

CARLO GAVAZZI
Automation Components



Magnetic Sensors

- Slot
- Flux
- Safety
- Proximity
- Atex
- Level
- Pick up



Sense





Keyword: Flexibility

The measurement of proximity and position, in addition to displacement of objects, is essential in many different applications, including valve position, level detection, process control, machine control, and safety. Carlo Gavazzi offers a wide range of magnetic sensors that are well-suited for many applications in the field of automation, where high reliability and cost optimized solutions are required. In addition, we have the ability to modify or adapt any of our sensors, or even to develop a custom sensor, to solve any unique application. In a word - flexibility!



User Friendly



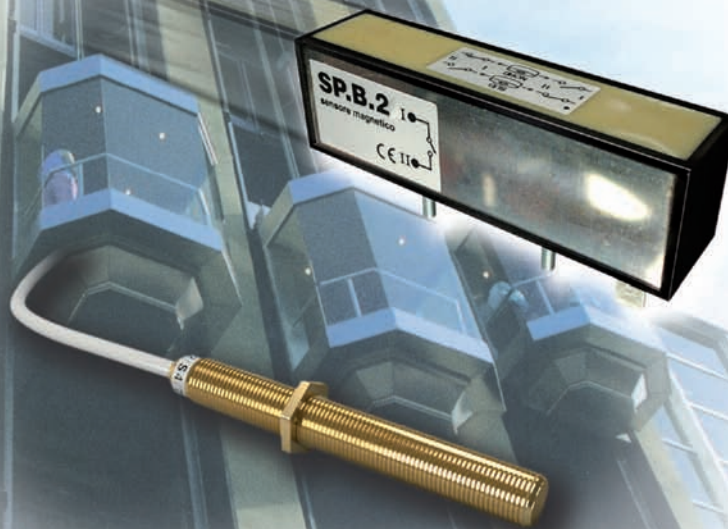
Inventory Reduction



For Harsh Environment



Diagnostic Warning



Proximity

The proximity switches are suitable for non-contact position detection for a wide range of applications. They are able to detect objects through painted metallic surfaces, stainless steel, aluminum, plastic and wood. Available in different materials and in several housing shapes.

Slot

A slot body is designed to detect the presence of a vane or tab passing through the sensing slot. The available families (ISY, IM, I) differ from shape and dimensions, offering a very high quality level of performance and safety.

Flux

The flux meter is a magnetic sensor for horizontal mounting that is activated by the flux of the liquid to be detected. The liquid pressure switches the output.

Level

A wide range of single or multi-point level sensors offers reliable and durable solutions for all liquid environments.

Atex

Some proximity and level sensors are certified for use in explosive environments. They are in accordance with the procedure of CEI 3-3 (EN 50028 standard).

Safety

The safety magnetic sensors are designed for use with safety gates and barriers that prevent access to machine areas with dangerous movements (risk category up to 4).

Hall effect

Hall effect sensors are designed for highly accurate gear-tooth sensing, direction detection, position sensing and contactless switching, with a very long lifetime.

Pick up

The pick up sensors are designed for applications where gear speed measurement is required. They do not need any power supply.

Market Application

Lift (Proximity)

Our proximity magnetic switches are used in lift market for many applications such including cabin leveling, speed monitoring, and cabin presence detection. Accuracy and speed combined with availability of various output functions ensure a signal suitable also for economical high speed elevator control.



Food & Beverage (Safety)

The moving parts of automatic filling and sealing machines for food and beverages must be protected by safety gates. In Food & Beverage market, where increased sanitary requirements call for cleaning cycles of the machine, safety magnetic sensors are often preferred to mechanical switches.

Gas Stations (Atex)

The ATEX proximity sensors are positioned on the gas pump to detect the presence of the nozzle. While the nozzle is properly stored the pump is deactivated. When the nozzle is removed by the user, the sensor activates the pump. We also provide level sensors to control the tank fuel filling, according to ATEX directive.



Liquid Flux on Rooftops

The FLMA1S1 is a magnetic sensor used to monitor the flux of the cooling circuit on rooftops. To work correctly, the flux of the liquid must push the float against its spring: when the flux is sufficiently high to move the float a fixed distance, the sensor switches on, when the flux decreases under the desired value the heating control system is warned by the sensor switch.

Motor Speedgear

Brushless motors can be controlled by a dedicated controller system using hall effect sensors. The controller can be set with the desired speed range to detect any alarm condition, in order to protect the motor. Common applications include pumps, blowers, packaging systems, conveyor belts and semiconductor manufacturers.





In Touch with Customer Needs

Carlo Gavazzi magnetic sensors feature high versatility and a wide range of housing shapes and materials, for use in countless applications fixtures. Our thirty-year commitment in the design and production of position and proximity sensors has

been marked by our commitment to modifying any sensor to fit a customer's specific requirements. We can customize materials, shape, connections and more, to meet any request.

...Just let us know your needs!

BUILD YOUR OWN SENSOR

Temperature range

Housing material

Sensing distance

Housing dimensions

Private label

Cable and Plug

ILCS128 - Multilevel

The ILC models represent a special series that is custom-produced for each application. The customer can specify the rod length (up to 2.5 m), the output function, the position of the contacts and the number of floats.

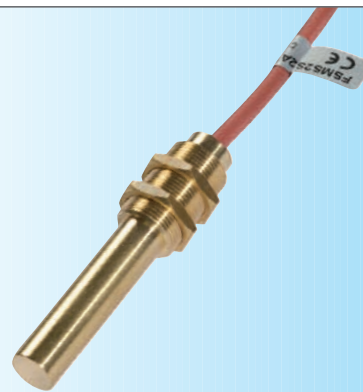
ILCS128 is a customized sensor with 2 floats activating 3 different contacts.



