



**SENSORS (MAGNETIC  
PROXIMITY SWITCHES)**

## SENSORS (MAGNETIC PROXIMITY SWITCHES)

### • GENERAL FEATURES:

The magnetic sensor is a device that change its status with the magnetic field.  
Basically it's used as proximity end-stroke on the pneumatic cylinders which have the piston holding a magnet.  
Therefore, fastening the sensor, on its seat on the external part of the cylinder housing, it is possible to get the information relative to the position of the piston, by an electrical contact or a voltage output, depending on the kind sensor which can be REED switch or static (GMR magneto resistive chip) respectively.  
The sensor cabled or quick connect are available.  
Our custom service is accessible round-the-clock to meet specific requirements for which standard products are not satisfactory.

### • PROTECTION CIRCUIT FOR SWITCHES:

The switching of inductive loads made by REED produces an high voltage peak during the drop-out. In order to prevent dielectric discharges or voltaic arcs, you have to introduce a protection circuit.

It can be:

- a RC circuit in parallel to the switch in case of V dc supply - ( Picture n.1 ) -
- a diode in parallel to the load in case of V dc supply - ( Picture n.2 ) -
- n.2 Zener diodes in parallel to the load with V ac / dc supply - ( Picture n.3 ) -
- a varistor (VDR) in parallel to the load with V ac / dc supply - ( Picture n.4 ) -

The switching of capacitive loads or the use of cables longer than 10 meters produces current peaks during the connection. For this reason you have to introduce a protection resistance near the switch on the brown wire. Please, pay attention in granting the minimum necessary current to the switch. ( 10 ÷ 20 mA )

### • SENSOR CHOICING:

Sensor choicing The sensor is a switch indeed, connect in series with a load, it must be used respecting its own electrical limit.

The functioning principles are two.

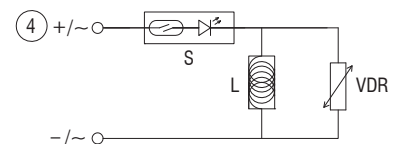
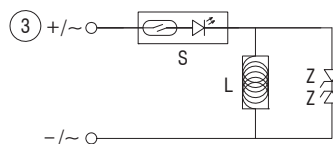
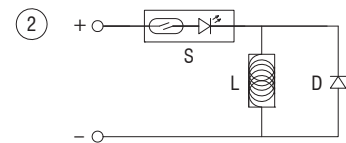
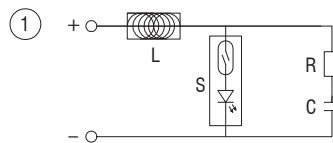
REED SWITCH: an electrical contact is switched by a magnetic field.

It can be supplied with both Vac and Vdc voltage.

In presence of vibration it can give troubles. If several sensors must be connected in series, it is recommended to utilize the version "D" to avoid the voltage drop due to the led indicators.

ELECTRONIC: a chip magneto resistor (GMR) is a solid-state device, therefore static (long life) with a voltage output NPN (sink) or PNP (source).

It must be supplied only with a 30Vdc max voltage. No problem in case of vibrations.



HSL 1 C 2 25 - G15

#### SERIES

HCB ; HSA ; HSL ; HSM ; HSS

#### CONNECTION

- 1 : 2 WIRES CABLE.
- 2 : 2 WIRES M8 SNAP CONNECTOR.
- 3 : 3 WIRES M8 SNAP CONNECTOR.
- 4 : 3 WIRES CABLE.
- 5 : 2 WIRES M12 SNAP CONNECTOR.
- 6 : 3 WIRES M12 SNAP CONNECTOR.
- 7 : 3 WIRES CABLE.
- 8 : 3 WIRES M8 AU SNAP CONNECTOR.
- 9 : 3 WIRES M12 AU SNAP CONNECTOR.

#### CIRCUIT TYPE

- A : NO LED 2 WIRES - REED.
- B : NO LED + VDR 2 WIRES - REED.
- C : 2 WIRES - REED.
- D : 3 WIRES - REED PNP.
- F : NO LED 2 WIRES - NC REED.
- G : NO LED + VDR 2 WIRES - NC REED.
- H : 2 WIRES - NC REED.
- M : MAGNETO-RESOSTIVE NPN.
- N : MAGNETO-RESOSTIVE PNP.
- P : NC MAGNETO-RESOSTIVE PNP.
- L : NC MAGNETO-RESOSTIVE NPN.

#### VOLTAGE

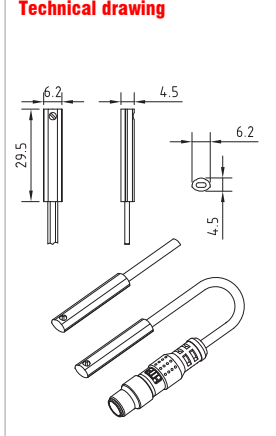
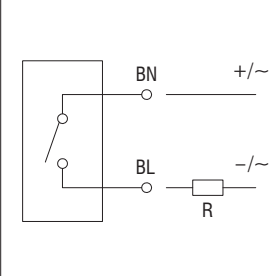
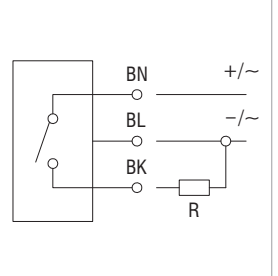
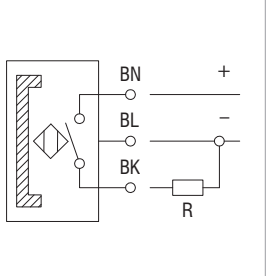
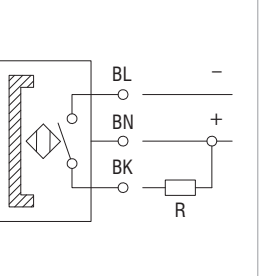
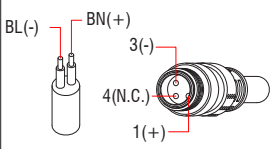
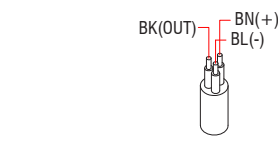
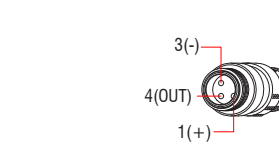

- 2 : 24 V AC/DC.
- 3 : 110 V AC.
- 5 : 250 V AC.

