

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/catalog/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

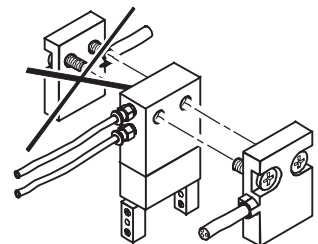
Key features

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

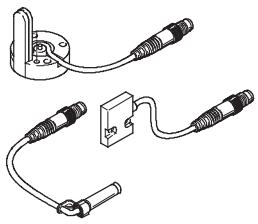
Type codes, technical data – Position sensors

SMH-S1	HGP06
--------	-------

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

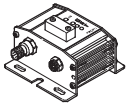
For position sensors SMH-S1-HG...:
 Adapted signal converters SVE4-HS
 → Internet: sve4-hs

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

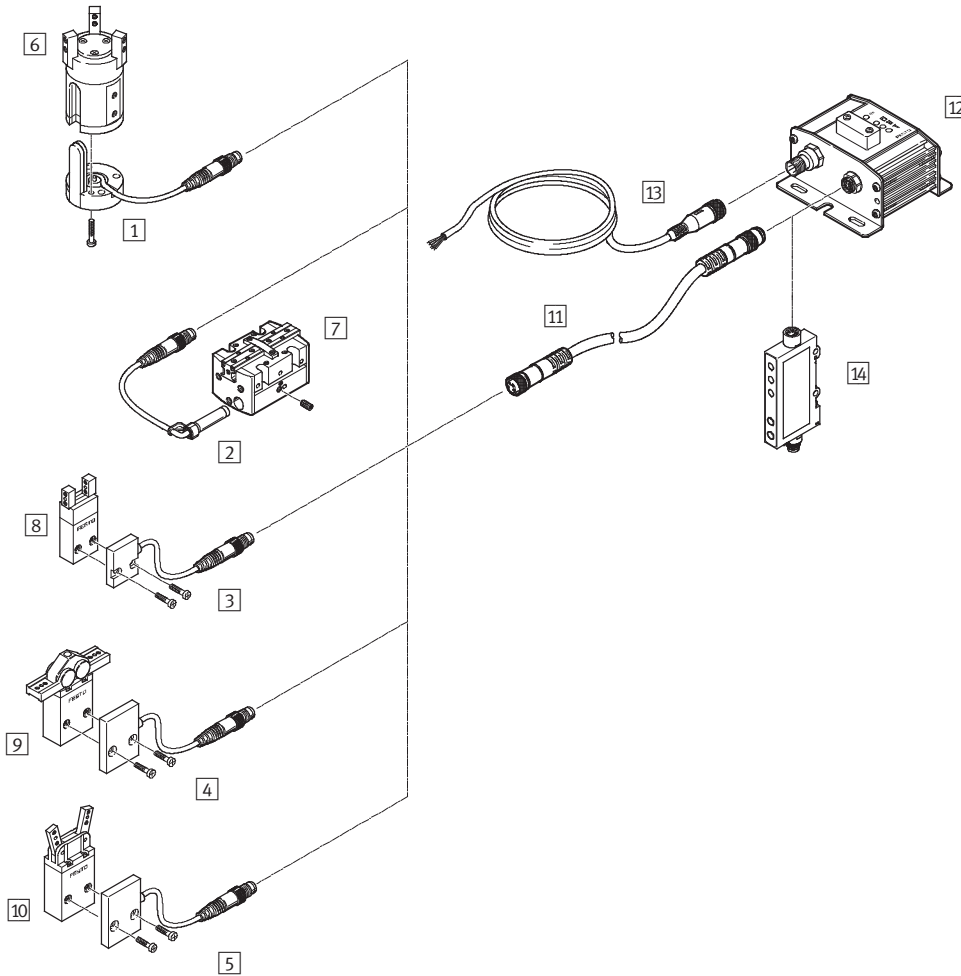
Ordering data			
	Switch output	Part No.	Type
	PNP	175 708	SMH-AE1-PS3-M12
	NPN	175 709	SMH-AE1-NS3-M12

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	

Product Range and Company Overview

A Complete Suite of Automation Services

Our experienced engineers provide complete support at every stage of your development process, including: conceptualization, analysis, engineering, design, assembly, documentation, validation, and production.



Custom Automation Components
Complete custom engineered solutions



Custom Control Cabinets
Comprehensive engineering support and on-site services



Complete Systems
Shipment, stocking and storage services

The Broadest Range of Automation Components

With a comprehensive line of more than 30,000 automation components, Festo is capable of solving the most complex automation requirements.



Electromechanical
Electromechanical actuators, motors, controllers & drives



Pneumatics
Pneumatic linear and rotary actuators, valves, and air supply



PLCs and I/O Devices
PLC's, operator interfaces, sensors and I/O devices

Supporting Advanced Automation... As No One Else Can!

