

DPR-0840-NPN-NC

Safety Light Curtain Area Sensor — 8 Beams · 40 mm Pitch · 280 mm Protection Height



Version: 1.0 | Date: September 2023 | SKU: SH60

DAPPRA Automation — Industrial Sensor Manufacturer

DPR-0840-NPN-NC

Safety Light Curtain Area Sensor — 8 Beams · 40 mm Pitch · 280 mm Protection Height

Product Overview

The DAPPRA DPR-0840-NPN-NC is an industrial safety light curtain area sensor from the DPR Series, designed for industrial automation equipment requiring reliable multi-beam object detection and machine protection. The DPR-0840-NPN-NC uses through-beam infrared detection technology with a separate emitter and receiver. With 8 optical beams, a 40 mm optical axis pitch, and a 280 mm protection height, it provides stable detection performance for industrial applications.

Key Product Specifications

Parameter	Specification
Brand	DAPPRA
Manufacturer	DAPPRA Automation
Product Series	DPR Series
Model	DPR-0840-NPN-NC
SKU	SH60
Product Category	Safety Light Curtain / Industrial Area Sensor
Detection Method	Through Beam Infrared Detection
Beam Configuration	Parallel Beam
Optical Axis Quantity	8 Beams
Optical Axis Pitch	40 mm
Output Type	NPN
Signal Logic	NC (Normally Closed)

Key Features

Feature	Description
Through Beam Infrared Detection	Separate emitter and receiver structure using infrared beam detection.
Parallel Beam Configuration	Multiple parallel infrared beams create a defined detection area.
10 mm Resolution	Supports detection requirements with 10 mm resolution specification.
NPN NC Output	Normally Closed NPN signal configuration for industrial control systems.
DC24V Operation	Designed for common industrial control voltage systems.
Wire Synchronization	Uses wire synchronization technology between emitter and receiver.
Dual-Circuit Signal Output	Provides self-test technology through dual-circuit signal output design.
IP65 Protection	Suitable for industrial environments requiring protection against dust and water exposure.
Oil Resistant Surface	Uses fluorosilicone surface coating for oil resistance.

SIL 2 | CE | FCC | RoHS | IP65

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Technical Specifications

General Specifications

Parameter	Specification
Brand	DAPPRA
Product Series	DPR Series
Product Type	Safety Light Curtain Area Sensor
Detection Type	Through Beam Infrared Detection
Light Source	Infrared LED

Optical Specifications

Parameter	Specification
Optical Beam Quantity	8 Beams
Optical Axis Pitch	40 mm
Protection Height	280 mm
Total Height	366 mm
Resolution	10 mm
Detection Distance	0.1–3 m

Electrical Specifications

Parameter	Specification
Operating Voltage	DC24V ±20%
Output Type	NPN
Signal Logic	NC (Normally Closed)
Output Current	≤200 mA
Power Consumption	<5 W
Response Speed	0.5 ms

Mechanical Specifications

Parameter	Specification
Housing Size	29 × 30 mm
Total Height	366 mm
Protection Height	280 mm
Emitter Connector	M12 3-Pin
Receiver Connector	M12 4-Pin
Cable Length	2 m

Environmental Specifications

Parameter	Specification
Protection Rating	IP65
Operating Temperature	–10 to 55°C
Relative Humidity	<85% RH at 20°C
Anti-Light Interference	10,000 Lux, incidence angle >5°
Dielectric Strength	AC1500V, 60s, no breakdown or flashover
Insulation Resistance	≥100 MΩ

Safety & Compliance

Parameter	Specification
Safety Standard	IEC 61508
Safety Integrity Level	SIL 2
Certifications	SIL 2, CE, FCC, RoHS

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Model Number Description

DPR - 08 - 40 - NPN - NC

- DPR** — DAPPRA DPR Series
- 08** — 8 Optical Beams
- 40** — 40 mm Optical Axis Pitch
- NPN** — NPN Output Type
- NC** — Normally Closed Signal Logic