#### CABLE LENGHT

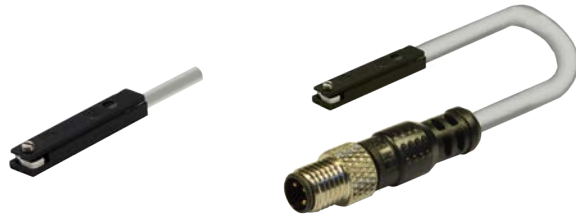
- NO DIGIT : WITHOUT CABLE.
- 03 : EXTENSION WITH SENSOR + M8 L=0.3m.
- 25 : SENSOR + M8/M12 CONNECTOR WITH CABLE L=2.5m.

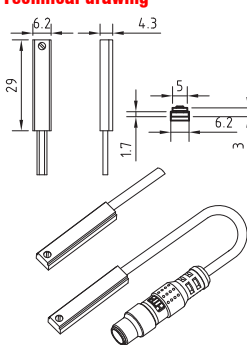
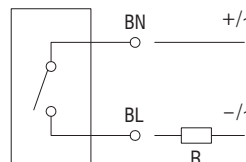
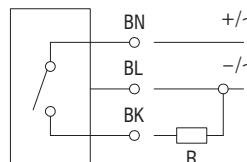
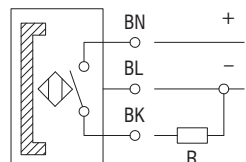
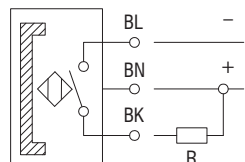
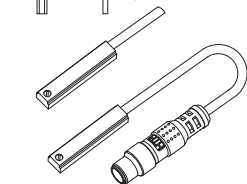
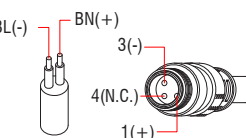
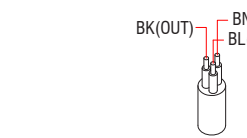
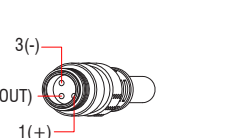
## SENSORS (MAGNETIC PROXIMITY SWITCHES)



Technical drawing				
				
				
Product description				
Sensor type	2 wires REED NORMALLY OPEN	3 wires REED NORMALLY OPEN	Magneto-resistive PNP NORMALLY OPEN	Magneto-resistive NPN NORMALLY OPEN
Sensor Part Number:				
2.5m moulded cable	<b>HSA1C225-G15</b>	<b>HSA4D225-G15</b>	<b>HSA4N225-G15</b>	<b>HSA4M225-G15</b>
Extension Sensor+M8 conn. 0.3m	<b>HSA2C203-G15</b>	<b>HSA3D203-G15</b>	<b>HSA3N203-G15</b>	<b>HSA3M203-G15</b>
Technical data				
Power Supply Rated voltage	3 ÷ 30 V AC/DC	3 ÷ 30 V AC/DC	6 ÷ 30 V AC/DC	6 ÷ 30 V AC/DC
Switching current	0.2 A	0.2 A	0.2 A	0.2 A
Power Rating	6 W	6 W	6 W	6 W
On voltage drop	< 3 V	//	< 1 V	< 1 V
Nominal operate point	20 ÷ 25 AT	20 ÷ 25 AT	40Gauss (34 ÷ 46 Gauss)	40Gauss (34 ÷ 46 Gauss)
ON-OFF differential	5 ÷ 10 AT	5 ÷ 10 AT	5 ÷ 15 Gauss	5 ÷ 15 Gauss
"ON" response time	0.5 ms	0.5 ms	0.8 µs	0.8 µs
"OFF" response time	0.1 ms	0.1 ms	0.3 µs	0.3 µs
Operating temperature	- 10°C ÷ 70°C	- 10°C ÷ 70°C	- 10°C ÷ 70°C	- 10°C ÷ 70°C
Operating frequency	500 Hz	500 Hz	200 KHz	200 KHz
Life Time	10 <sup>7</sup> imp	10 <sup>7</sup> imp	10 <sup>9</sup> imp	10 <sup>9</sup> imp
Speed piston	10 m/s	10 m/s	10 m/s	10 m/s
Polarity - reversal protection	Yes	Yes	Yes	Yes
Protection class	IP 67	IP 67	IP 67	IP 67
Sensor material	PA ; AISI 303 ; OT 63	PA ; AISI 303 ; OT 63	PA ; AISI 303 ; OT 63	PA ; AISI 303 ; OT 63
M8 connector material	PUR gold plated brass	PUR gold plated brass	PUR gold plated brass	PUR gold plated brass
Cable type	PVC/PVC CEI2022 II O.R.	PVC/PVC CEI2022 II O.R.	PVC/PVC CEI2022 II O.R.	PVC/PVC CEI2022 II O.R.
Cable jacket colour	Grey	Grey	Grey	Grey
No. Conductors / Section	2x0.14mm <sup>2</sup>	3x0.14mm <sup>2</sup>	3x0.14mm <sup>2</sup>	3x0.14mm <sup>2</sup>
Conductor colours	Brown(+); Blue(-);	Brown(+); Blue(-); Black(OUT)	Brown(+); Blue(-); Black(OUT)	Brown(+); Blue(-); Black(OUT)
Cable lenght	2.5m or 0.3m+M8 conn.	2.5m or 0.3m+M8 conn.	2.5m or 0.3m+M8 conn.	2.5m or 0.3m+M8 conn.
Packaging				
Qty/Box	1pc / Bag	1pc / Bag	1pc / Bag	1pc / Bag
Other accessories options				
-				
Notes:				

