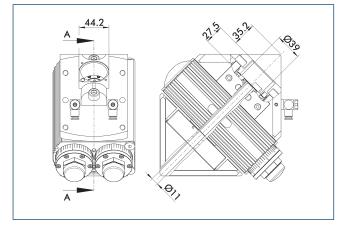
Universal swivel head

Hose-free direct connection M5



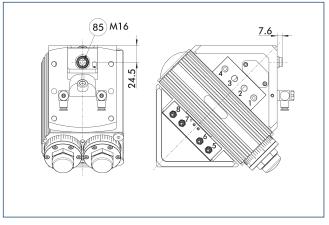
The direct connection is used for supplying compressed air without hoses. Instead, the pressure medium is fed through bore-holes in the mounting plate.

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.

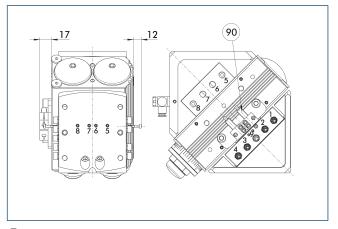
Axial cable connection (Version A)



(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.

Attachment kit for proximity switch



90 Sensor IN ...

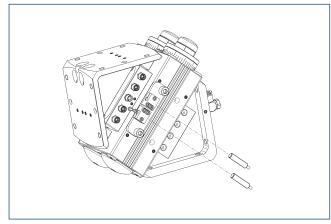
The attachment kit consists of brackets, control cams, and appropriate fastening materials. The proximity switches must be ordered separately.

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

① This attachment kit needs to be ordered optionally as an accessory.

Universal swivel head

Inductive proximity switches

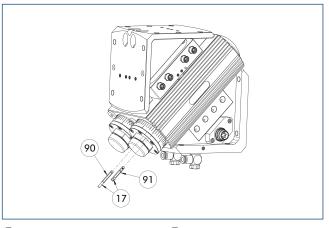


End position monitoring can be mounted with an attachment kit.

Description	ID	Often combined			
Attachment kit for proximity switch					
AS-SRH-plus 40	0359202				
Inductive proximity sw	itches				
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 cable outlet					
IN 80-S-M12-SA	0301587				
IN 80-S-M8-SA	0301483	•			
INK 80-S-SA	0301566				

 $\ensuremath{\textcircled{}}$ Two sensors (closer/S) are required for each swivel head. On option, extension cables are required.

Electronic magnetic switch MMS



(17) Cable outlet

(91) Sensor MMS 22...-SA

90 Sensor MMS 22..

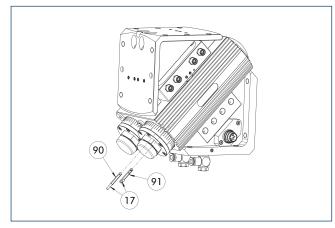
End position monitoring for mounting in the C-slot.

Description	ID	Often combined				
Electronic magnetic switch						
MMS 22-S-M8-PNP	0301032	•				
MMSK 22-S-PNP	0301034					
Electronic magnetic switches with	lateral cable o	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 plug/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					

 $\ensuremath{\textcircled{}}$ Two sensors (closer/S) are required for each swivel head. On option, extension cables are required.

Universal swivel head

Programmable magnetic switch MMS 22-PI1



(17) Cable outlet

(91) Sensor MMS 22 ..- PI1-...-SA

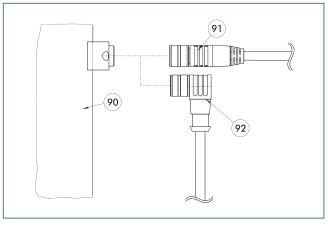
(90) Sensor MMS 22 PI1-...

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) 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.

Connection cables



90 Electrical connection component

(91) Cable with straight connector(92) Cable with angled connector

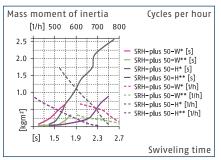
Description	ID	Length
		[m]
Connection cables		
KA BG16-L 12P-1000	0301801	10
KA BW16-L 12P-0500	0323005	5

③ BG stands for a connection cable with a straight female connector and BW for an angled female connector.SG stands for a connection cable with a straight male connector and SW for an angled male connector.



