

Position sensors SMH-S1, for grippers

Product overview



- Position sensors, adapted to Festo grippers
- Freely selectable switching points
- 3 gripper positions can be detected using an evaluation unit

Detailed product information

→ www.festo.com/catalogue/smh


Product overview							
Design	Type of mounting	Measuring principle	Operating voltage range	Analogue output	Switch output	Switching element function	→ Page
Position sensor SMH-S1							
For gripper	Screwed to gripper	Magnetic Hall	24 V DC	–	–	–	50
Evaluation unit SMH-AE1							
For position sensor SMH-S1	With mounting hole	–	24 V DC	–	3x PNP 3x NPN	N/O contact	51
Signal converter SVE4							
		–	10 ... 30 V DC	–	2x PNP 2x NPN	Switchable	187

Key features

The position sensor SMH-S1 has been specially developed for use with Festo grippers. An analogue electrical signal is generated in the proximity sensor

depending on the gripper position. The conversion to 3 digital output signals (corresponding to 3 gripper jaw

positions) takes place via the signal converters SVE4 or the evaluation units SMH-AE.

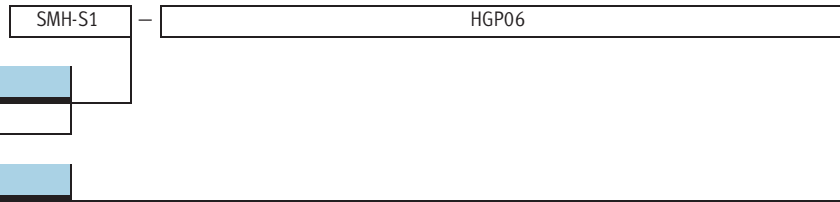
-  - Note

Sensors that detect magnetic fields, such as position sensors SMH, must not be secured onto the drive using

mountings made from ferritic materials, as this can lead to malfunction.

Position sensors SMH, for grippers

Type codes, technical data – Position sensors



Type	
SMH-S1	Position sensor for gripper

Associated grippers	
HGD16	Three-point gripper HGD-16
HGP06	Parallel gripper HGP-06
HGR10	Radial gripper HGR-10
HGW10	Angle gripper HGW-10
HGPP-10/12	Parallel gripper HGPP-10 and HGPP-12
HGPP-16	Parallel gripper HGPP-16
HGPP20/25	Parallel gripper HGPP-20 and HGPP-25
HGPP-32	Parallel gripper HGPP-32

Technical data	
Design	
Constructional design	Adapted for grippers
Type of mounting	Screwed to gripper
Electrical data	
Electrical connection	Cable with plug M8x1, 4-pin
Cable length [m]	0.5
Protection against short circuit	No
Protection against polarity reversal	No
Protection class	IP65
Operating and environmental conditions	
Ambient temperature [°C]	5 ... 60
CE mark (see declaration of conformity)	In accordance with EU EMC directive
Materials	
Housing	Polyamide
Cable sheath	Polyurethane

Ordering data			
	Associated grippers	Part No.	Type
	HGD-16-A	175 713	SMH-S1-HGD16
	HGP-06-A	175 710	SMH-S1-HGP06
	HGR-10-A	175 712	SMH-S1-HGR10
	HGW-10-A	175 711	SMH-S1-HGW10
	HGPP-10, HGPP-12	189 040	SMH-S1-HGPP10/12
	HGPP-16	189 041	SMH-S1-HGPP16
	HGPP-20, HGPP-25	189 042	SMH-S1-HGPP20/25
	HGPP-32	526 895	SMH-S1-HGPP32

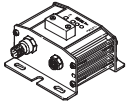
- - Note
 For position sensors
 SMH-S1-HG...: adapted signal converters SVE4-HS → 187.


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Type codes, technical data – Evaluation unit

		SMH-AE1	—	PS3	—	M12
Type						
SMH-AE1	Evaluation unit					
Switch output						
PS3	N/O contact, PNP, 3 switch outputs					
NS3	N/O contact, NPN, 3 switch outputs					
Electrical connection						
M12	Plug M12x1, 5-pin					

