

LTF Series

High-Performance Laser Time of Flight



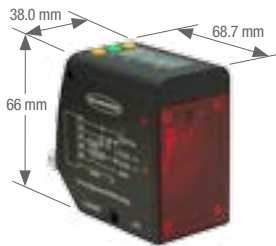
- Best in class combination of range, repeatability and accuracy enable highly reliable target detection and precise distance measurement
- Two-line, eight-character display and push-button programming for easy setup, troubleshooting and real-time distance measuring
- Durable IP67 housing, high ambient light immunity and stable performance across temperatures provide reliable performance in challenging environments
- Advanced options, including delay timers, advanced triggered measurement modes and cross-talk avoidance

LTF

Example Model Number: LTF12IC2LDQ

Family	Range (m)	Output	Laser Class	Sensing Mode	Connector
LTF	12	I	C2	LD	Q
	12 24	I = 4 to 20 mA analog and (1) NPN/PNP discrete U = 0 to 10 V analog and (1) NPN/PNP discrete K = Dual Discrete with IO-Link	C2 = Class 2	LD = Laser diffuse	Blank = 2 m Integral Cable Q = Rotatable M12 Euro QD QP = PVC M12 Euro Plgtail QD W/30 = 9 m intergal cable

NOTE: Discrete NPN/PNP is user configurable



 Connection Option: A model with a QD requires a mating cordset.

**M12/Euro-Style
with Shield**

Straight connector models
listed; for right-angle, add **RA**
to the end of the model number
(example, **MQDEC2-506RA**)

**5-Pin**

MQDEC2-506
2 m (6.5')
MQDEC2-515
5 m (15')
MQDEC2-530
9 m (30')

Additional cordset information is available
See page 758

**SMBLTFL****SMBLTFU****SMBAMSSLTFP****SMBLTFFA**

includes 3/8" bolt for mounting

SMBLTFFAM10

includes 10 mm bolt for mounting

SMBLTFFAM12

clamps directly onto industry standard
bracket systems of 1/2" or 12 mm rods

Additional bracket information is available
See page 724

LTF Specifications

Supply Voltage and Current	12 to 30 V dc																
Normal Run Mode:	< 2.1 W. Current consumption < 85 mA at 24 V dc																
Sensing Beam	Visible red laser; class 2																
Beam Spot Size	<table><thead><tr><th>Distance (mm)</th><th>Size</th></tr></thead><tbody><tr><td>50</td><td>6.5 m</td></tr><tr><td>7500</td><td>10 mm</td></tr><tr><td>12000</td><td>12.5 mm</td></tr></tbody></table>			Distance (mm)	Size	50	6.5 m	7500	10 mm	12000	12.5 mm						
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Response Time	Fast: 1.5 ms Standard: 8 ms Medium: 32 ms Slow: 256 ms																
Range and Linearity / Accuracy	<table><thead><tr><th rowspan="2">Reflectance</th><th colspan="2">Accuracy</th></tr><tr><th>±10 mm</th><th>±20 mm</th></tr></thead><tbody><tr><td>6% Black Card</td><td>5 m</td><td>7 m</td></tr><tr><td>18% Gray Card</td><td>8 m</td><td>11 m</td></tr><tr><td>90% White Card</td><td>12 m</td><td>–</td></tr></tbody></table>			Reflectance	Accuracy		±10 mm	±20 mm	6% Black Card	5 m	7 m	18% Gray Card	8 m	11 m	90% White Card	12 m	–
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Repeatability Slow 256 ms shown (for more info see datasheet)	<div><p>Slow: 256 ms</p></div> <div><p>Fast: 1.5 ms</p></div>																
Resolution	< 0.3 to 3 mm*																
Construction	Die-cast zinc housing; acrylic window																
Environmental Rating	IEC IP67; NEMA 6																
Connections	5-Pin Threaded M12/Euro-Style Cordsets—with Shield																
Operating Conditions	Temperature: –20 to +55 °C Humidity: 90% at +55 °C maximum relative humidity (non-condensing)																
Certifications	<div></div>																

* Resolution measured as twice repeatability with white target at slow response speed at 20 °C. See repeatability curves for more detail.