

# OVERVIEW RING DETECTORS

## analog

DESCRIPTION	Ø DIAMETER	SENSITIVITY	PAGE
KJR-D43KN-ANU	43 mm	1,0 mm ... 16 mm	5.2

**Analogue output** • When a metal part (theoretic all conductable materials) part pass the active magnetic field inside the ring there is an analogue output signal for the duration of metal detection. The level of the output signal depends on size, structure, properties of the metal part and orientation in the magnetic field. In the data sheet you find the diameters for ferrous metal bead-moldings. These bead-moldings will detect in the middle of the ring, the center is the point with lowest sensitivity. The magnetic field is larger than the free opening of the housing, that means around the housing metal can also detect. When there is no more metal in the active area the output signal is approx. 0V. The level of sensitivity can not adjust by this detectors.

## dynamic

DESCRIPTION	Ø DIAMETER	SENSITIVITY [Fe-bullet]	PAGE
KJR-D20AN-DNIA-VE	20 mm	ca. 0,5 mm	5.2
KJR-D35-AN-DNIA-VE	35 mm	ca. 0,5 mm	5.2
KJR-D50AN-DNIA-VE	50 mm	ca. 0,6 mm	5.5
KJR-D50FAN-DNIA-VE	50 mm	ca. 1,0 mm	5.5
KJR-D70AN-DNIA-VE	70 mm	ca. 1,0 mm	5.8
KJR-D100AN-DNIA-VE	100 mm	ca. 1,3 mm	5.8
KJR-Q130AN-DNIA-VE	130 mm	ca. 5,0 mm	5.12
KJR-D200AN-DNIA-VE	200 mm	ca. 3,0 mm	5.15
KJR-Q290AN-DNIA-VE	290 mm	ca. 12,0 mm	5.15
KJR-D300AN-DNIA-VE	300 mm	ca. 4,0 mm	5.18
MESEP® RG digital 50	50 mm	ca. 0,5 mm	5.21
MESEP® RG digital 70	70 mm	ca. 0,7 mm	5.21
M-Pulse RG 25	25 mm	ca. 0,1 mm	5.24
M-Pulse RG 35	35 mm	ca. 0,15 mm	5.24
M-Pulse RG 50	50 mm	ca. 0,25 mm	5.25
M-Pulse RG 70	70 mm	ca. 0,4 mm	5.25
M-Pulse RG 100	100 mm	ca. 0,5 mm	5.25

**Dynamic output signal [high sensitivity ring]** • When a moving metal part pass the active magnetic field of the ring [the most sensible area is inside the ring coils] the amplifier gives a very short output signal for some milliseconds. Whether the metal will detect depends on size, structure, properties of the metal part and orientation in the magnetic field. The level of sensitivity can adjust with a potentiometer to a minimum and maximum level. Dynamic ring are only available in NPN versions, that means the output signal decreases from + [power supply] 24V to 0V in the moment of metal detection. The high of the + signal depends on the high of power supply. This signal will normally amplify with an external control box [e.g. article 8102-0900] to control other processes or PLC units. The sensitivity of these units is higher as the static ring detectors in cause of their working principle. A metal part which stops inside the ring leads not to further signals, not until it moves again. Big metal parts can lead to several impulses. Extrem big metal parts generate a signal although they are not moving under certain conditions. Metal parts in free fall normally generate only one signal. There is limit for the max. operation frequency and for the max speed of detection. These limits depend on physical properties and must be checked in the practical application.

## statisch

DESCRIPTION	Ø DIAMETER	SENSITIVITY	PAGE
KJR-D43-KN-DPS	43 mm	9,0 mm	5.2
KJR-D50AN-DNA-VE	50 mm	3,0 mm	5.5
KJR-D50AN-DPA-VE	50 mm	3,0 mm	5.5
KJR-D100AN-DNA-VE	100 mm	6,0 mm	5.8
KJR-D100AN-DPA-VE	100 mm	6,0 mm	5.9
KJR-D100FAN-DPA-VE	100 mm	8,0 mm	5.9
KJR-D100FAN-DNA-VE	100 mm	8,0 mm	5.9
KJR-Q130AN-DNA-VE	130 mm	12,0 mm	5.12
KJR-Q130AN-DPA-VE	130 mm	12,0 mm	5.12
KJR-Q130AN-DNIA-VE	130 mm	5,0 mm	5.12
KJR-D200AN-DNA-VE	200 mm	15,0 mm	5.15
KJR-D200AN-DPA-VE	200 mm	15,0 mm	5.15
KJR-D300AN-DNA-VE	300 mm	30,0 mm	5.18
KJR-D300AN-DPA-VE	300 mm	30,0 mm	5.18

**Static output signal [normal sensitivities ring]** • When a metal part [theoretic all conductable materials] pass the active magnetic field of the ring the amplifier gives a constant output signal for the duration of metal detection. Whether the metal will detect depends on size, structure, properties of the metal part and orientation in the magnetic field. The level of sensitivity can adjust with a potentiometer to a minimum and maximum level. When there is no more metal in the active area of the ring the voltage output signal is on the no detection level. There are two kinds of signals available [NPN and PNP signals, PNP means the output signal] increase from 0V to + 24V [power supply] in the moment of metal detection. NPN means the output signal decreases from +24V [power supply] to 0V in the moment of metal detection. The high of the + signal depends on the high of power supply. Static sensor are able to detect bigger metal parts, so they will mainly use to count metal parts or to check if a special metal part exists or not. The ring detector detect metal parts without mechanical stress or contact for the product. The ring generate a signal if the metal part is bigger than the max sensitivity of the ring. With this output signal other processes can control or start. Metals in free fall produces only for the duration of detection a very short signal. There is limit for the max. operation frequency and for the max speed of detection. These limits depend on physical properties and must be checked in the practical application. To detect very small metal parts we recommend the ring detectors with the dynamic output signal. The level of sensitivity will be adjust with a potentiometer.