FSMS2S2AT - High temperature

The automated cleaning systems of many ovens uses caustic chemicals, so it is essential to monitor doors that need to be closed during the cleaning cycle. Since high temperatures are present, the sensor needs to exceed the temperature ratings of the standard magnetic sensors.

Carlo Gavazzi FSMS2S2AT meets the requirements of this challenging application.



PA2TMF60S1 - Pick up

Applications for heavy machinery such as farming machines and trenching equipment often require a customized sensor to monitor gear speed. Modification requests can include customized housing diameter and materials.

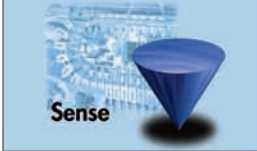
We can also modify sensing distance and operating temperature ranges.



HA2TMS1 - Zero speed detection

Hall Effect sensors are suitable for engine timing applications. The zero-speed sensor provides very precise measurements of movement even at zero speed. Customization options include special outputs and connection cables.





Sense



Switch



Control



Safety



Fieldbus

Accessories

In many applications the sensor positioning is a critical point. Our goal is simplification, in order to translate any incoming request into both a powerful

and a user-friendly solution. Our portfolio includes jaws, supports and customized magnetic units.



Lift Market

Many magnetic sensor applications are found in the lift market. Our dedicated solutions allow customers to avoid expensive or ineffective hand-made fixing plates.

Jaw

The jaw is a user friendly tool planned to simplify the sensor positioning. Once the sensor is in the desired position, it can be secured by attaching to a jaw. Two jaws can be connected to each other to create a 90° fixture. This solution is common in lift market for speed control and cabin presence monitoring.



Support

The support is built for M12 sensors (e.g. FMPA9). It can be positioned along the jaw and secured by screws. Multiple supports along the same jaw allow for speed & direction monitoring.

Magnets

The magnetic sensors need a magnet to operate. Magnets are available in multiple specifications. Almost all dimensions and shapes are supplied (cylindrical, rectangular, ring shaped, with or without plastic housing) depending on the different requirements. We can also provide different materials corresponding to different magnetic force, temperature range and consistency.



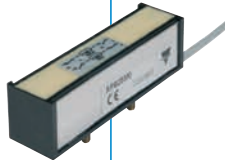
RECTANGULAR

S series



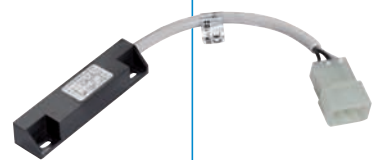
Dimensions
79 x 21.2 x 11.5 (mm)
Operating distance
8 - 32 (mm)
Output
NO: SA2 / SA8
NC: SC2 / SC8
CO: SS2
Bistable: SB2 / SB2 S5
Bistable CO: SBS2
Output connection
PVC cable
Housing material
Plastic
Operating temperature
-25° to +75°C / -13° to +167°F
Degree of protection
IP 67

SPB2 series



Dimensions
85 x 24 x 25.5 (mm)
Operating distance
5 - 30 (mm)
Output
Bistable: SPB2 / SPB2 2MT
Output connection
Plug / Cable
Housing material
Plastic
Operating temperature
-25° to +75°C / -13° to +167°F
Degree of protection
IP 67 or IP 65

SPA1 series



Dimensions
90 x 20 x 16 (mm)
Operating distance
12 mm
Output
NC: SPA1 S2 / SPA1 S3
Output connection
PVC cable
Housing material
ABS class V0
Operating temperature
-25° to +80°C / -13° to +167°F
Degree of protection
IP 67
Special feature
GND connection: within the output cable or thin plate fixed on the case

M and MS series



Dimensions
37 x 16 x 8.3 (mm)
Operating distance
7 - 35 (mm)
Output
NO: MSA1 / MA3
NC: MC3
CO: MS1
Output connection
PVC cable
Housing material
Plastic
Operating temperature
-25° to +75°C / -13° to +167°F
Degree of protection
IP 67

MM series



Dimensions
27 x 11 x 7 (mm)
Operating distance
10 - 35 (mm)
Output
NO: MMA3
CO: MMS1
Output connection
PVC cable
Housing material
Plastic
Operating temperature
-25° to +75°C / -13° to +167°F
Degree of protection
IP 67

Dimensions
23.5 x 14 x 6.1 (mm)
Operating distance
14 - 40 (mm)
Output
NO: MMA6
Output connection
Twin lead cable
Housing material
Plastic
Operating temperature
-25° to +75°C / -13° to +167°F
Degree of protection
IP 67

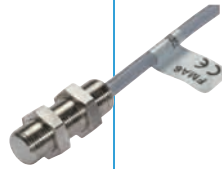


CYLINDRICAL

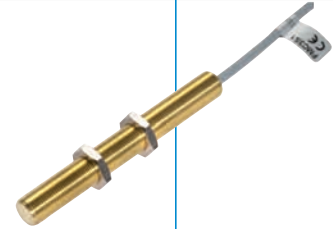
FM series



Dimensions
 Ø 9.3 mm
Operating distance
 5 - 25 (mm)
Output
 NO: FMA3
 NC: FMC3
 CO: FMS1
Output connection
 PVC cable
Housing material
 Plastic
Operating temperature
 -25° to +75°C / -13° to +167°F
Degree of protection
 IP 67

