

# 2D/3D Profile Sensor

## OPT3042 LASER

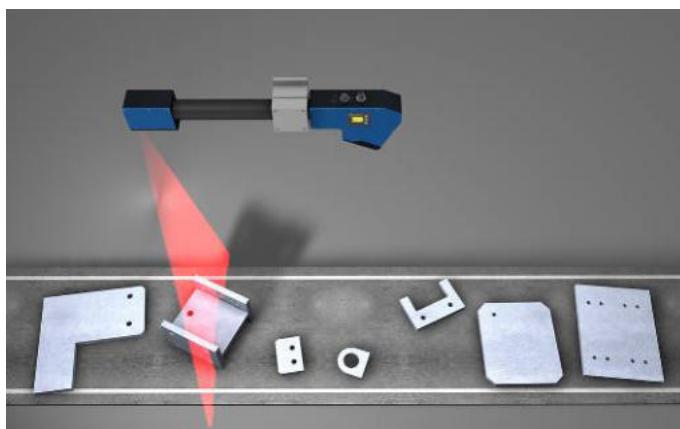
Part Number

weCat3D



- Optimized profile quality thanks to HDR function
- Precise resolution of visual field width 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	1450...2050 mm
Measuring range Z	600 mm
Visual field width X	200...280 mm
Linearity Deviation	150 µm
Resolution Z	25...49 µm
Resolution X	105...146 µm
Light Source	Laser (red)
Wavelength	660 nm
Service Life (T = +25 °C)	20000 h
Laser Class (EN 60825-1)	2M
Max. Ambient Light	5000 Lux

#### Electrical Data

Supply Voltage	18...30 V DC
Current Consumption (Ub = 24 V)	300 mA
Measuring Rate	180...6000 /s
Temperature Range	0...45 °C
Storage temperature	-20...70 °C
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

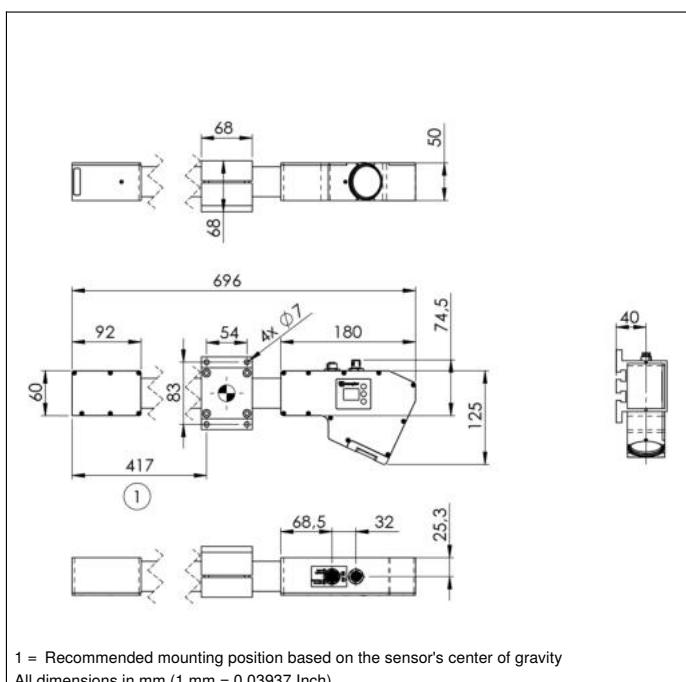
#### Mechanical Data

Housing Material	Aluminum
Degree of Protection	IP67
Connection	M12 x 1; 12-pin
Type of Connection Ethernet	M12 x 1; 8-pin, X-cod.
Optic Cover	Glass
Weight	2620 g
Web server	yes
Configurable as PNP/NPN/Push-Pull	
Switchable to NC/NO	
Connection Diagram No.	1022 1023
Control Panel No.	X2 A22
Suitable Connection Equipment No.	50 87

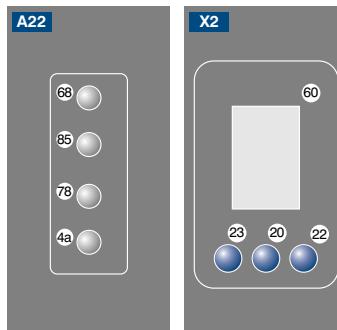
Display brightness may decrease with age. This does not result in any impairment of the sensor function.

### Complementary Products

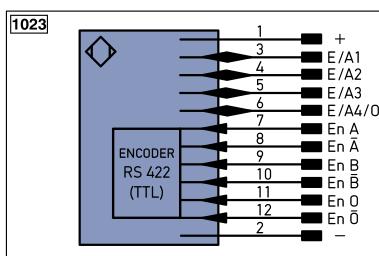
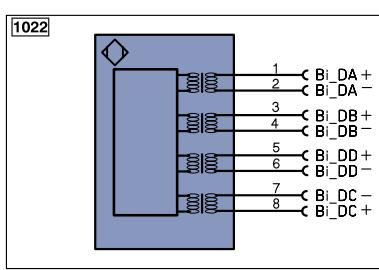
Control Unit
Cooling Unit ZLWK003
Protective Screen Retainer ZLWS003
Software
Switch ZAC45FN01



### Ctrl. Panel



20 = Enter Button  
 22 = UP Button  
 23 = Down Button  
 4a = User LED  
 60 = Display  
 68 = Supply Voltage Indicator  
 78 = Module status  
 85 = Link/Act LED



### Legend

PT	Platinum measuring resistor
nc	not connected
U	Test Input
Ü	Test Input inverted
W	Trigger Input
O	Analog Output
O-	Ground for the Analog Output
BZ	Block Discharge
AVV	Valve Output
a	Valve Control Output +
b	Valve Control Output 0 V
SY	Synchronization
RxD	Interface Receive Path
TxD	Interface Send Path
RDY	Ready
GND	Ground
CL	Clock
E/A	Output/Input programmable
IO-Link	IO-Link
PoE	Power over Ethernet
IN	Safety Input
OSO	Safety Output
Signal	Signal Output
BL-D	Ethernet Gigabit bidirect. data line (A-D)
EN0 <sub>RS422</sub>	Encoder 0-pulse 0-0 (TTL)
EN <sub>RS422</sub>	Encoder A/A (TTL)
EN <sub>RS422</sub>	Encoder B/B (TTL)

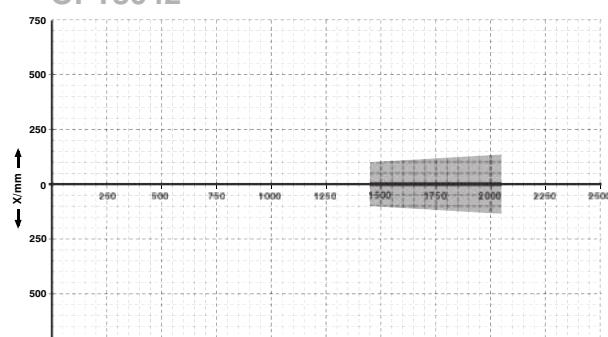
EN <sub>A</sub>	Encoder A
EN <sub>B</sub>	Encoder B
AMIN	Digital output MIN
AMAX	Digital output MAX
AOK	Digital output OK
SY IN	Synchronization IN
SY OUT	Synchronization OUT
0 <sub>1</sub> +	Brightness output
M	Maintenance
rsv	reserved

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
GN/YE	Green/Yellow

### Visual Field X, Z

#### OPT3042



Z = Working distance

X = Visual field width

