Pepperl+Fuchs Inductive Sensor Model NJ15-M1-E2-V1

Technical Specifications:

Device Type	Inductive proximity sensor, non-flush (unshielded)
Sensing Distance	15 mm (nominal)
Mounting Style	Non-flush (not embeddable)
Output Type	PNP, Normally Open (NO), 3-wire DC
Operating Voltage	10 to 60 V DC
Assured Operating Distance	0 ... 12.15 mm
Actual Operating Distance	13.5 ... 16.5 mm (typical 15 mm)
Switching Frequency	Up to 200 Hz
Hysteresis	Approx. 5%
Reverse Polarity Protection	Yes
Short-Circuit Protection	Pulsing type
Voltage Drop	≤ 2.5 V (typ. 2.2 V at 200 mA load)
Operating Current	0 ... 200 mA
No-Load Supply Current	≤ 14 mA
Response Delay	≤ 50 ms
Status Indicators	Green LED (power), Yellow LED (switching state)
Insulation Voltage	500 V
Housing / Material	PBT/metal, sensing face PBT
Connection Interface	M12 × 1, 4-pin connector plug
Enclosure Rating	IP67
Operating Temperature	-25 °C to +70 °C
Functional Safety Parameters	MTTFd: 932 years, TM: 20 years, DC: 0%
Standards & Certificates	EN/IEC 60947-5-2, CCC approved
Typical Dimensions	Length ~62 mm, housing ~30 × 30 mm

SEO Content:

The Pepperl+Fuchs NJ15-M1-E2-V1 inductive sensor is a rugged and reliable choice for metal detection in demanding industrial environments. With a 15 mm sensing distance and PNP normally-open output, it ensures stable performance even in non-flush mounting conditions. Its durable PBT housing, IP67 protection, and LED indicators for power and switching state make it ideal for integration in assembly lines, robotics, and automation systems requiring precision and reliability.

Key Features:

• 15 mm sensing distance, non-flush mounting
• PNP 3-wire, Normally Open output
• Wide operating voltage: 10–60 V DC
• Switching frequency up to 200 Hz, hysteresis ~5%
• Built-in reverse polarity and pulsing short-circuit protection

• Low voltage drop (≤ 2.5 V) and low no-load current (≤ 14 mA)
• Green and yellow LEDs for clear status feedback
• Durable PBT/metal housing, IP67 rating
• Operational temperature range -25 °C to +70 °C
• High functional safety: MTTFd 932 years, TM 20 years

Applications:

• Metal detection in conveyor and assembly systems
• Suitable for rugged environments with welding or magnetic interference
• High-speed automation and robotic applications
• Integration in industrial control panels and machinery
• Automotive, packaging, and precision manufacturing industries