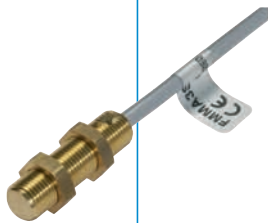


Dimensions
 M10 x 0.75 (mm)
Operating distance
 5 - 25 (mm)
Output
 NO: FMA3 S5 / FMA6
Output connection
 Plug / Cable
Housing material
 Nickel plated brass
Operating temperature
 -25° to +75°C / -13° to +167°F
Degree of protection
 IP 67



Dimensions
 M12 x 1 (mm)
Operating distance
 5 - 18 (mm)
Output
 NC: FMC3 S1
Output connection
 PVC cable
Housing material
 Brass
Operating temperature
 -25° to +75°C / -13° to +167°F
Degree of protection
 IP 67

FMM series



Dimensions
 M8 x 1 (mm)
Operating distance
 8 - 27 (mm)
Output
 NO: FMMA3 / FMMA6
 CO: FMMS1
Output connection
 PVC cable
Operating temperature
 -25° to +70°C / -13° to +158°F
Degree of protection
 IP 67

FMMP series



Dimensions
 Ø 6 x 25 (mm)
Operating distance
 > 8 mm
Output
 NO: FMMPA7 L25
Output connection
 Twin lead cable
Housing material
 Plastic
Operating temperature
 -20° to +75°C / -4° to +167°F
Degree of protection
 IP 67



Dimensions
 Ø 6 x 33 (mm)
Operating distance
 > 8 mm
Output
 NO: FMMPA7 L33
Output connection
 Twin lead cable
Housing material
 Plastic
Operating temperature
 -20° to +75°C / -4° to +167°F
Degree of protection
 IP 67

CYLINDRICAL

FMMP series



Dimensions
 Ø 6 x 38 (mm)
Operating distance
 > 8 mm
Output
 NO: FMMPA7 L38
Output connection
 Twin lead cable
Housing material
 Plastic
Operating temperature
 -20° to +75°C / -4° to +167°F
Degree of protection
 IP 67

FMP series



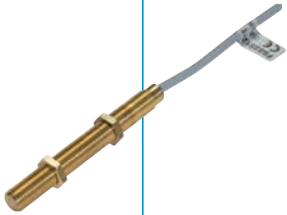
Dimensions
 M12 x 1 (mm)
Operating distance
 7 - 26 (mm)
Output
 NO: FMMPA7 / FMMPA9 / FMMPA9 S1
 NC: FMPC7 / FMPC9
 CO: FMPS1
 Bistable: FMPB2
Output connection
 PVC cable
Housing material
 Plastic
Operating temperature
 -25° to +75°C / -13° to +167°F
Degree of protection
 IP 67

FS series

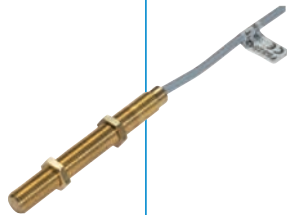


Dimensions
 Ø 13.5 (mm)
Operating distance
 3 - 12 (mm)
Output
 NO: FSA2 / FSA8
 NC: FSC2 / FSC8
 CO: FSS2
Output connection
 PVC cable
Housing material
 Plastic
Operating temperature
 -25° to +75°C / -13° to +167°F
Degree of protection
 IP 67

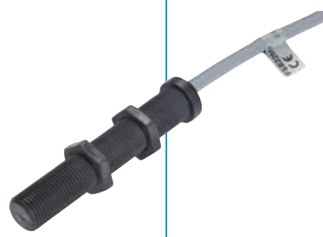
FS series



Dimensions
 M10 x 1.25 (mm)
Operating distance
 7 - 12 (mm)
Output
 NO: FSA2 S3 2MT
 CO: FSS2 S1 2MT
Output connection
 Plug / cable
Housing material
 Nickel plated brass
Operating temperature
 -25° to +75°C / -13° to +167°F
Degree of protection
 IP 67



Dimensions
 M12 x 1 (mm)
Operating distance
 7 - 12 (mm)
Output
 NO: FSA2 S4 2MT
 CO: FSS2 S4 2MT
Output connection
 PVC cable
Housing material
 Brass
Operating temperature
 -25° to +75°C / -13° to +167°F
Degree of protection
 IP 67



Dimensions
 M16 x 1.5 (mm)
Output
 Bistable: FSB2 2MT
Output connection
 PVC cable
Housing material
 Plastic
Operating temperature
 -25° to +75°C / -13° to +167°F
Degree of protection
 IP 67

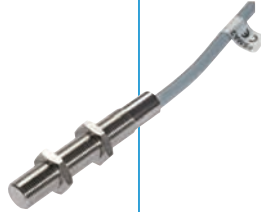
CYLINDRICAL

FSLP series



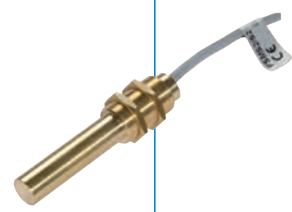
Dimensions
 Ø 16 x 110 (mm)
Operating distance
 18 - 25 (mm) (front)
 10 - 15 (mm) (side)
Output
 NO: FSLPA7
 Bistable: FSLPB2
Output connection
 PVC cable
Housing material
 Plastic
Operating temperature
 -30° to +80°C / -22° to +176°F
Degree of protection:
 IP 67
Modular guide extern. dimensions
 20 x 200 x 10 (mm)

