MLAS204

Part Number

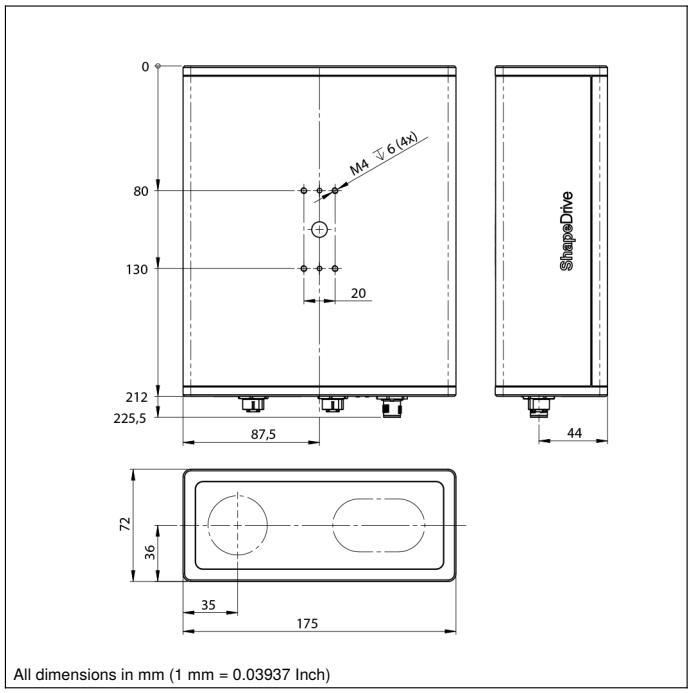
ShapeDrive

- **10 Gbit/s interface for high speed data transfer**
- **12 MP resolution**
- **Short recording times of up to 0.188 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.

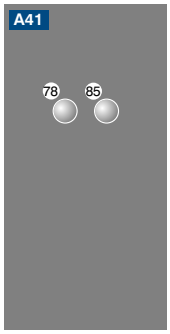
Technical Data

Optical Data	
Working range Z	270...470 mm
Measuring range Z	200 mm
Measuring range X	240 mm
Measuring range Y	160 mm
Resolution Z	10 µm
Resolution X/Y	59 µm
Camera Resolution	4096 × 3000 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	0,188...0,61 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

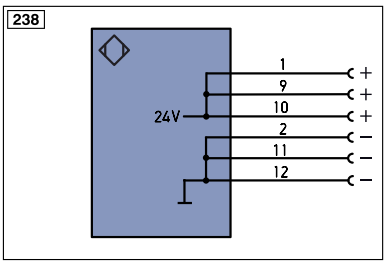


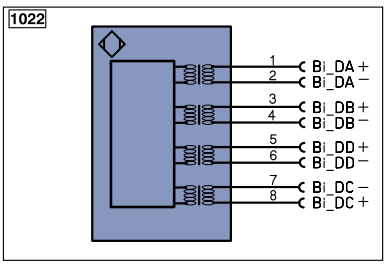
All dimensions in mm (1 mm = 0.03937 Inch)

Ctrl. Panel



78 = Module status
85 = Link/Act LED





Legend

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

Wire Colors according to DIN IEC 757

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