
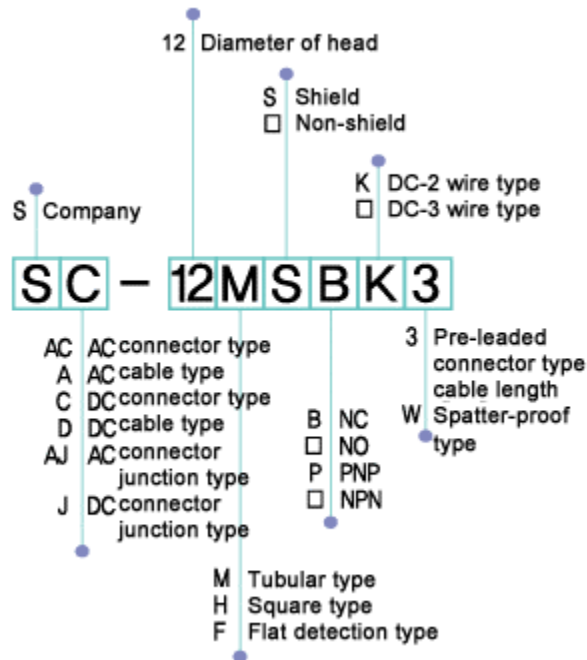


### SPECIFICATIONS

Outer shape	Model	Sensing distance(m/m)	Output	Response frequency	Power source
12Ø 	SD-12MS	2	NPN NO	800 Hz	DC 10~30V

### ● ORDERING INFORMATION



Model	SD-12MS	
Shape	Shield	
Setting distance(Rated)	2 mm ± 10%	
Setting distance(Actual)	0~1.4 mm	
Standard target	Iron 12×12×t1 mm	
Hysteresis	Less than 10% of the rated sensing distance	
Power source	12~24V DC±10% (10~30V DC Ripple p-p Less than 10%)	
Current consumption	Less than 15 mA	
Output	Load current	200 mA

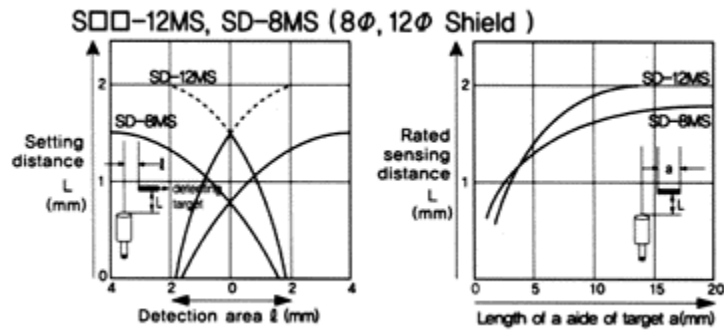
	Residual voltage	Less than 1.5V(24V DC in power ON state at 200 mA)
	Protection circuit	Surge protection circuit, Overload & short circuit protection
	Max. response frequency	800Hz
Environmental Resistance	Ambient temperature	-25 to +70°C, storage:-25~*80°C(Non-freezing condition)
	Protection	IP67(IEC Specification)
	Cable	*Oil,heat and cold resistant cable *Cable type:cable with 2m *Connector type:cable SD-3I5, SD-3L5
	Accessories	

### OUTLINE DIMENSIONS

Model	Shield type
SD-12MS	

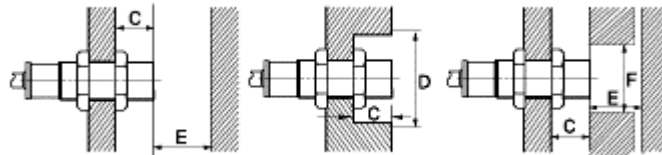
### Sensing Fields(Typical)

If detecting target with a smaller size than the standard target, the sensing distance will become shorter.



### Sensors Embedded in Metal

If the sensor is completely embedded in metal, its sensing distance may decrease thus it shall be established with the following values as shown at Table1.



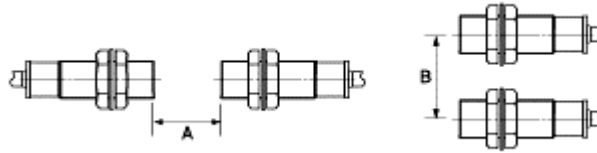
(Table 1.)

(Unit mm)

	Non-Shield			Shield		
	S□□-12M□ (8M)	S□□-18M□	S□□-30M□	S□□-12MS□ (8MS)	S□□-18MS□	S□□-30MS□
C	15(8)	22	30	0	0	0
D	36(24)	54	90	12(8)	18	30
E	20(6)	40	70	8(4.5)	20	40
F	40(24)	70	90	18(12)	27	45

### Mutual Interference

When mounting plural proximity switches in parallel or face to face, allow the clearance listed in the table2. below to avoid mutual interference.



(Table 2.)

(Unit mm)

	Non-Shield			Shield		
	S□□-12M□ (8M)	S□□-18M□	S□□-30M□	S□□-12MS□ (8MS)	S□□-18MS□	S□□-30MS□
A	24(16)	48	90	12(9)	30	60
B	36(24)	54	90	24(16)	36	60

### Sensing distance, Correction coefficient

The sensing distance listed in this specifications is for the standard target. For non-ferrous object detection, the sensing distance will be obtained by multiplying the correction coefficient.

Target	Iron	SUS 304	Brass	Aluminum
All models	1.0	Approx. 0.7	Approx. 0.4	Approx. 0.35