

2D/3D Profile Sensor

MLWL221

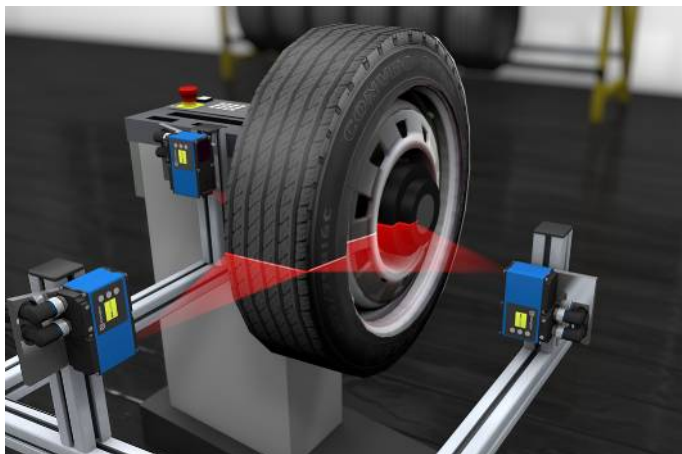
Part Number

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.

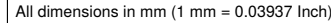


Technical Data

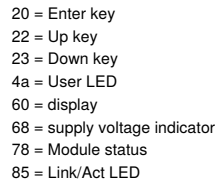
Optical Data	
Working range Z	120...300 mm
Measuring range Z	180 mm
Measuring range X	65...145 mm
Linearity Deviation	45 µm
Resolution Z	5,2...26 µm
Resolution X	36...81 µm
Light Source	Laser (red)
Wavelength	660 nm
Service Life (T = +25 °C)	20000 h
Laser Class (EN 60825-1)	2
Environmental conditions	
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	1710274-000
Mechanical Data	
Housing Material	Aluminum, anodised
Degree of Protection	IP67
UL Enclosure Type	1
Connection	M12 × 1; 12-pin
Type of Connection Ethernet	M12 × 1; 8-pin, X-cod.
Optic Cover	Glass
Web server	yes
Push-Pull	●
Connection Diagram No.	1022 1034
Control Panel No.	X2 A22
Suitable Connection Equipment No.	50 87
Suitable Mounting Technology No.	343

Complementary Products

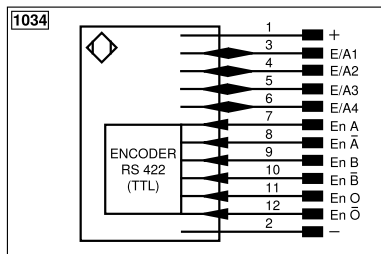
Connection cables
Control Unit
Cooling Unit ZLWK004
EHSS001 Switch
Machine Vision Controller MVC
Protective Screen Retainer ZLWS004
Software



A22



A rectangle is shown with a perimeter of 60. The width is labeled 23, the height is labeled 20, and the length is labeled 22.



Legend					
+	Supply Voltage +	nc	Not connected	EN _{BRG422}	Encoder B/B̄ (TTL)
-	Supply Voltage 0 V	U	Test Input	EN _A	Encoder A
~	Supply Voltage (AC Voltage)	Ü	Test Input inverted	EN _B	Encoder B
A	Switching Output (NO)	W	Trigger Input	AM _{IN}	Digital output MIN
Ä	Switching Output (NC)	W-	Ground for the Trigger Input	AM _{AX}	Digital output MAX
V	Contamination/Error Output (NO)	O	Analog Output	AOK	Digital output OK
Ů	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	AM _v	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		
RDY	Ready	E+	Receiver-Line		
GND	Ground	S+	Emitter-Line		
CL	Clock	±	Grounding		
E/A	Output/Input programmable	SnR	Switching Distance Reduction		
	IO-Link	Rx+/-	Ethernet Receive Path	YE	Yellow
PoE	Power over Ethernet	Tx+/-	Ethernet Send Path	GN	Green
IN	Safety Input	Bus	Interfaces-Bus A(+)/B(-)	BU	Blue
OSSD	Safety Output	La	Emitted Light disengageable	VT	Violet
Signal	Signal Output	Mag	Magnet activation	GY	Grey
BI_D+/-	Ethernet Gigabit bidirect. data line (A-D)	RES	Input confirmation	WH	White
EN ₀ RS422	Encoder 0-pulse 0/Ü (TTL)	EDM	Contact or Monitoring	PK	Pink
PT	Platinum measuring resistor	EN _{ARs422}	Encoder A/Ä (TTL)	GN _{YE}	Green/Yellow

Z = Working distance