Festo is a leading global manufacturer of pneumatic and electromechanical systems, components and controls for industrial automation, with more than 12,000 employees in 56 national headquarters serving more than 180 countries. For more than 80 years, Festo has continuously elevated the state of manufacturing with innovations and optimized motion control solutions that deliver higher performing, more profitable automated manufacturing and processing equipment. Our dedication to the advancement of automation extends beyond technology to the education and development of current and future automation and robotics designers with simulation tools, teaching programs, and on-site services.

Quality Assurance, ISO 9001 and ISO 14001 Certifications

Festo Corporation is committed to supply all Festo products and services that will meet or exceed our customers' requirements in product quality, delivery, customer service and satisfaction.

To meet this commitment, we strive to ensure a consistent, integrated, and systematic approach to management that will meet or exceed the requirements of the ISO 9001 standard for Quality Management and the ISO 14001 standard for Environmental Management.



© Copyright 2008, Festo Corporation. While every effort is made to ensure that all dimensions and specifications are correct, Festo cannot guarantee that publications are completely free of any error, in particular typing or printing errors. Accordingly, Festo cannot be held responsible for the same. For Liability and Warranty conditions, refer to our "Terms and Conditions of Sale", available from your local Festo office. All rights reserved. No part of this publication may be reproduced, distributed, or transmitted in any form or by any means, electronic, mechanical, photocopying or otherwise, without the prior written permission of Festo. All technical data subject to change according to technical update.



Printed on recycled paper at New Horizon Graphic, Inc., FSC certified as an environmentally friendly printing plant.

Festo North America

Festo Regional Contact Center

5300 Explorer Drive
Mississauga, Ontario L4W 5G4
Canada

USA Customers:

For ordering assistance,

Call: 1.800.99.FESTO (1.800.993.3786)

Fax: 1.800.96.FESTO (1.800.963.3786)

Email: customer.service@us.festo.com

For technical support,

Call: 1.866.GO.FESTO (1.866.463.3786)

Fax: 1.800.96.FESTO (1.800.963.3786)

Email: product.support@us.festo.com

Canadian Customers:

Call: 1.877.GO.FESTO (1.877.463.3786)

Fax: 1.877.FX.FESTO (1.877.393.3786)

Email: festo.canada@ca.festo.com

USA Headquarters

Festo Corporation
395 Moreland Road
P.O. Box 18023
Hauppauge, NY 11788, USA
www.festo.com/us

USA Sales Offices

Appleton

North 922 Tower View Drive, Suite N
Greenville, WI 54942, USA

Boston

120 Presidential Way, Suite 330
Woburn, MA 01801, USA

Chicago

1441 East Business Center Drive
Mt. Prospect, IL 60056, USA

Dallas

1825 Lakeway Drive, Suite 600
Lewisville, TX 75057, USA

Detroit – Automotive Engineering Center

2601 Cambridge Court, Suite 320
Auburn Hills, MI 48326, USA

New York

395 Moreland Road
Hauppauge, NY 11788, USA

Silicon Valley

4935 Southfront Road, Suite F
Livermore, CA 94550, USA

United States



USA Headquarters, East: Festo Corp., 395 Moreland Road, Hauppauge, NY 11788

Phone: 1.631.435.0800; Fax: 1.631.435.8026;

Email: info@festo-usa.com

www.festo.com/us

Canada



Headquarters: Festo Inc., 5300 Explorer Drive, Mississauga, Ontario L4W 5G4

Phone: 1.905.624.9000; Fax: 1.905.624.9001;

Email: festo.canada@ca.festo.com

www.festo.ca

Mexico



Headquarters: Festo Pneumatic, S.A., Av. Ceylán 3, Col. Tequesquahuac,
54020 Tlalneantla, Edo. de México

Phone: 011 52 [55] 53 21 66 00; Fax: 011 52 [55] 53 21 66 65;

Email: festo.mexico@mx.festo.com

www.festo.com/mx

Central USA

Festo Corporation
1441 East Business
Center Drive
Mt. Prospect, IL 60056, USA
Phone: 1.847.759.2600
Fax: 1.847.768.9480



Western USA

Festo Corporation
4935 Southfront Road,
Suite F
Livermore, CA 94550, USA
Phone: 1.925.371.1099
Fax: 1.925.245.1286



Festo Worldwide

Argentina Australia Austria Belarus Belgium Brazil Bulgaria Canada Chile China Colombia Croatia Czech Republic Denmark
Estonia Finland France Germany Great Britain Greece Hong Kong Hungary India Indonesia Iran Ireland Israel Italy Japan Latvia
Lithuania Malaysia Mexico Netherlands New Zealand Norway Peru Philippines Poland Romania Russia Serbia Singapore
Slovakia Slovenia South Africa South Korea Spain Sweden Switzerland Taiwan Thailand Turkey Ukraine United States Venezuela

www.festo.com