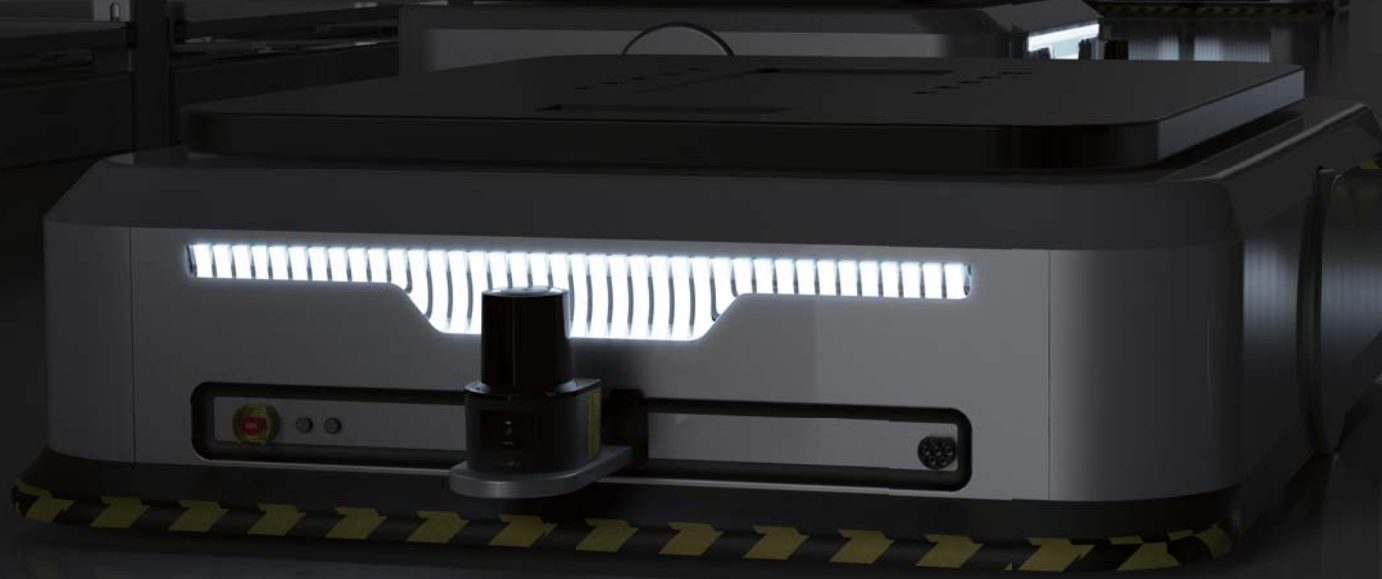




The Perfect Solution for Presence Detection

Compact LiDAR, LSC Series

Better, Wider, Autonics Compact LiDAR



Max. 270°
Detection Angle

Max. 25 m
Detection Distance

15 Hz
Scanning Frequency

0.33°
Angular Resolution

NPN/PNP
Open Collector Output Setting

Max. 16
Field Sets

Bluetooth
Communication

Compact
Size



2D 270° Compact LiDAR LSC Series

LiDAR sensors utilize time-of-flight (ToF) method to measure the round trip time of the infrared laser beam, to accurately detect presence of objects within a wide range area.

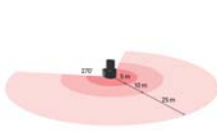
As the logistics robots and service market has grown, interest in LiDAR sensors is increasing. This technology can be applied in various industries such as AGV, OAV, drone, automobile, aircraft, and satellite to detect the surrounding environment, autonomous driving, collision prevention, and entrances. In addition, LiDAR sensors are highly utilized to detect objects within a wide range flexibly and accurately.

The new LSC series LiDAR sensors from Autonicus is available in 2 detection distance models (5 m / 10 m / 25 m). The compact size makes it optimal for use in small and medium-sized equipment. The laser scanners feature horizontal 270° detection area, angular resolution of 0.33°, and uses a 905 nm laser to meet Laser Class 1 for precise detection and measurement.

