DAPPRA AUTOMATION

CAD DRAWING

DPR-1220-NPN-NC

Industrial Area Sensor & Safety Light Curtain Â· Mechanical Drawing & Installation Layout

This CAD drawing document provides mechanical dimensions, installation layout and mounting reference information for the DAPPRA DPR-1220-NPN-NC Industrial Area Sensor and Safety Light Curtain. It is intended for engineers, designers and system integrators involved in machine design and industrial automation projects.

DOCUMENT SCOPE

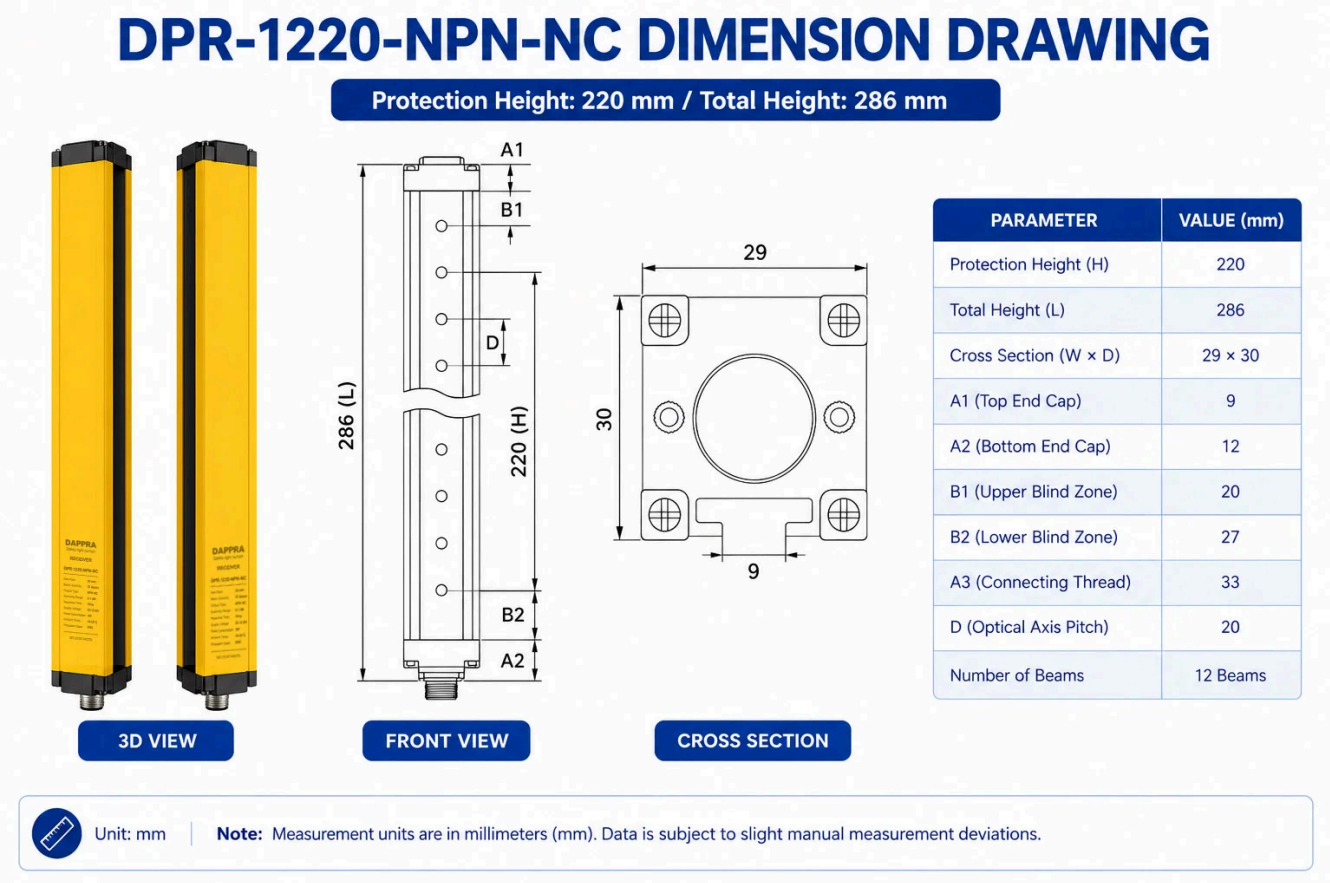
- â€¢ Overall mechanical dimensions
- â€¢ Protection height and total height
- â€¢ Optical axis pitch reference
- â€¢ Housing cross section dimensions
- â€¢ Mounting hole positions
- â€¢ Installation layout reference

Document: DPR-1220-NPN-NC CAD Drawing
Revision: 1.0
SKU: SD71
Manufacturer: DAPPRA Automation

Dimension Overview

The DPR-1220-NPN-NC Industrial Area Sensor and Safety Light Curtain has a compact aluminum alloy housing designed for integration into industrial machinery and automation equipment. The following drawing shows the overall mechanical dimensions, including protection height, total height, optical axis pitch and housing cross section.