## SENSORS (MAGNETIC PROXIMITY SWITCHES)



<b>Technical drawing</b> 				
				

<b>Product description</b>				
Sensor type	2 wires REED NORMALLY OPEN	3 wires REED NORMALLY OPEN	Magneto-resistive PNP NORMALLY OPEN	Magneto-resistive NPN NORMALLY OPEN
<b>Sensor Part Number:</b>				
2.5m moulded cable	<b>HSL1C225-G15</b>	<b>HSL4D225-G15</b>	<b>HSL4N225-G15</b>	<b>HSL4M225-G15</b>
Extension Sensor + M8 conn. 0.3m	<b>HSL2C203-G15</b>	<b>HSL3D203-G15</b>	<b>HSL3N203-G15</b>	<b>HSL3M203-G15</b>

<b>Technical data</b>				
Power Supply Rated voltage	3 ÷ 30 V AC/DC	3 ÷ 30 V AC/DC	6 ÷ 30 V AC/DC	6 ÷ 30 V AC/DC
Switching current	0.2 A	0.2 A	0.2 A	0.2 A
Power Rating	6 W	6 W	6 W	6 W
On voltage drop	< 3 V	//	< 1 V	< 1 V
Nominal operate point	20 ÷ 25 AT	20 ÷ 25 AT	40Gauss (34 ÷ 46 Gauss)	40Gauss (34 ÷ 46 Gauss)
ON-OFF differential	5 ÷ 10 AT	5 ÷ 10 AT	5 ÷ 15 Gauss	5 ÷ 15 Gauss
"ON" response time	0.5 ms	0.5 ms	0.8 µs	0.8 µs
"OFF" response time	0.1 ms	0.1 ms	0.3 µs	0.3 µs
Operating temperature	- 10°C ÷ 70°C	- 10°C ÷ 70°C	- 10°C ÷ 70°C	- 10°C ÷ 70°C
Operating frequency	500 Hz	500 Hz	200 KHz	200 KHz
Life Time	10 <sup>7</sup> imp	10 <sup>7</sup> imp	10 <sup>9</sup> imp	10 <sup>9</sup> imp
Speed piston	10 m/s	10 m/s	10 m/s	10 m/s
Polarity - reversal protection	Yes	Yes	Yes	Yes
Protection class	IP 67	IP 67	IP 67	IP 67
Sensor material	PA ; AISI 303 ; OT 63	PA ; AISI 303 ; OT 63	PA ; AISI 303 ; OT 63	PA ; AISI 303 ; OT 63
M8 connector material	PUR gold plated brass	PUR gold plated brass	PUR gold plated brass	PUR gold plated brass
Cable type	PVC/PVC CEI2022 II O.R.	PVC/PVC CEI2022 II O.R.	PVC/PVC CEI2022 II O.R.	PVC/PVC CEI2022 II O.R.
Cable jacket colour	Grey	Grey	Grey	Grey
No. Conductors / Section	2x0.14mm <sup>2</sup>	3x0.14mm <sup>2</sup>	3x0.14mm <sup>2</sup>	3x0.14mm <sup>2</sup>
Conductor colours	Brown(+); Blue(-)	Brown(+); Blue(-); Black(OUT)	Brown(+); Blue(-); Black(OUT)	Brown(+); Blue(-); Black(OUT)
Cable lenght	2.5m or 0.3m+M8 conn.	2.5m or 0.3m+M8 conn.	2.5m or 0.3m+M8 conn.	2.5m or 0.3m+M8 conn.

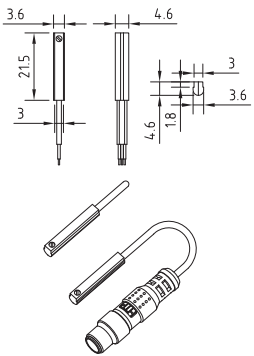
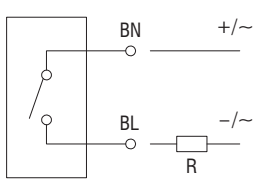
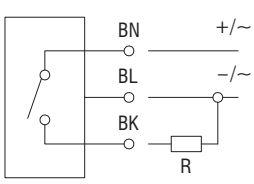
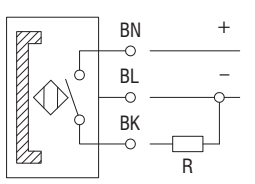
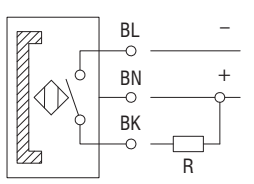
<b>Packaging</b>				
Qty/Box	1pc / Bag	1pc / Bag	1pc / Bag	1pc / Bag

