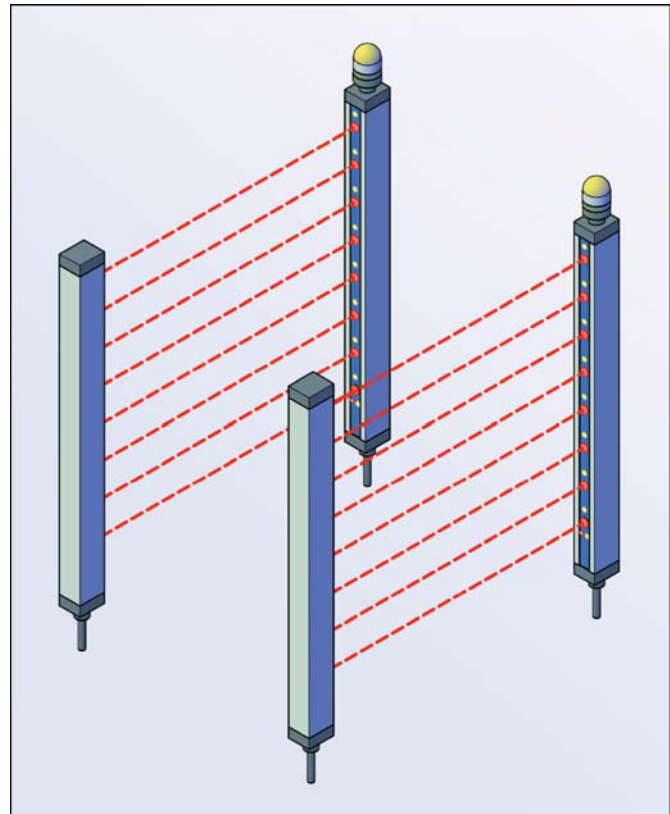


**SELECTION GUIDE FOR LIGHT CURTAIN**

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨  
**LC - S 25 4 - T 5 N L** □

- ① *Products Name*  
LC: Light Curtain
- ② *Type*  
S: Light Curtain Switch  
C: Light Curtain Safe Switch
- ③ *Beam Pitch*  
25: 25mm      40: 40mm
- ④ *Number of Beams*  
4: 4 Beams      6: 6 Beams  
8: 8 Beams      12: 12 Beams  
16: 16 Beams    20: 20 Beams  
24: 24 Beams    32: 32 Beams
- ⑤ *Sensing Mode*  
T: Through Beam
- ⑥ *Sensing Range*  
1.5: 0~1.5 Meter    5: 1~5 Meter
- ⑦ *Output Mode*  
N: NPN N.O./N.C.  
P: PNP N.O./ N.C.  
NC: NPN N.C./N.C.  
PC: PNP N.C./ N.C.
- ⑧ *Indicator type*  
L: Warning Light  
B: Warning Bell
- ⑨ *Others*



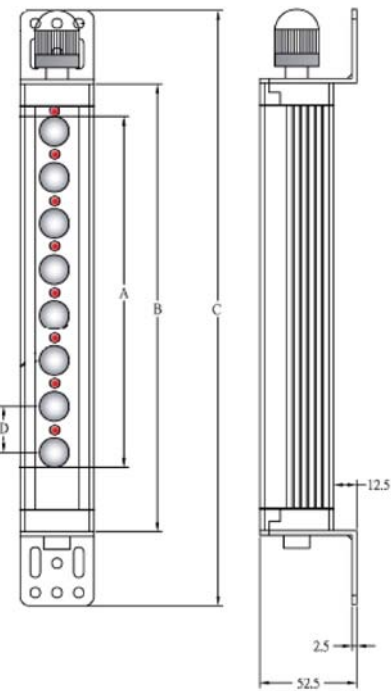
- 👍 Simple wiring, no traditional controller any more, all products are CE approved.
- 👍 Excellent stability. offers good interference resistance: prevent from the interference of Inverter,electric noise (high frequency florescent light), electric magnetic wave, sunlight etc.
- 👍 The sensing position of detected object is easily visible.
- 👍 Attached 1 piece warning light and 2 pieces Euro style connector with 5M cables.
- 👍 Detection distance: 1~ 5M or 0~1.5M.
- 👍 Aluminum alloy Housing, Cube 25\*30mm.
- 👍 LCC Series need use a safety relay MSR-001.

