MLAS104

Part Number

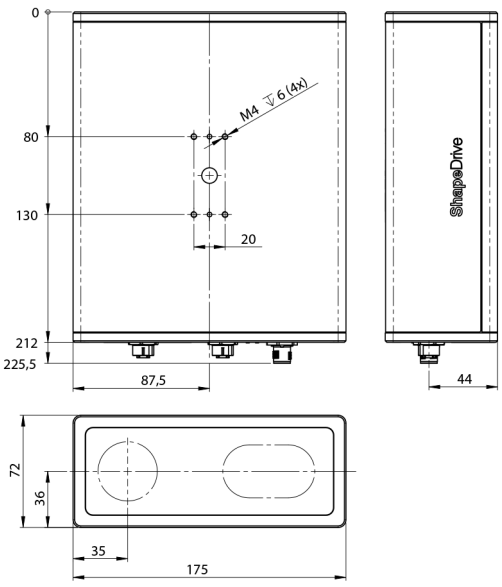
ShapeDrive

- **10 Gbit/s interface for high speed data transfer**
- **5 MP resolution**
- **Short recording times of up to 0.35 s**

ShapeDrive MLAS 3D Sensors are distinguished by high precision for minimal measuring volumes. The ten models in this series are available in two performance classes with camera resolutions of 5 and 12 megapixels. All ShapeDrive sensors are ideally suited for use in industrial environments thanks to the rugged IP65 housing. With its 10 Gigabit Ethernet interface and five measuring ranges in each performance class, ShapeDrive is also distinguished by great diversity and high speed.

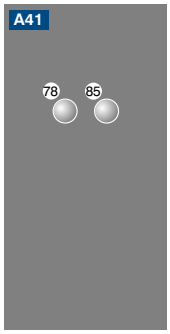
Technical Data

Optical Data	
Working range Z	390...590 mm
Measuring range Z	200 mm
Measuring range X	240 mm
Measuring range Y	200 mm
Resolution Z	12 µm
Resolution X/Y	142 µm
Camera Resolution	2448 × 2048 Pixel
Light Source	LED (blue)
Wavelength	460 nm
Service Life (T = +25 °C)	20000 h
Risk Group (EN 62471)	2
Max. Ambient Light	5000 Lux
Electrical Data	
Supply Voltage	18...30 V DC
Max. Current Consumption (Ub = 24 V)	3,5 A
Recording duration	0,35...2,15 s
Temperature Range	0...35 °C
Storage temperature	-5...70 °C
Short Circuit Protection	yes
Reverse Polarity Protection	yes
Interface	Ethernet TCP/IP
Baud Rate	100 Mbit/s
Baud Rate (10 GbE)	10 Gbit/s
Protection Class	III
Mechanical Data	
Housing Material	Aluminium; Plastic
Degree of Protection	IP65
Connection	M12 × 1; 12-pin
Type of Connection Ethernet	M12 × 1; 8-pin, X-cod.
Optic Cover	Plastic
Weight	2500 g
Web server	yes
Connection Diagram No.	238, 1022
Control Panel No.	A41
Suitable Connection Equipment No.	50, 87
Suitable Mounting Technology No.	343

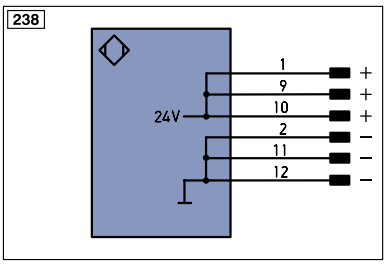


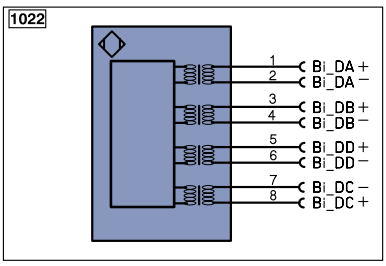
All dimensions in mm (1 mm = 0.03937 Inch)

Ctrl. Panel



78 = Module status
85 = Link/Act LED





Legend

+	Supply Voltage +	PT	Platinum measuring resistor
–	Supply Voltage 0 V	nc	not connected
~	Supply Voltage (AC Voltage)	U	Test Input
A	Switching Output (NO)	Ū	Test Input inverted
Ā	Switching Output (NC)	W	Trigger Input
V	Contamination/Error Output (NO)	W–	Ground for the Trigger Input
V̄	Contamination/Error Output (NC)	O	Analog Output
E	Input (analog or digital)	O–	Ground for the Analog Output
T	Teach Input	BZ	Block Discharge
Z	Time Delay (activation)	AMV	Valve Output
S	Shielding	a	Valve Control Output +
RxD	Interface Receive Path	b	Valve Control Output 0 V
TxD	Interface Send Path	SY	Synchronization
RDY	Ready	SY–	Ground for the Synchronization
GND	Ground	E+	Receiver-Line
CL	Clock	S+	Emitter-Line
E/A	Output/Input programmable	⏚	Grounding
	IO-Link	SnR	Switching Distance Reduction
PoE	Power over Ethernet	Rx+/–	Ethernet Receive Path
IN	Safety Input	Tx+/–	Ethernet Send Path
OSSD	Safety Output	Bus	Interfaces-Bus A(+)/B(–)
Signal	Signal Output	La	Emitted Light disengageable
Bl_D+/-	Ethernet Gigabit bidirect. data line (A-D)	Mag	Magnet activation
EN0 RS422	Encoder 0-pulse 0-0̄ (TTL)	RES	Input confirmation
		EDM	Contactor Monitoring

ENA RS422	Encoder A/Ā (TTL)
ENB RS422	Encoder B/B̄ (TTL)
ENA	Encoder A
ENB	Encoder B
AMIN	Digital output MIN
AMAX	Digital output MAX
AOK	Digital output OK
SY In	Synchronization In
SY OUT	Synchronization OUT
OLT	Brightness output
M	Maintenance
rsv	reserved

Wire Colors according to IEC 60757

BK	Black
BN	Brown
RD	Red
OG	Orange
YE	Yellow
GN	Green
BU	Blue
VT	Violet
GY	Grey
WH	White
PK	Pink
GNYE	Green/Yellow

Measuring Volume