

# Measuring Light Curtains



## MC20 Sensors

Measuring light curtains composed by the pair of optical emitter and receiver, and all of emitters and receivers are in the different two housings (High quality aluminum alloy as the basic framework, the colors of housing could customized). The object will block a part of light what from the emitters to the receivers when it was to be placed between emitters and receivers. The measuring light curtain can identify the area where to be blocked by synchronous scanning.

The emitters in sequence to send the same optical plus, and receiver received this plus accordingly. If the receiver could not received the expected plus in response time, then the light curtain will as a abnormal station, then the system recorder it. Base on the function of the user set, the system send a output signal which could be analog signal or a switch signal.

## Self-diagnostic function

Measuring light curtains have a simple and easy to Identified the status indicator, the different led and different light show the different working condition.

### LED what on the emitters (A single red LED indicator)

- Normal working —the red LED on.
- Could not detected the receiver —the red LED flashes in quickly and continuously.
- The light of emitters is fault —the red LED flashes per second.

### LED what on the receiver (green, red, yellow for each one)

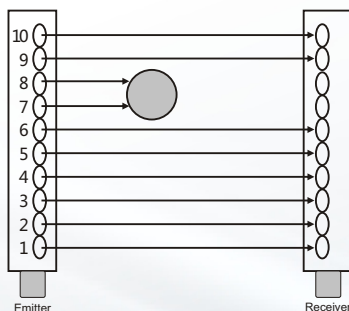
- Normal working —green LED on, red and yellow LED off.
- Light were to be blocked —red LED on, green and yellow off.
- The light what arrived in the receiver under the standard value as lens dirty —yellow LED on, green and red LED off.
- Receiver or emitter fault —yellow LED flash, green and red LED off.

## Detection Area

The means of detection area is the area covered by optical network what composed by receiver and emitter.

## The tips of mount

Emitter and receiver must to be fixed on the same plane and the horizontal alignment so that receiver could received all of the light what from correspond emitter.



Schematic diagram

## Features

- Apply in RS485 synchronous scanning technology, strong interference prevention function.
- Various detection height, from 140mm to 940mm.
- Beam distance: 20mm, Protect work area in very effectively.
- With analog and switch output control function.
- Self-diagnostic function: faulty alarm and self-judgment faulty type.

Apply in the industrial, assembly line control and civilian equipment field, play the role of area protection, security protection, size detection, high degree detection.

Note: Don't using this production in the personal security protection.

## Parameters

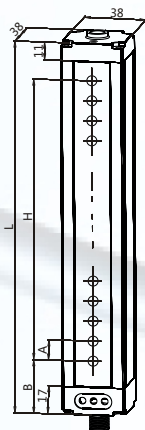
Axes qua.	8Axes	16Axes	24Axes	32Axes	40Axes	48Axes
Emitter	MC20-T0812L-E8	MC20-T1612L-E8	MC20-T2412L-E8	MC20-T3212L-E8	MC20-T4012L-E8	MC20-T4812L-E8
Receiver	MC20-T0812LU1BO-E8	MC20-T1612LU1BO-E8	MC20-T2412LU1BO-E8	MC20-T3212LU1BO-E8	MC20-T4012LU1BO-E8	MC20-T4812LU1BO-E8
Detection height	140mm	300mm	460mm	620mm	780 mm	940 mm
Detection width	0.9~12m					
Beam distance	20mm					
Sensing object	>φ45mm opaque object					
Output	PNP+ analog output ( 0-5v )					
Supply voltage	15 ~ 30V DC±10%					
Current consumption	<150mA					
Response time (ms)	24	48	72	96	120	144
Light source	Infrared LED (modulate)					
Circuit protection	Reverse polarity /short-circuit protection/ overload protection					
Ambient temperature	- 10 ~ + 55°C(forbidden dewed or iced), storage : - 10 ~ + 60°C					
Ambient humidity	35 ~ 85%RH , storage : 35 ~ 85%RH					
Intensity of illumination	Incandescent lamp : intensity of illumination 3,000lx					
Anti-vibration	10 ~ 55hz , double-amplitude; 1.2mm, in each of x, y and z direction for 2 hours					
Anti-concussion	Acceleration : 500m/s2(approx:50g) , for 3 times, in each of x,y and z direction					
Protection	IP65					
Housing material	Housing : al ; light cover : polyester ; end cover : strengthen nylon					
Connection	M12 Connector					
Accessory	3m cable connection cable ( E12-N8F3 ) ( customized available )					

## Datasheets

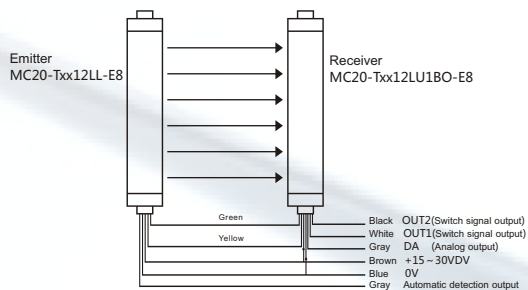
Item code	A	B	H	L
MC20-T0812LU1BO-E8	20	47	140	208
MC20-T1612LU1BO-E8	20	47	300	368
MC20-T2412LU1BO-E8	20	47	460	528
MC20-T3212LU1BO-E8	20	47	620	688
MC20-T4012LU1BO-E8	20	47	780	848
MC20-T4812LU1BO-E8	20	47	940	1008

H: Protection height , H=20\* ( N-1 ) L: Total length of the production L=H+68mm N: The number of axes

## Dimensions



## Electrical wiring diagram



Note: Ensure to have a right synchronization between emitter and receiver, the black , yellow and the green cable both of them must connect in very reliably.