



LR-TB5000CL

Detection distance 5 m, Cable with connector M12, Laser Class 1



*Please note that accessories depicted in the image are for illustrative purposes only and may not be included with the product.

Specifications

Model		LR-TB5000CL
Type		Cable with connector M12
Detectable distance		60 to 5000 mm 2.36" to 196.85"*1
Spot diameter		Variable (use a spot diameter of 40 mm 1.57" or less)
Light source	Type	Red laser (660 nm)
	Laser class	Class 1 laser product (IEC60825-1,FDA (CDRH) Part1040.10*2)
Mutual interference prevention function		4 units (when using the interference prevention function)
Timer		OFF/OFF delay/ON delay/One-shot
Response time		2 ms/20 ms/50 ms/200 ms/2000 ms selectable
I/O	Control output	NPN open collector/PNP open collector selectable 30 VDC or less, 50 mA or less, residual voltage: 2 V or less, N.O./N.C. selectable *3*4
	Analog output	Current output/Voltage output selectable Current output: 4 to 20 mA with a max. load resistance of 500 Ω Voltage output: 0 to 10 V with an external load resistance of 5 kΩ or more *3*4
Protection circuit		Protection against reverse power connection, power supply surges, output over-current, reverse output connection, and output surge
Power voltage		20 to 30 VDC, including 10% ripple (P-P), Class 2 or LPS
Current consumption		50 mA or less (without load)*5
Environmental resistance	Enclosure rating	IP65/IP67 (IEC60529)
	Ambient light	Incandescent lamp/Sunlight: 10,000 lux or less
	Ambient temperature	-20 to +55 °C -4 to 131 °F (No freezing)
	Relative humidity	35 to 85 % RH (No condensation)
	Vibration resistance	10 to 55 Hz, Double amplitude 1.5 mm 0.06", 2 hours in each of the X, Y, and Z directions
	Shock resistance	1,000 m/s², 6 times in each of the X, Y, and Z directions
Material		Case: Zinc die cast (Nickel chrome plating), Indicator cover and buttons: PES, Lens cover and display: PMMA (scratch-resistant coating specifications), Cable bushing: PBT, Cable: PVC, M12 connector: TPE, PBT, Nickel-plated brass
Accompanying items		Instruction manual
Weight		Approx. 160 g

*1 The range for displayable distance is from 50 to 5200.

*2 The laser classification for FDA (CDRH) is implemented based on IEC60825-1 in accordance with the requirements of Laser Notice.

*3 You can select the I/O from the following combinations.

Control output × 2, control output + external input

Control output + analog output (LR-TB5000/TB5000C/TB5000CL only)

External input + analog output (LR-TB5000/TB5000C/TB5000CL only)

(For details on the setting method, see the instruction manual.)

*4 IO-Link specification v.1.1/COM2 (38.4 kbps) is supported. You can download a setup file from the KEYENCE website (<http://www.keyence.com>).

If you are using the product in an environment in which you cannot download files over the Internet, contact your nearest KEYENCE office.

*5 150 mA or less(with load)

* Download CAD file or product manual for larger image/text and more detail.

lr-tb5000c_tb5000cl_2_dimension_01.gif

Technical drawings of the M12 connector assembly, including dimensions and labels:

- Top View (Left):** Shows the connector head with dimensions: 30.6 (width), 16.5 (width of top section), 14.5 (width of bottom section), 28.4 (height), and 16.9 (height of top section).
- Top View (Middle):** Shows the connector head with dimensions: 51.4 (width), 42.4 (width of top section), 5.5 (width of bottom section), 1.2 (width of bottom section), 1.5 (width of bottom section), 43.2 (height), 35.9 (height of top section), 20.3 (height of bottom section), 40.9 (height of bottom section), and 1.5 (height of bottom section).
- Top View (Right):** Shows the connector head with dimensions: 11.3 (width) and 28.3 (height).
- Side View (Middle):** Shows the connector head with dimensions: 18 (width), 26.6 (width), 39.9 (width), 15 (height), 6.8 (height), and 1.5 (height).
- Detail View (Bottom):** Shows the connector head with dimensions: 8 (width), 11 (height), and 12 (height).
- Labels:**
 - Button
 - Display
 - Indicator
 - Transmitting point
 - Receiving point
 - Dial
 - 2x $\phi 4.2$
 - $\phi 4$
 - M12
 - $\phi 14$