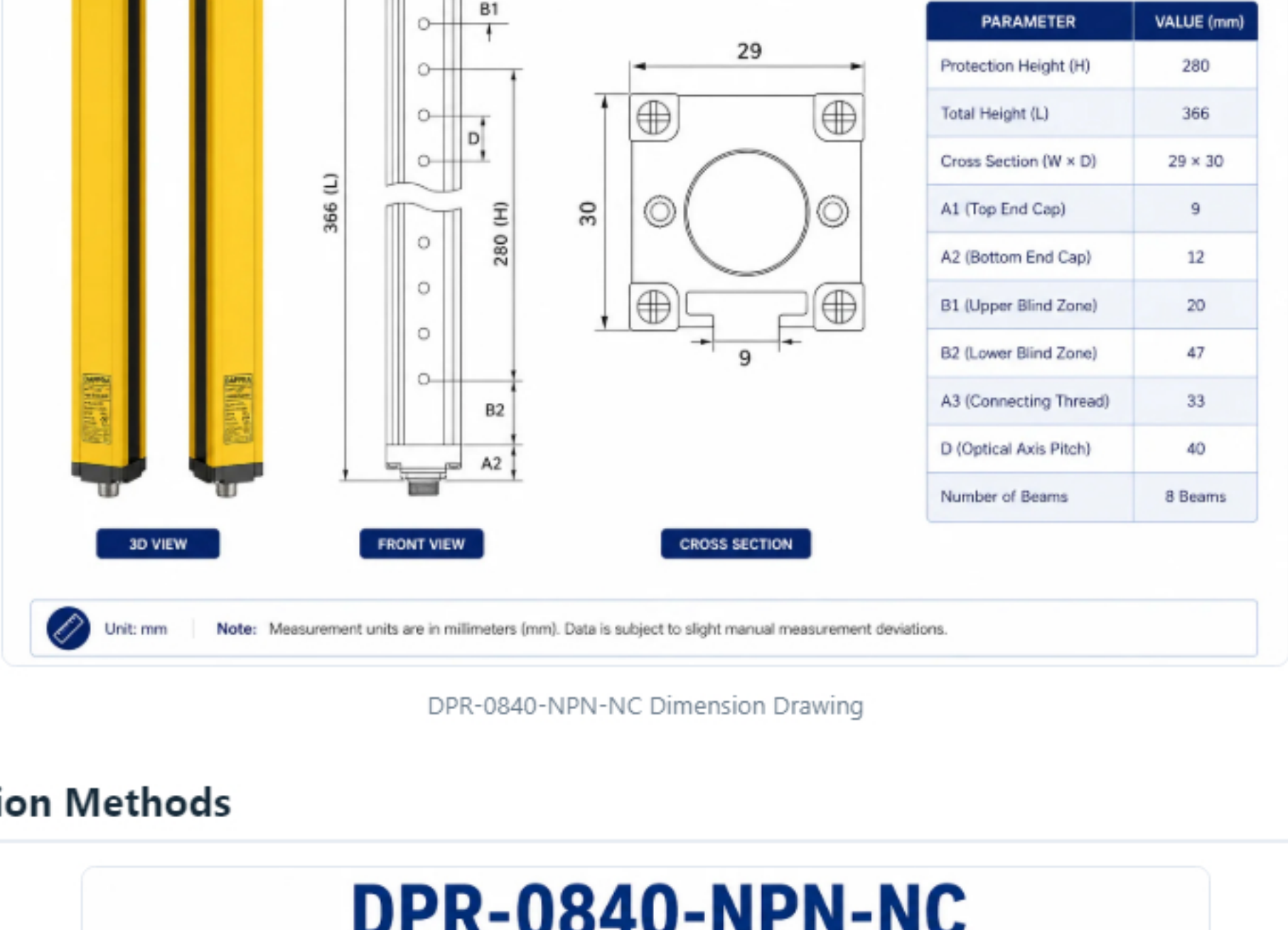
Protection Height Calculation

Protection Height = (Beam Quantity - 1) × Optical Axis Pitch

For DPR-0840-NPN-NC:

