

MODULOC Control Systems



LT2000-ST-EN LASER DISTANCE METER WITH ETHERNET INTERFACE



Back View

- **Visible Class II Laser providing precise distance measurement**
- **Operates off Natural Surfaces up to 30 Meters (98 feet), off a white target at 100 Meters (328 Feet) and off a special reflector target at 150 Meters (492 Feet)**
- **Provides +/- 2mm to +/- 5mm accuracy**
- **Low in cost yet long range**
- **Ethernet Interface**
- **Industrial RJ45 Receptacle**
- **Robust cast aluminum housing rated IP66 with unique combined air purge & cooling facility**
Optional water cooling available

Typical Applications

Product Material	Length, width, level and position of product.
Material Handling	Automated Storage/Retrieval Systems and positioning of mobile equipment.
Metals Industry	Measure/Position slab, billet, bloom or bar.
Crane Control	Positioning of cranes & crane trolleys.
Collision Avoidance	Distance alarm between vehicles using reflective target.

General Description

The LT2000-ST-EN Laser Distance Meter with Ethernet Interface operates over a substantial range off static or passing product in difficult areas in harsh environments. The LT2000-ST-EN measures distances over a working range up to 30 meters off of natural surfaces, up to 100 meters off of white surfaces and up to 150 meters off of a special reflector. For operation with automated positioning control of material handling transport systems a white reflective target is used or the special reflector is used.

Especially suited for precise detection and measurement of cold/hot product at temperatures up to 600°C. For higher product temperature a Model LT2000-HT is available for measurement of cold/hot product at product temperatures up to 1260°C.

Straightforward alignment is easily accomplished via the visible red laser measuring beam.

Accuracy is +/- 2mm to +/- 5mm according to ambient temperature and surface reflectivity. Repeatability is +/- 0.5mm and the user scalable resolution is 0.1mm.

The distance offset is user programmable, this allows the user to define a zero point independent of the zero offset.

Provided with a user programmable digital switching output which is triggered by exceeding in the positive or negative direction a user programmable distance threshold. The hysteresis of the digital switching output is also programmable.

This Robust Laser Distance Meter with built-in air coolant chamber venting as air purge. Standard operating temperature without air cooling is 50°C and with air cooling is 60°C. Optional In Line Vortex Air Cooling for an operating temperature up to 90°C. Optional water cooling is available for an operating temperature up to 120°C.

The LT2000-ST-EN Laser Distance Meter provides a highly accurate measurement reading. It is ideal for length and width determination, and checking position of product in and around furnace areas.

The LT2000-ST-EN is supplied as standard with an Ethernet Interface and with Industrial RJ45 Receptacle. The Ethernet Interface is configured as an Ethernet Web Server.

MODULOC Technology - The Total Laser Solution

MODULOC Control Systems Ltd.

Wheathamstead, Hertfordshire, AL4 8SB United Kingdom
Phone: +44 (0)845 8736501 FAX: +44 (0)1582 831980
E-Mail: sales@moduloc-intl.com Website: www.moduloc-intl.com

MODULOC Control Systems, Inc.

500 Garden City Drive. - Suite 2B, Monroeville, PA 15146 USA
Phone: 412-824-1260 FAX: 412-824-8890
E-Mail: sales@moduloc-usa.com Website: www.moduloc-usa.com

