

2D/3D Profile Sensor

MLWL123

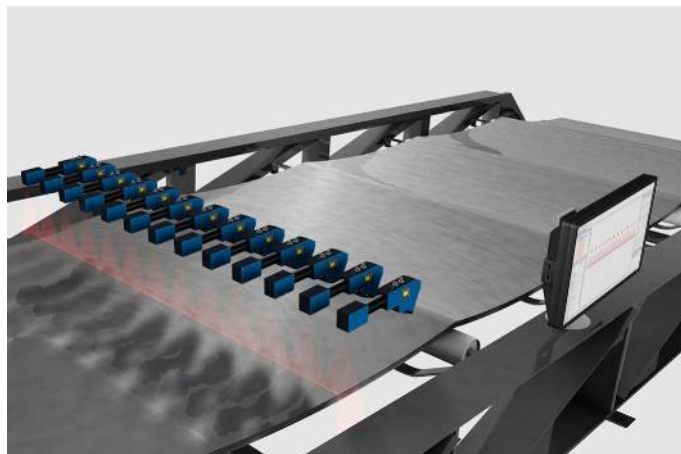
Part Number

weCat3D



- Optimized profile quality thanks to HDR function
- Precise measuring range resolution X (> 2000 measuring points)
- Up to 12 million measuring points per second

2D/3D Profile Sensors project a laser line onto the object to be detected and generate an accurate, linearized height profile with an internal camera which is set up at a triangulation angle. Thanks to its uniform, open interface, the weCat3D series can be incorporated by means of the DLL program library or the GigE Vision standard without an additional control unit. Alternatively, wenglor offers its own software packages for implementing your application.

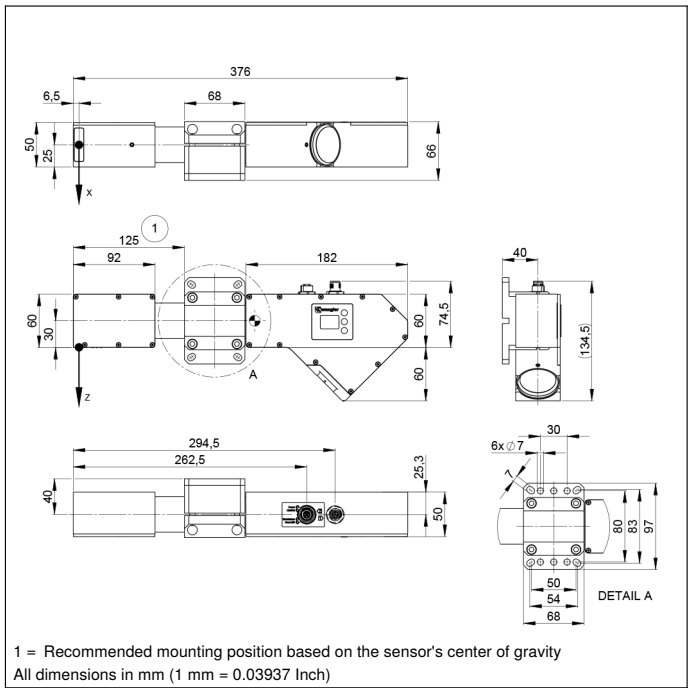


Technical Data

Optical Data			
Working range Z	215...475 mm		
Measuring range Z	260 mm		
Measuring range X	150...230 mm		
Linearity Deviation	65 μ m		
Resolution Z	9,6...22 μ m		
Resolution X	79...120 μ m		
Light Source	Laser (red)		
Wavelength	660 nm		
Service Life (T = +25 °C)	20000 h		
Laser Class (EN 60825-1)	2		
Environmental conditions			
Ambient temperature	0...45 °C		
Storage temperature	-20...70 °C		
Max. Ambient Light	5000 Lux		
EMC	DIN EN 61000-6-2; 61000-6-4		
Shock resistance per DIN IEC 68-2-27	30 g / 11 ms		
Vibration resistance per DIN IEC 60068-2-6	6 g (10...55 Hz)		
Atmospheric humidity	5...95%, non-condensing		
Electrical Data			
Supply Voltage	18...30 V DC		
Current Consumption (Ub = 24 V)	300 mA		
Measuring Rate	175...6000 /s		
Subsampling	350...6000 /s		
Inputs/Outputs	4		
Switching Output Voltage Drop	< 1,5 V		
Switching Output/Switching Current	100 mA		
Short Circuit Protection	yes		
Reverse Polarity Protection	yes		
Overload Protection	yes		
Interface	Ethernet TCP/IP		
Baud Rate	100/1000 Mbit/s		
Protection Class	III		
FDA Accession Number	1710274-002		
Mechanical Data			
Housing Material	Aluminum, anodised		
Degree of Protection	IP67		
UL Enclosure Type	1		
Connection	M12 $\times$ 1; 12-pin		
Type of Connection Ethernet	M12 $\times$ 1; 8-pin, X-cod.		
Optic Cover	Glass		
Web server	yes		
Push-Pull			
Connection Diagram No.	<table border="1"><tr><td>1022</td><td>1034</td></tr></table>	1022	1034
1022	1034		
Control Panel No.	<table border="1"><tr><td>X2</td><td>A22</td></tr></table>	X2	A22
X2	A22		
Suitable Connection Equipment No.	<table border="1"><tr><td>50</td><td>87</td></tr></table>	50	87
50	87		