# LIGHT CURTAIN (12-24VDC)

## LCS Series



Beam pitch:  
25mm



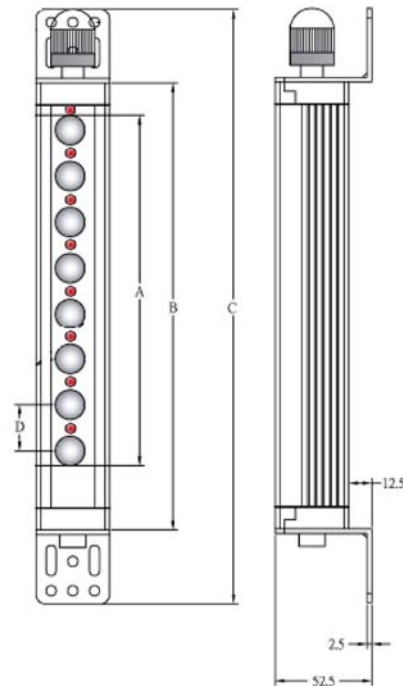
Model number	Switching output	Number of beams	Beam pitch (D)	Detecting Distance	Detection height (A)	Light screen height (B)	Total height (C)		
LC-S258-T5NL	NPN N.O./N.C.	8	25mm (Detecting target: ≥35mm opaque object)	1~5 meters (When setting detecting distance is more than 1.5 meters, please select this series light curtains.)	175mm	262.5mm	329mm		
LC-S258-T5PL	PNP N.O./N.C.	8			275mm	362.5mm	429mm		
LC-S2512-T5NL	NPN N.O./N.C.	12			375mm	462.5mm	529mm		
LC-S2512-T5PL	PNP N.O./N.C.	12			475mm	562.5mm	629mm		
LC-S2516-T5NL	NPN N.O./N.C.	16			575mm	662.5mm	729mm		
LC-S2516-T5PL	PNP N.O./N.C.	16			775mm	862.5mm	929mm		
LC-S2520-T5NL	NPN N.O./N.C.	20			25mm (Detecting target: ≥35mm opaque object)	0~1.5 meters (When setting detecting distance is less than 1.5 meters, please select this series light curtains.)	175mm	262.5mm	329mm
LC-S2520-T5PL	PNP N.O./N.C.	20					275mm	362.5mm	429mm
LC-S2524-T5NL	NPN N.O./N.C.	24					375mm	462.5mm	529mm
LC-S2524-T5PL	PNP N.O./N.C.	24					475mm	562.5mm	629mm
LC-S2532-T5NL	NPN N.O./N.C.	32					575mm	662.5mm	729mm
LC-S2532-T5PL	PNP N.O./N.C.	32					775mm	862.5mm	929mm
LC-S258-T1.5NL	NPN N.O./N.C.	8	25mm (Detecting target: ≥35mm opaque object)	0~1.5 meters (When setting detecting distance is less than 1.5 meters, please select this series light curtains.)			175mm	262.5mm	329mm
LC-S258-T1.5PL	PNP N.O./N.C.	8					275mm	362.5mm	429mm
LC-S2512-T1.5NL	NPN N.O./N.C.	12					375mm	462.5mm	529mm
LC-S2512-T1.5PL	PNP N.O./N.C.	12					475mm	562.5mm	629mm
LC-S2516-T1.5NL	NPN N.O./N.C.	16					575mm	662.5mm	729mm
LC-S2516-T1.5PL	PNP N.O./N.C.	16					775mm	862.5mm	929mm
LC-S2520-T1.5NL	NPN N.O./N.C.	20			25mm (Detecting target: ≥35mm opaque object)	0~1.5 meters (When setting detecting distance is less than 1.5 meters, please select this series light curtains.)	175mm	262.5mm	329mm
LC-S2520-T1.5PL	PNP N.O./N.C.	20					275mm	362.5mm	429mm
LC-S2524-T1.5NL	NPN N.O./N.C.	24					375mm	462.5mm	529mm
LC-S2524-T1.5PL	PNP N.O./N.C.	24					475mm	562.5mm	629mm
LC-S2532-T1.5NL	NPN N.O./N.C.	32					575mm	662.5mm	729mm
LC-S2532-T1.5PL	PNP N.O./N.C.	32					775mm	862.5mm	929mm