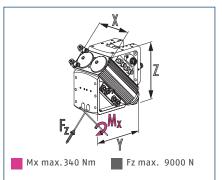


Max. admissible inertia J



The diagrams are valid for applications with a symmetrical design (*) to the swivel axis: one-sided centrically arranged to one mounting face (**), and with an operating pressure of 6 bar. The mass moment of inertia always refers to the swiveling axis. The cycle times can be adjusted via throttling and adjustment of the shock absorber's stroke. Otherwise the lifetime may reduce. On request, we are glad to assist you in designing other applications. Please contact us.

Dimensions and maximum loads



The indicated moments and forces are statical values and may appear simultaneously. Throttling has to be done for ensuring that the rotary movement takes place without impact or bouncing. Otherwise the service life reduces.

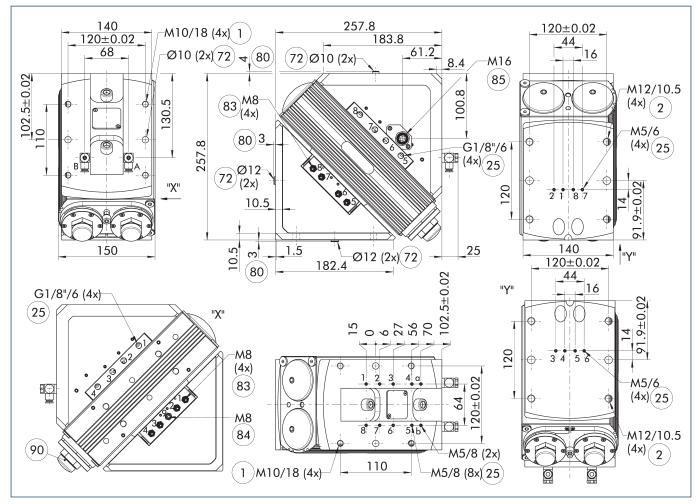
Technical data

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
IP protection class		67	67	67	67	67	67
Weight	[kg]	17.3	17.3	17.6	17.6	17.6	17.6
Fluid consumption (2x nom. 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
Min./nom./max. operating pressure	[bar]	3/6/8	3/6/8	3/6/8	3/6/8	3/6/8	3/6/8
Diameter of connecting hose		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 fluid 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
No. of E-fittings on the output end				9	9	9	9
Size of the E-connections on the output end				M8	M8	M8	M8
Max. voltage	[V]			24	24	24	24
Max. current per wire	[A]			1	1	1	1
Max. current	[A]			1	1	1	1
Dimensions X x Y x Z	[mm]	150 x 256.4 x 259.8	150 x 256.4 x 259				

① All units are also available in an FKM version. Please contact us for details.

Universal swivel head

Main view



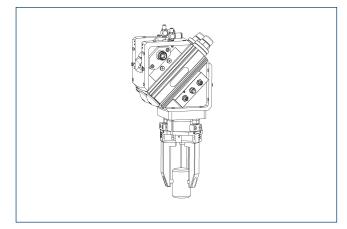
The main view shows the SRH-plus version with the EDF electric feed-through. The swivel head is drawn in the left end position (0°) and rotates 180° clockwise (when viewing the output side)

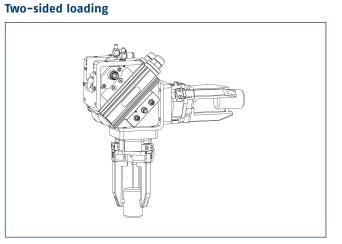
- ① The SDV-P pressure maintenance valve can be used to maintain the position in the case of a loss of pressure (see "Accessories" catalog section).
- A, a Main / direct connection, rotary actuator rotates clockwise
- B, b Main / direct connection, rotary actuator rotates counterclockwise
- (1) Connection 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

