

# Ring - Sensors

Ø 10 ... Ø 270 mm

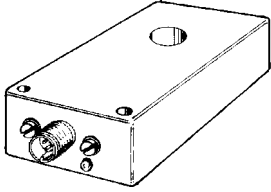
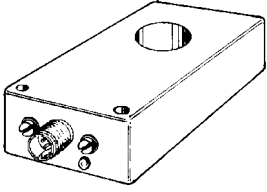
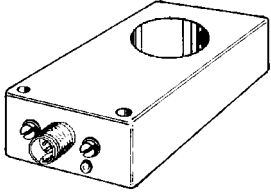
Item group 250

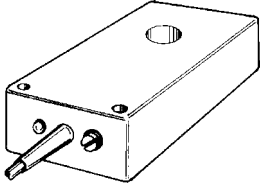
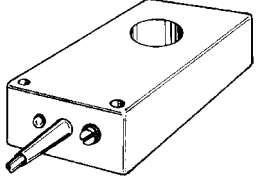
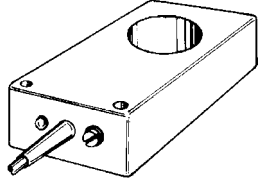


## Detection of metallic objects

- nails
- welding bolts
- counting of parts
- ejection monitoring
- wire crack indication

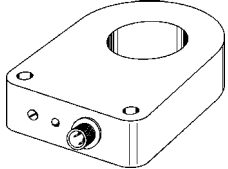
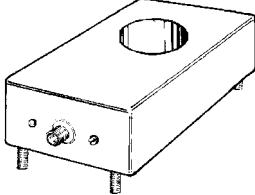
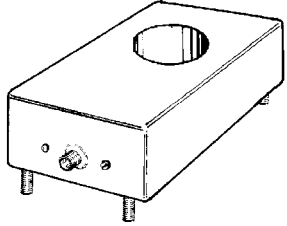
The output of the ring-sensor operates statically, i. e. it changes the output signal as long as a metallic object is in the aperture. This time depends on velocity, size and material of the object. The optional time delay operates as adjustable off-delay and thus safe detection is possible for the signal processing system.

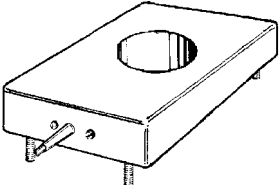
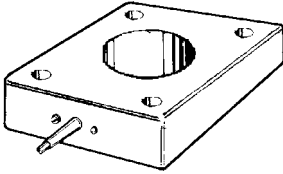
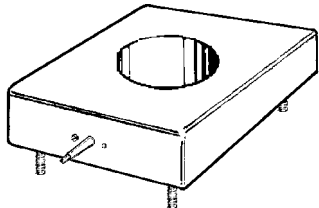
Aperture:	Ø 10 mm	Ø 15 mm	Ø 25 mm
			
<b>Sensitivity:</b>	≥ 2 mm Ø (Steel ball St37)	≥ 3 mm Ø (Steel ball St37)	≥ 4 mm Ø (Steel ball St37)
Dimension: L x W x H	80 x 45 x 20 mm	80 x 45 x 20 mm	80 x 45 x 20 mm
Fixing:	2 x Ø 4,5 mm, distance 33 mm	2 x Ø 4,5 mm, distance 33 mm	2 x Ø 4,5 mm, distance 33 mm
Connection:	Plug S4 (M12 x 1)	Plug S4 (M12 x 1)	Plug S4 (M12 x 1)
Target velocity:	max. 60 m/s	max. 60 m/s	max. 60 m/s
Time delay:	no	no	no
<b>Type:</b>	<b>IKV 010.23 G S4</b>	<b>IKV 015.23 G S4</b>	<b>IKV 025.23 G S4</b>
Art.-No.:	2453A	2454A	2455A
Time delay:	2,5 – 250 ms adjustable	2,5 – 250 ms adjustable	2,5 – 250 ms adjustable
<b>Type:</b>	<b>IKV 010.23 GZ S4</b>	<b>IKV 015.23 GZ S4</b>	<b>IKV 025.23 GZ S4</b>
Art.-No.:	2034P	2034Q	2034R
Note:			

Aperture:	Ø 10 mm	Ø 15 mm	Ø 25 mm
			
<b>Sensitivity:</b>	≥ 2 mm Ø (Steel ball St37)	≥ 3 mm Ø (Steel ball St37)	≥ 4 mm Ø (Steel ball St37)
Dimension: L x W x H	80 x 45 x 20 mm	80 x 45 x 20 mm	80 x 45 x 20 mm
Fixing:	2 x Ø 4,5 mm, distance 33 mm	2 x Ø 4,5 mm, distance 33 mm	2 x Ø 4,5 mm, distance 33 mm
Connection:	3 m cable	3 m cable	3 m cable
Target velocity:	max. 60 m/s	max. 60 m/s	max. 60 m/s
Time delay:	no	no	no
<b>Type:</b>	<b>IKV 010.23 G</b>	<b>IKV 015.23 G</b>	<b>IKV 025.23 G</b>
Art.-No.:	2034N	2454B-3	2034B-3
Time delay:		2,5 – 250 ms adjustable	2,5 – 250 ms adjustable
<b>Type:</b>		<b>IKV 015.23 GZ</b>	<b>IKV 025.23 GZ</b>
Art.-No.:		2035A	2034F
Note:			

## Ring-Sensors

The response sensitivity can be adjusted. The nominal sensitivity is referred to a ball of steel (St37). In case of pins or wires considerably smaller diameters are detected. Brass, Aluminium or copper reduce the sensitivity. Mounting in series with small distance between the sensors can result in troubles because of interference. This can be remedied by using different oscillation frequencies.