**LIGHT CURTAIN (12-24VDC)**

**LCS Series**



Beam pitch  
40mm



Model number	Switching output	Number of beams	Beam pitch (D)	Detecting Distance	Detection height (A)	Light screen height (B)	Total height (C)		
LC-S404-T5NL	NPN N.O./N.C.	4	40mm (Detecting target: ≥50mm opaque object)	1~5 meters (When setting detecting distance is more than 1.5 meters, please select this series light curtains.)	120mm	215mm	281mm		
LC-S404-T5PL	PNP N.O./N.C.	4			200mm	295mm	361mm		
LC-S406-T5NL	NPN N.O./N.C.	6			280mm	375mm	441mm		
LC-S406-T5PL	PNP N.O./N.C.	6			440mm	535mm	601mm		
LC-S408-T5NL	NPN N.O./N.C.	8			600mm	695mm	761mm		
LC-S408-T5PL	PNP N.O./N.C.	8			760mm	855mm	921mm		
LC-S4012-T5NL	NPN N.O./N.C.	12			920mm	1015mm	1081mm		
LC-S4012-T5PL	PNP N.O./N.C.	12			1240mm	1335mm	1401mm		
LC-S4016-T5NL	NPN N.O./N.C.	16			40mm (Detecting target: ≥50mm opaque object)	0~1.5 meters (When setting detecting distance is less than 1.5 meters, please select this series light curtains.)	120mm	215mm	281mm
LC-S4016-T5PL	PNP N.O./N.C.	16					200mm	295mm	361mm
LC-S4020-T5NL	NPN N.O./N.C.	20					280mm	375mm	441mm
LC-S4020-T5PL	PNP N.O./N.C.	20					440mm	535mm	601mm
LC-S4024-T5NL	NPN N.O./N.C.	24					600mm	695mm	761mm
LC-S4024-T5PL	PNP N.O./N.C.	24					760mm	855mm	921mm
LC-S4032-T5NL	NPN N.O./N.C.	32					920mm	1015mm	1081mm
LC-S4032-T5PL	PNP N.O./N.C.	32					1240mm	1335mm	1401mm
LC-S404-T1.5NL	NPN N.O./N.C.	4	40mm (Detecting target: ≥50mm opaque object)	0~1.5 meters (When setting detecting distance is less than 1.5 meters, please select this series light curtains.)			120mm	215mm	281mm
LC-S404-T1.5PL	PNP N.O./N.C.	4					200mm	295mm	361mm
LC-S406-T1.5NL	NPN N.O./N.C.	6					280mm	375mm	441mm
LC-S406-T1.5PL	PNP N.O./N.C.	6					440mm	535mm	601mm
LC-S408-T1.5NL	NPN N.O./N.C.	8					600mm	695mm	761mm
LC-S408-T1.5PL	PNP N.O./N.C.	8					760mm	855mm	921mm
LC-S4012-T1.5NL	NPN N.O./N.C.	12					920mm	1015mm	1081mm
LC-S4012-T1.5PL	PNP N.O./N.C.	12					1240mm	1335mm	1401mm
LC-S4016-T1.5NL	NPN N.O./N.C.	16			40mm (Detecting target: ≥50mm opaque object)	0~1.5 meters (When setting detecting distance is less than 1.5 meters, please select this series light curtains.)	120mm	215mm	281mm
LC-S4016-T1.5PL	PNP N.O./N.C.	16					200mm	295mm	361mm
LC-S4020-T1.5NL	NPN N.O./N.C.	20					280mm	375mm	441mm
LC-S4020-T1.5PL	PNP N.O./N.C.	20					440mm	535mm	601mm
LC-S4024-T1.5NL	NPN N.O./N.C.	24					600mm	695mm	761mm
LC-S4024-T1.5PL	PNP N.O./N.C.	24					760mm	855mm	921mm
LC-S4032-T1.5NL	NPN N.O./N.C.	32					920mm	1015mm	1081mm
LC-S4032-T1.5PL	PNP N.O./N.C.	32					1240mm	1335mm	1401mm

## LIGHT CURTAIN (12-24VDC)

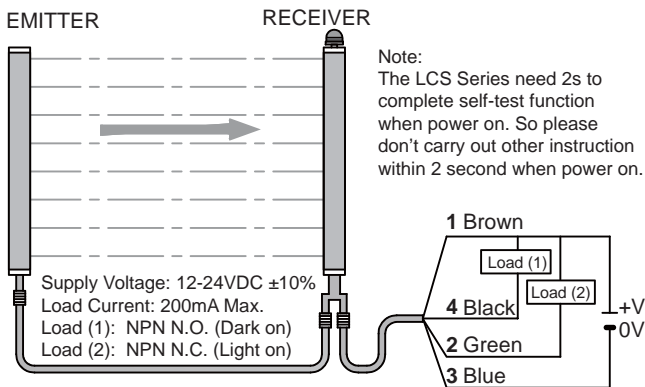
### SPECIFICATIONS (LCS Series)