FSM series



Dimensions
 M12 x 1 (mm)
Operating distance
 2 - 19 (mm)
Output
 NO: FSMA2 / FSMA7
 CO: FSMS2
Output connection
 PVC cable / Silicone cable
Housing material
 Nickel plated brass
Operating temperature
 -25° to +75°C / -13° to +167°F
Degree of protection
 IP 67

FSM series



Dimensions
 M16 x 1 (mm)
Operating distance
 8 mm
Output
 CO: FSMS2 S2 / FSMS2 S2 AT
Output connection
 PVC cable / Silicone cable
Housing material
 Brass
Operating temperature
 -25° to +75°C / -13° to +167°F
 -25° to +180°C / -13° to +356°F
Degree of protection
 IP 67

FSQ series



Dimensions
 M12 x 1 (mm)
Operating distance
 7 - 23 (mm)
Output
 NO: FSQA3 A01 2MT HF
Output connection
 Shielded cable
Housing material
 Stainless steel
Operating temperature
 -25° to +75°C / -13° to +167°F
Degree of protection
 IP 67

FORK

I series



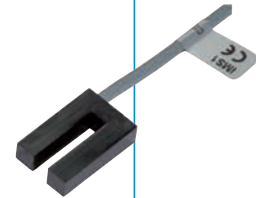
Dimensions
75 x 50.7 x 40 (mm)
Output
NO: IA2 / IA8
NC: IC2 / IC8
CO: IS2
Output connection
PVC cable
Housing material
Plastic
Operating temperature
-25° to +75°C / -13° to +167°F
Degree of protection
IP 67

ISY series



Dimensions
45 x 37 x 10 (mm)
Output
NC: ISYC3
CO: ISYS1
Output connection
PVC cable
Housing material
Plastic
Operating temperature
-25° to +75°C / -13° to +167°F
Degree of protection
IP 67

IM series



Dimensions
28 x 18.5 x 7 (mm)
Output
NC: IMC3
CO: IMS1
Output connection
PVC cable
Housing material
Plastic
Operating temperature
-25° to +75°C / -13° to +167°F
Degree of protection
IP 67

CYLINDRICAL LEVEL

ILM / ILC series



Float diameter
Ø 53 mm
Max pressure
20 Kg/cm²
Output
NO, NC: ILM2 / ILM8
CO: ILM52 / ILC
Output connection
Silicone cable
Housing material
Stainless steel
Operating temperature
-25° to +120°C / -13° to +248°F
-25° to +80°C / -13° to +176°F
Degree of protection
IP 67

ILMM series



Float diameter
Ø 28 mm
Max pressure
10 Kg/cm²
Output
NO, NC: ILMM5 / ILMM5 90 /
ILMM5 AT S1
NO: ILMM5 S2 AT / ILMM5 S1 /
ILM5 S2
Output connection
XLPE cable
Housing material
Stainless steel
Operating temperature
-10° to +120°C / -14° to +248°F
-10° to +200°C / -14° to +392°F
-20° to +120°C / -4° to +248°F
Degree of protection
IP 68

ILSP series



Float diameter
Ø 44 mm
Max pressure
6 Kg/cm²
Output
NO, NC: ILSP2 / ILSP8
CO: ILSPS2
Output connection
Silicone cable
Housing material
Plastic
Operating temperature
-20° to +80°C / -4° to +176°F
Degree of protection
IP 68

CYLINDRICAL LEVEL

FLM series


Dimensions

M10 x 1 (mm)

Float diameter

Ø 20 mm

Operating distance

5 mm

Output

NO: FLMA1 S1

Output connection

PVC cable ended with 6.35 mm female faston

Housing material

Stainless steel

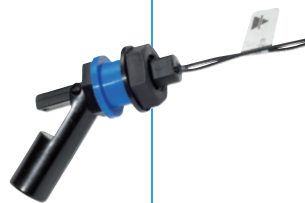
Operating temperature

-30° to +105°C / -22° to +221°F

Degree of protection

IP 67

ILMPU5 series


Float diameter

Ø 17.5 mm

Max pressure

2 Kg/cm²

Output

NO, NC: ILMPU5

Output connection

Silicone cable

Housing material

Plastic

Operating temperature

-20° to +80°C / -4° to +176°F

Degree of protection

IP 68

ILMU5 series


Float diameter

Ø 31 mm

Max pressure

100 Kg/cm²

Output

NO, NC: ILMU5

Output connection

Silicone cable

Housing material

Plastic

Operating temperature

-20° to +100°C / -4° to +212°F

Degree of protection

IP 68

ILU series


Float diameter

Ø 45 mm

Max pressure

2 Kg/cm²

Output

NO: ILU2 / ILU8

CO: ILUS2 / ILUS2 S1

Output connection

Silicone cable

Housing material

Plastic

Operating temperature

-20° to +80°C / -4° to +176°F

Degree of protection

IP 68

ILMP series


Float diameter

Ø 25 mm

Max pressure

2 Kg/cm²

Output

NO, NC: ILMP5 / ILMP5 P

Output connection

PVC cable

Housing material

Plastic

Operating temperature

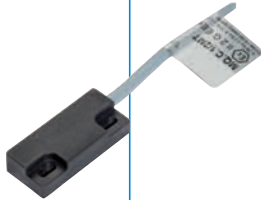
-20° to +80°C / -4° to +176°F

Degree of protection

IP 68

ATEX

MQA and MQC series



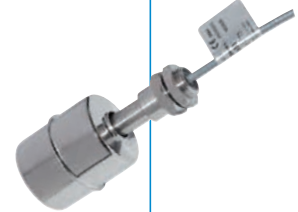
Dimensions
37 x 16 x 8.3 (mm)
Operating distance
7 - 35 (mm)
Output
NO: MQA1 EX
NC: MQC1 EX
Output connection
PVC cable
Housing material
Polypropylene
Operating temperature
-10° to +80°C / -14° to +176°F
Degree of protection
IP 67

