

2D Laser Scanners



LSE Series CATALOG

For your safety, read and follow the considerations written in the instruction manual, other manuals and Autonics website.

The specifications, dimensions, etc. are subject to change without notice for product improvement. Some models may be discontinued without notice.

Major Features

- Monitoring zone up to 90°, 5.6 × 5.6 m
- Supports up to 4 channels
- Small size (W 125 × H 80.3 × L 88 mm) suitable for various installation environments
- Ethernet communication support
- atLiDAR, PC-only software support

Product Components

- Product
- 3 mm allen wrench × 1
- M2.6 × L6 Tapping screw × 2
- Instruction manual
- Bracket × 1

Software

Download the installation file and the manuals from the Autonics website.

■ atLidar

atLidar is the management program for laser scanner installation, parameter settings, status information and monitoring data, etc.

This program communicates with the laser scanner via Ethernet communication.

Specifications

Model	LSE-4A5R2
Emitting property	Infrared laser
Laser class	CLASS 1
Wave length band	905 nm
Max. pulse output power	75 W
Response time	Typ. 20 to 80 ms + monitoring time
Scanning mode	Motion and presence
Monitoring zone	0.3 × 0.3 m to 5.6 × 5.6 m ⁰¹⁾
Front contamination	Normal operation with max. 30 % contamination of one material
Min. size of the scanning target ⁰²⁾	At detection distance of 3 m: ≈ W 2.1 × H 2.1 × L 2.1 cm At detection distance of 5 m: ≈ W 3.5 × H 3.5 × L 3.5 cm
Angular resolution	0.4°
Aperture angle	90°
Object reflectivity	≥ 2 %
Laser scanner angle	-45°, 0°, 45°
Bracket rotation angle ⁰³⁾	-5 to 5°
Bracket tilt angle	-3 to 3°
Life expectancy	≤ 6.8 years
Approval	CE
Korean Railway Standards	KRS SG 0068
Unit weight (package)	≈ 0.58 kg (≈ 0.96 kg)

01) At object reflectivity: 10 %

02) At object reflectivity: 90 % (Kodak Gray card R-27, White)

03) Indicates the laser scanner adjustment range.

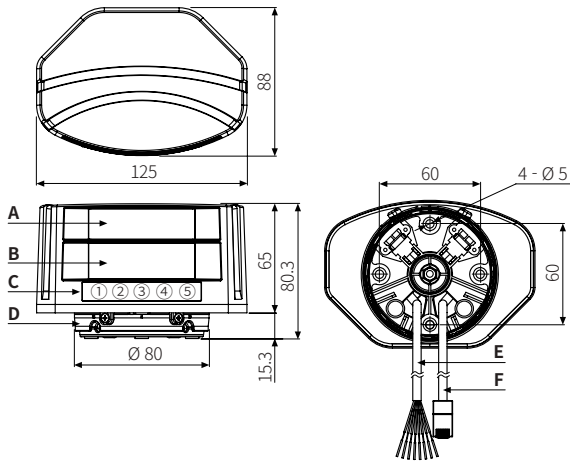
Power supply	24 VDC = ± 20 %
Power consumption	≤ 8 W
Communication interface	Ethernet (TCP/IP) 10BASE-T
Input	Photocoupler input H ⁰¹⁾ : ≥ 8 - 30 VDC =, L: ≤ 3 VDC =
Output	PhotoMOS relay output Galvanic isolation, non-polarity Resistive load: 30 VDC = / 24 VAC ~, ≤ 80 mA Output resistance: 30 Ω Switching time: t _{ON} = 5 ms, t _{OFF} = 5 ms
Insulation resistance	≥ 5 MΩ (500 VDC = megger)
Dielectric strength	500 VAC ~ 50 / 60 Hz for 1 minute
Vibration	≤ 2 G (18.7 m/s ²)
Shock	30 G / 18 ms
Ambient illuminance	Sunlight: ≤ 100,000 lx
Ambient temperature ⁰²⁾	-30 to 60 °C (no freezing or condensation)
Ambient humidity	0 to 95 %RH, storage: 0 to 95 %RH (no freezing or condensation)
Protection structure	IP67 (IEC standard)
Cable spec.	Power, I / O cable: Ø 5 mm, 8-wire, 5 m Ethernet cable: Ø 5 mm, 4-wire, 3 m, shield cable, RJ45 connector
Wire spec.	AWG26 (0.16 mm, 7-core), insulator outer diameter: Ø 1 mm
Material	PC

01) Operates as output test mode and outputs obstacle detection output and error status output.

02) Ambient temperature in power supplied status is -30 to 60°C and in power cut status is -10 to 60°C.

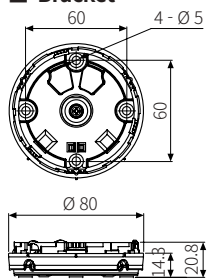
Dimensions

- Unit: mm, For the detailed drawings, follow the Autonics website.



A	Laser emitter	C	Indicators	E	Power, I / O cable
B	Laser receiver	D	Bracket	F	Ethernet cable

Bracket



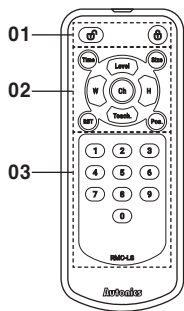
Sold Separately

- Remote control: RMC-LS

Sold Separately: Remote Control

RMC-LS

Each function can be set by the combination of the menu keys and the number keys. Refer to "Function Setting: Remote Control".



01. UN-LOCK / LOCK

02. Menu key

- Time: Monitoring time
- Size: Scanning target size
- RST: Initialization to factory default
- Pos.: Sensor position
- Ch: Activated channel (s)
- Level: Sensitivity
- W: Width of the monitoring zone or concentrated monitoring zone
- H: Height of the monitoring zone or concentrated monitoring zone
- Teach.: Teaching

03. Number key