Item	Specification	
Sensing Mode	Through-beam (Light ON)	
Sensing Range	1~5M (When setting detecting distance is more than 1.5 meters, please select this range light curtains)	0~1.5M (When setting detecting distance is less than 1.5 meters, please select this range light curtains)
Detecting Target	For beam pitch (25mm): $\geq \Phi 35$ mm opaque object For beam pitch (40mm): $\geq \Phi 50$ mm opaque object	
Operating Voltage	DC 12~24V $\pm 10\%$ . Ripple $\leq 10\%$	
Control Output	NPN or PNP output, Load current $\leq 200$ mA, Residual voltage $< 2$ VDC	
Warning Light Power Consumption	$< 40$ mA	
Light Curtain Power Consumption	Emitter: $< 150$ mA; Receiver: $< 120$ mA (no load)	
Response Time	ON: 12~50ms; OFF: 12ms	
Light Source	Infraed LED (870nm)	
Short-circuit Protection	YES	
Reverse Polarity Protection	YES	
Enclosure Protection	IP65	
Ambient Temperature & Humidity Range	Operating: $-10 \sim 55^{\circ}\text{C}$ / RH 35 ~85 % (with no icing or condensation)	
Ambient illumination	Lamp light $< 3000$ Lux / Sunlight $< 10000$ Lux	
Operation Indicator	1) Power indicator: Orange LEDx2 (Light up when power is ON). 2) Output indicator: Red LED (Lights up when one or more beams are interrupted). 3) Emitter indicator: Red LED (total 8 to 32 LED, Light up by each beam interrupted). Red LED will flash under unstable light received or subjected to external light interference. Red LED will OFF under stable light received (beam aligned). 4) Warning Light: Lights up by selectable Light on or Dark on (Default is Light on).	
Power On Response time	$< 2$ S	
Voltage withstand ability	1000VAC for one min, between all supply terminals connected together and enclosure.	
Insulation Resistance	20 M $\Omega$ or more. (with 500VDC megger between all supply terminals connected together and enclosure)	
Vibration Resistance	10 to 55 Hz frequency, 1.5mm amplitude in X, Y and Z directions for 2 hours each.	
Shock Resistance	300m/s <sup>2</sup> (30G approx), in Z, Y and Z directions for 30 times each.	
Connecting method and Connector type	1) Emitter and Receiver have a pigtail (M12 male connector with 0.2M cable: 5.0 $\Phi$ 3x0.16mm <sup>2</sup> or 5.0 $\Phi$ 4x0.16mm <sup>2</sup> ) each. 2) Connection between Emitter and Receiver is double connector E-FD4-FD4-V3 or E-FD4-FD4-V5. 3) Connecting receiver is T-type (E-FD4-MD4-MD4) and E-FD4V5	
Housing material	Case: Aluminum; Lens: Acrylic	
Accessories	Mounting bracket 4pcs, M3 Screws 8pcs, E-FD4V3 or E-FD4V5 1pcs or E-FD4-FD4-V3 or E-FD4-FD4-V5 1pcs, Warning light 1piece.	

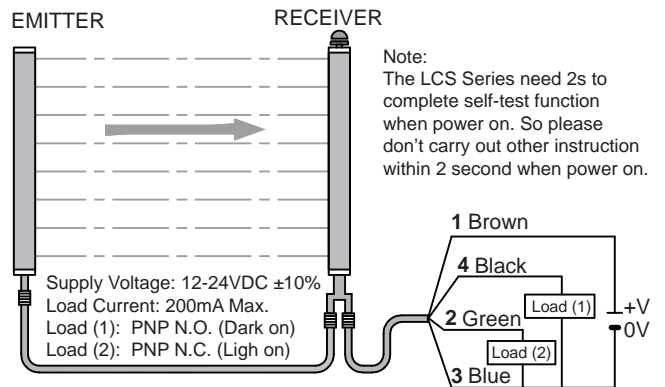
**LIGHT CURTAIN (12-24VDC)**

**Wiring Diagram (LCS Series)**

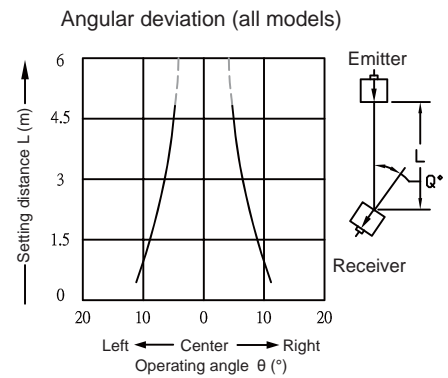
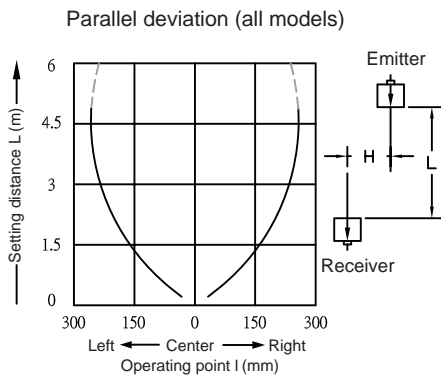
**■ NPN-N.O. / N.C.**



**■ PNP-N.O. / N.C.**

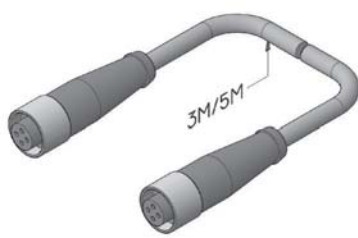


**Sensing Characteristics (typical)**

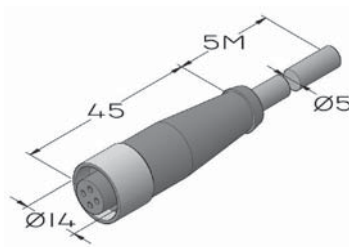


**Attachment Size (Unit: mm)**

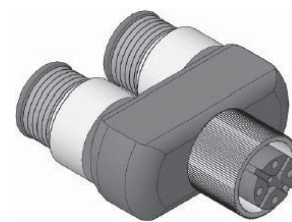
Connecting cable with double connectors  
E-FD4-FD4-V3 / E-FD4-FD4-V5



