



DENKI SEIGYO

DSP30-15DP / DSP30-15DN SERIES



Category

Inductive Proximity Sensors – Square Series

Manufacturer: Denki Seigyo

PRODUCT OVERVIEW

The **Denki Seigyo DSP30-15DP / DSP30-15DN** is a high-performance **30 × 30 mm square inductive proximity sensor** designed for reliable, non-contact detection of metallic objects in industrial automation systems.

Featuring a **15 mm sensing distance**, compact square housing, rugged ABS enclosure, and DSP30 Series delivers stable performance in conveyors, packaging machinery, robotics, assembly lines, machine tools, and material handling applications.

Designed for long service life and dependable operation, the sensor incorporates reverse polarity, overload, and short-circuit protection, making it suitable for demanding industrial environments. The product is positioned as a 30 mm frame-size DC 3-wire inductive sensor with 15 mm sensing distance and IP67 protection.

MODEL CODE STRUCTURE

Example: DSP30-15DP-C

Code	Description
D	Denki Seigyo
SP	Square Proximity Sensor
30	30 × 30 mm Housing
15	15 mm Sensing Distance
D	DC Supply
P	PNP Output
N	NPN Output



MODEL SPECIFICATION

Model	Output Type	Operation
DSP30-15DP	PNP	Normally Open
DSP30-15DN	NPN	Normally Open

KEY FEATURES

- 30 × 30 mm compact square housing
 - 15 mm long sensing distance
 - DC 3-wire operation
 - PNP and NPN output options
 - M12 connector type
 - LED operation indicator
 - Reverse polarity protection
 - Short-circuit protection
- Overload protection
 - High switching reliability
 - Heat-resistant ABS housing
 - Excellent noise immunity
 - IP67 protection
 - Easy installation
 - Long service life

TECHNICAL SPECIFICATIONS

General Specifications

Parameter	Specification
Sensor Type	Inductive Proximity Sensor
Housing Type	Square
Housing Size	30 × 30 mm
Detection Method	Inductive
Installation	Standard (Front Sensing)
Standard Target	Iron (Fe), 45 × 45 × 1 mm
Rated Sensing Distance	15 mm

Protection Features

Parameter	Specification
Reverse Polarity Protection	Yes
Short-Circuit Protection	Yes
Surge Protection	Built-in
Overload Protection	Yes



Electrical Specifications

Parameter	Specification
Supply Voltage	12–24 VDC
Output Type	PNP / NPN
Output Mode	Normally Open
Wiring	3-Wire DC
Current Consumption	≤10 mA
Load Current	200 mA Max.
Residual Voltage	≤2 V
Response Frequency	200 Hz
Hysteresis	≤10% of Sn
Indicator	Red LED

Mechanical Specifications

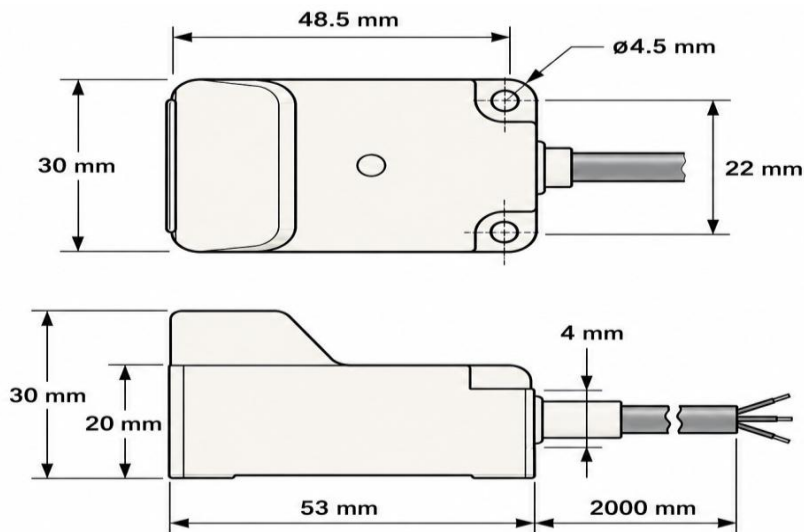
Parameter	Specification
Housing Material	Heat-Resistant ABS
Sensing Face	ABS Resin
Connection	M12 Connector
Mounting	Screw Mount
Weight	Approx. 165 g

Environmental Specifications

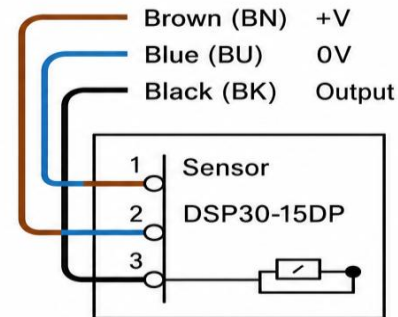
Parameter	Specification
Protection Rating	IP67
Operating Temperature	–25°C to +70°C
Storage Temperature	–30°C to +80°C
Ambient Humidity	35–95% RH (Non-condensing)



MECHANICAL DIMENSIONS & WIRING DIAGRAM



Note: All dimensions are in millimeters (mm).



Wiring Diagram:

- | | | |
|---|------------|--------|
| 1 | Brown (BN) | +V |
| 2 | Blue (BU) | 0V |
| 3 | Black (BK) | Output |

APPLICATIONS

Suitable for:

- Industrial Automation
- Packaging Machinery
- Conveyor Systems
- Robotics
- Assembly Lines
- Material Handling
- Machine Tools
- Automotive Industry
- Factory Automation
- Position Detection
- Metal Object Detection

PRODUCT SUMMARY

The **Denki Seigyo DSP30-15DP/ DSP30-15DN** Square Inductive Proximity Sensors provide dependable non-contact metal detection with a **15 mm sensing distance**, **30 × 30 mm compact housing**. Featuring **PNP/NPN outputs**, **IP67 protection**, and integrated electrical protection, the DSP30 Series is an ideal choice for modern industrial automation, packaging, robotics, and machine-building applications.