FSQA2 series



Dimensions
PG 13.5 (mm)
Operating distance
8 - 30 (mm)
Output
NO: FSQA2 B01 EX / FSQA2 B03 EX
Output connection
Silicone cable
Housing material
Stainless steel
Operating temperature
-30° to +75°C / -22° to +167°F
Degree of protection
IP 67

Level series



Float diameter
Ø 53 mm (...S EX)
45 x 55 (mm) (...C EX)
Shape
Spheric: ILMS2 S
Cylindric: ILMS2 C
Output
CO: ILMS2 S EX / ILMS2 C EX
Output connection
PVC cable
Housing material
Stainless steel
Operating temperature
-25° to +70°C / -13° to +158°F
Degree of protection
IP 68

CL SERIES MAGNETS

CL1, CL2, CL3, CL4



Shapes
Rectangular
Min separation/dimensions (mm):
CL1: 10 / 14 x 25 x 8
CL2: 20 / 12 x 44.5 x 9
CL3: 30 / 18 x 59 x 9
CL4: 50 / 25 x 76 x 18

CL90



Shapes
Trapezoidal
Dimensions (mm)
31 x 90 x 22.5

CL



Shapes
Cylindrical
Dimensions (mm)
CL10 Ø 9.3 x 32
CL11 Ø 13.5 x 65
CL18 Ø 18 x 6
CL23 Ø 23 x 9
CL31 Ø 31 x 10
CL20S1 Ø 20 x 10.5
CL20S3 Ø 22.1 x 10.5
CL50 Ø 50 x 10



RECTANGULAR

SMS01



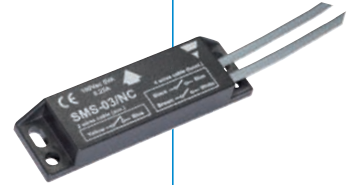
Dimensions
88 x 25 x 13 (mm)
Operating distance
10 mm
Output
1 NO+1 NC: SMS01
Output connection
Cable
Housing material
Plastic
Operating temperature
-25° to +70°C / -13° to +158°F
Degree of protection
IP 67
Safety category
4

SMS02



Dimensions
88 x 25 x 13 (mm)
Operating distance
20 mm
Output
1 NO+1 NC: SMS02 / SMS02LD / SMS02S1
Output connection
Cable
Housing material
Plastic
Operating temperature
-25° to +70°C / -13° to +158°F
Degree of protection
IP 67
Safety category
4
Indication for Gate open
LED, red (SMS02LD)

SMS03



Dimensions
88 x 25 x 13 (mm)
Operating distance
20 mm
Output
2 NO: SMS03NC / SMS03
Output connection
Cable
Housing material
Plastic
Operating temperature
-25° to +70°C / -13° to +158°F
Degree of protection
IP 67
Safety category
4
Auxiliary output
1NC (SMS03NC)

SMS03 + CM1A4/03M



Dimensions
88 x 25 x 13 (mm)
Operating distance
20 mm
Output
2 NO: SMS03 + CM1A4/03MT
Output connection
M12 4-pole connector
Housing material
Plastic
Operating temperature
-25° to +70°C / -13° to +158°F
Degree of protection
IP 67
Safety category
4

SMS10



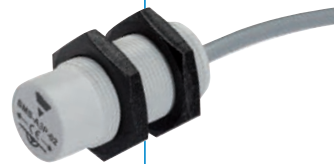
Dimensions
88 x 25 x 13 (mm)
Operating distance
17 mm (SMS10NC)
20 mm (SMS10)
Output
1 NO: SMS10NC / SMS10
Output connection
Cable
Housing material
Plastic
Operating temperature
-25° to +70°C / -13° to +158°F
Degree of protection
IP 67
Safety category
4
Auxiliary output
1NC (SMS10NC)

CYLINDRICAL

SMS



Dimensions
M18 x 1 (mm)
Operating distance
15 mm
Output
1 NO+1 NC: SMSA2P02 /
SMSA2P02LD / SMSA2M02
Output connection
Cable
Housing material
Plastic
Stainless steel (SMSA2M02)
Operating temperature
-25° to +70°C / -13° to +158°F
Degree of protection
IP 67
Safety category
4
Indication for Gate open
LED, red (SMSA2P02LD)

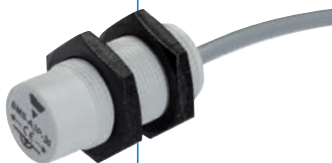


Dimensions
M30 x 1.5 (mm)
Operating distance
15 mm
Output
1 NO+1 NC: SMSA3P02
Output connection
Cable
Housing material
Plastic
Operating temperature
-25° to +70°C / -13° to +158°F
Degree of protection
IP 67
Safety category
4



Dimensions
M18 x 1 (mm)
Operating distance
16 mm
Output
1 NO: SMSA2P10 / SMSA2M10
2 NO: SMSA2P30
Output connection
Cable
Housing material
Plastic
Operating temperature
-25° to +70°C / -13° to +158°F
Degree of protection
IP 67
Safety category
3

