

Ring - Sensors

Ø 10 ... Ø 270 mm

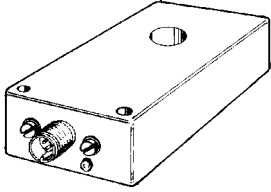
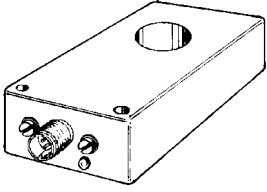
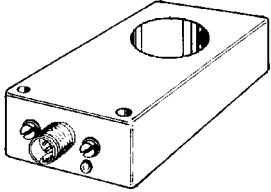
Item group 250

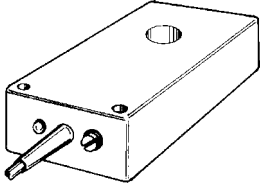
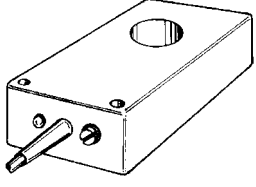
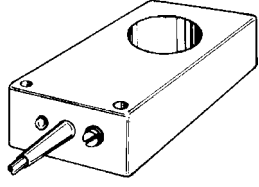


Detection of metallic objects

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

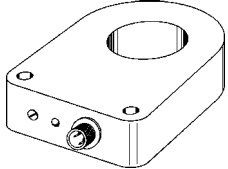
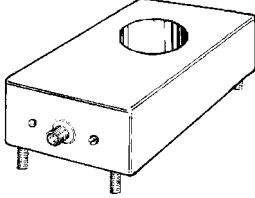
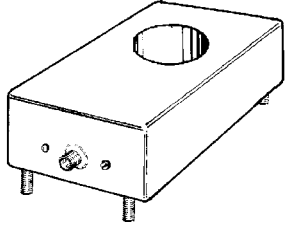
The output of the ring-sensor operates statically, i. e. it changes the output signal as long as a metallic object is in the aperture. This time depends on velocity, size and material of the object. The optional time delay operates as adjustable off-delay and thus safe detection is possible for the signal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

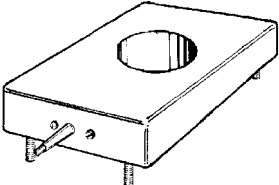
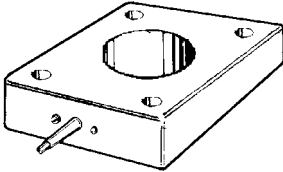
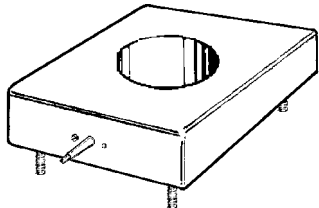
| Aperture: | Ø 10 mm | Ø 15 mm | Ø 25 mm |
|----------------------|---|--|---|
| |  |  |  |
| Sensitivity: | ≥ 2 mm Ø (Steel ball St37) | ≥ 3 mm Ø (Steel ball St37) | ≥ 4 mm Ø (Steel ball St37) |
| Dimension: L x W x H | 80 x 45 x 20 mm | 80 x 45 x 20 mm | 80 x 45 x 20 mm |
| Fixing: | 2 x Ø 4,5 mm, 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 |
| Type: | IKV 010.23 G S4 | IKV 015.23 G S4 | IKV 025.23 G S4 |
| Art.-No.: | 2453A | 2454A | 2455A |
| Time delay: | 2,5 – 250 ms adjustable | 2,5 – 250 ms adjustable | 2,5 – 250 ms adjustable |
| Type: | IKV 010.23 GZ S4 | IKV 015.23 GZ S4 | IKV 025.23 GZ S4 |
| Art.-No.: | 2034P | 2034Q | 2034R |
| Note: | | | |

| Aperture: | Ø 10 mm | Ø 15 mm | Ø 25 mm |
|----------------------|---|--|---|
| |  |  |  |
| Sensitivity: | ≥ 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 |
| Type: | IKV 010.23 G | IKV 015.23 G | IKV 025.23 G |
| Art.-No.: | 2034N | 2454B-3 | 2034B-3 |
| Time delay: | | 2,5 – 250 ms adjustable | 2,5 – 250 ms adjustable |
| Type: | | IKV 015.23 GZ | IKV 025.23 GZ |
| 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 |
|----------------------|---|--|---|
| |  |  |  |
| Sensitivity: | ≥ 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 |
| Type: | IKV 045.23 G S4 | IKV 060.23 G S4 | IKV 080.23 G S4 |
| Art.-No.: | 2035J | 2456A | 2035O |
| | | | |
| Time delay: | 2,5 – 250 ms adjustable | | |
| Type: | IKV 045.23 GZ S4 | | |
| Art.-No.: | 2035L | | |
| Note: | | | |

| Aperture: | Ø 120 mm | Ø 170 mm | Ø 270 mm |
|----------------------|---|--|---|
| |  |  |  |
| Sensitivity: | ≥ 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 |
| Type: | IKV 120.23 G | IKV 170.23 G | IKV 270.23 G |
| Art.-No.: | 2036C | 2036D | 2036B |
| | | | |
| Time delay: | | | |
| Type: | | | |
| Art.-No.: | | | |
| Note: | | | |

Additional variations available:

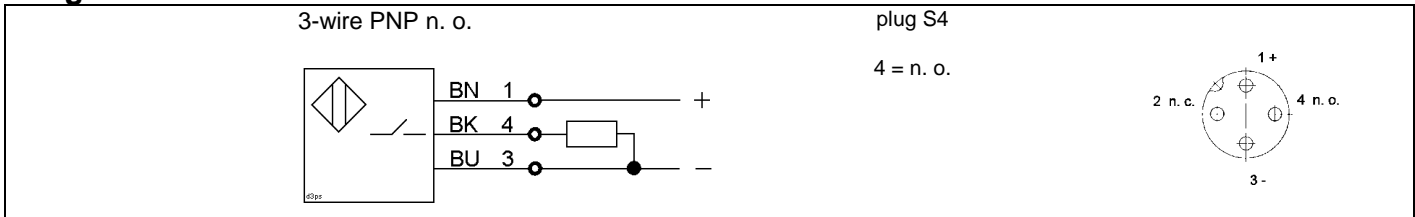
NPN output, normally-close behaviour, complementary outputs, various cable and plug variations, designs acc. to customers' specifications.

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 |

Range of products



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**Itemgroup
Inductive proximity switch**

- WG 210 Sensing distance < 20 mm
- WG 220 Sensing distance 20-60 mm
- WG 230 Sensing distance 60-120 mm
- WG 240 Sensor strips
- WG 241 Surface sensors
- WG 250 Ring-sensors
- WG 260 Inductive analog sensors and evaluation electronics

**Itemgroup
Other Sensors**

- WG 100 Capacitive Sensors
- WG 510 Piros Light barriers
- WG 610 Piros Infrared-Sensors
- WG 620 Piros for fibre optics
- WG 610 Piros Infrared-pyrometers
- WG 800 Flow-sensors for air
- WG 830 Flow-sensors