



## ILEE® ONE-WAY LASER LIGHT BARRIER LS02 M18/M12

### CHARACTERISTICS

- Short response time
- Choice of response to light and dark signal
- Suppression of interfering light
- Long range
- Transmitter can be focussed
- M18 sensor housing/M12 sensor connector
- Solid construction
- Watertight (IP65)
- Wide range of operating voltage

### APPLICATIONS

- Time measurement
- Data transmission
- Object detection

TECHNICAL DATA TRANSMITTER				ORDER NO. 0072-05-92-01
One-way laser light barrier LS02				Unit
Operating voltage	12	–	24 ±10%	VDC
Max. operating current	40 <sup>1)</sup>		35 <sup>1)</sup>	mA
Typical laser turn-on delay (Disable pos. edge)	920		900	µs
Typical jitter of laser's turn-on delay	15		12	µs
Typical laser turn-off delay (Disable neg. edge)	65		77	µs
Typical jitter of laser's turn-off delay	3		2	µs
Optical power		<1 <sup>2)</sup>		mW
Laser class		2 <sup>2)</sup>		–
Wavelength		650		nm
Focus range		10 – infinite		mm
Typical beam size at output		5 x 2		mm
Typical modulation frequency		455		kHz
Weight		42		g
Operating temperature		–20...+40		°C
Storage temperature		–40...+85		°C

Unless otherwise noted, all data are valid at room temperature (21°C) and under normal operating conditions.

<sup>1)</sup> Laser on (Laser Disable = V<sub>cc</sub> or open)

<sup>2)</sup> Standard version; extended range available on request.



TECHNICAL DATA RECEIVER				ORDER NO. 0072-05-92-02
One-way laser light barrier LS02				Unit
Operating voltage	12	–	24 ±10%	VDC
Max. operating current <sup>1)</sup>	16		12	mA
Load approx. 100 mA <sup>3)</sup> :				
Typical rise time, t <sub>rise</sub>	2		1	µs
Typical fall time, t <sub>fall</sub>	6		10	µs
Typical response delay (rising edge)	11		10	µs
Typical release delay (falling edge)	14		18	µs
Dropout voltage at output	1.2		0.9	V
Load approx. 200 mA <sup>4)</sup> :				
Typical rise time, t <sub>rise</sub>	3		1	µs
Typical fall time, t <sub>fall</sub>	4		6	µs
Typical response delay (rising edge)	11		10	µs
Typical release delay (falling edge)	11		15	µs
Dropout voltage at output	1.7		1.3	V
Typical jitter of response delay (rising edge)	1		1	µs
Typical jitter of release delay (falling edge)	3		2	µs
Max. PNP output load <sup>2)</sup>		200		mA
Weight		32		g
Operating temperature		–20...+40		°C
Storage temperature		–40...+85		°C

Unless otherwise noted, all data are valid at room temperature (21°C) and under normal operating conditions.

<sup>1)</sup> without output load

<sup>2)</sup> Output is short-circuit protected

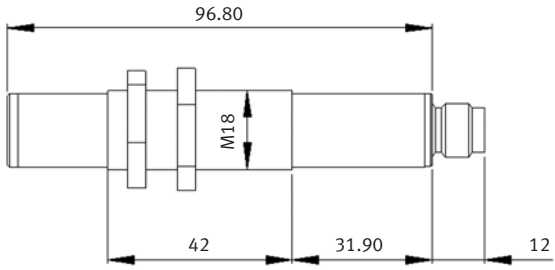
<sup>3)</sup> 110Ω load at 10.8VDC supply voltage; 250Ω load at 26.4VDC supply voltage

<sup>4)</sup> 54Ω load at 10.8VDC supply voltage; 150Ω load at 26.4VDC supply voltage