SMS



Dimensions
M30 x 1.5 (mm)
Operating distance
16 mm
Output
2 NO: SMSA3P30
Output connection
Cable
Housing material
Plastic
Operating temperature
-25° to +70°C / -13° to +158°F
Degree of protection
IP 67
Safety category
3



Dimensions
M18 x 1 (mm)
Operating distance
20 mm
Output
2 NO: SMSA2P03
Output connection
Cable
Housing material
Plastic
Operating temperature
-25° to +70°C / -13° to +158°F
Degree of protection
IP 67
Safety category
4



Dimensions
M30 x 1.5 (mm)
Operating distance
20 mm
Output
2 NO: SMSA3P03
Output connection
Cable
Housing material
Plastic
Operating temperature
-25° to +70°C / -13° to +158°F
Degree of protection
IP 67
Safety category
4



CLS SERIES MAGNETS

CLS: rectangular



Dimensions
88 x 25 x 13 (mm)
Housing material
Plastic
Operating temperature
-25° to +70°C / -13° to +158°F
Degree of protection
IP 67

CLSA2/CLSA2M: cylindrical



Dimensions:
Ø 25.1 x 9.3 (mm)
Housing material
Plastic (CLSA2)
Stainless steel (CLSA2M)
Operating temperature
-25° to +70°C / -13° to +158°F
Degree of protection
IP 67

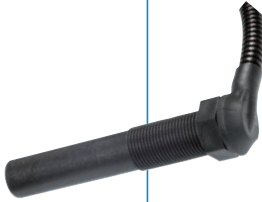
CLSA3 cylindrical



Dimensions
Ø 30 x 16 (mm)
Housing material
Plastic
Operating temperature
-25° to +70°C / -13° to +158°F
Degree of protection
IP 67

MAGNETIC SENSORS

Pick up sensors



Dimensions
M20 x 1.5 (mm)
Body length
60 mm: PA2PK F45T60
70 mm: PA2PK F45T70
107 mm: PA2PK F45T107
Output connection:
AMP connector
Housing material
Nylon
Operating temperature
-40° to +130°C / -40° to +266°F
Degree of protection
IP 65

Type selection

Type Number	Operating distance	Dimensions (mm)	Contact Ratings	Housing Material	Output
Rectangular					
SA2	10 - 32 (mm)	79 x 21.2 x 11.5	250 VAC, 3 A	Plastic	NO
SA8	10 - 32 (mm)	79 x 21.2 x 11.5	1500 VAC, 3 A	Plastic	NO
SC2	9 - 28 (mm)	79 x 21.2 x 11.5	250 VAC, 3 A	Plastic	NC
SC8	9 - 28 (mm)	79 x 21.2 x 11.5	1500 VAC, 3 A	Plastic	NC
SS2	10 - 32 (mm)	79 x 21.2 x 11.5	220 VAC, 1 A	Plastic	CO
SB2	8 - 30 (mm)	79 x 21.2 x 11.5	250 VAC, 3 A	Plastic	Bistable
SB2 S5	8 - 30 (mm)	79 x 21.2 x 11.5	250 VAC, 3 A	Plastic	Bistable
SBS2	8 - 30 (mm)	79 x 21.2 x 11.5	220 VAC, 1 A	Plastic	Bistable CO
SPB2	5 - 30 (mm)	85 x 24 x 25.5	250 VAC, 3 A	Plastic	Bistable
SPB2 2MT	5 - 30 (mm)	85 x 24 x 25.5	250 VAC, 3 A	Plastic	Bistable
SPA1 S2	12 mm	90 x 20 x 16	24 VDC, 4 A	ABS class V0	NC
SPA1 S3	12 mm	90 x 20 x 16	24 VDC, 4 A	ABS class V0	NC
