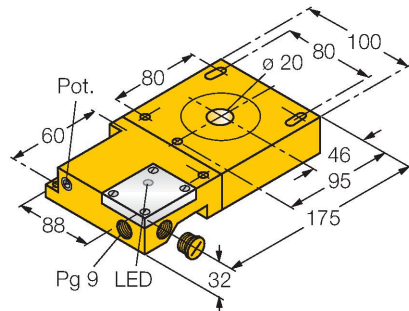


# NI20R-S32SR-VP44X

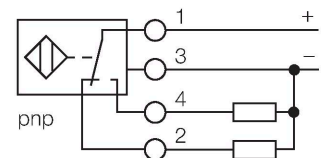
## Inductive Sensor – Ring Sensor



### Features

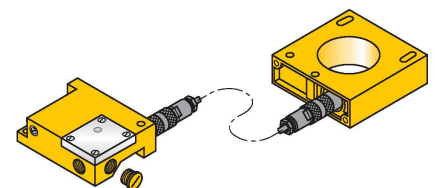
- Rectangular, height 32 mm
- Plastic, ABS
- Static output behavior
- Sensitivity adjusted via potentiometer
- Modular design, ring probe and switching amplifier also separately mountable
- Output pulse length min. 100 ms
- DC 4-wire, 10...55 VDC
- Changeover contact, PNP output
- Terminal chamber

### 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.



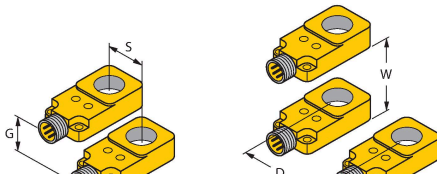
### Technical data

|                                        |                                    |
|----------------------------------------|------------------------------------|
| Type                                   | NI20R-S32SR-VP44X                  |
| ID                                     | 1440001                            |
| General data                           |                                    |
| Inside ring diameter D                 | 20 mm                              |
| Steel wire diameter (St37)             | ≥ 0.4 mm                           |
| Repeat accuracy                        | ≤ 2 % of full scale                |
| pulse stop                             | ≥ 5 ms                             |
| Pulse duration at the output           | ≥ 100 ms ± 20 %                    |
| 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, S32SR                 |
| Dimensions                             | 175 x 100 x 32 mm                  |
| Housing material                       | Plastic, ABS                       |
| Electrical connection                  | Terminal chamber                   |
| Coil body                              | plastic, ABS                       |

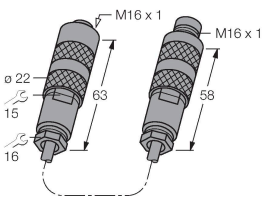
Technical data

| Environmental conditions |                                            |
|--------------------------|--------------------------------------------|
| Ambient temperature      | -25...+70 °C                               |
| Vibration resistance     | 55 Hz (1 mm)                               |
| Shock resistance         | 30 g (11 ms)                               |
| Protection class         | IP65                                       |
| MTTF                     | 2283 years acc. to SN 29500 (Ed. 99) 40 °C |
| Switching state          | LED, Yellow                                |
| Included in delivery     | cable gland, blanking plug                 |

Mounting instructions

| Mounting instructions/Description                                                  |            |        |
|------------------------------------------------------------------------------------|------------|--------|
|  | Distance D | 150 mm |
|                                                                                    | Distance W | 150 mm |
|                                                                                    | Distance S | 150 mm |
|                                                                                    | Distance G | 150 mm |

Accessories

| ADAPTER CABLE RING 1.6M                                                             |                                                                                                            |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|
| 14306                                                                               |                                                                                                            |
|  | Adapter cable enables separate mounting of ring probe and switching amplifier; coax cable: RG58 C/U 50 Ohm |