<b>Other accessories options</b>				
-				

<b>Notes:</b>				
-				

## SENSORS (MAGNETIC PROXIMITY SWITCHES)

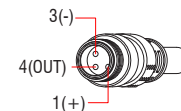
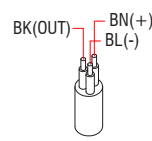
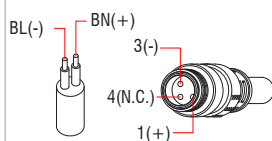
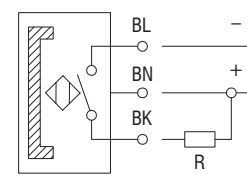
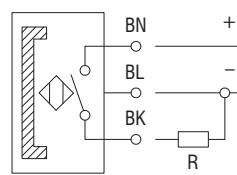
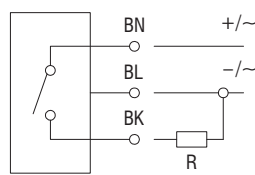
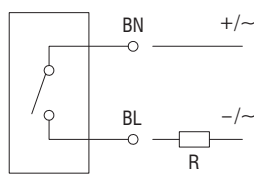
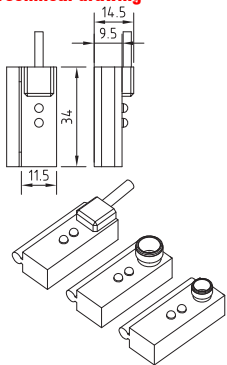


Technical drawing				
				
Product description				
Sensor type	2 wires REED NORMALLY OPEN	3 wires REED NORMALLY OPEN	Magneto-resistive PNP NORMALLY OPEN	Magneto-resistive NPN NORMALLY OPEN
<b>Sensor Part Number:</b>				
2.5m moulded cable	<b>HSS1C225-G15</b>	<b>HSS4D225-G15</b>	<b>HSS4N225-G15</b>	<b>HSS4M225-G15</b>
Extension Sensor+M8 conn. 0.3m	<b>HSS2C203-G15</b>	<b>HSS3D203-G15</b>	<b>HSS3N203-G15</b>	<b>HSS3M203-G15</b>
Technical data				
Power Supply Rated voltage	3 ÷ 30 V AC/DC	3 ÷ 30 V AC/DC	6 ÷ 30 V AC/DC	6 ÷ 30 V AC/DC
Switching current	0.2 A	0.2 A	0.2 A	0.2 A
Power Rating	6 W	6 W	6 W	6 W
On voltage drop	< 3 V	//	< 1 V	< 1 V
Nominal operate point	20 ÷ 25 AT	20 ÷ 25 AT	28Gauss (21 ÷ 35 Gauss)	28Gauss (21 ÷ 35 Gauss)
ON-OFF differential	5 ÷ 10 AT	5 ÷ 10 AT	5 ÷ 15 Gauss	5 ÷ 15 Gauss
"ON" response time	0.5 ms	0.5 ms	0.8 μs	0.8 μs
"OFF" response time	0.1 ms	0.1 ms	0.3 μs	0.3 μs
Operating temperature	- 10°C ÷ 70°C	- 10°C ÷ 70°C	- 10°C ÷ 70°C	- 10°C ÷ 70°C
Operating frequency	500 Hz	500 Hz	200 KHz	200 KHz
Life Time	10 <sup>7</sup> imp	10 <sup>7</sup> imp	10 <sup>9</sup> imp	10 <sup>9</sup> imp
Speed piston	10 m/s	10 m/s	10 m/s	10 m/s
Polarity - reversal protection	Yes	Yes	Yes	Yes
Protection class	IP 67	IP 67	IP 67	IP 67
Sensor material	PA ; AISI 303 ; OT 63	PA ; AISI 303 ; OT 63	PA ; AISI 303 ; OT 63	PA ; AISI 303 ; OT 63
M8 connector material	PUR gold plated brass	PUR gold plated brass	PUR gold plated brass	PUR gold plated brass
Cable type	PVC/PVC CEI2022 II O.R.	PVC/PVC CEI2022 II O.R.	PVC/PVC CEI2022 II O.R.	PVC/PVC CEI2022 II O.R.
Cable jacket colour	Grey	Grey	Grey	Grey
No. Conductors / Section	2x0.14mm <sup>2</sup>	3x0.14mm <sup>2</sup>	3x0.14mm <sup>2</sup>	3x0.14mm <sup>2</sup>
Conductor colours	Brown(+); Blue(-);	Brown(+); Blue(-); Black(OUT)	Brown(+); Blue(-); Black(OUT)	Brown(+); Blue(-); Black(OUT)
Cable lenght	2.5m or 0.3m+M8 conn.	2.5m or 0.3m+M8 conn.	2.5m or 0.3m+M8 conn.	2.5m or 0.3m+M8 conn.
Packaging				
Qty/Box	1pc / Bag	1pc / Bag	1pc / Bag	1pc / Bag
Other accessories options				
-				
Notes:				

## SENSORS (MAGNETIC PROXIMITY SWITCHES)



### Technical drawing



### Product description

Sensor type	2 wires REED NORMALLY OPEN	3 wires REED NORMALLY OPEN	Magneto-resistive PNP NORMALLY OPEN	Magneto-resistive NPN NORMALLY OPEN
<b>Sensor Part Number:</b>				
2.5m moulded cable	<b>HSM1C525-G15</b>	<b>HSM4D225-G15</b>	<b>HSM4N225-G15</b>	<b>HSM4M225-G15</b>
With M8 plug	<b>HSM2C5-G15</b>	<b>HSM3D2-G15</b>	<b>HSM3N2-G15</b>	<b>HSM3M2-G15</b>
With M12 plug	<b>HSM5C5-G15</b>	<b>HSM6D2-G15</b>	<b>HSM6N2-G15</b>	<b>HSM6M2-G15</b>