MSA1	10 - 35 (mm)	37 x 16 x 8.3	230 VAC, 0.75 A	Plastic	NO
MA3	10 - 35 (mm)	37 x 16 x 8.3	500 VAC, 0.5 A	Plastic	NO
MC3	7 - 30 (mm)	37 x 16 x 8.3	500 VAC, 0.5 A	Plastic	NC
MS1	10 - 35 (mm)	37 x 16 x 8.3	100 VAC, 0.25A	Plastic	CO
MMA3	10 - 35 (mm)	27 x 11 x 7	500 VAC, 0.5 A	Plastic	NO
MMS1	10 - 35 (mm)	27 x 11 x 7	100 VAC, 0.25 A	Plastic	CO
MMA6	14 - 40 (mm)	23.5 x 14 x 6.1	100 VDC, 1 A	Plastic	NO
Cylindrical					
FMA3	9 - 25 (mm)	Ø 9.3	500 VAC, 0.5 A	Plastic	NO
FMC3	7 - 20 (mm)	Ø 9.3	500 VAC, 0.5 A	Plastic	NC
FMS1	9 - 25 (mm)	Ø 9.3	100 VAC, 0.25 A	Plastic	CO
FMA3 S5	7 - 23 (mm)	M10 x 0.75	500 VAC, 0.5 A	Brass	NO
FMA6	15 -36 (mm)	M10 x 0.75	100 VAC, 0.5 A	Nickel plated brass	NO
FMC3 S1	5 - 18 (mm)	M12 x 1	500 VAC, 0.5 A	Brass	NC
FMMA3	10 - 27 (mm)	M8 x 1	500 VAC, 0.5 A	Stainless steel	NO
FMMA6	13 mm	M8 x 1	100 VAC, 0.5 A	Nickel plated brass	NO
FMMS1	8 - 23 (mm)	M8 x 1	100 VAC, 0.25 A	Stainless steel	CO
FMMPA7 L25	> 8 mm	Ø 6 x 25	100 VAC, 0.4 A	Plastic	NO
FMMPA7 L33	> 8 mm	Ø 6 x 33	100 VAC, 0.4 A	Plastic	NO
FMMPA7 L38	> 8 mm	Ø 6 x 38	100 VAC, 0.4 A	Plastic	NO
FMPA7	26 mm	M12 x 1	250 VAC, 0.5 A	Plastic	NO
FMPA9	7 mm	M12 x 1	230 VAC, 3 A	Plastic	NO
FMPA9S1	17 mm	M12 x 1	230 VAC, 3 A	Plastic	NO
FMPC7	23 mm	M12 x 1	250 VAC, 0.5 A	Plastic	NC
FMPC9	26 mm	M12 x 1	230 VAC, 3 A	Plastic	NC
FMPS1	20 mm	M12 x 1	100 VAC, 0.25 A	Plastic	CO
FMPB2	15 mm	M12 x 1	250 VAC, 3A	Plastic	Bistable
FSA2	7 - 12 (mm)	Ø 13.5	250 VAC, 3A	Plastic	NO
FSA8	7 - 12 (mm)	Ø 13.5	1500 VAC, 3 A	Plastic	NO
FSC2	3 - 12 (mm)	Ø 13.5	250 VAC, 3A	Plastic	NC
FSC8	3 - 12 (mm)	Ø 13.5	1500 VAC, 3 A	Plastic	NC
FSS2	7 - 12 (mm)	Ø 13.5	220 VAC, 1A	Plastic	CO
FSA2 S3 2MT	7 - 12 (mm)	M10 x 1.25	250 VAC, 3A	Brass	NO
FSS2 S1 2MT	7 - 12 (mm)	M10 x 1.25	220 VAC, 1A	Brass	CO
FSA2 S4 2MT	7 - 12 (mm)	M12 x 1	250 VAC, 3A	Brass	NO
FSS2 S4 2MT	7 - 12 (mm)	M12 x 1	220 VAC, 1A	Brass	CO
FSB2 2MT	11 - 32 (mm)	M16 x 1.5	250 VAC, 3A	Plastic	Bistable
FSLPA7	front: 25, side: 15	Ø 16 x 110	100 VAC, 0.4 A	Plastic	NO
FSLPB2	front: 18, side: 10	Ø 16 x 110	250 VAC, 3 A	Plastic	Bistable
FSMA2	2 - 19 (mm)	M12 x 1	250 VAC, 3 A	Nickel plated brass	NO
FSMA7	7 mm	M12 x 1	24 VDC, 50 mA	Nickel plated brass	NO
FSMS2	9 - 19 (mm)	M12 x 1	220 VAC, 1A	Nickel plated brass	CO
FSMS2 S2	8 mm	M16 x 1	220 VAC, 1A	Brass	CO
FSMS2 S2 AT	8 mm	M16 x 1	220 VAC, 1A	Brass	CO
FSQA3 A01 2MT HF	7 - 23 (mm)	M12 x 1 mm	500 VAC, 0.5 A	Stainless steel	NO



