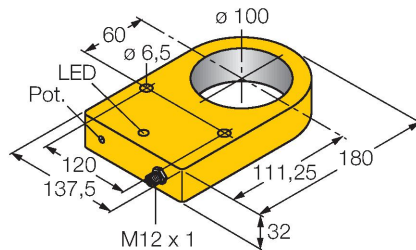


NI100R-S32XL-VP44X-H1141

Inductive Sensor – Ring Sensor



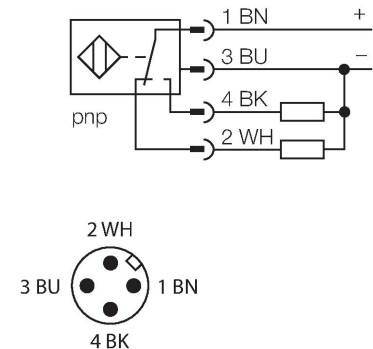
Features

- Rectangular, height 32 mm
- Plastic, POM
- Integrated amplifier
- Static output behavior
- Sensitivity adjusted via potentiometer
- Output pulse length min. 100 ms
- Short-circuit proof and reverse-polarity protected
- Wide temperature range
- High resolution
- High switching accuracy
- High repeatability
- DC 4-wire, 10...55 VDC
- Changeover contact, PNP output
- M12 x 1 male connector

Technical data

Type	NI100R-S32XL-VP44X-H1141
ID	1510301
General data	
Inside ring diameter D	100 mm
Steel ball diameter (DIN 5401)	≥ 10 mm
Steel wire diameter (St37)	≥ 4 mm
Repeat accuracy	≤ 2 % of full scale
pulse stop	≥ 5 ms
Pulse duration at the output	≥ 100 ms ± 20 %
Hysteresis	3...15 %
Electrical data	
Operating voltage U_B	10...55 VDC
Ripple U_{ss}	≤ 10 % U_{Bmax}
DC rated operating current I_o	≤ 200 mA
No-load current	≤ 20 mA
Residual current	≤ 0.1 mA
Isolation test voltage	0.5 kV
Short-circuit protection	yes/Cyclic
Voltage drop at I_o	≤ 1.8 V
Wire break/reverse polarity protection	yes/Complete
Output function	4-wire, Complementary contact, PNP
Switching frequency	0.008 kHz
Mechanical data	
Design	Ring sensor, S32XL

Wiring diagram



Functional principle

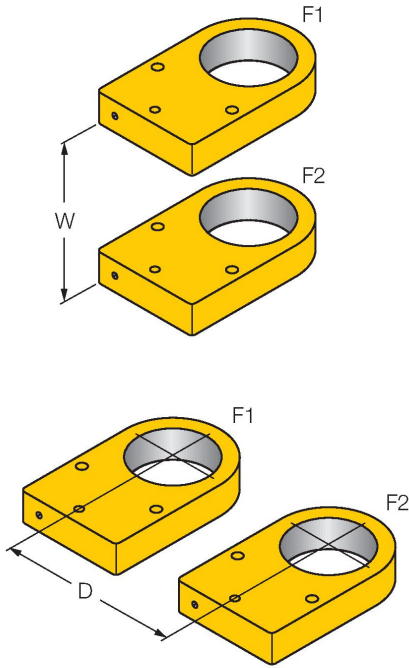
Inductive sensors detect metal objects contactless and wear-free. For this purpose they use a high-frequency electromagnetic AC field that interacts with the target. Inductive ring sensors generate this field through an LC resonant circuit. The target acts as the coil core.

Technical data

Dimensions	180 x 137.5 x 32 mm
Housing material	Plastic, POM
Electrical connection	Connector, M12 × 1
Coil body	plastic, POM
Environmental conditions	
Ambient temperature	-25...+70 °C
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP67
MTTF	2283 years acc. to SN 29500 (Ed. 99) 40 °C
Switching state	LED, Yellow

Mounting instructions

Mounting instructions/Description



Distance D	290 mm
Distance W	240 mm

The mounting distances depend on the adjusted sensitivity

For limited metal-free spaces use sensors with offset oscillator frequencies:
Ni100R-S32XL-VP44X-H1141/F2
(Id. 1510303)

Ni100R-S32XL-VP44X-H1141| 02/21/2025 13:09 | technical changes reserved

Wiring accessories

Dimension drawing	Type	ID	
	RKC4.4T-2/TEL	6625013	Connection cable, M12 female connector, straight, 4-pin, cable length: 2 m, jacket material: PVC, black; cULus approval