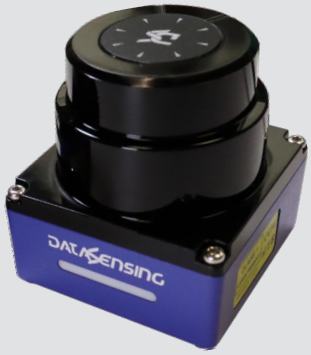
DATASENSING
easing automation challenges

NEW!

LGS-A10

COMPACT LIDAR SCANNER

FOR COLLISION AVOIDANCE AND OBJECT DETECTION



Very Compact, reliable and rugged Lidar for collision avoidance and for object detection available also for outdoor applications.
Very easy to install and use.

APPLICATIONS

- Automated Guided Vehicles (AGV)
- Automated Mobile Robots (AMR)
- Automated Guided Forklifts (AGF)
- Automated manufacturing machines
- Automated processing lines
- Agriculture and transportation equipment
- Earth moving machines

- ToF technology on infrared laser
- 2D Measurement data stream available
- 360° measurement for all-round scanning
- Very Compact design suitable also for smaller machines
- High precision and reliable measurement up to 25 meters
- Up to 225000 measured points per second
- Up to 25 Hz selectable rotation frequency
- 0.25° angle resolution
- Dimensions: 65 x 65 x 70 mm
- 10 m x 360° detection field
- 3 simultaneous detection outputs
- Up to 16 zone sets
- 5 selectable detection capabilities
- 10 selectable response times
- Output response time min = 80 ms

CODE DESCRIPTION

LGS - A 10

series	**LGS**	Lidar
model	**A**	Anti-collision lidar
max detection range	**10**	10 m detection range

TECHNICAL SPECIFICATIONS

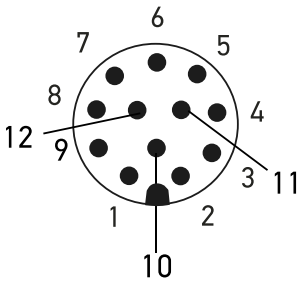
	LGS-A10
GENERAL DATA	
Operating principle	Lidar / pulsed TOF
Description	LGS-A10
Diagnostic	Motor / Temperature / Voltage
Transmitted Data	angle of each measuring point
	distance of each measuring point
	signal strenght of each measuring point
	time stamp in ms each 24h/cycle
MEASURING PERFORMANCES	
Nominal sensing distance	25 m
range @ 10% of remission	0.1 ... 10 m
range @ 80% remission	0.1 ... 25 m
Scan Angle	360 °
Minimum distance of detection	0.1 m
Measurement accuracy	± 30 mm @ 80% (0.4-25 m)
Repeatability	≤20 mm @ 80% (0.4-25 m)
Angular resolution	0.25° @10Hz / 0.5° @15Hz / 1° @25Hz
DETECTION CAPABILITIES	
Detection range	10 m
N. of selectable detection capabilities	5
N. of zone sets	16
N. of simultaneous detections	3
Response time	min. 80 ms
EMISSION	
Emission	Laser Infrared
Laser wavelenght	905 ± 20 (IR) nm
FUNCTIONS	
Selectable scanning frequency	10/15/25 Hz
Selectable output response time	up to 10 values for each scanning frequency
Selectable detection capabilities	from 1 to 5 adiacent beams
INPUT/OUTPUT	
Ethernet Output type	IEEE 802.3u 100Mbps Ethernet
N. of inputs for zone set switching	4
N. of digital outputs	3
COMMUNICATION	
Communication protocol	TCP/IP
Measurement data transfer protocol	UDP
Ethernet connector	M12 4P Female, KEY D
Network Interface	10/100 Mbit/s Ethernet
HMI/UI	
Configuration and monitoring interface(s)	LGS Pro
LED indicators	Power (Green) / Fault (Red) / Outputs status

	LGS-A10
ELECTRICAL DATA	
Supply voltage	9 ... 30 Vdc
Power consumption (25°C)	< 5W @15Hz (without outputs loads)
Input Max current	50 mA
Input Voltage Min for ON status	0 V
Input Voltage Max for OFF status	VDC-0.1 V
Input Impedence	6.8 KΩ
Input max switching frequency	2 / 3 / 5 Hz
Input protection	36 V
Output Max load current	50 mA
Output Voltage Min ON Status	0.7 V
Output Voltage Max OFF Status	VDC
Output Voltage Drop Max	30 V
Output Max Capacitive Load	1 uF
Output Max Inductive Load	2.2 mH
Output Max Switching Frequency	2,5 / 3,5 / 6 Hz
Output Protection	85° C
MECHANICAL DATA	
Dimensions	65x65x70 mm
Material	Metal - Aluminium / PC
Weight	<500 g
ENVIRONMENTAL DATA	
Operating Temperature	-10 ... 60 °C
Mechanical Protection	IP67
Storage temperature max.	-20 ... 70 °C
Ambient light immunity	>80000 lux

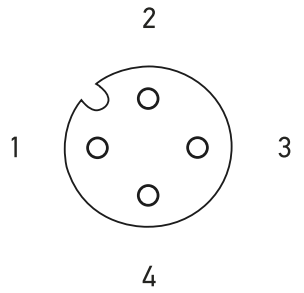
AVAILABLE MODELS

Description	Model
LGS-A10 compact lidar	**LGS-A10** (958200003)

