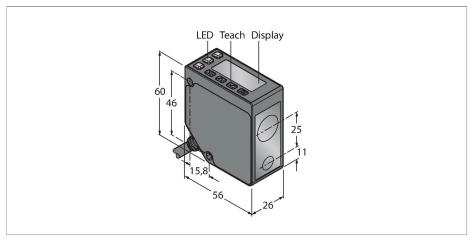


LE250U Photoelectric Sensor – Laser Scanning System



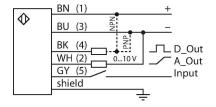
Technical data

ID no. 3091691	Туре	LE250U
Function Proximity switch Operating mode Triangulation Light type Red Wavelength 650 nm Laser class ▲ 2 Optical resolution 0.2 mm Repeatability 0.1 mm Range 100400 mm Ambient light immunity 10000 lux Electrical data Operating voltage 1230 VDC DC rated operational current ≤ 70 mA Short-circuit protection yes Reverse polarity protection yes Reverse polarity protection NO contact, PNP/NPN Output 12 Analog output Type of analog output 010 V Voltage output 010 V Switching frequency ≤ 250 Hz Readiness delay ≤ 2 s Readiness delay ≤ 2 ms Mechanical data	ID no.	3091691
Operating mode Triangulation Light type Red Wavelength 650 nm Laser class ♠ 2 Optical resolution 0.2 mm Repeatability 0.1 mm Range 100400 mm Ambient light immunity 10000 lux Electrical data Operating voltage Operating voltage 1230 VDC DC rated operational current ≤ 70 mA Short-circuit protection yes Reverse polarity protection yes Output function NO contact, PNP/NPN Output 2 Analog output Type of analog output 010 V Voltage output 010 V Switching frequency ≤ 250 Hz Readiness delay ≤ 2 s Readiness delay ≤ 2000 ms Response time typical < 2 ms	Optical data	
Light type Red Wavelength 650 nm Laser class	Function	Proximity switch
Wavelength 650 nm Laser class ▲ 2 Optical resolution 0.2 mm Repeatability 0.1 mm Range 100400 mm Ambient light immunity 10000 lux Electrical data Operating voltage Operating voltage 1230 VDC DC rated operational current ≤ 70 mA Short-circuit protection yes Reverse polarity protection yes Output function NO contact, PNP/NPN Output 2 Analog output Type of analog output 010 V Voltage output 010 V Switching frequency ≤ 250 Hz Readiness delay ≤ 2 s Readiness delay ≤ 2000 ms Response time typical < 2 ms	Operating mode	Triangulation
Laser class	Light type	Red
Optical resolution Repeatability 0.1 mm Range 100400 mm Ambient light immunity 10000 lux Electrical data Operating voltage 1230 VDC DC rated operational current Short-circuit protection Reverse polarity protection Qutput function Output 2 Analog output Type of analog output Voltage output Switching frequency Readiness delay Response time typical Mochanical data	Wavelength	650 nm
Repeatability 0.1 mm Range 100400 mm Ambient light immunity 10000 lux Electrical data 1230 VDC DC rated operational current ≤ 70 mA Short-circuit protection yes Reverse polarity protection yes Output function NO contact, PNP/NPN Output 2 Analog output Type of analog output 010 V Voltage output 010 V Switching frequency ≤ 250 Hz Readiness delay ≤ 2 s Readiness delay ≤ 2000 ms Response time typical < 2 ms	Laser class	▲ 2
Range 100400 mm Ambient light immunity 10000 lux Electrical data 1230 VDC DC rated operational current ≤ 70 mA Short-circuit protection yes Reverse polarity protection yes Output function NO contact, PNP/NPN Output 2 Analog output Type of analog output 010 V Voltage output 010 V Switching frequency ≤ 250 Hz Readiness delay ≤ 2 s Readiness delay ≤ 2000 ms Response time typical < 2 ms	Optical resolution	0.2 mm
Ambient light immunity Electrical data Operating voltage 1230 VDC DC rated operational current ≤ 70 mA Short-circuit protection Reverse polarity protection Output function NO contact, PNP/NPN Output 2 Analog output Type of analog output Voltage output 010 V Switching frequency ≤ 250 Hz Readiness delay Readiness delay Response time typical Mechanical data	Repeatability	0.1 mm
Electrical data Operating voltage 1230 VDC DC rated operational current ≤ 70 mA Short-circuit protection yes Reverse polarity protection yes Output function NO contact, PNP/NPN Output 2 Analog output Type of analog output 010 V Voltage output 010 V Switching frequency ≤ 250 Hz Readiness delay ≤ 2 s Readiness delay ≤ 2000 ms Response time typical < 2 ms	Range	100400 mm
Operating voltage 1230 VDC DC rated operational current ≤ 70 mA Short-circuit protection yes Reverse polarity protection yes Output function NO contact, PNP/NPN Output 2 Analog output Type of analog output 010 V Voltage output 010 V Switching frequency ≤ 250 Hz Readiness delay ≤ 2 s Readiness delay ≤ 2000 ms Response time typical < 2 ms	Ambient light immunity	10000 lux
DC rated operational current ≤ 70 mA Short-circuit protection yes Reverse polarity protection yes Output function NO contact, PNP/NPN Output 2 Analog output Type of analog output 010 V Voltage output 010 V Switching frequency ≤ 250 Hz Readiness delay ≤ 2 s Readiness delay ≤ 2000 ms Response time typical < 2 ms	Electrical data	
Short-circuit protection yes Reverse polarity protection yes Output function NO contact, PNP/NPN Output 2 Analog output Type of analog output 010 V Voltage output 010 V Switching frequency ≤ 250 Hz Readiness delay ≤ 2 s Readiness delay ≤ 2000 ms Response time typical < 2 ms	Operating voltage	1230 VDC
Reverse polarity protection yes Output function NO contact, PNP/NPN Output 2 Analog output Type of analog output 010 V Voltage output 010 V Switching frequency ≤ 250 Hz Readiness delay ≤ 2 s Readiness delay ≤ 2000 ms Response time typical < 2 ms	DC rated operational current	≤ 70 mA
Output function NO contact, PNP/NPN Output 2 Analog output Type of analog output 010 V Voltage output 010 V Switching frequency ≤ 250 Hz Readiness delay ≤ 2 s Readiness delay ≤ 2000 ms Response time typical < 2 ms	Short-circuit protection	yes
Output 2 Analog output Type of analog output 010 V Voltage output 010 V Switching frequency ≤ 250 Hz Readiness delay ≤ 2 s Readiness delay ≤ 2000 ms Response time typical < 2 ms	Reverse polarity protection	yes
Type of analog output 010 V Voltage output 010 V Switching frequency ≤ 250 Hz Readiness delay ≤ 2 s Readiness delay ≤ 2000 ms Response time typical ✓ 2 ms Mechanical data	Output function	NO contact, PNP/NPN
Voltage output 010 V Switching frequency ≤ 250 Hz Readiness delay ≤ 2 s Readiness delay ≤ 2000 ms Response time typical < 2 ms	Output 2	Analog output
Switching frequency ≤ 250 Hz Readiness delay ≤ 2 s Readiness delay ≤ 2000 ms Response time typical < 2 ms	Type of analog output	010 V
Readiness delay ≤ 2 s Readiness delay ≤ 2000 ms Response time typical < 2 ms	Voltage output	010 V
Readiness delay ≤ 2000 ms Response time typical < 2 ms Mechanical data	Switching frequency	≤ 250 Hz
Response time typical < 2 ms Mechanical data	Readiness delay	≤ 2 s
Mechanical data	Readiness delay	≤ 2000 ms
	Response time typical	< 2 ms
Design Rectangular, LE250	Mechanical data	
	Design	Rectangular, LE250