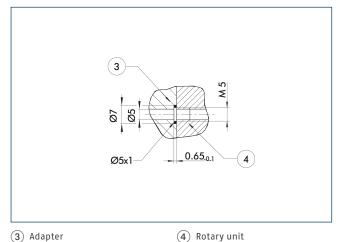
One-sided loading





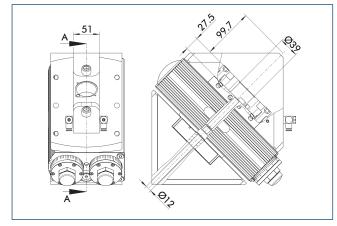
Universal swivel head

Hose-free direct connection M5



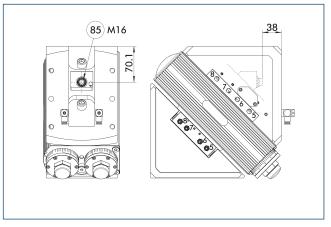
The direct connection is used for supplying compressed air without hoses. Instead, the pressure medium is fed through bore-holes in the mounting plate.

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.

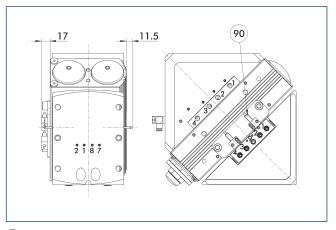
Axial cable connection (Version A)



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.

Attachment kit for proximity switch



90 Sensor IN ...

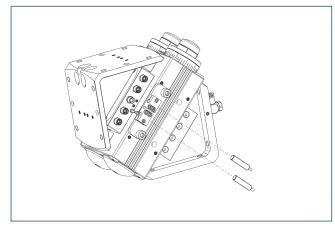
The attachment kit consists of brackets, control cams, and appropriate fastening materials. The proximity switches must be ordered separately.

Descri	ription	ID
Attachment kit for proximity switch		
AS-SRH	RH-plus 50/60	0359203

① This attachment kit needs to be ordered optionally as an accessory.

Universal swivel head

Inductive proximity switches

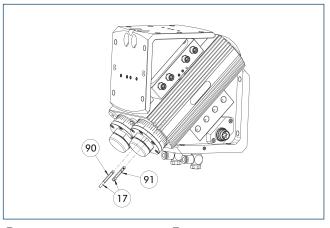


End position monitoring can be mounted with an attachment kit.

Description	ID	Often combined			
Attachment kit for proxi	Attachment kit for proximity switch				
AS-SRH-plus 50/60	0359203				
Inductive proximity swit	ches				
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 cable outlet					
IN 80-S-M12-SA	0301587				
IN 80-S-M8-SA	0301483	•			
INK 80-S-SA	0301566				

 $\ensuremath{\textcircled{}}$ Two sensors (closer/S) are required for each swivel head. On option, extension cables are required.

Electronic magnetic switch MMS



(17) Cable outlet

(91) Sensor MMS 22...-SA

90 Sensor MMS 22..

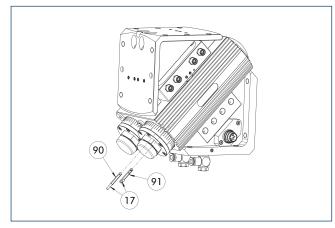
End position monitoring for mounting in the C-slot.

	-	
Description	ID	Often combined
Electronic magnetic switch		
MMS 22-S-M8-PNP	0301032	•
MMSK 22-S-PNP	0301034	
Electronic magnetic switches with	lateral cable o	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 plug/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	

 $\ensuremath{\textcircled{}}$ Two sensors (closer/S) are required for each swivel head. On option, extension cables are required.

Universal swivel head

Programmable magnetic switch MMS 22-PI1



(17) Cable outlet

(91) Sensor MMS 22 ..- PI1-...-SA

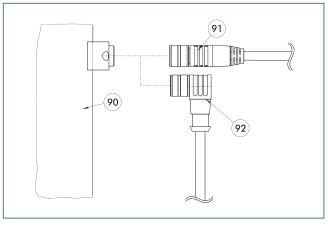
(90) Sensor MMS 22 PI1-...

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) 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	ı			
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.

Connection cables



90 Electrical connection component

(91) Cable with straight connector(92) Cable with angled connector

Description	ID	Length
		[m]
Connection cables		
KA BG16-L 12P-1000	0301801	10
KA BW16-L 12P-0500	0323005	5

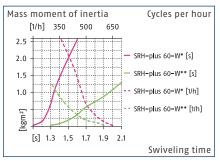
③ BG stands for a connection cable with a straight female connector and BW for an angled female connector.SG stands for a connection cable with a straight male connector and SW for an angled male connector.