Main Features

- Wide range detection area: 270° detection angle, 25 m detection distance
- Number of field sets: 16 (1 set, consists of 3 sub-fields)
- Flexible field function for accurate detection
- Compact size for flexible installation (50 x 50 x 40 mm)
- Ethernet and Bluetooth communication
- All LiDAR software provided for PC and Android devices
- ROS API supported
- Bluetooth model availability may differ by country

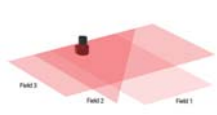
Detailed Features



270° Detection Angle, 25 m Detection Distance
The LSC series laser scanners offer wide range detection area with horizontal 270° detection angle and up to 25 m detection distance.



Auto Set Detection Area with Teaching Function
Users can use the teaching function to automatically set optimal detection area. This function can be operated also with dedicated software and other input signals.



Flexible Field Configuration
The laser scanners can set 16 types of field sets with 4 input types. Each field set consists of 3 sub-fields and each sub-field are individually connected to outputs.



Easy Parameter Setting with Mobile Application
The LSC series offer Bluetooth communication for parameter setting with mobile (Android) devices.

* Bluetooth model availability may differ by country



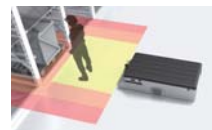
Intuitive Detection Format Setting
Each sub-field can be configured in the form of rectangles, circles and polygons for easy and flexible application.



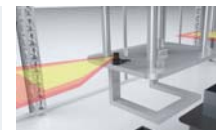
Dedicated Software atLiDAR Provided
Users can easily set parameters and monitor status with dedicated software atLiDAR. The intuitive and user-friendly interface allows users to easily operate laser scanners.

* Bluetooth model availability may differ by country

Application



Autonomous Mobile Robot
Laser scanners are used in Automated Guided Vehicle and Autonomous Mobile Robot to prevent collisions with personnel and objects.



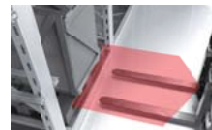
Collision Prevention
Laser scanners used to prevent collisions between objects in OHT (Overhead Hoist Transport) equipment operation.



Interactive Media
Laser scanners can be used in various interactive contents for education, promotion, arts and more.



Security
Laser scanners used for security purposes at retail stores.



Environment Detection
Laser scanner can be used to detect occupancy status of tray and to detect size of pallet for pick-up.



Anomaly Detection
Laser scanners are used to identify the inner condition of tote boxes on shipping conveyor belts.

Specifications

Model	LSC-02CT5-5T	LSC-02CT5-10T	LSC-02CT5-25T
Environment of use	Indoor		
Working property	Infrared laser		
Laser class	Class 1		
Wave length band	905nm		
Max pulse output power	5 W		
Beam diameter range	5~20mm		
Scanning frequency	25 Hz		
Response time	Typ. 87 ms		
Detection distance range	500 to 5m	500 to 10 m	500 to 25 m
Detection distance of 1% reflection	5 m	5 m	5 m
Min. object size ⁽¹⁾	At detection distance of 5 m = 121 mm		
Angular resolution	0.33°		
Detection angle	270°		
Object reflectivity	≥ 4%		
Number of field sets	16 (1 set, consists of subfield 1, 2, 3)		
Number of sub-fields that can be used concurrently	3		
Unit weight (package)	0.329 kg (0.74 lb)		
Approval	CE, FCC, RoHS		

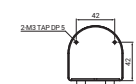
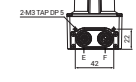
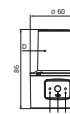
(1) Data: objects smaller than the set min. object size can be detected depending on the environment.

Power supply	5 ~ 28 VDC
Power consumption ⁽¹⁾	1.6 W
Input	4 (Programmable inputs: 1A x 3, 20 VDC; 1L x 2 0VDC)
Output signal	NPN/PNP open collector output setting (software)
Load voltage	5 ~ 28 VDC
Load current	≤ 100 mA
Rated load voltage	≤ 24 VDC
Resolution (minimum)	2.544 (100 (1/40) mm) (range)
Detection accuracy	±0.005% ~ ±0.010% (at 10 m)
Vibration	10 mm/sec cycle in each X, Y, Z axes at one half sine, 10 to 500 Hz, acceleration 1 G
Shock (non-inertial)	10 mm/sec in each X, Y, Z axes at one half sine, 10 to 500 Hz, acceleration 1 G
Operation (range)	2 times in each X, Y, Z axes at one half sine, acceleration 5 G, duration 11 ms
Shock (inertial)	1000 mm/sec in each X, Y, Z axes at one half sine, acceleration 25 G, duration 5 ms
Shock (inertial)	2000 mm/sec in each X, Y, Z axes at one half sine, acceleration 50 G, duration 1 ms
Shock (inertial)	4 times in each X, Y, Z axes at one half sine, acceleration 50 G, duration 11 ms
Ambient temperature	0 to 50 °C, storage: -30 to 70 °C (no freezing or condensation)
Ambient humidity	0 to 95 %RH, storage: 0 to 95 %RH (no freezing or condensation)
Protection structure	IP67 (DIN standard)
Connector specification	Phoenix 10-1503-12000, Ethernet RJ45 B-type
Material	Clear AL, White PC