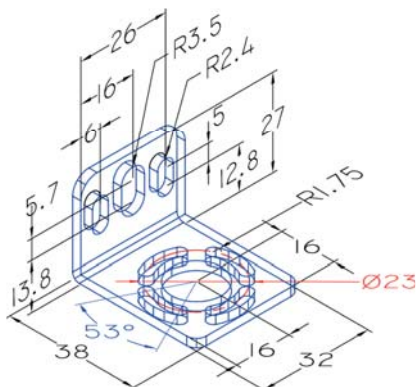
Connecting cable E-FD4V5



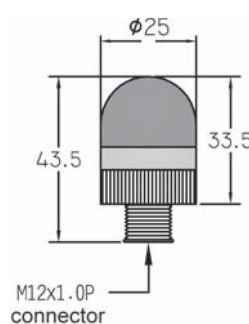
T-type connector E-FD4-MD4-MD4



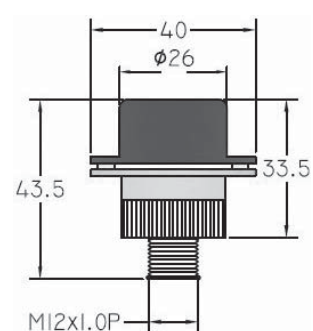
Mounting Bracket



Warning Light



Warning Bell

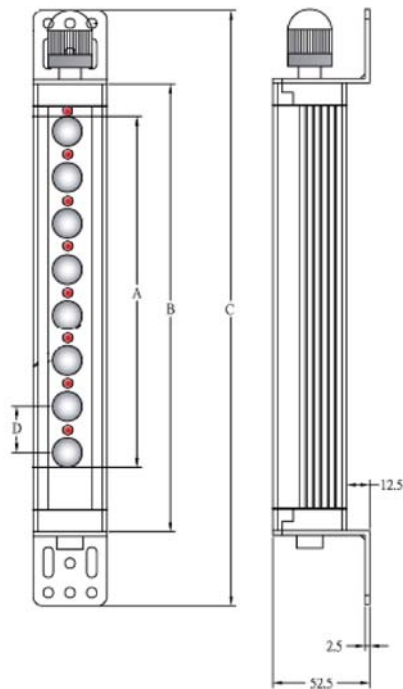


# LIGHT CURTAIN (12-24VDC)

## LCC Series



Beam pitch:  
25mm



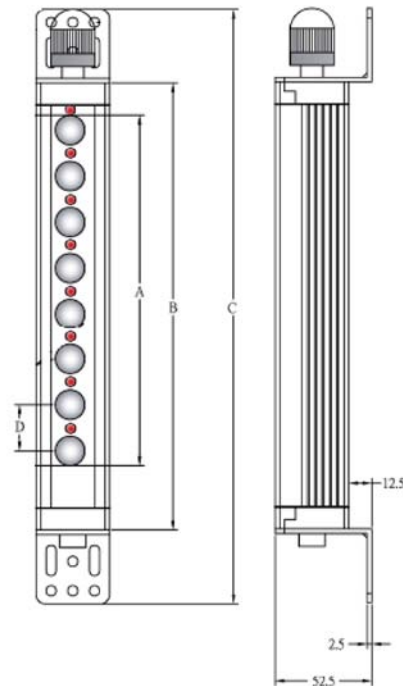
Model number	Switching output	Number of beams	Beam pitch (D)	Detecting Distance	Detection height (A)	Light screen height (B)	Total height (C)		
LC-C258-T5NL	NPN N.C./N.C.	8	25mm (Detecting target: ≥35mm opaque object)	1~5 meters (When setting detecting distance is more than 1.5 meters, please select this series light curtains.)	175mm	262.5mm	329mm		
LC-C258-T5PL	PNP N.C./N.C.	8			275mm	362.5mm	429mm		
LC-C2512-T5NL	NPN N.C./N.C.	12			375mm	462.5mm	529mm		
LC-C2512-T5PL	PNP N.C./N.C.	12			475mm	562.5mm	629mm		
LC-C2516-T5NL	NPN N.C./N.C.	16			575mm	662.5mm	729mm		
LC-C2516-T5PL	PNP N.C./N.C.	16			775mm	862.5mm	929mm		
LC-C2520-T5NL	NPN N.C./N.C.	20			25mm (Detecting target: ≥35mm opaque object)	0~1.5 meters (When setting detecting distance is less than 1.5 meters, please select this series light curtains.)	175mm	262.5mm	329mm
LC-C2520-T5PL	PNP N.C./N.C.	20					275mm	362.5mm	429mm
LC-C2524-T5NL	NPN N.C./N.C.	24					375mm	462.5mm	529mm
LC-C2524-T5PL	PNP N.C./N.C.	24					475mm	562.5mm	629mm
LC-C2532-T5NL	NPN N.C./N.C.	32	575mm	662.5mm			729mm		
LC-C2532-T5PL	PNP N.C./N.C.	32	775mm	862.5mm			929mm		
LC-C258-T1.5NL	NPN N.C./N.C.	8	25mm (Detecting target: ≥35mm opaque object)	0~1.5 meters (When setting detecting distance is less than 1.5 meters, please select this series light curtains.)			175mm	262.5mm	329mm
LC-C258-T1.5PL	PNP N.C./N.C.	8					275mm	362.5mm	429mm
LC-C2512-T1.5NL	NPN N.C./N.C.	12					375mm	462.5mm	529mm
LC-C2512-T1.5PL	PNP N.C./N.C.	12					475mm	562.5mm	629mm
LC-C2516-T1.5NL	NPN N.C./N.C.	16			575mm	662.5mm	729mm		
LC-C2516-T1.5PL	PNP N.C./N.C.	16			775mm	862.5mm	929mm		
LC-C2520-T1.5NL	NPN N.C./N.C.	20			25mm (Detecting target: ≥35mm opaque object)	0~1.5 meters (When setting detecting distance is less than 1.5 meters, please select this series light curtains.)	175mm	262.5mm	329mm
LC-C2520-T1.5PL	PNP N.C./N.C.	20					275mm	362.5mm	429mm
LC-C2524-T1.5NL	NPN N.C./N.C.	24					375mm	462.5mm	529mm
LC-C2524-T1.5PL	PNP N.C./N.C.	24					475mm	562.5mm	629mm
LC-C2532-T1.5NL	NPN N.C./N.C.	32	575mm	662.5mm			729mm		
LC-C2532-T1.5PL	PNP N.C./N.C.	32	775mm	862.5mm			929mm		

