



# DENKI SEIGYO

## Inductive Proximity Sensor

Round Full-Metal Inductive Proximity Sensor – M8 Diameter

### 1. PRODUCT OVERVIEW

The **Denki Seigyo DPRF08-1.5DP-PC** is a compact inductive proximity sensor designed for reliable detection of metallic objects in industrial automation systems. The sensor features a **full-metal stainless-steel housing**, high noise immunity, and stable switching performance.

It is ideal for machine automation, packaging systems, robotics, and conveyor monitoring applications.

Key advantages include:

- Full metal body for durability
- High switching reliability
- Compact **M8 cylindrical design**
- LED switching indication
- Protection against reverse polarity and short circuit

### 2. MODEL CODE STRUCTURE

| Code  | Description             |
|-------|-------------------------|
| D     | Denki Seigyo            |
| PR    | Round Proximity Sensor  |
| F     | Full Metal Body         |
| 08    | M8 Diameter             |
| 1.5   | 1.5 mm sensing distance |
| D     | DC type                 |
| P     | PNP output              |
| PC    | Pig tail cable          |
| C     | Connector type          |
| Blank | Cable type              |



## Ordering Information

| Model           | Output Type | Sensing Distance | Housing       | Connection Type |
|-----------------|-------------|------------------|---------------|-----------------|
| DPRF08-1.5DP-PC | PNP NO      | 1.5 mm           | Full Metal M8 | Pig tail cable  |
| DPRF08-1.5DN-PC | NPN NO      | 1.5 mm           | Full Metal M8 | Pig tail cable  |
| DPRF08-1.5DP-C  | PNP NO      | 1.5 mm           | Full Metal M8 | M12 Connector   |
| DPRF08-1.5DN-C  | NPN NO      | 1.5 mm           | Full Metal M8 | M12 Connector   |
| DPRF08-1.5DP    | PNP NO      | 1.5 mm           | Full Metal M8 | Cable Type      |
| DPRF08-1.5DN    | NPN NO      | 1.5 mm           | Full Metal M8 | Cable Type      |

## 3. KEY FEATURES

- Compact M8 cylindrical sensor
- Full metal stainless steel body
- 1.5 mm sensing distance
- PNP/NPN normally open output
- Reverse polarity protection
- Short-circuit protection
- High switching frequency
- LED switching indicator
- IP67 protection

## 4. TECHNICAL SPECIFICATIONS

### General Specifications

| Parameter                   | Specification      |
|-----------------------------|--------------------|
| Switching Function          | Normally Open (NO) |
| Output Type                 | PNP/NPN            |
| Rated Sensing Distance (Sn) | 1.5 mm             |
| Installation                | Quasi flush        |
| Output Type                 | 3-wire DC          |
| Assured Operating Distance  | 0 – 1.5 mm         |

Reduction factors for different metals:

| Material | Reduction Factor |
|----------|------------------|
| Aluminum | 0.25             |
| Copper   | 0.22             |



| Material        | Reduction Factor |
|-----------------|------------------|
| Stainless Steel | 0.65             |

These values correspond to the sensor's detection capability depending on the target material.

## 5. ELECTRICAL SPECIFICATIONS

| Parameter           | Specification |
|---------------------|---------------|
| Operating Voltage   | 10 – 30 V DC  |
| Switching Frequency | 0 – 500 Hz    |
| Voltage Drop        | ≤ 2 V         |
| Load Current        | 0 – 200 mA    |
| Off-State Current   | ≤ 0.1 mA      |
| No-Load Current     | ≤ 10 mA       |

Protection features include:

- Reverse polarity protection
- Short-circuit protection (pulsing)

These electrical ratings ensure reliable operation in industrial environments.

## 6. INDICATOR

| Indicator  | Function                   |
|------------|----------------------------|
| Yellow LED | Output switching indicator |

## 7. MECHANICAL SPECIFICATIONS

| Parameter        | Specification   |
|------------------|-----------------|
| Housing Material | Stainless steel |
| Sensing Face     | Stainless steel |
| Diameter         | 8 mm            |
| Length           | 35 mm           |
| Protection Class | IP67            |

The compact body allows easy installation in limited spaces.