Aperture:	Ø 45 mm	Ø 60 mm	Ø 80 mm
			
<b>Sensitivity:</b>	≥ 9 mm Ø (Steel ball St37)	≥ 9 mm Ø (Steel ball St37)	≥ 10 mm Ø (Steel ball St37)
Dimension: L x W x H	115 x 80 x 30 mm	145 x 100 x 50 mm	200 x 150 x 64 mm
Fixing:	2 x Ø 7 mm, distance 60 mm	4 x M8 x 30, 120 x 75 mm	4 x M8 x 30, 160 x 110 mm
Connection:	Plug S4 (M12 x 1)	Plug S4 (M12 x 1)	Plug S4 (M12 x 1)
Target velocity:	max. 20 m/s		
Time delay:	no	no	no
<b>Type:</b>	<b>IKV 045.23 G S4</b>	<b>IKV 060.23 G S4</b>	<b>IKV 080.23 G S4</b>
Art.-No.:	2035J	2456A	2035O
Time delay:	2,5 – 250 ms adjustable		
<b>Type:</b>	<b>IKV 045.23 GZ S4</b>		
Art.-No.:	2035L		
Note:			

Aperture:	Ø 120 mm	Ø 170 mm	Ø 270 mm
			
<b>Sensitivity:</b>	≥ 30 mm Ø (Steel ball St37)	≥ 40 mm Ø (Steel ball St37)	≥ 60 mm Ø (Steel ball St37)
Dimension: L x W x H	240 x 200 x 50 mm	260 x 260 x 50 mm	390 x 360 x 50 mm
Fixing:	4 x M8 x 30, 140 x 160 mm	4 x Ø 9 mm, 210 x 210 mm	4 x M8 x 30, 290 x 320 mm
Connection:	2 m cable	2 m cable	2 m cable
Time delay:	no	no	no
<b>Type:</b>	<b>IKV 120.23 G</b>	<b>IKV 170.23 G</b>	<b>IKV 270.23 G</b>
Art.-No.:	2036C	2036D	2036B
Time delay:			
<b>Type:</b>			
Art.-No.:			
Note:			

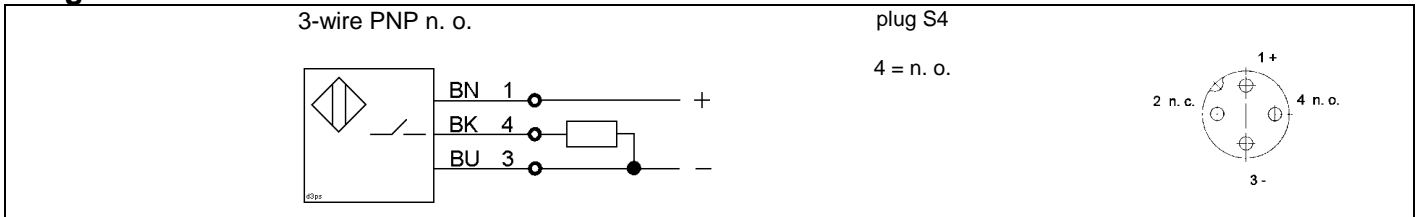
Additional variations available:

NPN output, normally-close behaviour, complementary outputs, various cable and plug variations, designs acc. to customers' specifications.

**General technical data**

Supply voltage	10 - 30 V DC	Sensitivity adjustable	yes
Ripple voltage	max. 15 %	Short circuit protection	yes, pulsing
Voltage drop	2 V	Protection class	IP 67*
No-load current	< 10 mA	Switching hysteresis	1 - 15 %
Load current max. IKV 010 - 025	0 - 200 mA	Ambient temperature	-25 to +70 °C
Load current max. IKV 045 - 270	0 - 400 mA	Function display	LED
Short-time load current	2 A / 10 ms 0,8 A / 100 ms	Housing material	plastic

\*Protection type IP 67 is complied with when the plug is perfectly connected with the socket and the protection screw for the adjusting unit is screwed in.

**Diagram of Connections**


Also available as NPN resp. normally closed.

**Accessories**

Suitable connection cable with moulded S4 angular connector, for all types (please order separately)	Type	Art.-No.
Length 2 m	ST 041-2	9841D
Length 5 m	ST 041-5	9841E