**Autonics** TCD210013AC

#### **Product Components**

• M2.6  $\times$  L6 Tapping screw  $\times$  2

- Product
- 3 mm allen wrench $\times$  1
- Instruction manual
- Bracket  $\times$  1

#### **Software**

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

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.

# 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  $\times$  5.6 m
- Supports up to 4 channels
- Small size (W 125  $\times$  H 80.3  $\times$  L 88 mm) suitable for various installation environments
- Ethernet communication support
- atLiDAR, PC-only software support

### **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 $0.3 \times 0.3 \mathrm{m}$ to $5.6 \times 5.6 \mathrm{m}^{\mathrm{Ol}}$			
Monitoring zone				
Front contamination	Normal operation with max. 30 % contamination of one mater			
Min. size of the scanning target <sup>02)</sup>	At detection distance of 3 m: $\approx$ W 2.1 $\times$ H 2.1 $\times$ L 2.1 cm At detection distance of 5 m: $\approx$ W 3.5 $\times$ H 3.5 $\times$ 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	C€ №			
Korean Railway Standards	KRS SG 0068			
Unit weight (package)	≈ 0.58 kg (≈ 0.96 kg)			

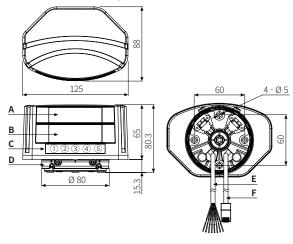
- 01) At object reflectivity: 10 %
- 02) At object reflectivity: 90 % (Kodak Gray card R-27, White) 03) Indicates the laser scanner adjustment range.

03) Indicates the laser scanner adjustment range.					
Power supply	24 VDC== ± 20 %				
Power consumption	≤8W				
Communication interface	Ethernet (TCP/IP) 10BASE-T				
Input	Photocoupler input $H^{(0)}$ : $\geq 8-30  \text{VDC}$ ==, L: $\leq 3  \text{VDC}$ ==				
Output	PhotoMOS relay output Galvanic isolation, non-polarity Resistive load: $30  \text{VDC} = /24  \text{VAC} \sim, \leq 80  \text{mA}$ Output resistance: $30  \Omega$ Switching time: $t_{\text{ON}} = 5  \text{ms}$ , $t_{\text{OFF}} = 5  \text{ms}$				
Insulation resistance	$\geq$ 5 M $\Omega$ (500 VDC== megger)				
Dieletric strength	500 VAC~ 50 / 60 Hz for 1 minute				
Vibration	$\leq 2 \mathrm{G} (18.7 \mathrm{m/s^2})$				
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.

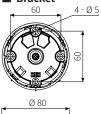
#### **Dimensions**

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



Α	Laser emitter	С	Indicators	E	Power, I / O cable
В	Laser receiver	D	Bracket	F	Ethernet cable

#### ■ Bracket





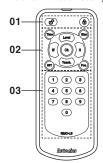
#### **Sold Separately**

• 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