

# 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](http://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

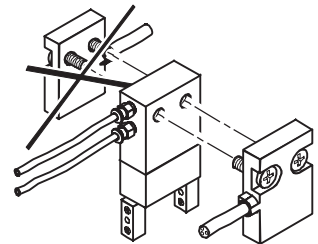
## Key features

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

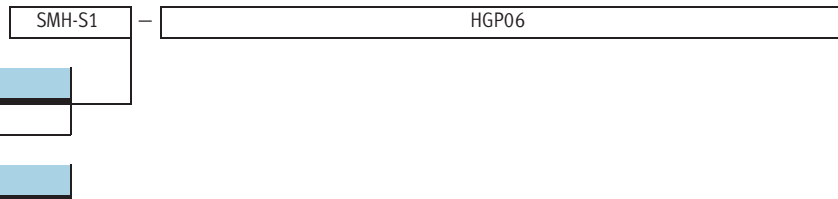
Sensors that detect magnetic fields, such as position sensors SMH, must not be secured onto the drive using mountings made from ferritic materials, as this can lead to malfunction.

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 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

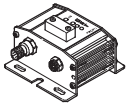
- - Note  
 For position sensors SMH-S1-HG...:  
 Adapted signal converters SVE4-HS  
 → Internet: sve4-hs


# Position sensors SMH, for grippers

Type codes, technical data – Evaluation unit

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

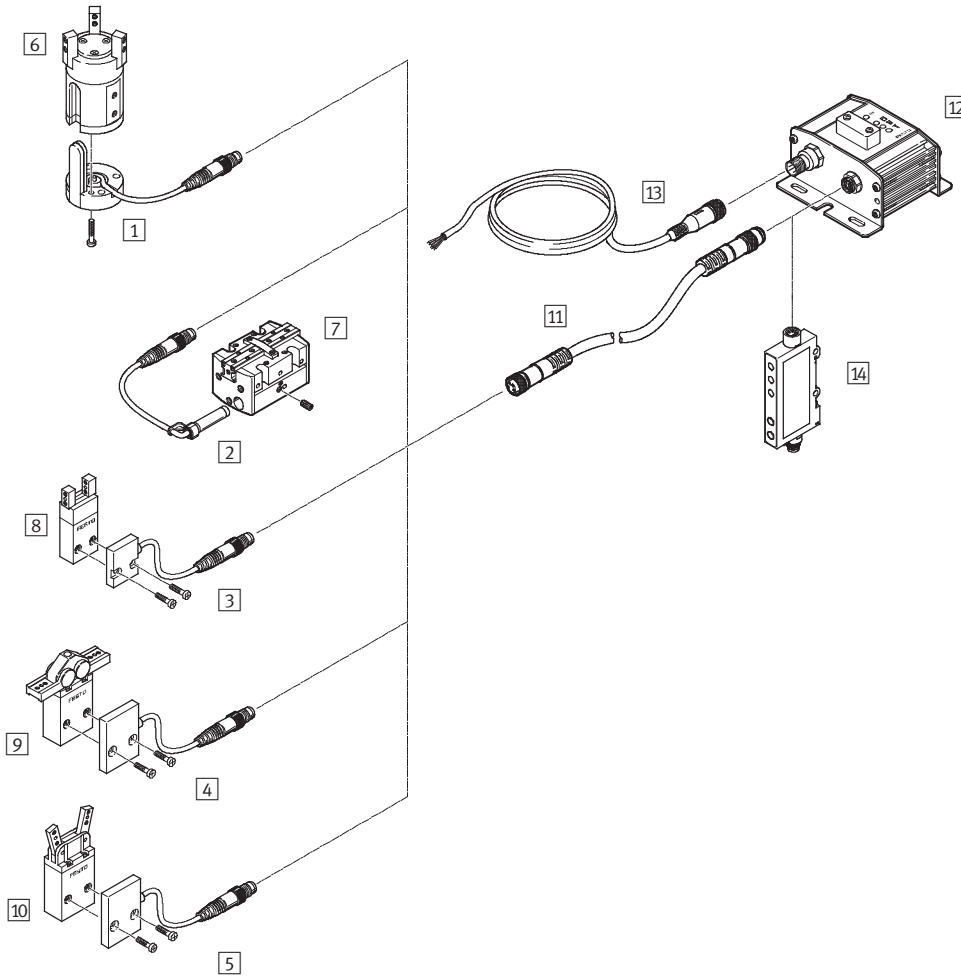
Technical data	
<b>Design</b>	
Type of mounting	Via through-hole
Switching status display	Yellow LED
Ready status display	Green LED
<b>Electrical data</b>	
Switch output	PNP
	NPN
Electrical connection	4-pin
	Plug M12x1, 5-pin
Operating voltage range [V DC]	24
Protection class	IP53
<b>Operating and environmental conditions</b>	
Ambient temperature [°C]	5 ... 60
CE mark (see declaration of conformity)	In accordance with EU EMC directive
Certification	C-Tick
<b>Materials</b>	
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
<b>Position sensors</b>		
1	SMH-S1-HGD16	2
2	SMH-S1-HGPP	
3	SMH-S1-HGP06	
4	SMH-S1-HGR10	
5	SMH-S1-HGW10	
<b>Associated grippers</b>		
6	Three-point gripper HGD-16-A	gripper
7	Parallel gripper HGPP	
8	Parallel gripper HGP-06-A	
9	Radial gripper HGR-10-A	
10	Angle gripper HGW-10-A	
<b>Accessories</b>		
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	
<b>Straight plug socket</b>					
	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	