**LIGHT CURTAIN (12-24VDC)**

**LCC Series**



Beam pitch  
40mm



Model number	Switching output	Number of beams	Beam pitch (D)	Detecting Distance	Detection height (A)	Light screen height (B)	Total height (C)		
LC-C404-T5NL	NPN N.C./N.C.	4	40mm (Detecting target: ≥50mm opaque object)	1~5 meters (When setting detecting distance is more than 1.5 meters, please select this series light curtains.)	120mm	215mm	281mm		
LC-C404-T5PL	PNP N.C./N.C.	4			200mm	295mm	361mm		
LC-C406-T5NL	NPN N.C./N.C.	6			280mm	375mm	441mm		
LC-C406-T5PL	PNP N.C./N.C.	6			440mm	535mm	601mm		
LC-C408-T5NL	NPN N.C./N.C.	8			600mm	695mm	761mm		
LC-C408-T5PL	PNP N.C./N.C.	8			760mm	855mm	921mm		
LC-C4012-T5NL	NPN N.C./N.C.	12			920mm	1015mm	1081mm		
LC-C4012-T5PL	PNP N.C./N.C.	12			1240mm	1335mm	1401mm		
LC-C4016-T5NL	NPN N.C./N.C.	16			40mm (Detecting target: ≥50mm opaque object)	0~1.5 meters (When setting detecting distance is less than 1.5 meters, please select this series light curtains.)	120mm	215mm	281mm
LC-C4016-T5PL	PNP N.C./N.C.	16					200mm	295mm	361mm
LC-C4020-T5NL	NPN N.C./N.C.	20					280mm	375mm	441mm
LC-C4020-T5PL	PNP N.C./N.C.	20					440mm	535mm	601mm
LC-C4024-T5NL	NPN N.C./N.C.	24					600mm	695mm	761mm
LC-C4024-T5PL	PNP N.C./N.C.	24					760mm	855mm	921mm
LC-C4032-T5NL	NPN N.C./N.C.	32					920mm	1015mm	1081mm
LC-C4032-T5PL	PNP N.C./N.C.	32					1240mm	1335mm	1401mm
LC-C404-T1.5NL	NPN N.C./N.C.	4	40mm (Detecting target: ≥50mm opaque object)	0~1.5 meters (When setting detecting distance is less than 1.5 meters, please select this series light curtains.)			120mm	215mm	281mm
LC-C404-T1.5PL	PNP N.C./N.C.	4					200mm	295mm	361mm
LC-C406-T1.5NL	NPN N.C./N.C.	6					280mm	375mm	441mm
LC-C406-T1.5PL	PNP N.C./N.C.	6					440mm	535mm	601mm
LC-C408-T1.5NL	NPN N.C./N.C.	8					600mm	695mm	761mm
LC-C408-T1.5PL	PNP N.C./N.C.	8					760mm	855mm	921mm
LC-C4012-T1.5NL	NPN N.C./N.C.	12					920mm	1015mm	1081mm
LC-C4012-T1.5PL	PNP N.C./N.C.	12					1240mm	1335mm	1401mm
LC-C4016-T1.5NL	NPN N.C./N.C.	16			40mm (Detecting target: ≥50mm opaque object)	0~1.5 meters (When setting detecting distance is less than 1.5 meters, please select this series light curtains.)	120mm	215mm	281mm
LC-C4016-T1.5PL	PNP N.C./N.C.	16					200mm	295mm	361mm
LC-C4020-T1.5NL	NPN N.C./N.C.	20					280mm	375mm	441mm
LC-C4020-T1.5PL	PNP N.C./N.C.	20					440mm	535mm	601mm
LC-C4024-T1.5NL	NPN N.C./N.C.	24					600mm	695mm	761mm
LC-C4024-T1.5PL	PNP N.C./N.C.	24					760mm	855mm	921mm
LC-C4032-T1.5NL	NPN N.C./N.C.	32					920mm	1015mm	1081mm
LC-C4032-T1.5PL	PNP N.C./N.C.	32					1240mm	1335mm	1401mm