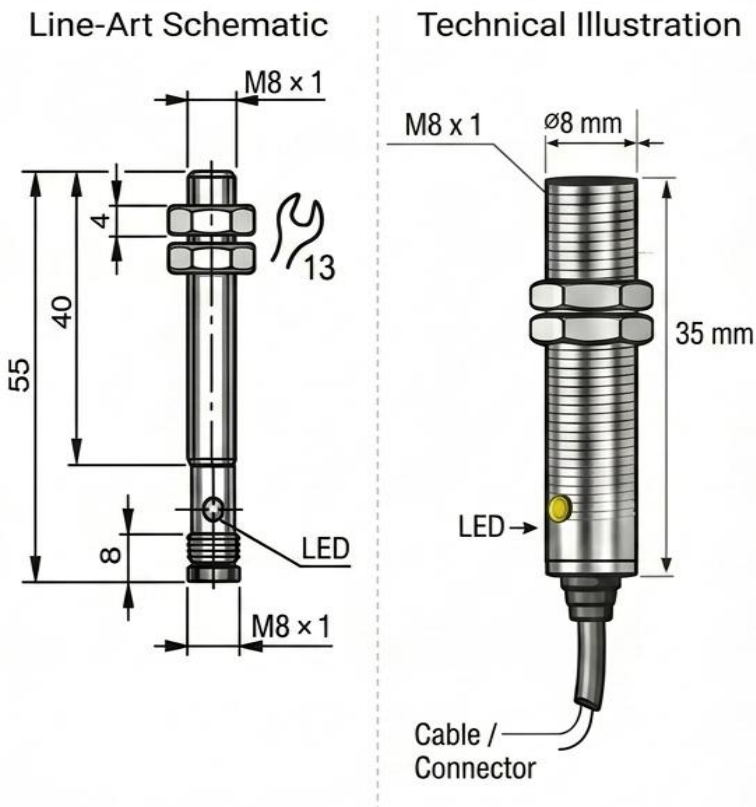
## 8. ENVIRONMENTAL CONDITIONS

| Parameter             | Specification    |
|-----------------------|------------------|
| Operating Temperature | -25 °C to +70 °C |
| Protection Degree     | IP67             |

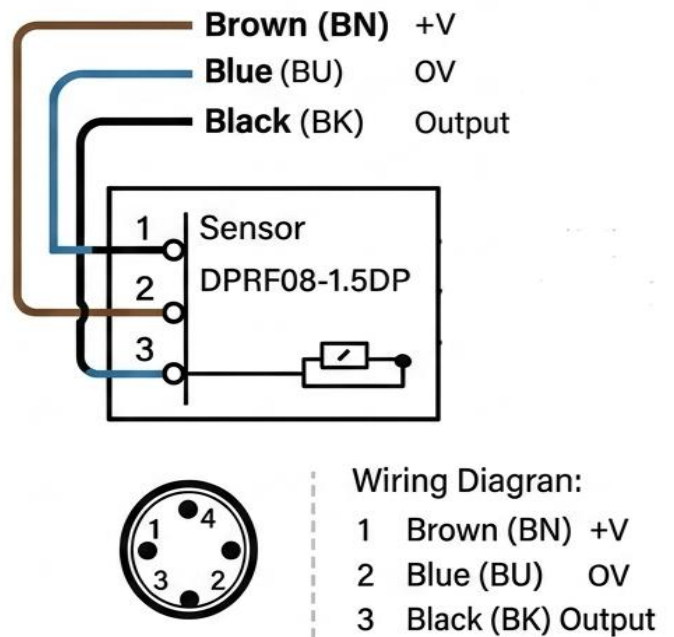
## 9. DIMENSIONS & ELECTRICAL CONNECTION

### M8 Sensor Specifications

#### Dimension Drawing



#### Wiring Diagram



Wire colors follow EN 60947-5-2 standard.

## 10. APPLICATIONS

- Industrial automation
- Conveyor systems



- Packaging machines
- Robotics
- Position detection
- Assembly lines



DST Series Tower Light