Universal swivel head

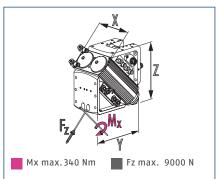


Max. admissible inertia J



The diagrams are valid for applications with a symmetrical design (*) to the swivel axis: one-sided centrically arranged to one mounting face (**), and with an operating pressure of 6 bar. The mass moment of inertia always refers to the swiveling axis. The cycle times can be adjusted via throttling and adjustment of the shock absorber's stroke. Otherwise the lifetime may reduce. On request, we are glad to assist you in designing other applications. Please contact us.

Dimensions and maximum loads



The indicated moments and forces are statical values and may appear simultaneously. Throttling has to be done for ensuring that the rotary movement takes place without impact or bouncing. Otherwise the service life reduces.

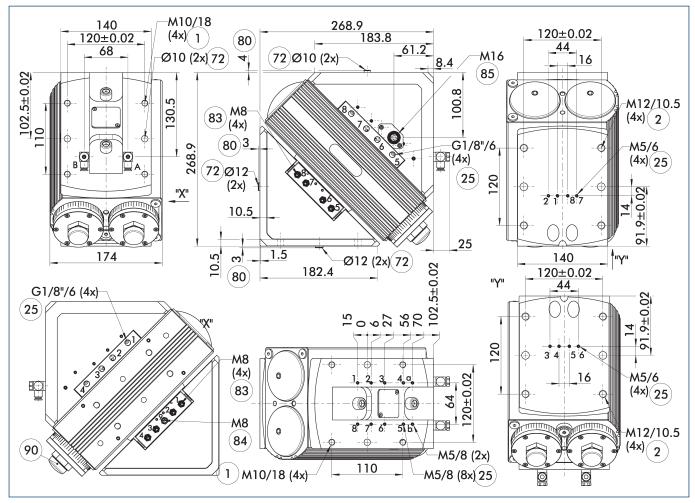
Technical data

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
IP protection class		67	67	67
Weight	[kg]	19.9	21.2	21.2
Fluid consumption (2x nom. angle)	[cm ³]	1120.0	1120.0	1120.0
Swivel time without a payload	[s]	1.3	1.3	1.3
Min./nom./max. operating pressure	[bar]	3/6/8	3/6/8	3/6/8
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 fluid 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
No. of E-fittings on the output end			9	9
Size of the E-connections on the output end			M8	M8
Max. voltage	[V]		24	24
Max. current per wire	[A]		1	1
Max. current	[A]		1	1
Dimensions X x Y x Z	[mm]	174 x 263.9 x 266.8	174 x 263.9 x 266.8	174 x 263.9 x 266.8

① All units are also available in an FKM version. Please contact us for details.

Universal swivel head

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)

- ① 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, rotary actuator rotates clockwise
- B, b Main / direct connection, rotary actuator rotates counterclockwise
- (1) Connection swivel unit
- (2) Attachment connection
- (25) Fluid feed-through

