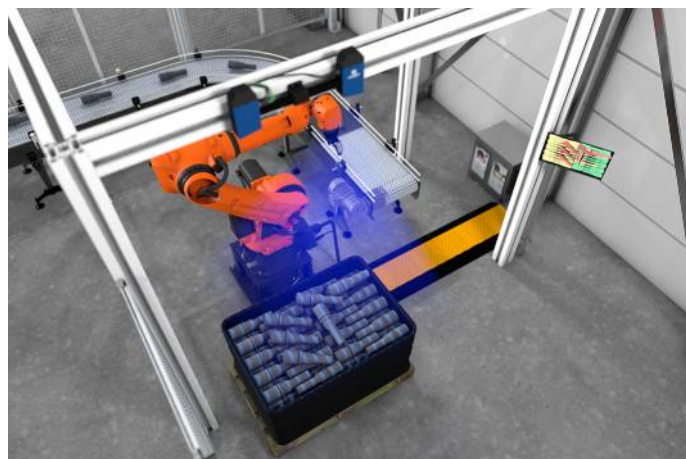# 3D Sensor

MLBS112

Part Number

- ● **5 MP resolution**
- ● **Easy integration via SDK or GigE Vision**
- ● **High point cloud quality with up to four 3D point clouds per second**
- ● **Integrated 3D point cloud calculation**

Technical Data

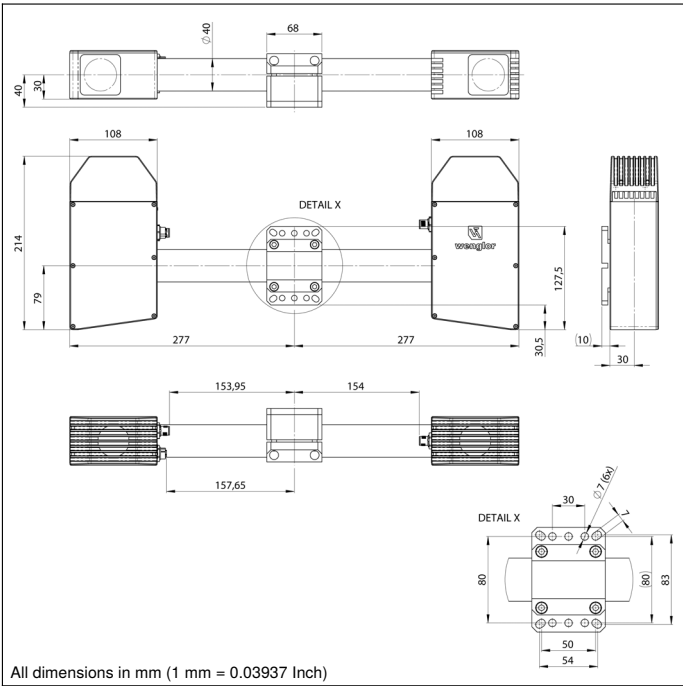| Optical Data	
Working range Z	1550...2050 mm
Measuring range Z	500 mm
Measuring range X	750 mm
Measuring range Y	560 mm
Resolution Z	50 μm
Resolution X/Y	406 μm
Camera Resolution	2448 × 2048 Pixel
Light Source	LED (blue)
Wavelength	457 nm
Service Life (T = +25 °C)	20000 h
Risk Group (EN 62471)	2
Environmental conditions	
Ambient temperature	0...35 °C
Storage temperature	-5...70 °C
Max. Ambient Light	20000 Lux
Electrical Data	
Supply Voltage	18...30 V DC
Max. Current Consumption (Ub = 24 V)	3,5 A
Recording duration	0,28 s
Inputs/Outputs	4
Short Circuit Protection	yes
Reverse Polarity Protection	yes
Interface	Ethernet TCP/IP
Baud Rate	1000/10000 Mbit/s
Protection Class	III
Mechanical Data	
Housing Material	Aluminium; Plastic
Degree of Protection	IP67
Type of Connection Power	M12 × 1; 5-pin
Type of connection digital I/O ports	M12 × 1; 12-pin
Type of Connection Ethernet	M12 × 1; 8-pin, X-cod.
Optic Cover	Plastic
Weight	< 4500 g
Web server	yes
Connection Diagram No.	250 251 1022
Control Panel No.	A22

The three variants of the ShapeDrive MLBS series are optimally designed for crates and pallets with their symmetrical design and large measuring volumes. The robust design makes the MLBS sensors suitable for use in industrial environments. With its fast Ethernet interface and three measuring ranges, ShapeDrive G4 is distinguished by great diversity and high speed.

