

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/Internet
Position sensor SMH-S1							
For gripper	Screwed to gripper	Magnetic Hall	24 V DC	–	–	–	2
Evaluation unit SMH-AE1							
For position sensor SMH-S1	With mounting hole	–	24 V DC	–	3x PNP 3x NPN	N/O contact	3
Signal converter SVE4							
For position sensor SMH-S1	With mounting hole	–	10 ... 30 V DC	–	2x PNP 2x NPN	Switchable	sve4

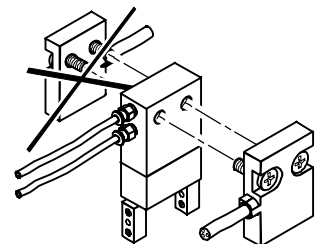
Key features

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

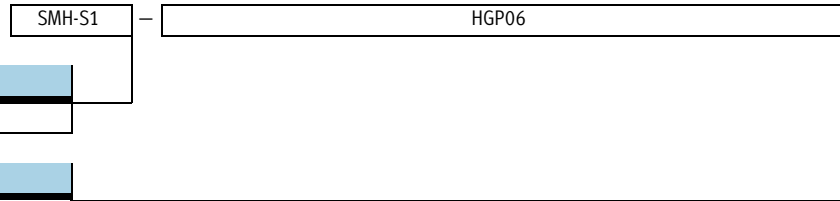
Sensors that detect magnetic fields, such as position sensors SMH, must not be secured onto the drive using mountings made from ferritic materials, as this can lead to malfunction.

In order to ensure the correct functioning of the position sensor the outlet cables and the compressed air tubing must be mounted in the same direction.



Position sensors SMH, for grippers

Type codes, technical data – Position sensors



Type	
SMH-S1	Position sensor for gripper

Associated grippers	
HGD16	Three-point gripper DHDS-16-A
HGP06	Parallel gripper DHPS-06-A
HGR10	Radial gripper DHRS-10-A
HGW10	Angle gripper DHWS-10-A
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	
Measuring principle	Magnetic Hall	
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	TPE-U (PUR)	
Note on materials	Free of copper and PTFE	

Ordering data			
	Associated grippers	Part No.	Type
	DHDS-16-A	175 713	SMH-S1-HGD16
	DHPS-06-A	175 710	SMH-S1-HGP06
	DHRS-10-A	175 712	SMH-S1-HGR10
	DHWS-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

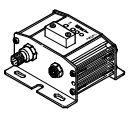
- - Note
 For position sensors SMH-S1-HG...:
 Adapted signal converters SVE4-HS
 → Internet: sve4-hs


Position sensors SMH, for grippers

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		

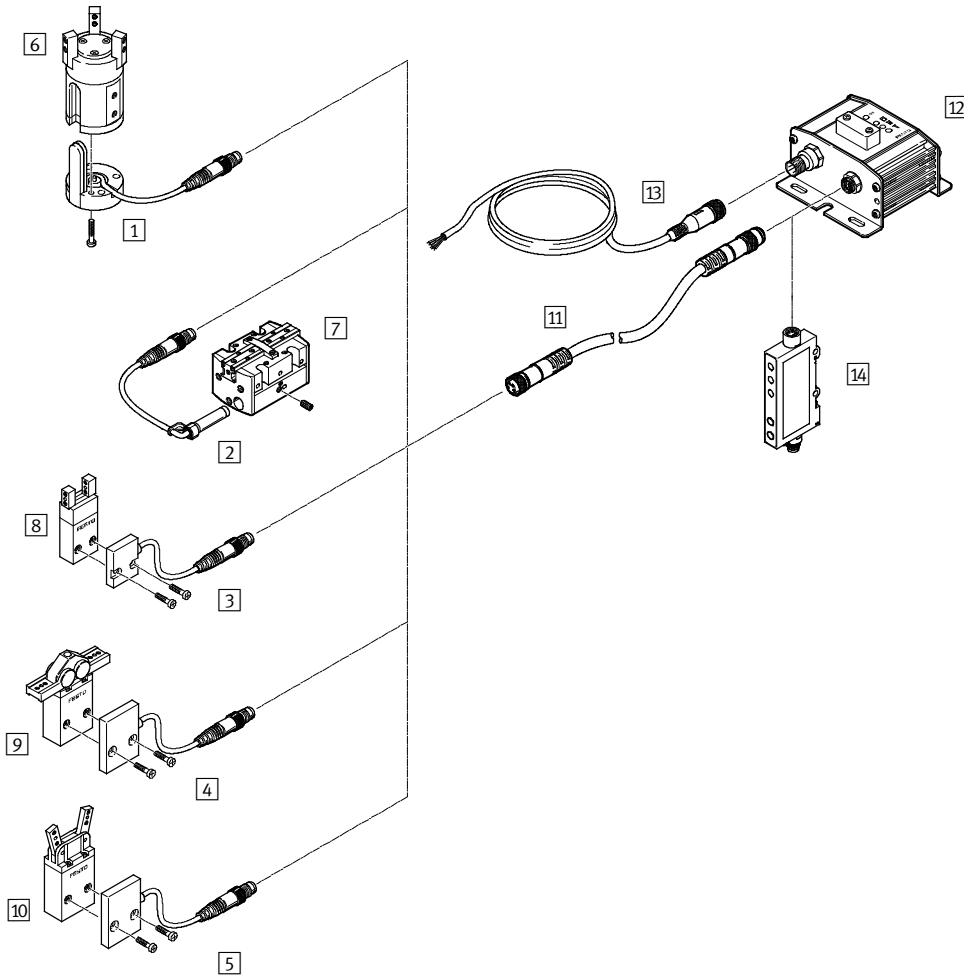
Technical data	
Design	
Type of mounting	Via through-hole
Switching status display	Yellow LED
Ready status display	Green LED
Electrical data	
Switch output	PNP
	NPN
Electrical connection	4-pin
	Plug M12x1, 5-pin
Operating voltage range [V DC]	24
Protection class	IP53
Operating and environmental conditions	
Ambient temperature [°C]	5 ... 60
CE mark (see declaration of conformity)	In accordance with EU EMC directive
Certification	C-Tick
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
 → Internet: sve4-hs

Position sensors SMH, for grippers

Peripherals overview



Accessories		→ Page/ Internet
Position sensors		
1	SMH-S1-HGD16	2
2	SMH-S1-HGPP	
3	SMH-S1-HGP06	
4	SMH-S1-HGR10	
5	SMH-S1-HGW10	
Associated grippers		
6	Three-point gripper DHDS-16-A	gripper
7	Parallel gripper HGPP	
8	Parallel gripper DHPS-06-A	
9	Radial gripper DHRS-10-A	
10	Angle gripper DHWS-10-A	
Accessories		
11	Connecting cable NEBU-M8G4-K-2.5-M8G4	4
12	Evaluation unit SMH-AE1	3
13	Connecting cable NEBU-M12G5-K-...-LE5	4
14	Signal converter SVE4	sve4

Ordering data – Connecting cables			
		Technical data → Internet: nebu	
	Number of wires	Cable length [m]	Part No. Type
Straight plug socket			
	4	2.5	554 035 NEBU-M8G4-K-2.5-M8G4
	5	2.5	541 330 NEBU-M12G5-K-2.5-LE5
			541 331 NEBU-M12G5-K-5-LE5