Features

- ■2-line, 8-segment display
- Cable, PVC, 2 m
- Range: 100...400 mm
- ■Laser class 2, red, 650 nm, acc. to IEC 60825-1:2007
- Resolution at 100 mm 250 mm distance: < 0.02 mm
- Resolution at 250 mm 400 mm distance: < 0.2 mm
- Operating voltage: 12...30 VDC
- PNP/NPN-switching output, switchable
- ■Analog output: 0...10 V

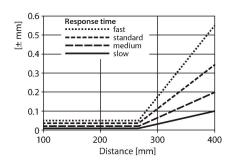
Wiring diagram



Functional principle

The laser distance sensors of the LE250 Series measure the distance to the object to 400 mm. The devices are set with buttons on the housing. The built-in display assists with the menu navigation and serves to display the measured distance. The switching output is reprogrammable and the analog output is, depending on the type, either laid out as current or voltage output. The integrated connector is rotatable by 90° degrees which makes it easy to mount. The transmitter LED can be turned off via the menu or the grey wire (PIN 5). The same wire can be used to operate two devices in the synch mode, which prevents mutual influence. The measuring accuracy is 0.02 mm at a distance of 250 mm and 0.2 mm at a distance of 400 mm.

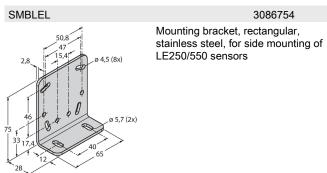
Excess Gain Curve

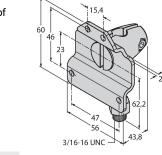


Technical data

Dimensions	56 x 26 x 60 mm
Housing material	Metal, Die-cast zinc alloy, Black
Lens	plastic, Polycarbonate
Electrical connection	Cable, 2 m, PVC
Number of cores	5
Ambient temperature	-20+55 °C
Storage temperature	-30+65 °C
Relative humidity	90 %
Protection class	IP67
Special features	keep/defer
Power-on indication	LED, Green
Switching state	LED, Yellow
Tests/approvals	
Approvals	CE, cULus listed

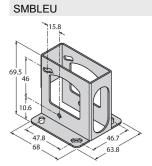
Accessories





SMBLEFA

3088226 Mounting bracket, rotatable, stainless steel, for sensors of the LE250/550 series



Protective housing, stainless steel, for sensors of the LE250/550 series

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