### Technical data

Power Supply Rated voltage	3 ÷ 250 V AC/DC	0 ÷ 24 V AC/DC	6 ÷ 30 V DC	6 ÷ 30 V DC
Switching current	1.5 A	2 A	0.25 A	0.25 A
Power Rating	10 W	10 W	6 W	6 W
On voltage drop	< 3 V	//	< 1 V	< 1 V
Nominal operate point	20 ÷ 25 AT	20 ÷ 25 AT	15Gauss (11 ÷ 22 Gauss)	15Gauss (11 ÷ 22 Gauss)
ON-OFF differential	5 ÷ 10 AT	5 ÷ 10 AT	4 ÷ 7 Gauss	4 ÷ 7 Gauss
"ON" response time	0.5 ms	0.5 ms	0.8 µs	0.8 µs
"OFF" response time	0.1 ms	0.1 ms	0.3 µs	0.3 µs
Operating temperature	- 10°C ÷ 70°C	- 10°C ÷ 70°C	- 10°C ÷ 70°C	- 10°C ÷ 70°C
Operating frequency	500 Hz	500 Hz	200 Hz	
Life Time	10 <sup>7</sup> imp	10 <sup>7</sup> imp	10 <sup>9</sup> imp	10 <sup>9</sup> imp
Speed piston	10 m/s	10 m/s	10 m/s	10 m/s
Polarity - reversal protection	Yes	Yes	Yes	Yes
Protection class	IP 67	IP 67	IP 67	IP 67
Sensor material	PA ; AISI 303 ; OT 63	PA ; AISI 303 ; OT 63	PA ; AISI 303 ; OT 63	PA ; AISI 303 ; OT 63
M8-M12 plug material	Brass	Brass	Brass	Brass
Cable type	PVC/PVC CEI2022 II O.R.	PVC/PVC CEI2022 II O.R.	PVC/PVC CEI2022 II O.R.	PVC/PVC CEI2022 II O.R.
Cable jacket colour	Grey	Grey	Grey	Grey
No. Conductors / Section	2x0.14mm <sup>2</sup>	3x0.14mm <sup>2</sup>	3x0.14mm <sup>2</sup>	3x0.14mm <sup>2</sup>
Conductor colours	Brown(+); Blue(-);	Brown(+); Blue(-); Black(OUT)	Brown(+); Blue(-); Black(OUT)	Brown(+); Blue(-); Black(OUT)
Cable length	2.5m	2.5m	2.5m	2.5m

### Packaging

Qty/Box	1pc / Bag	1pc / Bag	1pc / Bag	1pc / Bag
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### Other accessories options

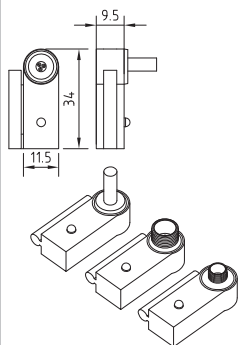
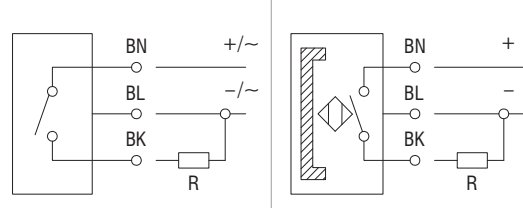
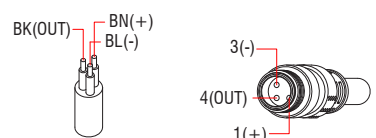
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### Notes:

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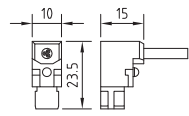
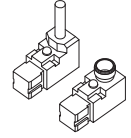
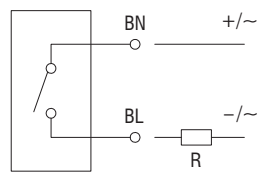
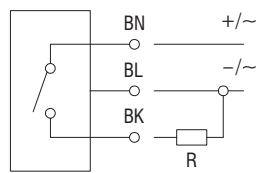
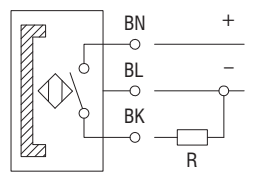
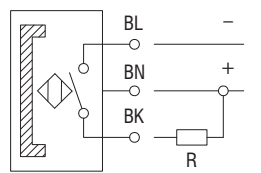
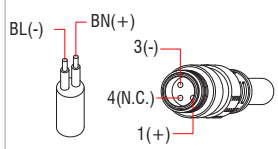
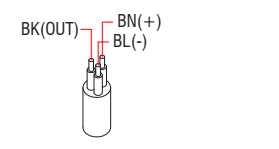
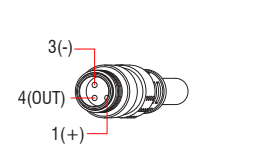
## SENSORS (MAGNETIC PROXIMITY SWITCHES)



