



DENKI SEIGYO

DPR SERIES – ANALOG INDUCTIVE PROXIMITY SENSOR

Voltage Output Cylindrical Type



1. PRODUCT OVERVIEW

The **Denki Seigyo DPR Series Analog Inductive Proximity Sensors** are precision non-contact sensors designed to provide continuous analog output proportional to the distance of metallic targets.

The DPR series supports stable analog voltage output for industrial automation, positioning systems, thickness measurement, and process control applications.

With compact cylindrical threaded housings, high linear accuracy, and rugged IP67 construction, the sensors deliver reliable performance in demanding industrial environments.

- ✓ Continuous analog distance sensing
- ✓ Voltage output type
- ✓ Compact cylindrical threaded design
- ✓ High stability and repeatability

2. KEY FEATURES

- Analog voltage output (0–10V DC)
- Continuous distance measurement
- High linear accuracy (< 5%)
- Fully potted IP67 construction
- Compact cylindrical threaded housing
- Reverse polarity protection
- Short-circuit protection
- Stable sensing performance
- High vibration resistance
- Flush mounting design



3. MODEL STRUCTURE

Example:

DPRA18-07V2M

Code	Description
D	Denki Seigyo
PRA	Round Analog Proximity Sensor
18	M18 diameter
07	7 mm sensing distance
V	Voltage output
2M	2 meter cable

4. AVAILABLE MODELS

Model	Size	Sensing Distance	Output Type
DPRA12-03V2M	M12	3 mm	Voltage
DPRA12-04V2M	M12	4 mm	Voltage
DPRA18-04V2M	M18	4 mm	Voltage
DPRA18-07V2M	M18	7 mm	Voltage

5. TECHNICAL SPECIFICATIONS

General Specifications

Parameter	Specification
Sensor Type	Analog inductive proximity sensor
Installation	Flush
Output Type	Analog voltage
Detection Object	Ferrous metal



Electrical Specifications

Parameter	Specification
Supply Voltage	10 – 30V DC
No-load Current	< 35 mA
Voltage Output	0 – 10V DC
Load Resistance	> 2 kΩ
Voltage Drop	< 2V DC
Switching Frequency	100 Hz

Sensing Specifications

Model	Sensing Range
DPRA12-03V2M	0.1 – 3.0 mm
DPRA12-04V2M	0.1 – 4.0 mm
DPRA18-04V2M	1.0 – 4.0 mm
DPRA18-07V2M	1.0 – 7.0 mm

Accuracy Specifications

Parameter	Specification
Linear Accuracy	< 5%
Repeat Accuracy	0.02 mm
Temperature Drift	< 10%

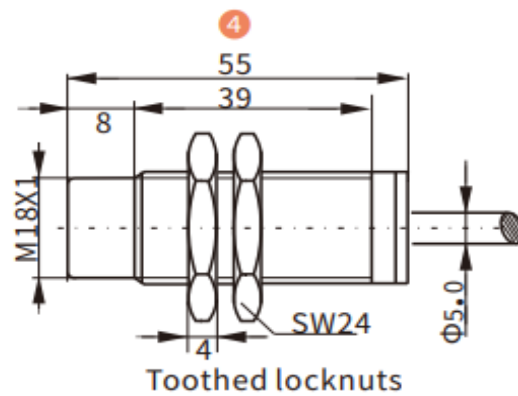
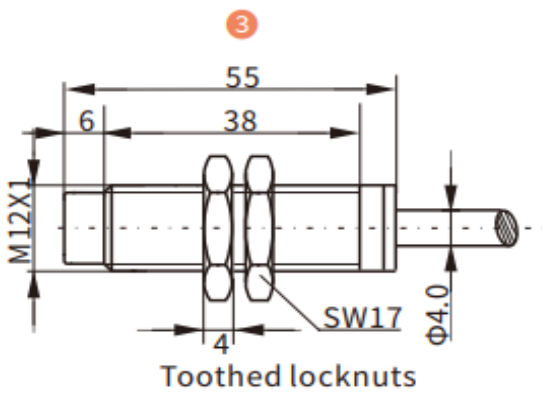
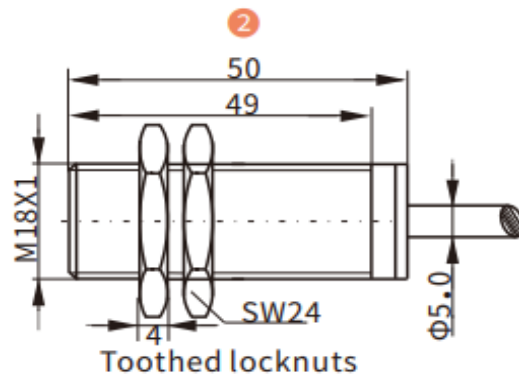
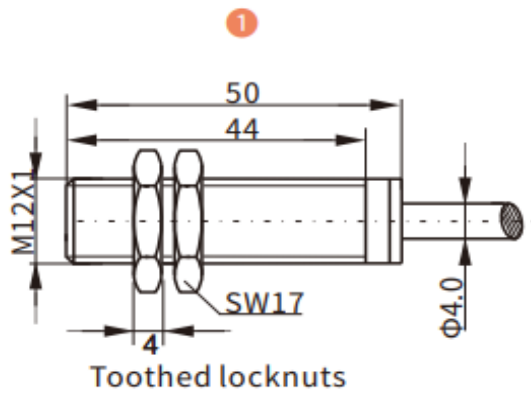
Environmental Specifications

Parameter	Specification
Protection Rating	IP67
Operating Temperature	-25°C to +70°C
Vibration Resistance	55 Hz, 1 mm amplitude
Shock Resistance	30 g / 11 ms
EMC Standard	IEC 60947-5-2

6. CORRECTION FACTOR

Material	Correction Factor
Steel (Fe37)	1.0
Stainless Steel	Approx. 0.85
Brass	Approx. 0.5
Aluminum	Approx. 0.45
Copper	Approx. 0.4

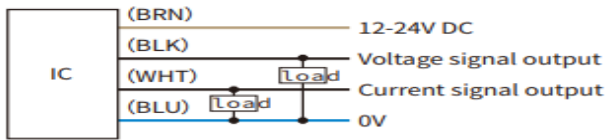
7. DIMENSIONS



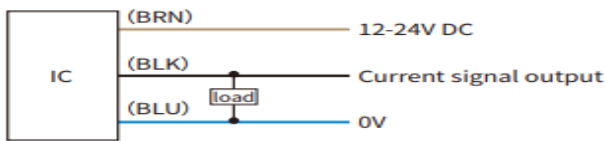
8. WIRING DIAGRAM

(Unit: mm)

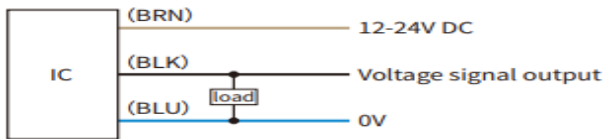
Dual voltage/current output



current output



voltage output



9. APPLICATIONS

The DPRA series is suitable for:

- Distance measurement
- Thickness detection
- Position control systems
- Process automation
- Industrial positioning applications
- Metal displacement monitoring
- Machine automation

10. ORDERING INFORMATION

Model	Size	Output	Cable
DPRA12-03V2M	M12	0-10V	2 m
DPRA12-04V2M	M12	0-10V	2 m
DPRA18-04V2M	M18	0-10V	2 m
DPRA18-07V2M	M18	0-10V	2 m