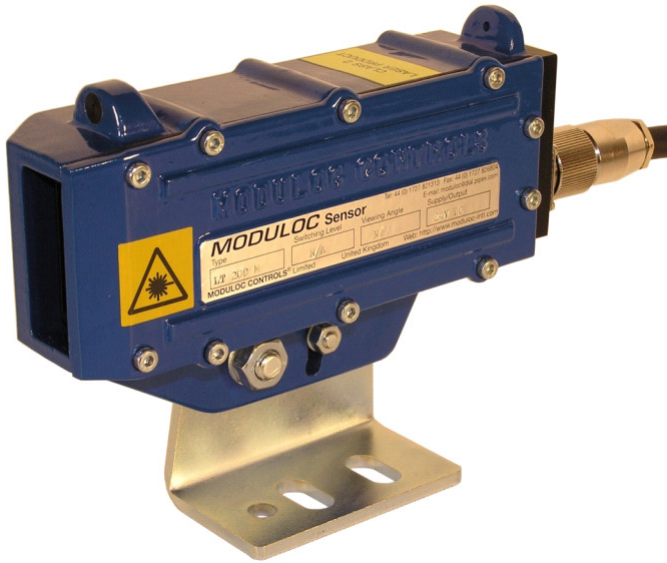




## LT200M RETRO-REFLECTIVE LASER SENSOR



- **Visible Retro-Reflective Laser Sensor**
- **20 - 25 Meter Range**
- **Detects Hot or Cold Product**
- **Operates off plastic or Glass prisms**
- **Detects small C.S.A. product**
- **Edge Resolution of 3 mm per Meter**
- **IR Filtering enables use in furnace entry**
- **Class 2 Laser Visible Laser Light**
- **Continuous Self-Check**
- **Robust IP66 aluminum housing**
- **Unique combined air purge & cooling facility. Optional water cooling available.**

### Typical Applications

**Furnace Door Monitoring** For prevention of product collision with furnace door.

**Photo-Switch Replacement** Highly reliable retro-reflective through beam sensor.

**Metals Industry** Detection of Hot and Cold Product

### General Description

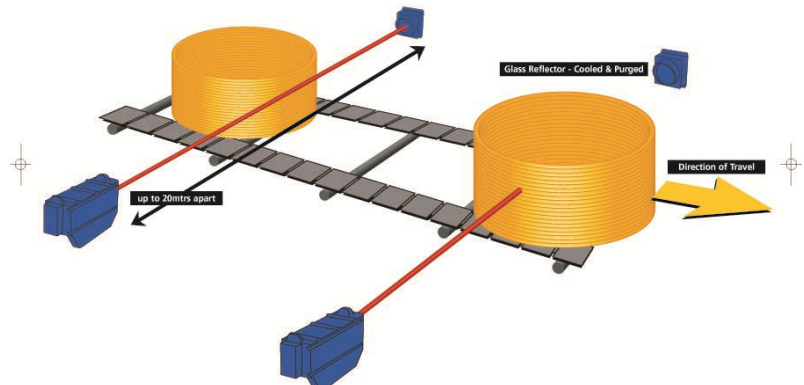
The LT200M is a robust Sensor in a aluminum housing incorporating a built-in air coolant chamber venting as air purge. Optional water cooling is available.

The LT200M Retro-Reflect Laser operates over a substantial range and is especially suited for precise detection of product regardless of its size. As it operates via a modulated laser beam with IR filtering enables precise detection of both cold and hot product.

Alignment is easily accomplished via the visible red Class II laser beam. A continuous self-check facility is incorporated with LED indication of reflector contamination or poor signal return. Both an 8A/250VAC SPNO/SPNC Form C output relay, and NPN & PNP 500mA transistor outputs are provided.

Both plastic and glass reflectors are available with temperature ratings up to 240°C. The standard reflector units are air cooled and purged. Water cooled reflectors with air purging are also available.

The LT200M provides highly accurate detection over the whole range as a result of linear laser beam.



**MODULOC<sup>®</sup> Technology - The Total Laser Solution**  
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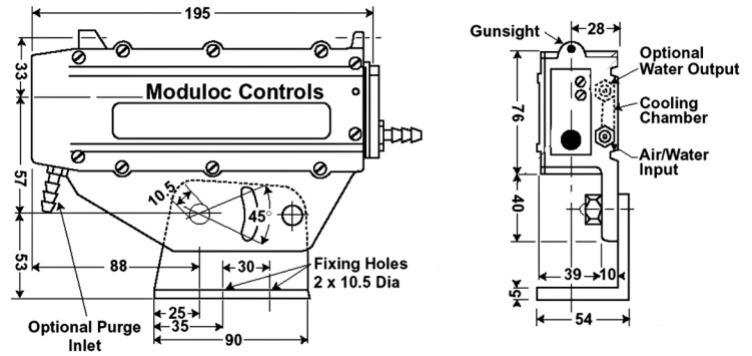
## Housing Specifications

**Housing:** Aluminum AL6, Oven baked blue paint  
**Housing Rating:** IEC IP66, DIN 89011  
**Weight w/o Cable:** 1.9 Kg  
**Connector:** IP65 Plug/Socket  
**Cable Length:** 1.5 M  
**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 70 °C use ambient water below 20 °C

## LT200M Dimensions



## General Specifications

Operating range	Up to 25 meters depending on reflector	Supply Voltage	24 VDC ±20%
Edge Accuracy	3 mm per meter divergence	Power Consumption	1 Watt
Edge Resolution	± 1mm + divergence	Operating Temperature	-10 °C - +40 °C without air cooling
Response time	0.05 msec on/off (10 msec lock between edges)		-10 °C to +60 °C with air cooling
			to +70 °C with (20 °C ) water cooling
Laser Wavelength	Visible Red 650nm	Storage Temperature	-20 °C - +70 °C
Laser Classification	Safety Class II (DIN EN 60825-1)	Output (#1)	Relay Output, Form C Contact (SPNO/ SPNC) 250 VAC, 8A 20 mSec response time
Laser Power	1 mW		
Laser Divergence	0.5 mrad	Output (#2)	Switch selectable NPN & PNP Transistor Outputs, N.O., 500 mA, 45V, 2A peak
Laser Spot Diameter	0.1mm at 10M, 0.2mm at 20M		
MTTF	32,000 hrs	Function Indication	Green LED
Power Indication:	Red LED	Contamination Indication	Flashing Yellow LED



**Reflector REF-2 Air Purged & Cooled**  
 Rating: 70 °C without air cooling  
 100 °C with air cooling

Terminal Connections		
Pin No.	Wire Color	Function
1	Red	+ 24VDC Supply
2	Black	0VDC Supply
3	Green/Yellow	Shield/Ground
4	Orange	N.C. Relay Output
5	White	Relay Common Output
6	Grey	N.O. Relay Output
7	Yellow	PNP Transistor Output
8	Violet	NPN Transistor Output

## MODULOC<sup>®</sup> Technology - The Total Laser Solution

**MODULOC<sup>®</sup>**  
 Control Systems

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

Your Local Sales Representative:



Bul. MC-LT200M-006-01  
 January 2006