<b>Technical drawing</b> 					
					
<b>Product description</b>					
Sensor type	3 wires REED NORMALLY OPEN	Magneto-resistive PNP NORMALLY OPEN			
<b>Sensor Part Number:</b>					
2.5m moulded cable	<b>HSM7D2-G15</b>	<b>HSM7N225-G15</b>			
With M8 plug	<b>HSM8D2-G15</b>	<b>HSM8N203-G15</b>			
With M12 plug	<b>HSM9D2-G15</b>	<b>HSM9N203-G15</b>			
<b>Technical data</b>					
Power Supply Rated voltage	3 ÷ 30 V AC/DC	6 ÷ 30 V AC/DC			
Switching current	0.2 A	0.2 A			
Power Rating	6 W	6 W			
On voltage drop	//	< 1 V			
Nominal operate point	20 ÷ 25 AT	40Gauss (34 ÷ 46 Gauss)			
ON-OFF differential	5 ÷ 10 Gauss	5 ÷ 15 Gauss			
"ON" response time	- 10 ° ÷ 70°C	- 10 ° ÷ 70°C			
"OFF" response time	0.5 ms	0.8 μs			
Operating temperature	0.1 ms	0.3 μs			
Operating frequency	- 10°C ÷ 70°C	- 10°C ÷ 70°C			
Life Time	10 <sup>7</sup> imp	10 <sup>9</sup> imp			
Speed piston	10 m/s	10 m/s			
Polarity - reversal protection	Yes	Yes			
Protection class	IP 68	IP 68			
Sensor material	PA	PA			
M8-M12 plug material	Brass	Brass			
Cable type	PVC/PVC CEI2022 II O.R.	PVC/PVC CEI2022 II O.R.			
Cable jacket colour	Grey	Grey			
No. Conductors / Section	3x0.14mm <sup>2</sup>	3x0.14mm <sup>2</sup>			
Conductor colours	Brown(+); Blue(-); Black(OUT)	Brown(+); Blue(-); Black(OUT)			
Cable lenght	2.5m	2.5m			
<b>Packaging</b>					
Qty/Box					
<b>Other accessories options</b>					
-					
<b>Notes:</b>					

## SENSORS (MAGNETIC PROXIMITY SWITCHES)



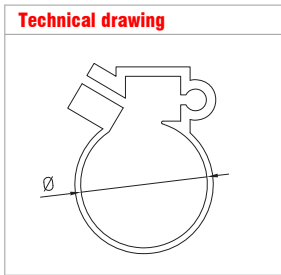
Technical drawing				
 				
				
Product description				
Sensor type	2 wires REED NORMALLY OPEN	3 wires REED NORMALLY OPEN	Magneto-resistive PNP NORMALLY OPEN	Magneto-resistive NPN NORMALLY OPEN
<b>Sensor Part Number:</b>				
2.5m moulded cable	<b>HCB1C425-G15</b>	<b>HCB4D225-G15</b>	<b>HCB4N225-G15</b>	<b>HCB4M225-G15</b>
With M8 plug	<b>HCB2C4-G15</b>	<b>HCB3D2-G15</b>	<b>HCB3N2-G15</b>	<b>HCB3M2-G15</b>
Technical data				
Power Supply Rated voltage	3 ÷ 110 V AC/DC	0 ÷ 24 V AC/DC	6 ÷ 30 V AC/DC	6 ÷ 30 V AC/DC
Switching current	0.3 A	1 A	0.25 A	0.25 A
Power Rating	10 W	10 W	6 W	6 W
On voltage drop	< 3 V	//	< 1 V	< 1 V
Nominal operate point	20 ÷ 25 AT	20 ÷ 25 AT	20Gauss (11 ÷ 22 Gauss)	20Gauss (11 ÷ 22 Gauss)
ON-OFF differential	5 ÷ 10 AT	5 ÷ 10 AT	4 ÷ 7 Gauss	4 ÷ 7 Gauss
"ON" response time	0.5 ms	0.5 ms	0.8 µs	0.8 µs
"OFF" response time	0.1 ms	0.1 ms	0.3 µs	0.3 µs
Operating temperature	- 10°C ÷ 70°C	- 10°C ÷ 70°C	- 10°C ÷ 70°C	- 10°C ÷ 70°C
Operating frequency	500 Hz	500 Hz	200 KHz	200 KHz
Life Time	10 <sup>7</sup> imp	10 <sup>7</sup> imp	10 <sup>9</sup> imp	10 <sup>9</sup> imp
Speed piston	10 m/s	10 m/s	10 m/s	10 m/s
Polarity - reversal protection	Yes	Yes	Yes	Yes
Protection class	IP 67	IP 67	IP 67	IP 67
Sensor material	PA ; AISI 303	PA ; AISI 303	PA ; AISI 303	PA ; AISI 303
M8 plug material	PA6 gold plated brass	PA6 gold plated brass	PA6 gold plated brass	PA6 gold plated brass
Cable type	PVC/PVC CEI2022 II O.R.	PVC/PVC CEI2022 II O.R.	PVC/PVC CEI2022 II O.R.	PVC/PVC CEI2022 II O.R.
Cable jacket colour	Grey	Grey	Grey	Grey
No. Conductors / Section	2x0.14mm <sup>2</sup>	3x0.14mm <sup>2</sup>	3x0.14mm <sup>2</sup>	3x0.14mm <sup>2</sup>
Conductor colours	Brown(+); Blue(-)	Brown(+); Blue(-); Black(OUT)	Brown(+); Blue(-); Black(OUT)	Brown(+); Blue(-); Black(OUT)
Cable lenght	2.5m	2.5m	2.5m	2.5m
Packaging				
Qty/Box	1pc / Bag	1pc / Bag	1pc / Bag	1pc / Bag
Other accessories options				
-				
Notes:				
-				



## SENSORS (MAGNETIC PROXIMITY SWITCHES)

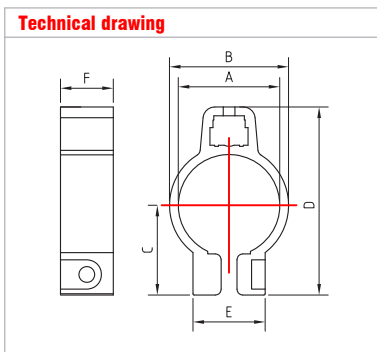
- **CYLINDER MOUNTING CLAMPS:**

- **HXF-G15:**



Microcylinder mounting clamps	HXF-09	HXF-11	HXF-12	HXF-13	HXF-14	HXF-16	HXF-17	HXF-18	HXF-20	HXF-21	HXF-22	HXF-24	HXF-26	HXF-27	HXF-29	HXF-30	HXF-33	HXF-36	HXF-41	HXF-45	HXF-52	HXF-65
Ø mm	Ø 9.3	Ø 11.3	Ø 12	Ø 13.3	Ø 14	Ø 16	Ø 17.3	Ø 18	Ø 20	Ø 21.3	Ø 22	Ø 24	Ø 26.3	Ø 27	Ø 29	Ø 30	Ø 33.6	Ø 36	Ø 41.6	Ø 45	Ø 52.4	Ø 65.4
Body materials	PA ; AISI 303																					