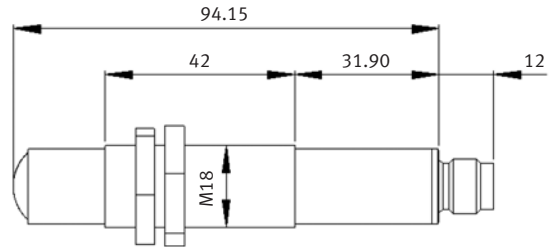


## DIMENSIONS (MM)

Transmitter:  
Alu anodized/Polyamid

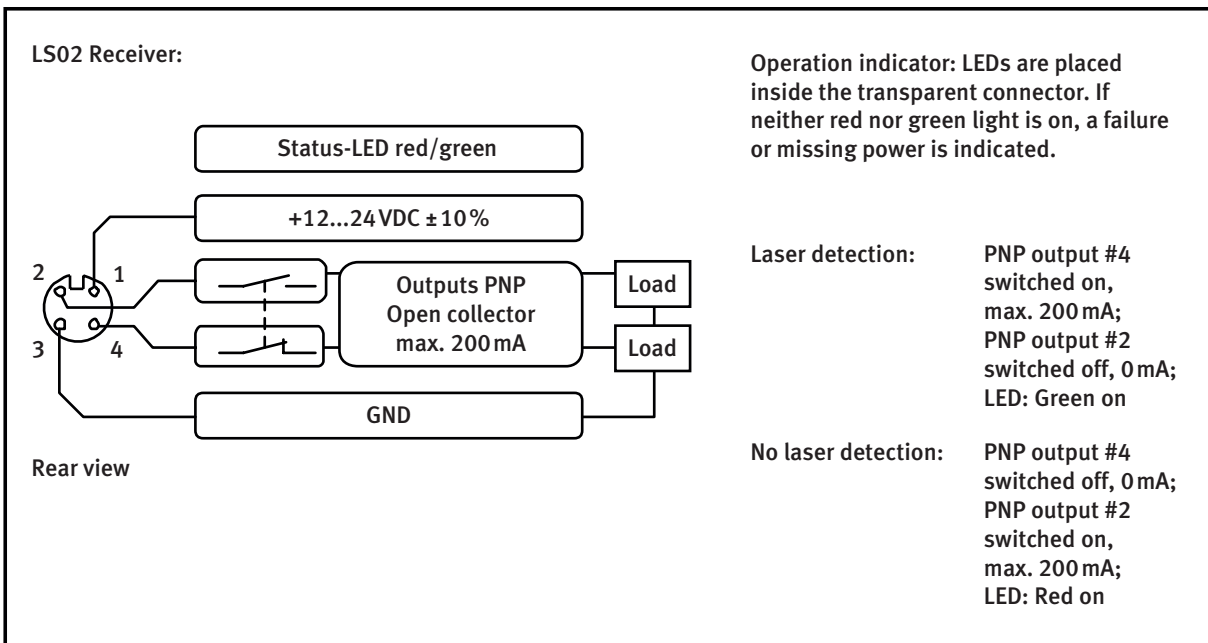
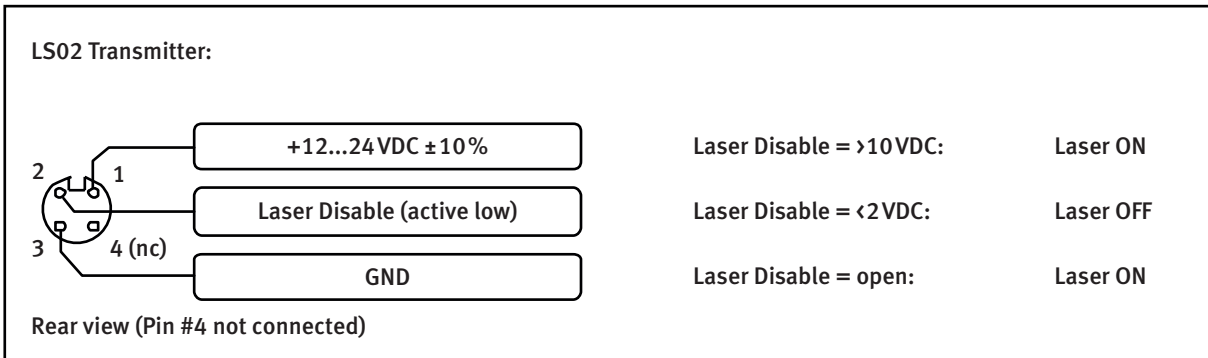


Receiver:  
PVC/Polyamid



Connector: Sensor connectors series 713 (M12 x 1), male receptacle, 4-pole, transparent  
(matching female cable connectors available on request)

## WIRING DIAGRAM



Laser beams can cause damage to your eyes.  
The user is responsible to observe the local safety regulations.

*Mistakes and technical changes reserved.*

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