PLUGS



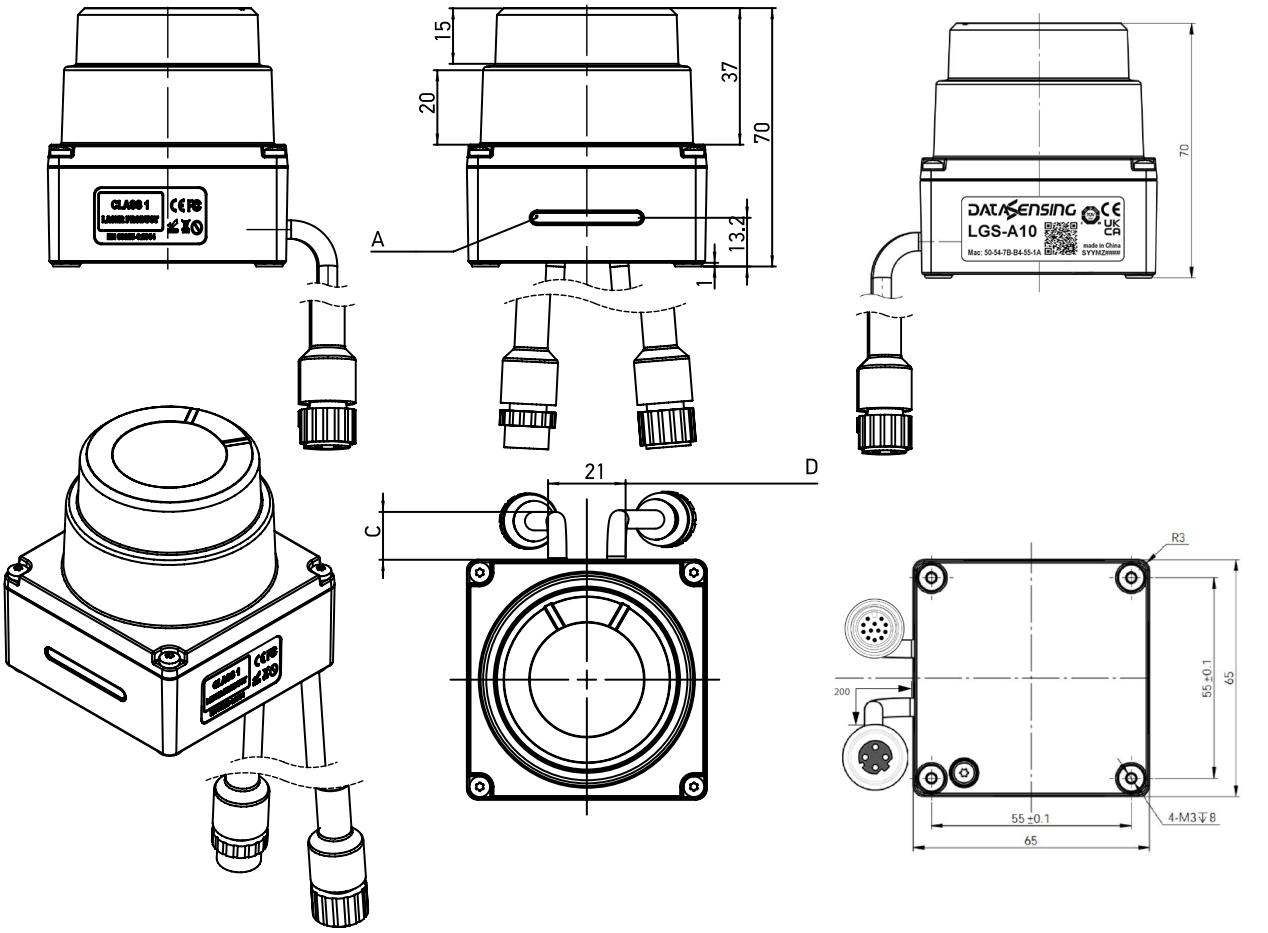
POWER AND I/O			
PIN #	PIN NAME	WIRING COLOR	CONNECTION DIAGRAM
1	+VCC	Brown	
2	GND	Blue	VCC_I/O
3	INPUT 1	White	INPUT#
4	INPUT 2	Green	GND_I/O
5	INPUT 3	Pink	
6	INPUT 4	Yellow	
7	GND I/O	Black	
8	OUT_1	Grey	OUT_# load load GND_I/O
9	+VDC_I/O	Red	
10	OUT_2	Violet	OUT_# load load GND_I/O
11	OUT_3	Grey/Pink	OUT_# load load GND_I/O
12	OUT_4	Red/Blue	OUT_# load load GND_I/O



ETHERNET	
PIN #	PIN NAME
1	TX+
2	RX+
3	TX-
4	RX-

MECHANICAL DRAWINGS

LGS-A10



(mm)

Model	A	B	C	D
LGS-A10	LED user interface	min 15~20	It's recommended to install the threading opening > 20x20	Cable length 150 ~ 200

ACCESSORIES TO BE ORDERED SEPARATELY (CABLES)

Description	Cables poles connections	Dimensions	Model
Power and I/O cables	12 pin female	3 m	**CS-A1-10-U-03** (95A252720)
		5 m	**CS-A1-10-U-05** (95A252730)
		10 m	**CS-A1-10-U-10** (95A252740)
		15 m	**CS-A1-10-U-15** (95A252750)
		25 m	**CS-A1-10-U-25** (95A252760)
Ethernet to host cables	M12 4-poles M, Key D Ethernet - RJ45	1 m lenght	**CAB-ETH-M01** (93A051346)
		3 m lenght	**CAB-ETH-M03** (93A051347)
		5 m lenght	**CAB-ETH-M05** (93A051348
		10 m lenght	**CAB-ETH-M10** (93A051391)