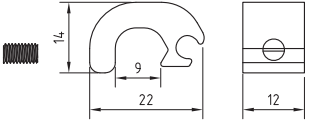
- **HSW-G15:**

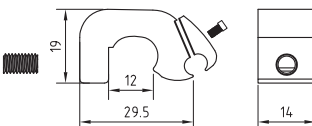


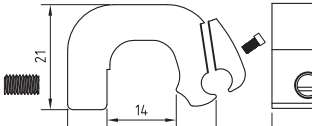
Microcylinder mounting clamps	HSW-08	HSW-10	HSW-12	HSW-16	HSW-20	HSW-25
For cylinder	Ø 8	Ø 10	Ø 12	Ø 16	Ø 20	Ø 25
A mm	Ø 9.3	Ø 11.3	Ø 13.3	Ø 17.3	Ø 21.3	Ø 26.5
B mm	12.3	14.3	16.3	20.3	24.3	29.5
C mm	11.1	12.2	13.2	15.3	17.4	20
D mm	23.9	25.9	28	32.1	36.2	41.4
E mm	12.3			14		
F mm	9					
Body materials	PA ; AISI 303					

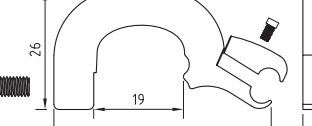
## SENSORS (MAGNETIC PROXIMITY SWITCHES)

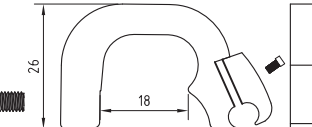
### • MOUNTING BRACKETS FOR CYLINDER:

Technical drawing	
	
For cylinder	$\varnothing 5 \div 9\text{mm}$
Part Number	<b>HST-10-G15</b>
Body materials	

Technical drawing	
	
For cylinder	$\varnothing 32 \div 40\text{mm}$
Part Number	<b>HST-80-G15</b>

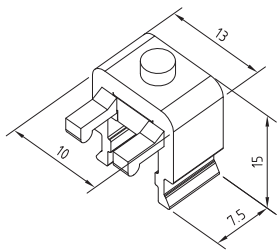
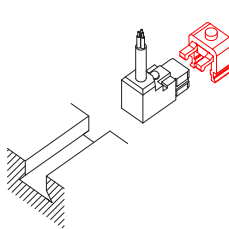
Technical drawing	
	
For cylinder	$\varnothing 50 \div 63\text{mm}$
Part Number	<b>HST-81-G15</b>

Technical drawing	
	
For cylinder	$\varnothing 82 \div 100\text{mm}$
Part Number	<b>HST-82-G15</b>

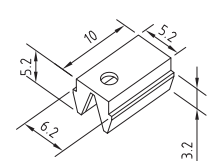
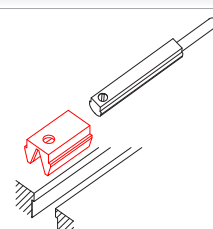
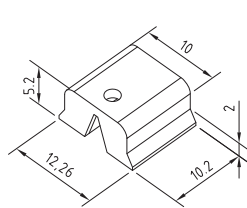
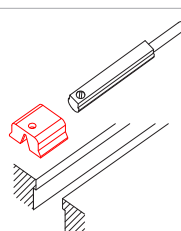
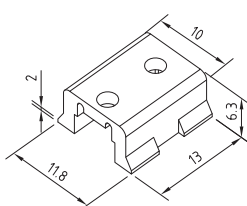
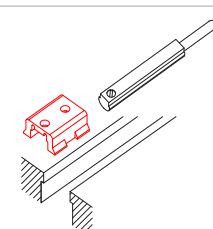
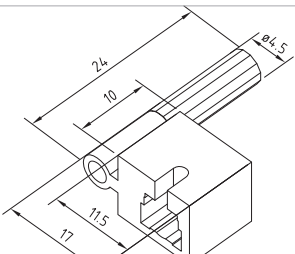
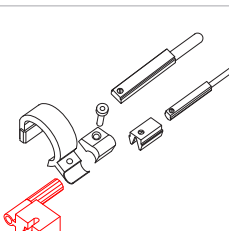
Technical drawing	
	