## LIGHT CURTAIN (12-24VDC)

### SPECIFICATIONS (LCC Series)

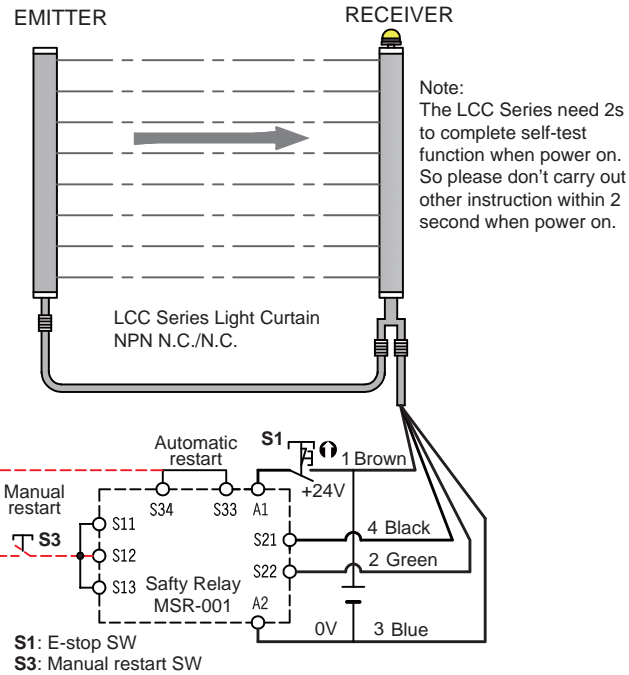
Item	Specification	
Sensing Mode	Through-beam (Light ON)	
Sensing Range	1~5M (When setting detecting distance is more than 1.5 meters, please select this range light curtains)	0~1.5M (When setting detecting distance is less than 1.5 meters, please select this range light curtains)
Detecting Target	For beam pitch (25mm): $\geq \Phi 35$ mm opaque object For beam pitch (40mm): $\geq \Phi 50$ mm opaque object	
Operating Voltage	DC 12~24V $\pm 10\%$ . Ripple $\leq 10\%$	
Control Output	NPN or PNP output, Load current $\leq 200$ mA, Residual voltage $< 2$ VDC	
Warning Light Power Consumption	$< 40$ mA	
Light Curtain Power Consumption	Emitter: $< 150$ mA; Receiver: $< 120$ mA (no load)	
Response Time	ON: 12~50ms; OFF: 12ms	
Light Source	Infraed LED (870nm)	
Short-circuit Protection	YES	
Reverse Polarity Protection	YES	
Enclosure Protection	IP65	
Ambient Temperature & Humidity Range	Operating: $-10 \sim 55^{\circ}\text{C}$ / RH 35 ~85 % (with no icing or condensation)	
Ambient Illumination	Lamp light $< 3000$ Lux / Sunlight $< 10000$ Lux	
Operation Indicator	1) Power indicator: Orange LEDx2 (Light up when power is ON). 2) Output indicator: Red LED (Lights up when one or more beams are interrupted). 3) Emitter indicator: Red LED (total 8 to 32 LED, Light up by each beam interrupted) Red LED will flash under unstable light received or subjected to external light interference. Red LED will OFF under stable light received (beam aligned). 4) Warning Light: Lights up by selectable Light on or Dark on (Default is Light on).	
Power On Response time	$< 2$ S	
Voltage withstand ability	1000VAC for one min, between all supply terminals connected together and enclosure.	
Insulation Resistance	20 M $\Omega$ or more. (with 500VDC megger between all supply terminals connected together and enclosure)	
Vibration Resistance	10 to 55 Hz frequency, 1.5mm amplitude in X, Y and Z directions for 2 hours each.	
Shock Resistance	300m/s <sup>2</sup> (30G approx), in Z, Y and Z directions for 30 times each.	
Matching Safety Relay	Safety Relay MSR-001	
Connecting method and Connector type	1) Emitter and Receiver have a pigtail (M12 male connector with 0.2M cable: 5.0 $\Phi$ 3x0.16mm <sup>2</sup> or 5.0 $\Phi$ 4x0.16mm <sup>2</sup> ) each. 2) Connetion between Emitter and Receiver is double connector E-FD4-FD4-V3 or E-FD4-FD4-V5. 3) Conneting receiver is T-type (E-FD4-MD4-MD4) and E-FD4V5	
Housing material	Case: Aluminum; Lens: Acrylic	
Accessories	Mounting bracket 4pcs, M3 Screws 8pcs, E-FD4V3 or E-FD4V5 1pcs or E-FD4-FD4-V3 or E-FD4-FD4-V5 1pcs, Warning light 1piece.	