All dimensions in mm (1 mm = 0.03937 Inch)

Ctrl. Panel

A22
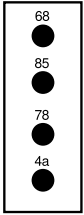
4a = User LED
68 = supply voltage indicator
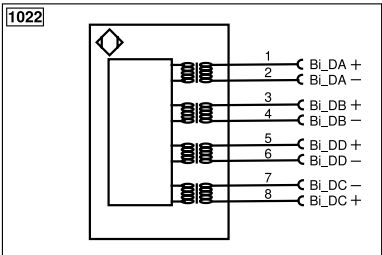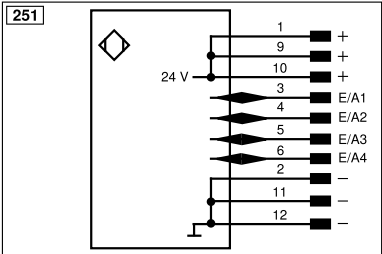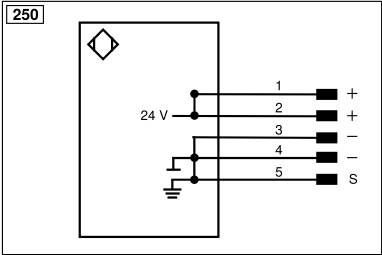78 = Module status
85 = Link/Act LED

250

24 V

1	+
2	+
3	–
4	–
5	S

251

24 V

1	+
9	+
10	+
3	E/A1
4	E/A2
5	E/A3
6	E/A4
2	–
11	–
12	–

1022

1	Bi_DA +
2	Bi_DA –
3	Bi_DB +
4	Bi_DB –
5	Bi_DD +
6	Bi_DD –
7	Bi_DC –
8	Bi_DC +

Legend					
+	Supply Voltage +	nc	Not connected	ENBRS422	Encoder B/B̄ (TTL)
–	Supply Voltage 0 V	U	Test Input	ENA	Encoder A
~	Supply Voltage (AC Voltage)	Ū	Test Input inverted	ENB	Encoder B
A	Switching Output (NO)	W	Trigger Input	AMIN	Digital output MIN
Ā	Switching Output (NC)	W–	Ground for the Trigger Input	AMAX	Digital output MAX
V	Contamination/Error Output (NO)	O	Analog Output	AOK	Digital output OK
V̄	Contamination/Error Output (NC)	O–	Ground for the Analog Output	SY In	Synchronization In
E	Input (analog or digital)	BZ	Block Discharge	SY OUT	Synchronization OUT
T	Teach Input	AMV	Valve Output	OLT	Brightness output
Z	Time Delay (activation)	a	Valve Control Output +	M	Maintenance
S	Shielding	b	Valve Control Output 0 V	rsv	Reserved
RxD	Interface Receive Path	SY	Synchronization	Wire Colors according to DIN IEC 60757	
TxD	Interface Send Path	SY–	Ground for the Synchronization	BK	Black
RDY	Ready	E+	Receiver-Line	BN	Brown
GND	Ground	S+	Emitter-Line	RD	Red
CL	Clock	⏚	Grounding	OG	Orange
E/A	Output/Input programmable	SnR	Switching Distance Reduction	YE	Yellow
⊚	IO-Link	Rx+/–	Ethernet Receive Path	GN	Green
PoE	ower over Ethernet	Tx+/–	Ethernet Send Path	BU	Blue
IN	Safety Input	Bus	Interfaces-Bus A(+)/B(–)	VT	Violet
OSSD	Safety Output	La	Emitted Light disengageable	GY	Grey
Signal	Signal Output	Mag	Magnet activation	WH	White
BI_D+/–	Ethernet Gigabit bidirect. data line (A-D)	RES	Input confirmation	PK	Pink
EN0 RS422	Encoder 0-pulse 0/0̄ (TTL)	EDM	Contactor Monitoring	GNYE	Green/Yellow
PT	Platinum measuring resistor	ENARS422	Encoder A/Ā (TTL)		

UK CA   C€   RoHS

Specifications are subject to change without notice