For cylinder	$\varnothing 125\text{mm}$
Part Number	<b>HST-83-G15</b>

## SENSORS (MAGNETIC PROXIMITY SWITCHES)

### • HK-CB-G15

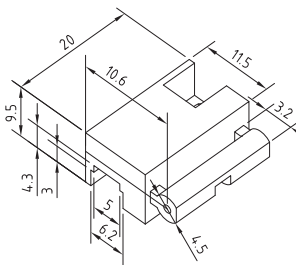
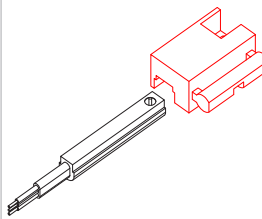
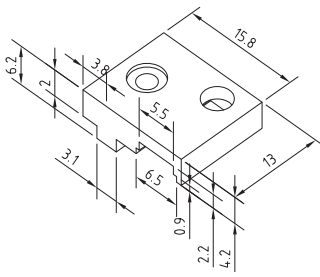
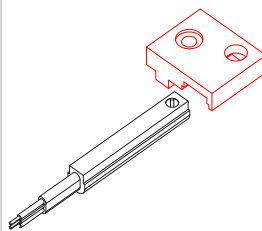
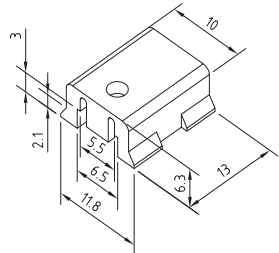
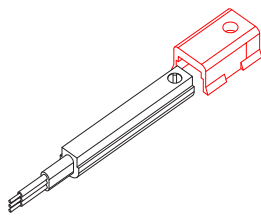
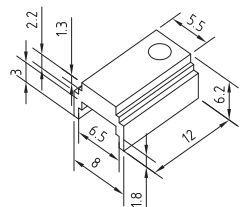
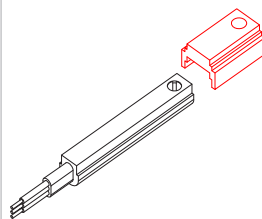
Technical drawing	Slot adapters material	Application	Packaging	Suitable sensors
	PA / 6005 A / AISI 303		1PC/bag	HCB

### • HK-SENS-G15

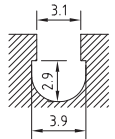
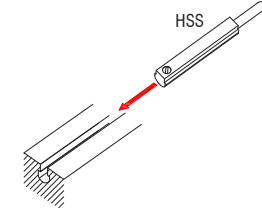
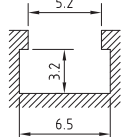
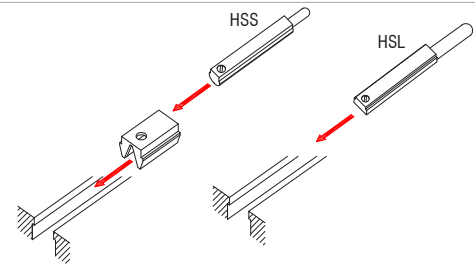
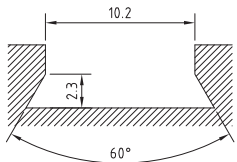
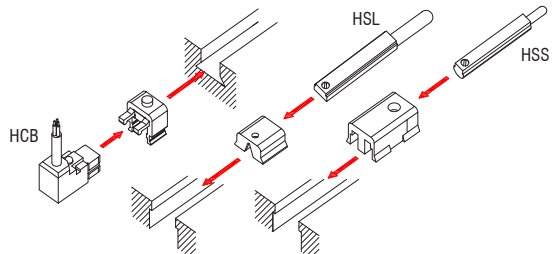
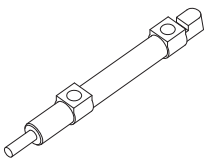
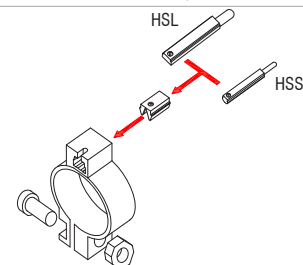
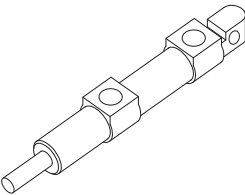
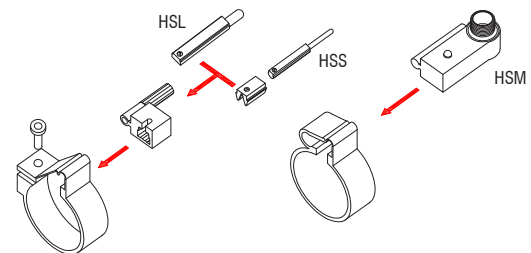
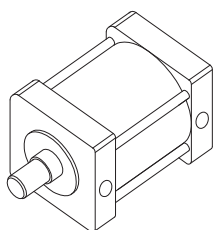
Technical drawing	Slot adapters material	Application	Packaging	Suitable sensors
	PA		1PC/bag	HSN HSS
	PA		1PC/bag	HSN HSS
	PA		1PC/bag	HSC HSL HSN HSS
	PA		1PC/bag	HSC HSL HSN HSS

## SENSORS (MAGNETIC PROXIMITY SWITCHES)

### • HK-SL-G15

Technical drawing	Slot adapters material	Application	Packaging	Suitable sensors
	PA		1PC/bag	HSL
	PA		1PC/bag	HSL
	PA		1PC/bag	HSL
	PA		1PC/bag	HSL

## SENSORS (MAGNETIC PROXIMITY SWITCHES)

	Slots type	Sensors type					Applications type
		HSS	HSL	HSA	HSM	HCB	
<b>C slot</b>		HSS	-	-	-	-	
<b>T slot</b>		HSS + HK-SENS	HSL	HSA	-	-	
<b>Dovetail slot</b>		HSS + HK-SENS	HSL + HK-SENS	HSA + HK-SENS	-	HCB	
<b>SW mounting clamps</b>		HSS + HK-SENS + HSW	HSL + HK-SENS + HSW	HSA + HK-SENS + HSW	-	-	
<b>XF mounting clamps</b>		HSS + HK-SENS + HXF	HSL + HK-SENS + HXF	HSA + HK-SENS + HXF	HSM + HXF	HCB	
<b>ST mounting brackets</b>		HSS + HK-SENS + HST	HSL + HK-SENS + HST	HSA + HK-SENS + HST	HSM + HST	HCB	