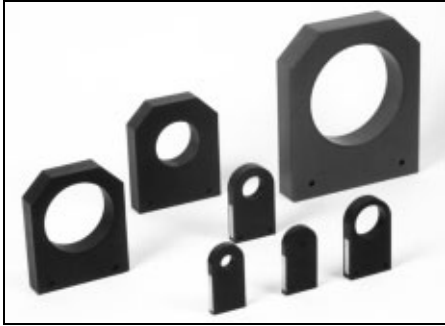


## Ring DC 4 Wire



**FEATURES:**

- Internal diameters of 5, 12, 15, 22, 25, 30, 44, 63, 100 mm
- Adjustable sensitivity
- Delay ON/OFF switch
- LED function indicator
- Short circuit & reverse polarity protection
- Pre-wired cable or connector models
- 3.5, 5, 7.5 and 10 meter cable lengths upon request
- CE Marked
- Protection degree IP65: dust tight and protection against water jets.

**DESCRIPTION:**

In inductive ring sensors, the sensing area is located inside the ring. These sensors are designed to detect metallic masses entering or passing through the ring. They are ideal for sensing, counting and checking of small metal parts such as: screws, washers, nuts etc. and the control, detection, position, inspection and automation of machine tools & manufacturing systems.

They operate on a 10-30 Vdc supply and offer NPN or PNP, NO+NC outputs. They are sealed in a rugged, plastic housing with

a protection degree of IP 65. All versions have short circuit and reverse polarity protection and are available in either prewired cable or connector output connection. Each unit is supplied with a sensitivity adjustment and a delay ON/OFF switch that fixes the output pulse for 100mS. This makes them ideal for detection of fast moving small metal objects. Special version NAMUR output is available.

The operating distance of the sensor depends on the actuator shape and size and is strictly linked to the nature of the metal. For minimum target size, see Table 1.

		MODEL				
Output Connection		Cable (L=2 meter)				
Output Function	NPN, NO+NC	S3200R	S3202R	S3236R	S3204R	S3208R
	PNP, NO+NC	S3201R	S3203R	S3237R	S3205R	S3209R
Output Connection		Connector (Type C)				
Output Function	NPN, NO+NC	S3216R	S3218R	S3238R	S3220R	S3224R
	PNP, NO+NC	S3217R	S3219R	S3239R	S3221R	S3225R
Dimensions: mm 1 mm = .03937"						
CE		Ø 5	Ø 12	Ø 15	Ø 22	Ø 30
Hole diameter						
Power Supply		10-30 Vdc				
Power Drain		<18 mA				
Voltage Drop (on state)		<1.8 Vdc				
Switching Current		200 mA				
Short Circuit Protection		Yes				
Operating Frequency		600 - 1500 Hz	600 - 1000 Hz		600 - 1000 Hz	600 - 800 Hz
Repeatability		< 0.3 mm				
Case		Plastic				
Flush Mounting		No				
Protection Degree		IP 65				
Operating Temperature		-25 to +70°C (-13 to 158°F)				

Table 1

Min. dimensions of target Iron (Fe37).								
Hole Diameter	5 mm	12 mm	15 mm	22 mm	30 mm	44 mm	63 mm	100 mm
Length mm	1	2	2	6	7	9	12	20
Diameter mm	0.7	1.2	1.2	3	4	5	6	12

## Inductive

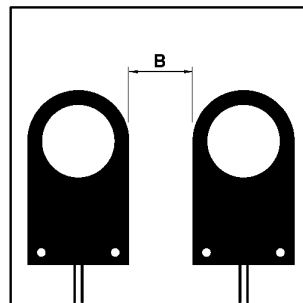
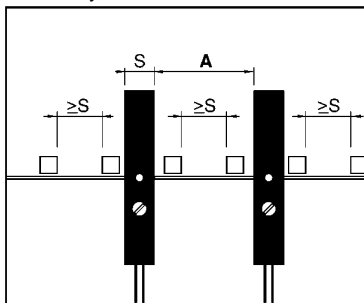
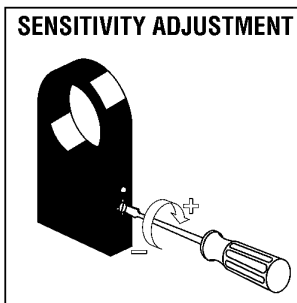
		MODEL		
Output Connection		Cable (L=2 meter)		
Output Function	NPN, NO+NC	S3210R	S3212R	S3214R
	PNP, NO+NC	S3211R	S3213R	S3215R
Output Connection		Connector (Type C)		
Output Function	NPN, NO+NC	S3226R	S3228R	S3230R
	PNP, NO+NC	S3227R	S3229R	S3231R
Dimensions: mm 1 mm = .03937"				
Hole diameter		Ø 44	Ø 63	Ø 100
Power Supply		10-30 Vdc		
Power Drain		<18 mA		
Voltage Drop (on state)		<1.8 Vdc		
Switching Current		200 mA		
Short Circuit Protection		Yes		
Operating Frequency		250 - 600 Hz	100 - 200 Hz	100 Hz
Repeatability		< 0.3 mm		
Case		Plastic		
Flush Mounting		No		
Protection Degree		IP 65		
Operating Temperature		-25 to +70°C (-13 to 158°F)		

**SELECTION OF RING SENSOR:** Select the minimum ring diameter required. This enables the sensitivity adjustment to be made within normal parameters ensuring proper functioning of the unit.

**SENSITIVITY ADJUSTMENT:** After selection of the ring diameter, it is recommended that the sensitivity adjustment be made while the sensor is installed in its final position, enabling any surrounding metal to be taken into account. Sensitivity increases by turning the trimmer clockwise and decreases by turning it counter-clockwise.

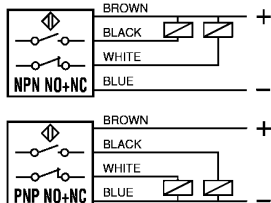
**EFFECTS OF METAL IN THE CLOSE VICINITY:** Moving metal parts close to the sensing area can affect the performance of the sensor. In order to ensure proper functioning, mount the sensor away from metallic objects.

**USE OF SENSOR:** A distance equal to the width of the sensor should be left between each object that passes through the sensor. If more than one sensor is to be installed in close vicinity, the minimum distance indicated between sensors should be observed.

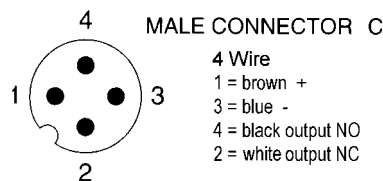


Hole Dia.	A (mm)	B (mm)
5 mm	25	10
12 & 15 mm	30	10
22 mm	60	20
30 mm	60	20
44 mm	300	250
63 mm	300	250
100 mm	600	650

### WIRING:



### CONNECTOR:



### MATING CONNECTORS:

ID#	Type	Description
4 wire		
S3496/2	C	right angle w/ 2 meter cable
S3496	C	right angle w/ 5 meter cable
S3499/2	C	straight w/ 2 meter cable
S3499	C	straight w/ 5 meter cable