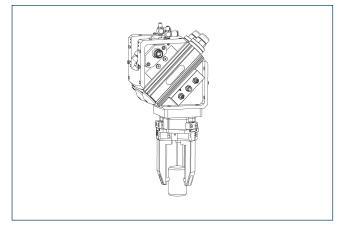
Two-sided loading

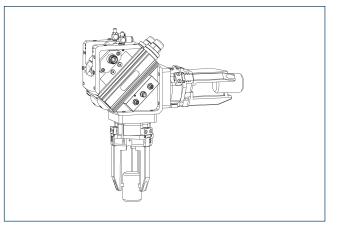
(72) Fit for centering sleeves

- (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

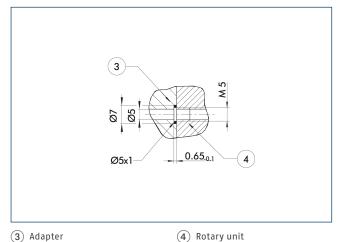
One-sided loading





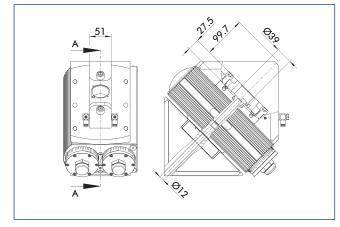
Universal swivel head

Hose-free direct connection M5



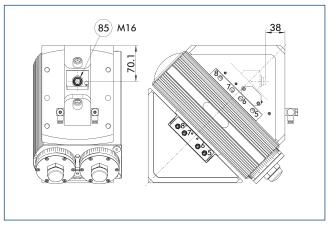
The direct connection is used for supplying compressed air without hoses. Instead, the pressure medium is fed through bore-holes in the mounting plate.

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.

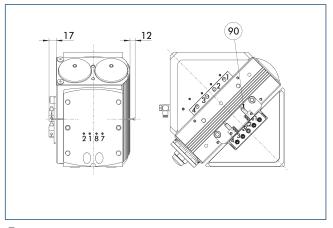
Axial cable connection (Version A)



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.

Attachment kit for proximity switch



90 Sensor IN ...

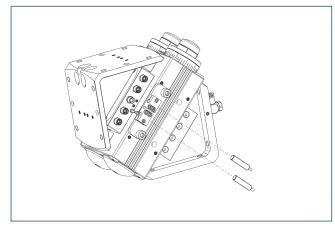
The attachment kit consists of brackets, control cams, and appropriate fastening materials. The proximity switches must be ordered separately.

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

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

Universal swivel head

Inductive proximity switches

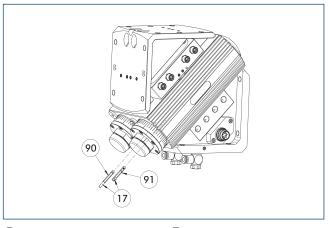


End position monitoring can be mounted with an attachment kit.

Description	ID	Often combined			
Attachment kit for proxi	Attachment kit for proximity switch				
AS-SRH-plus 50/60	0359203				
Inductive proximity swit	ches				
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 cable 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 switch MMS



(17) Cable outlet

(91) Sensor MMS 22...-SA

90 Sensor MMS 22..

End position monitoring for mounting in the C-slot.

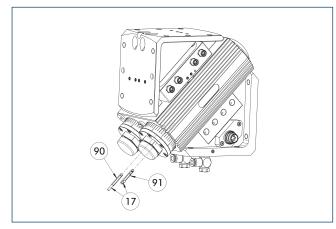
Description	ID	Often combined		
Electronic magnetic switch				
MMS 22-S-M8-PNP	0301032	•		
MMSK 22-S-PNP	0301034			
Electronic magnetic switches with	lateral cable o	outlet		
MMS 22-S-M8-PNP-SA	0301042	•		
MMSK 22-S-PNP-SA	0301044			
Connection cables				
KA BG08-L 3P-0300-PNP	0301622	•		
KA BG08-L 3P-0500-PNP	0301623			
KA BW08-L 3P-0300-PNP	0301594			
KA BW08-L 3P-0500-PNP	0301502			
clip for plug/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 (closer/S) are required for each swivel head. On option, extension cables are required.



Universal swivel head

Programmable magnetic switch MMS 22-PI1



(17) Cable outlet

(91) Sensor MMS 22 ..- PI1-...-SA

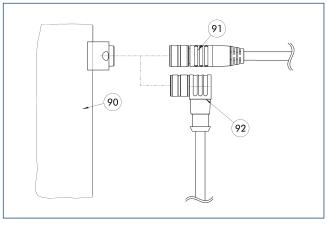
(90) Sensor MMS 22 PI1-...

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) 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.

Connection cables



(90) Electrical connection component

(91) Cable with straight connector(92) Cable with angled connector

Description	ID	Length
		[m]
Connection cables		
KA BG16-L 12P-1000	0301801	10
KA BW16-L 12P-0500	0323005	5

③ BG stands for a connection cable with a straight female connector and BW for an angled female connector.SG stands for a connection cable with a straight male connector and SW for an angled male connector.





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