**LIGHT CURTAIN (12-24VDC)**

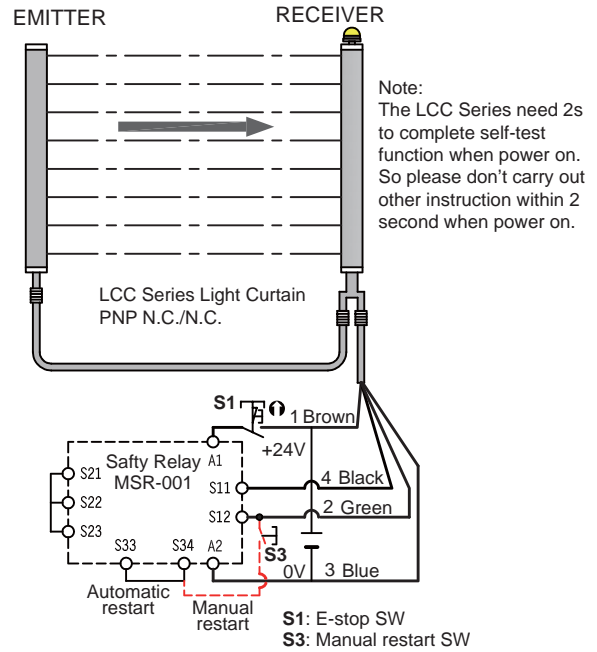
**Wiring examples for applications (LCC Series)**

**NPN-N.C. / N.C. with Safty Relay MSR-001**



- 1) In this wiring example, the LCC light curtain is operating under 1-channel mode with E-stop SW input.
- 2) For the restart mode, it is available only for one mode: Automatic restart or Manual restart.
- 3) According to IEC/EN 60204-1, 9.2.5.4.2 and 10.7, it is prohibited to automatic restart after push E-stop. So, if the machine is Emergency Stop, it will not automatic restart.
- 4) For the usage of Safty Relay MSR-001, please reference to Page 10-13.

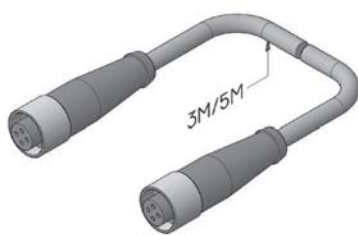
**PNP-N.C. / N.C. with Safty Relay MSR-001**



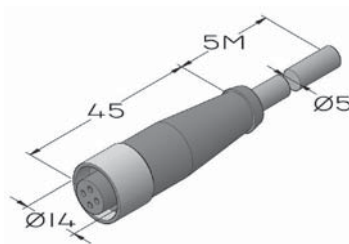
- 1) In this wiring example, the LCC light curtain is operating under 1-channel mode with E-stop SW input.
- 2) For the restart mode, it is available only for one mode: Automatic restart or Manual restart.
- 3) According to IEC/EN 60204-1, 9.2.5.4.2 and 10.7, it is prohibited to automatic restart after push E-stop. So, if the machine is Emergency Stop, it will not automatic restart.
- 4) For the usage of Safty Relay MSR-001, please reference to Page 10-13.

**Attachment Size (Unit: mm)**

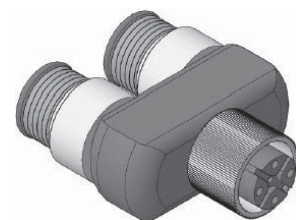
Connecting cable with double connectors  
E-FD4-FD4-V3 / E-FD4-FD4-V5



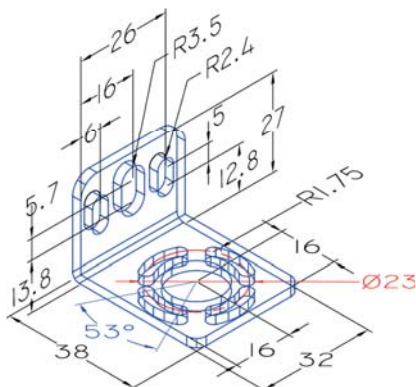
Connecting cable E-FD4V5



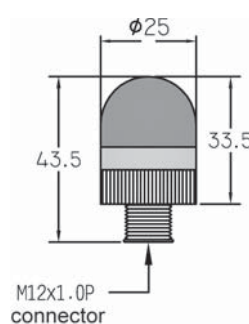
T-type connector E-FD4-MD4-MD4



Mounting Bracket



Warning Light



Warning Bell