ENGINEERING DRAWING â€" NOT TO SCALE



PARAMETER	VALUE (mm)
Protection Height (H)	220
Total Height (L)	286
Cross Section (W × D)	29 × 30
A1 (Top End Cap)	9
A2 (Bottom End Cap)	12
B1 (Upper Blind Zone)	20
B2 (Lower Blind Zone)	27
A3 (Connecting Thread)	33
D (Optical Axis Pitch)	20
Number of Beams	12 Beams

Figure 1 â€" DPR-1220-NPN-NC mechanical dimensions and installation reference

Key Dimension Summary

DIMENSION PARAMETER	VALUE
Protection Height	**220 mm**
Total Height	**286 mm**
Optical Axis Pitch	**20 mm**
Housing Cross Section	**29 Ã— 30 mm**

DIMENSION PARAMETER	VALUE
Beam Quantity	12 optical beams

> **Note**
>
> The drawing shown above is a reference representation. For detailed CAD files in DWG, DXF or STEP format, please contact DAPPRA Automation.

Drawing Title Block

PRODUCT MODEL
DPR-1220-NPN-NC

SKU
SD71

PRODUCT TYPE
Industrial Area Sensor / Safety Light Curtain

PRODUCT SERIES
DPR Series

DRAWING TYPE
Mechanical Dimension Drawing

DRAWING NUMBER
CAD-DPR-1220-001

UNIT
Millimeter (mm)

REVISION
1.0

MANUFACTURER
DAPPRA Automation

SCALE
Not to Scale

Mechanical Specifications

PARAMETER	SPECIFICATION
Beam Quantity	12 Optical Beams
Optical Axis Pitch	20 mm
Protection Height	220 mm

PARAMETER	SPECIFICATION
Total Height	286 mm
Housing Cross Section	29 Ã— 30 mm
Housing Material	Aluminum Alloy
Protection Rating	IP65
Connector	M12 Cable

Installation Reference

- **Mounting Type** â€” Bracket-mounted with adjustable options
- **Mounting Accessories** â€” Top/bottom brackets, side brackets, cantilever brackets
- **Installation Method** â€” Vertical, side or adjustable bracket configuration
- **Detection Distance** â€” 0.2â€“3 m between transmitter and receiver

Mounting & Installation Layout

The DPR-1220-NPN-NC supports three installation configurations to accommodate different machine structures and protection requirements. The following drawing shows the installation layout reference for vertical, side and adjustable bracket mounting.

ENGINEERING DRAWING â€" NOT TO SCALE



Figure 2 â€" DPR-1220-NPN-NC installation layout reference

Installation Configuration Reference

CONFIGURATION	DESCRIPTION	TYPICAL USE
Standard Vertical	Transmitter and receiver placed vertically opposite each other	Machine protection, personnel protection
Side Installation	Side-mounted configuration for limited mounting space	Compact equipment, customized layout

CONFIGURATION	DESCRIPTION	TYPICAL USE
Adjustable Bracket	Multi-directional adjustable bracket mounting	Custom automation, precise alignment

Mounting Accessories

- **Top and Bottom Mounting Brackets** â€” Standard mounting configuration
- **Side Mounting Brackets** â€” For side installation applications
- **Cantilever Mounting Brackets** â€” For adjustable multi-directional mounting
- **Mounting Screws and Hardware** â€” Included with standard package

> **Installation Note**
>
> Ensure that the transmitter and receiver are aligned correctly and that the mounting structure is stable enough to prevent vibration-induced misalignment.

Drawing Notes

1. **Units** â€” All dimensions are in millimeters (mm) unless otherwise specified.
2. **Scale** â€” The drawing shown in this document is not to scale. Refer to the original CAD file for accurate dimensional reference.
3. **Tolerances** â€” Standard manufacturing tolerances apply. Contact DAPPRA Automation for specific tolerance requirements.
4. **Protection Height** â€” Defined as (Beam Quantity â^' 1) Ã— Optical Axis Pitch. For DPR-1220-NPN-NC: (12 â^' 1) Ã— 20 mm = 220 mm.
5. **Total Height** â€” Includes the housing and mounting structure beyond the protection height.
6. **Mounting** â€” Verify that the mounting surface is flat and stable before installation.
7. **Alignment** â€” Transmitter and receiver optical beams must be properly aligned for reliable detection performance.

CAD File Request

For detailed CAD files suitable for machine design and system integration, please contact DAPPRA Automation. Available file formats may include DWG, DXF and STEP, depending on the specific product configuration.

FILE FORMAT	DESCRIPTION
DWG	2D mechanical drawing for AutoCAD and compatible software
DXF	Universal 2D drawing exchange format
STEP	3D model for mechanical design and simulation

Contact DAPPRA Automation for CAD Files

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Website: https://dappra.com

Product: DPR-1220-NPN-NC (SKU: SD71)

Related Documents

DOCUMENT	DESCRIPTION
Datasheet	Specifications, wiring, dimensions and certifications
Installation Guide	Mounting methods and alignment reference
CAD Drawing	This document â€” mechanical dimensions and installation layout