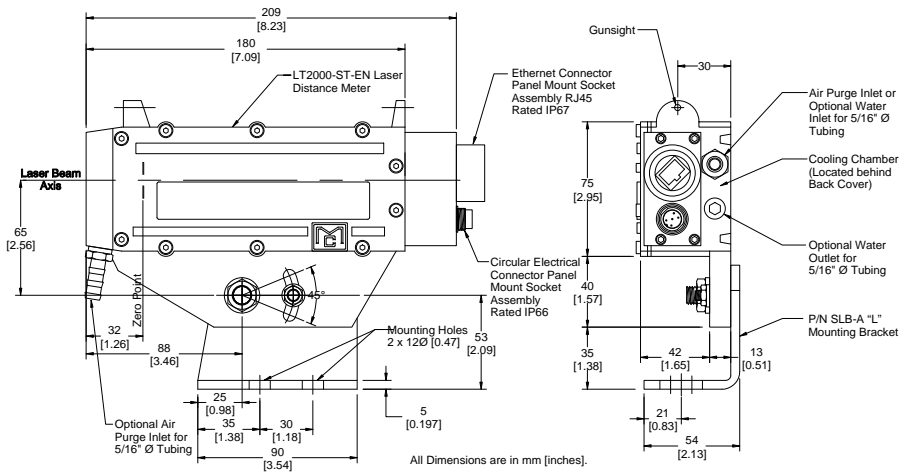
Housing Specifications

Housing: Aluminum AL6, Oven baked blue paint
Housing Rating: IEC IP66, DIN 89011
Weight w/o Cable: 1.9 Kg (4.2lb)
Electrical Connector: IP66 Plug/Socket
Ethernet Connector: IP66; Industrial RJ45
Cable Length: 2.0 M (Optional 5, 10 & 15M Available)
Cooling: Standard: -A Air Cooled & Air Purged
Optional: -D Water Cooled & Air Purged

Air & Optional Water Specifications

Air Pressure: 1 cu ft./min at 5 PSI for normal conditions
 5 cu ft./min at 15 PSI for severe conditions
Water Pressure: 5 to 10 PSI
Water Volume: Regulate between 0.2 - 0.3 liters/min.
Water Temp.: For Ambient Temperature up to 80°C (176°F)
 use ambient water below 25°C (77°F)
 For Ambient Temperature up to 120°C (248°F)
 use water chilled to 5°C

LT2000-ST-EN Dimensions



General Specifications

Operating range ¹⁾ (Type of surface)	Natural Surface: 0.2M (7.8IN) to 30M (98FT) White Surface: 0.2M (7.8IN) to >100M (328FT) Special Reflector: 2M (6.6FT) to > 150M (492FT)	Laser Spot Diameter	6mm (0.236 in) at 10m (32.8 ft), 60 mm (2.36 in) at 100m (328 ft)
		MTTF	32,000 hrs
Accuracy (according to surface reflectivity)	± 3 mm (0.118in) for 15°C (59°F) to 30°C (86°F)	Operating Temperature	-10°C (14°F) to +50°C (122°F) no cooling
	± 5 mm (0.197in) over full operating temperature range		-10°C (14°F) to +60°C (140°F) w/air cooling
			+2°C to 120°C with (5°C/68°F) water cooling
Resolution	0.1 mm user (programmable & scalable)	Storage Temperature	-20°C (-4°F) to +70°C (158°F)
Repeatability	±0.5 mm (0.0197in)	Supply Voltage	-86 10 - 30 VDC
Scale (programmable)	Output can be M, cm, mm, yard, feet, inch	Power Consumption	1 Watt Operating, 0.4 Watt in Standby
Measuring Time ²⁾ (According to type of surface reflectivity)	Any Surface: 160 msec. to 6 sec. (typically 200 msec) ³⁾	Product Temp. Limit	Standard 600°C (Hi-Temp model available)
	White Surface: 100 msec (in DW Measuring Mode)	Bus Interface	Ethernet Web Server, RJ45, CAT5E
Laser Wavelength	659nm, Visible Red	Auto Distance Tracking	Can be programmed to start at power on
Laser Classification	Safety Class 2 (DIN EN 60825-1), Class II	Laser Divergence	0.6 mrad
Laser Power	1 mW		

1). Ranges shown are for DT, DW & DM measuring mode. DS measuring mode has a range of 0.5M (197.7IN) to 7M (23FT)

2). Measuring Time can also be preset in intervals of 240 msec to 6 seconds in DT measuring mode and preset in intervals of 150M to 3.75 seconds in DS measuring mode.

3). In DT & DS measuring mode

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We reserve the right to alter specifications without prior notice. Specifications without tolerances are typical values.

Your Local Sales Representative:



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