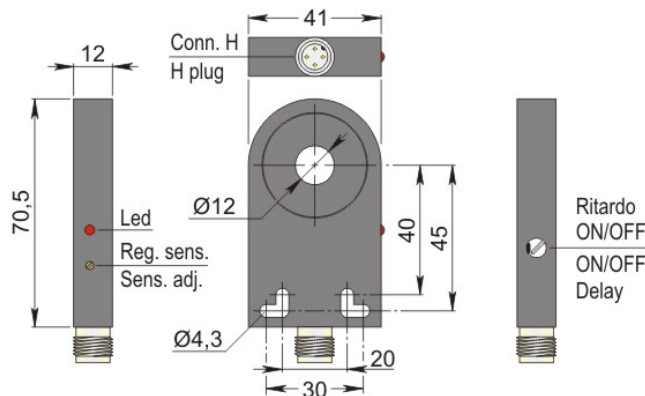




## POSITION SENSORS

### Inductive Ring Sensors

Part number: **SIA000141** Model: **SIA12-CE PNP NO+NC H R**



Dimension in mm

## 1. TECHNICAL CHARACTERISTICS



Electrical data		
Power supply type:		Direct current
Working voltage:	[V]	10 ÷ 30
Current consumption:	[mA]	< 15 mA @ 24Vdc
Protection class:		III
Reverse polarity protection:		Presente
Outputs		
Electrical design:		PNP
Function:		NO+NC
Delay ON de-energization:	[ms]	100 (when inserted)
Max voltage drop:	[V]	< 1.8
Max output current:	[mA]	200
Max switching frequency:	[Hz]	See instructions for installation
Short circuit protection:		Present
Overload protection:		Present
Detection zone		
Sensing hole diameter:	[mm]	12
Minimum detectable object:	[mm]	Ø 1.2x2 - Fe360
Accuracy and Deviations		
Correction factor:		Stainless steel: 0.9 - Brass: 0.5 - Aluminium: 0.4 - Copper: 0.4
Hysteresis:	[%Sr]	Depends on the sensitivity
Switching point drift:	[%Sr]	-1
Repeatability:	[%Sn]	< 0.3
Environmental conditions		
Temperature limits:	[°C]	-20 / +60 °C
IP rating:		IP65
Display and control elements		
Display:		Output switching status - 4 x 90° LED: Yellow



## POSITION SENSORS Inductive Ring Sensors

### Mechanical data

Housing:		Ring
Dimensions:	[Hz]	41 x 12 x 70.5
Materials:		Housing: PC black - Sensing area: PVC black
Mounting:		Not embeddable
Weight:	[g]	50

### Electrical connection

Connector:		H type - M12X1 - Gold plated contacts
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### Compliance to Standards / Directives

Directives compliance:		2014/30/EU -Electromagnetic compatibility directive (EMC)
Standards compliance:		EN60947-5-2 - Product standard

## 2. NORME DI INSTALLAZIONE

### WIRING DIAGRAM

**CONNECTION WITH H PLUG**

PNP NO+NC

**VIEW OF MALE CONNECTOR**

1 = Brown / +  
3 = Blue / -  
4 = Black / output NO  
2 = White / output NC

### INSTRUCTIONS FOR CORRECT INSTALLATION

**INSTRUCTIONS FOR CORRECT INSTALLATION**

**Fig. 1**

**Fig. 2**

Model	SIA05	SIA12	SIA15	SIA22	SIA30	SIA44	SIA63	SIA100
A (Fig. 1) mm	25	30	30	60	60	300	300	600
B (Fig. 2) mm	10	10	10	20	20	250	250	650



## POSITION SENSORS Inductive Ring Sensors

Titolo img 1

### MIN. DIMENSIONS OF THE OBJECT TO DETECT (Fe37)

Model		SIA12
Lenght	mm	2
Diameter	mm	1.2

### SWITCHING FREQUENCY

The switching frequency of inductive ring sensors depends on delayed impulse time (**when inserted**) according to the formula :

$$\text{Switching frequency (Hz)} = \frac{1}{(\text{T impulse} + 10) \text{ mS}}$$

Vice versa, the switching frequency will be between 600+1000 Hz.