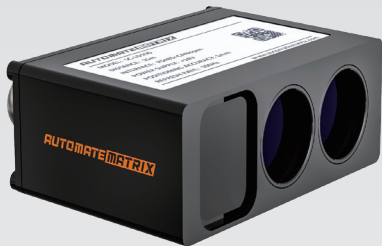


# SC-LD100

Laser Ranging  
Sensor



- Anti-glare
- Ultra-compact size
- Superb cost performance

## PRODUCT INTRODUCTION

### Basic Principle

Automate Matrix's SC-LD100 employs absolute measurement methodology, designed for horizontal and vertical position measurement in various machinery applications.

### Technical Specifications

High refresh rate of 100Hz with  $\pm 1\text{mm}$  accuracy and a maximum measuring distance of 15 meters.

### Application Scenarios

SC-LD100 is widely applied in automated warehousing and logistics equipment, including stacker travel and lifting systems, crane trolley traverse and spreader hoisting mechanisms, forklift lifting mechanisms, and elevator positioning systems. It effectively replaces traditional cable-encoder solutions, delivering significantly improved operational reliability for these applications.

## SUITABLE MODELS

| Product Model | Measurement Range(m) | Repeatability (mm) | Communication Interface | Operating Temperature |
|---------------|----------------------|--------------------|-------------------------|-----------------------|
| SC-LD112 15   | 0.3 - 15m            | $\pm 1\text{mm}$   | RS485 + CANopen         | -20°C to 70°C         |

## TECHNICAL SPECIFICATIONS

| Parameter                       |                                  |                                   |
|---------------------------------|----------------------------------|-----------------------------------|
| Distance Measurement Parameters | Product Model                    | SC-LD112 15                       |
|                                 | Measurement Range                | 0.3 - 15m                         |
|                                 | Accuracy                         | $\pm 1\text{mm}$                  |
|                                 | Repeatability                    | $\pm 1\text{mm}$                  |
|                                 | Measuring frequency              | 100Hz                             |
|                                 | Type. light spot size (distance) | $\leq 30\text{mm}$                |
|                                 | Response time                    | Static: 25ms; Dynamic: 5ms        |
|                                 | Resolution                       | 0.1mm/1mm Adjustable              |
|                                 | Temperature drift                | $\leq 0.1\text{mm/K}$             |
|                                 | Moving speed                     | $\leq 10\text{m/s}$               |
|                                 | Setup time                       | 6s                                |
| Optical Parameters              | Emitter                          | Laser, Infrared                   |
|                                 | Wavelength                       | 905nm + 650nm                     |
| Electrical Parameters           | Operating voltage                | 18V - 30V DC                      |
|                                 | Operating current                | $\leq 30\text{mA}/24\text{V DC}$  |
| RS485 Interface Parameters      | Baud rate (bit/s)                | 9600/19200/38400/57600/115200     |
|                                 | Data bits                        | 8                                 |
|                                 | Parity bit                       | None                              |
|                                 | Stop bits                        | 1                                 |
| CANopen Interface Parameters    | Baud rate (kbps)                 | 20/50/57.143/100/125/250/500/1000 |
| Mechanical Parameters           | Dimensions                       | 26 x 72 x 55mm                    |
|                                 | Housing material                 | Aluminum alloy                    |
|                                 | Lens                             | Glass                             |
|                                 | Weight                           | Approximately 200g                |
|                                 | IP rating                        | IP55                              |
| Environmental Parameters        | Ambient light immunity           | Sunlight: 100kLux                 |
|                                 | Operating Temperature            | -20°C to 70°C                     |
|                                 | Storage Temperature              | -40°C to 85°C                     |