(8 - 1) × 40 mm = 280 mm

Dimension & Optical Structure



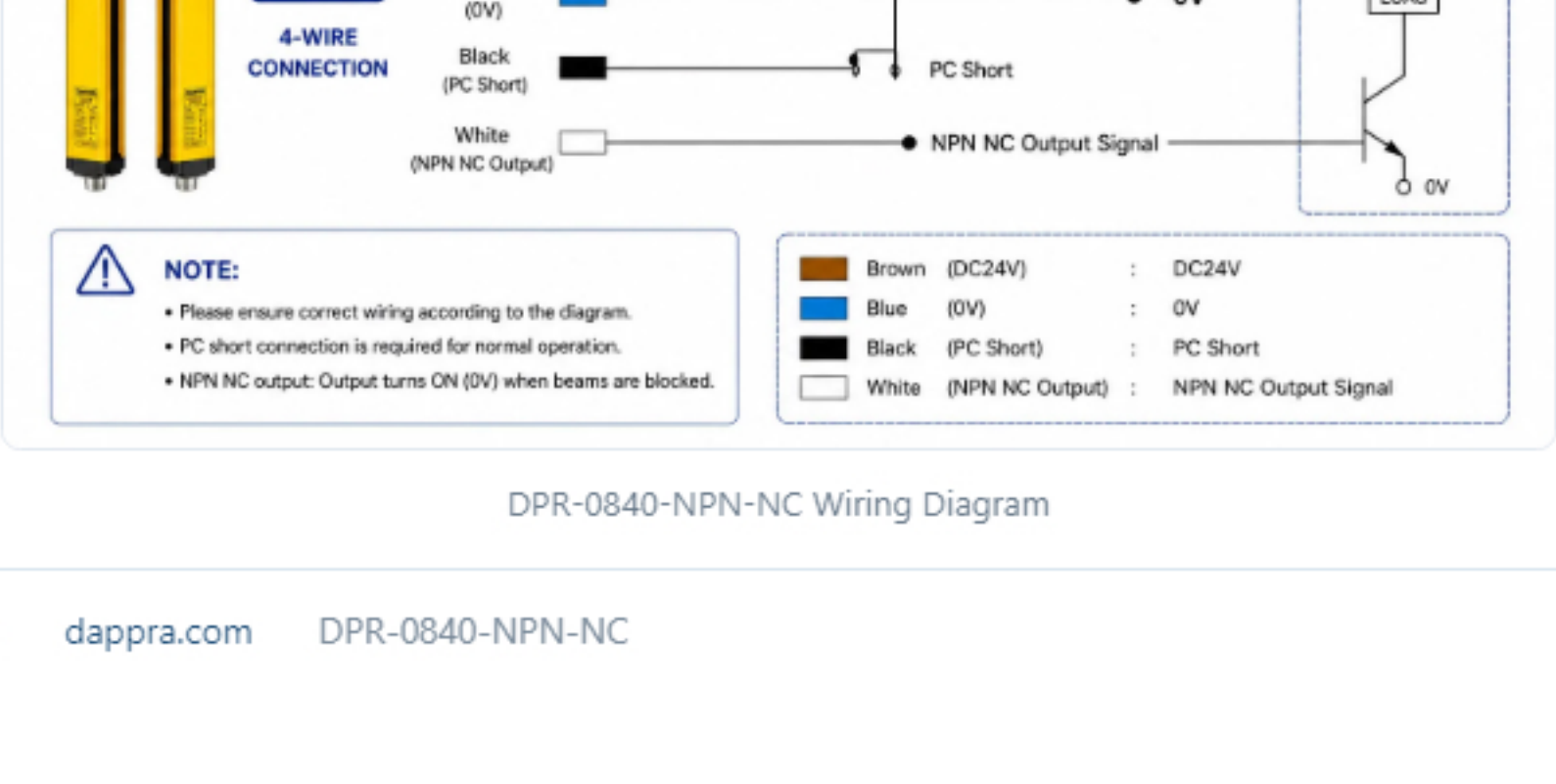
DPR-0840-NPN-NC Dimension Drawing

Installation Methods



DPR-0840-NPN-NC Three Installation Methods

Wiring Diagram



DPR-0840-NPN-NC Wiring Diagram

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