Complementary Products

Connection cables
Control Unit
Cooling Unit ZLWK003
EHSS001 Switch
Machine Vision Controller MVC
Protective Screen Retainer ZLWS003
Software

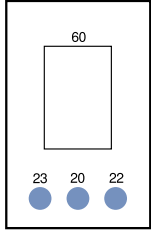
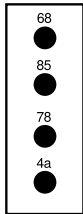


1 = Recommended mounting position based on the sensor's center of gravity
All dimensions in mm (1 mm = 0.03937 Inch)

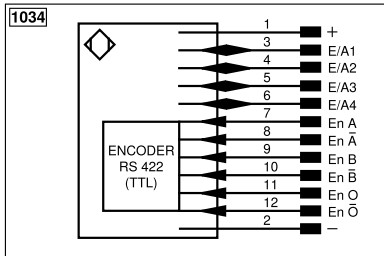
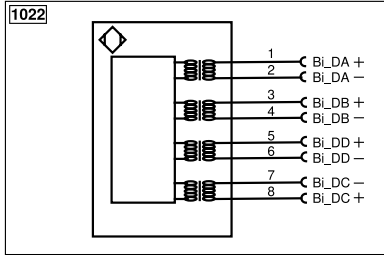
Ctrl. Panel

A22

X2

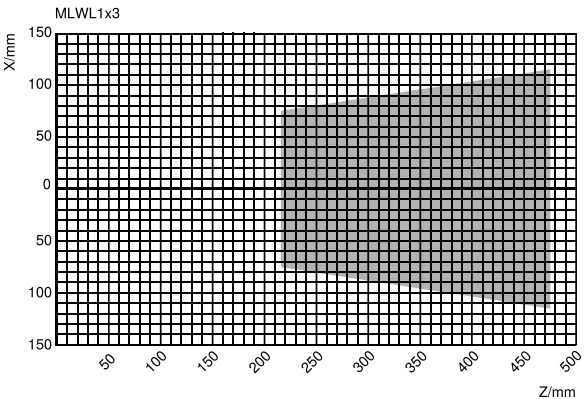


- 20 = Enter key
- 22 = Up key
- 23 = Down key
- 4a = User LED
- 60 = display
- 68 = supply voltage indicator
- 78 = Module status
- 85 = Link/Act LED



Legend			
+	Supply Voltage +	nc	Not connected
-	Supply Voltage 0 V	U	Test Input
~	Supply Voltage (AC Voltage)	Ü	Test Input inverted
A	Switching Output (NO)	W	Trigger Input
Ä	Switching Output (NC)	W-	Ground for the Trigger Input
V	Contamination/Error Output (NO)	O	Analog Output
V̄	Contamination/Error Output (NC)	O-	Ground for the Analog Output
E	Input (analog or digital)	BZ	Block Discharge
T	Teach Input	Amv	Valve Output
Z	Time Delay (activation)	a	Valve Control Output +
S	Shielding	b	Valve Control Output 0 V
RxD	Interface Receive Path	SY	Synchronization
TxD	Interface Send Path	SY-	Ground for the Synchronization
RDY	Ready	E+	Receiver-Line
GND	Ground	S+	Emitter-Line
CL	Clock	±	Grounding
E/A	Output/Input programmable	SnR	Switching Distance Reduction
IO-Link	IO-Link	Rx+/-	Ethernet Receive Path
PoE	Power over Ethernet	Tx+/-	Ethernet Send Path
IN	Safety Input	Bus	Interfaces-Bus A(+)/B(-)
OSSD	Safety Output	La	Emitted Light disengageable
Signal	Signal Output	Mag	Magnet activation
BL_D+/-	Ethernet Gigabit bidirect. data line (A-D)	RES	Input confirmation
ENO RS422	Encoder 0-pulse 0/Ü (TTL)	EDM	Contact Monitoring
PT	Platinum measuring resistor	ENARIS422	Encoder A/Ä (TTL)
		ENBRIS422	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 DIN 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 field X, Z



Z = Working distance
X = Measuring Range