Type selection

Type Number	Operating distance	Dimensions (mm)	Contact Ratings	Housing Material	Output
Fork					
IA2	--	75 x 50.7 x 40	250 VAC, 3 A	Plastic	NO
IA8	--	75 x 50.7 x 40	1500 VAC, 3 A	Plastic	NO
IC2	--	75 x 50.7 x 40	250 VAC, 3 A	Plastic	NC
IC8	--	75 x 50.7 x 40	1500 VAC, 3 A	Plastic	NC
IS2	--	75 x 50.7 x 40	220 VAC, 1 A	Plastic	CO
ISYC3	--	45 x 37 x 10	500 VAC, 0.5	Plastic	NC
ISYS1	--	45 x 37 x 10	100 VAC, 0.25	Plastic	CO
IMC3	--	28 x 18.5 x 7	500 VAC, 0.5 A	Plastic	NC
IMS1	--	28 x 18.5 x 7	100 VAC, 0.25 A	Plastic	CO
Cylindrical level					
ILM2	--	Ø 53	250 VAC, 3 A	Stainless steel	NO, NC
ILM8	--	Ø 53	1500 VAC, 3 A	Stainless steel	NO, NC
ILMS2	--	Ø 53	220 VAC, 1 A	Stainless steel	CO
ILC	--	Ø 53	on request	Stainless steel	CO
ILMM5	--	Ø 28	240 VAC, 220 VDC, 0.5 A	Stainless steel	NO, NC
ILMM5 90	--	Ø 28	240 VAC, 220 VDC, 0.5 A	Stainless steel	NO, NC
ILMM5 AT S1	--	Ø 28	240 VAC, 220 VDC, 0.5 A	Stainless steel	NO, NC
ILMM5 S2 AT	--	Ø 28	240 VAC, 220 VDC, 0.5 A	Stainless steel	NO
ILMM5 S1	--	Ø 28	240 VAC, 220 VDC, 0.5 A	Stainless steel	NO
ILMM5 S2	--	Ø 28	240 VAC, 220 VDC, 0.5 A	Stainless steel	NO
ILSP2	--	Ø 44	250 VAC, 3 A	Plastic	NO, NC
ILSP8	--	Ø 44	1500 VAC, 3 A	Plastic	NO, NC
ILSPS2	--	Ø 44	220 VAC, 1 A	Plastic	CO
FLMA1 S1	5 mm	M10 x 1	100 VAC, 0.4 A	Stainless steel	NO
ILMPU5	--	Ø 17.5	240 VAC, 200 VDC, 0.5 A	Plastic	NO, NC
ILMU5	--	Ø 31	240 VAC, 200 VDC, 0.5 A	Plastic	NO, NC
ILU2	--	Ø 45	250 VAC, 3 A	Plastic	NO
ILU8	--	Ø 45	1000 VAC, 3 A	Plastic	NO
ILUS2	--	Ø 45	220 VAC, 1 A	Plastic	CO
ILUS2 S1	--	Ø 45	220 VAC, 1 A	Plastic	CO
ILMP5	--	Ø 25	240 VAC, 200 VDC, 0.5	Plastic	NO, NC
ILMP5 P	--	Ø 25	240 VAC, 200 VDC, 0.5	Plastic	NO, NC
Atex					
MQA1 EX	10 - 35 (mm)	37 x 16 x 8.3	230 VAC, 0.75 A	Polypropylene	NO
MQC1 EX	7 - 30 (mm)	37 x 16 x 8.3	230 VAC, 0.75 A	Polypropylene	NC
FSQA2 B01 EX	8 - 30 (mm)	PG 13.5	250 VAC, 3 A	Stainless steel	NO
FSQA2 B03 EX	8 - 30 (mm)	PG 13.5	250 VAC, 3 A	Stainless steel	NO
ILMS2 S EX	--	Ø 53	230 VAC, 1 A	Stainless steel	CO
ILMS2 C EX	--	45 x 55	230 VAC, 1 A	Stainless steel	CO
CL series Magnets					
CL1	--	14 x 25 x 8	--	Plastic	--
CL2	--	12 x 44.5 x 9	--	Plastic	--
CL3	--	18 x 59 x 9	--	Plastic	--
CL4	--	25 x 76 x 18	--	Plastic	--
CL90	--	31 x 90 x 22.5	--	Plastic	--
CL10	--	Ø 9.3 x 32	--	Plastic	--
CL11	--	Ø 13.5 x 65	--	Plastic	--
CL18	--	Ø 18 x 6	--	Plastic	--
CL23	--	Ø 23 x 9	--	Plastic	--
CL31	--	Ø 31 x 10	--	Plastic	--
CL20S1	--	Ø 20 x 10.5	--	Plastic	--
CL20S3	--	Ø 22.5 x 10.5	--	Plastic	--
CL50	--	Ø 50 x 10	--	Plastic	--

Type selection

Type number	Operating distance	Dimensions (mm)	Contact Ratings	Housing Material	Output
Rectangular sensors					
SMS01	10 mm	88 x 25 x 13	100 VAC, 0.25 A	Plastic	1 NO+1 NC
SMS02	20 mm	88 x 25 x 13	100 VAC, 0.25 A	Plastic	1 NO+1 NC
SMS02LD	20 mm	88 x 25 x 13	100 VAC, 0.25 A	Plastic	1 NO+1 NC
SMS02S1	20 mm	88 x 25 x 13	100 VAC, 0.25 A	Plastic	1 NO+1 NC
SMS03	20 mm	88 x 25 x 13	100 VAC, 0.25 A	Plastic	2 NO
SMS03NC	20 mm	88 x 25 x 13	100 VAC, 0.25 A	Plastic	2 NO
SMS03+CM1A4/03MT	20 mm	88 x 25 x 13	100 VAC, 0.25 A	Plastic	2 NO
SMS10	20 mm	88 x 25 x 13	100 VAC, 0.25 A	Plastic	1 NO
SMS10NC	17 mm	88 x 25 x 13	100 VAC, 0.25 A	Plastic	1 NO
Cylindrical sensors					
SMSA2P02	15 mm	M18 x 1	100 VAC, 0.25 A	Plastic	1 NO+1 NC
SMSA2P02LD	15 mm	M18 x 1	100 VAC, 0.25 A	Plastic	1 NO+1 NC
SMSA2M02	15 mm	M18 x 1	100 VAC, 0.25 A	Stainless steel	1 NO+1 NC
SMSA3P02	15 mm	M 30 x 1.5	100 VAC, 0.25 A	Plastic	1 NO+1 NC
SMSA2P10	16 mm	M 18 x 1	100 VAC, 0.25 A	Plastic	1 NO
SMSA2M10	16 mm	M18 x 1	100 VAC, 0.25 A	Stainless steel	1 NO
SMSA2P30	16 mm	M18 x 1	100 VAC, 0.25 A	Plastic	2 NO
SMSA3P30	16 mm	M30 x 1.5	100 VAC, 0.25 A	Plastic	2 NO
SMSA2P03	20 mm	M18 x 1	100 VAC, 0.25 A	Plastic	2 NO
SMSA3P03	20 mm	M30 x 1.5	100 VAC, 0.25 A	Plastic	2 NO
CLS series Magnets					
CLS	--	88 x 25 x 13	--	Plastic	--
CLSA2	--	Ø 25.1 x 9.3	--	Plastic	--
CLSA2M	--	Ø 25.1 x 9.3	--	Stainless steel	--
CLSA3	--	Ø 30 x 16	--	Plastic	--
Magnetic sensors					
PA2PK F45T60	< 2 mm	M20 x 1.5	--	Nylon	--
PA2PK F45T70	< 2 mm	M20 x 1.5	--	Nylon	--
PA2PK F45T107	< 2 mm	M20 x 1.5	--	Nylon	--

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