(1) Excluding power supplied to the load

Dimensions

Note: unit: mm. For the detailed drawing, follow the Autonicus website.



1	Power supply	2	Bluetooth
3	Output signal	4	Power I/O connector
5	Input voltage	6	Ethernet connector

Autonics

Products

Sensors, Controllers, Motion Devices, Safety, Measuring Equipment, Connection Equipment and more

- Safety Light Curtains • Safety Switches • Safety Controllers • Vision Sensors • LiDAR • Displacement Sensors
- Photoelectric Sensors • Photomicro Sensors • Fiber Optic Sensors • Door Sensors • Area Sensors • Proximity Sensors • Pressure Sensors
- Rotary Encoders • Temperature Controllers • Solid State Relays • Power Controllers • Counters • Timers
- Digital Panel Meters • Digital Display Units • Sensor Controllers • SMPS • Industrial PC • HMIs • Recorders • Indicators • Network Converters
- Closed Loop Stepper Motor System (Ai-SERVO) • 5-Phase Stepper Motor & Drivers • 2-Phase Stepper Motor Drivers
- Motion Controllers • Industrial Networking • I/O Terminal Blocks • Distribution Boxes • Cables
- Control Switches/Pilot Lights/Buzzers • Pressure Transmitters • Temperature Transmitters • Software

Global Network

Global Business Headquarters 39, Magokjungang 5-ro 1-gil, Gangseo-gu, Seoul, Republic of Korea, 07594
Tel: 82-2-2048-1577 / E-mail: sales@autonics.com

Brazil Autonics do Brasil Comercial Importadora e Exportadora LTDA
Tel: 55-11-2307-8480 / 3195-4610 / Fax: 55-11-2309-7784 / E-mail: comercial@autonics.com.br

China Autonics electronic(Jiaxing) Corporation
Tel: 86-21-5422-5969 / Fax: 86-21-5422-5961 / E-mail: china@autonics.com

India Autonics Automation India Private Limited
Tel : 91-22-2768-2570 / E-mail: india@autonics.net.in

Indonesia PT. Autonics Indonesia
Tel: 62-21-8088-8814/5 / Fax: 62-21-8088-4442/0 / E-mail: indonesia@autonics.co.id

Japan Autonics Japan Corporation
Tel: 81-3-6435-8380 / Fax: 81-3-6435-8381 / E-mail: ja@autonics.com

Malaysia Mal-Autonics Sensor Sdn. Bhd.
Tel: 60-3-7805-7190 / Fax: 60-3-7805-7193 / E-mail: malaysia@autonics.com

Mexico Autonics Mexico S.A. DE C.V
Tel: 52-55-5207-0019 / Fax: 52-55-1663-0712 / E-mail: ventas05@autonics.com

Russia Autonics Rus LLC
Tel/Fax: 7-495-660-10-88 / E-mail : russia@autonics.com

Turkey Autonics Otomasyon Ticaret Ltd. Sti.
Tel: 90-216-365-9117/3 / Fax: 90-216-365-9112 / E-mail: turkey@autonics.com

USA Autonics USA, Inc.
Tel: 1-847-680-8160 / Fax: 1-847-680-8155 / E-mail: sales@autonicsusa.net

Vietnam Cong Ty TNHH Autonics Vina
Tel: 84-28-3771-2662 / Fax: 84-28-3771-2663 / E-mail: vietnam@autonics.com

* The dimensions or specifications on this product guide may change and some models may be discontinued without notice.

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