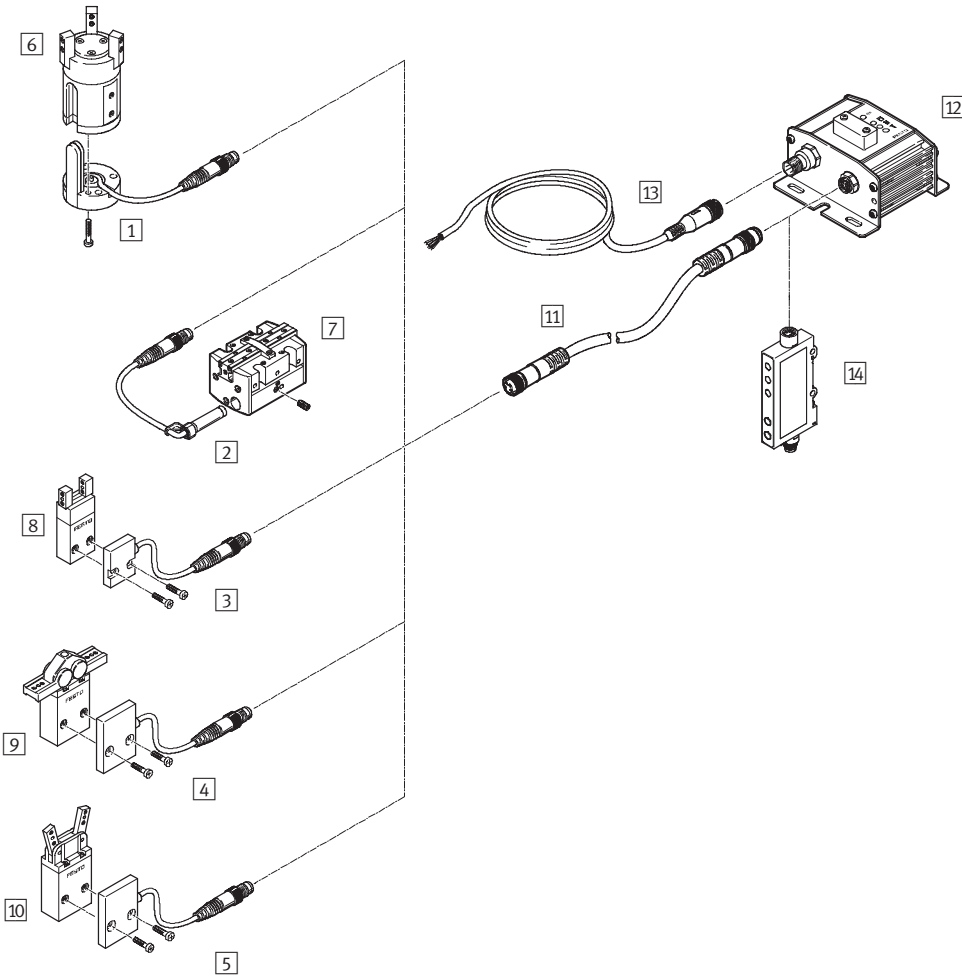
Technical data		
Design		
Type of mounting	Via through-hole	
Switching status display	Yellow LED	
Ready status display	Green LED	
Electrical data		
Switch output	PNP	
	NPN	
Electrical connection	Input	4-pin
	Output	Plug M12x1, 5-pin
Operating voltage range	[V DC]	24
Protection class	IP53	
Operating and environmental conditions		
Ambient temperature	[°C]	5 ... 60
CE mark (see declaration of conformity)	In accordance with EU EMC directive	
Materials		
Housing	Wrought aluminium alloy	

Ordering data			
	Switch output	Part No.	Type
	PNP	175 708	SMH-AE1-PS3-M12
	NPN	175 709	SMH-AE1-NS3-M12

-  - Note
For position sensors SMH-S1-HG...: adapted signal converters SVE4-HS → 187.

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Peripherals overview



Sensors for drive units

1.1

Accessories	→ Page
Position sensors	
1 SMH-S1-HGD16	50
2 SMH-S1-HGPP	
3 SMH-S1-HGP06	
4 SMH-S1-HGR10	
5 SMH-S1-HGW10	

Accessories	→ Page
Associated grippers	
6 Three-point gripper HGD-16-A	www.festo.com
7 Parallel gripper HGPP	
8 Parallel gripper HGP-06-A	
9 Radial gripper HGR-10-A	
10 Angle gripper HGW-10-A	
Accessories	
11 Connecting cable KSMH-1-M8-2-M8	52
12 Evaluation unit SMH-AE1	50
13 Connecting cable NEBU-M12G5	52
14 Signal converter SVE4	187

Ordering data – Connecting cables		Technical data → 261	
	Number of wires	Cable length [m]	Part No. Type
Straight plug socket			
	4	2.0	175 714 KSMH-1-M8-2-M8

Ordering data – Connecting cables		Technical data → 264	
	Number of wires	Cable length [m]	Part No. Type
Straight plug socket			
	5	2.5	541 330 NEBU-M12G5-K-2.5-LE5
		5	541 331 NEBU-M12G5-K-5-LE5