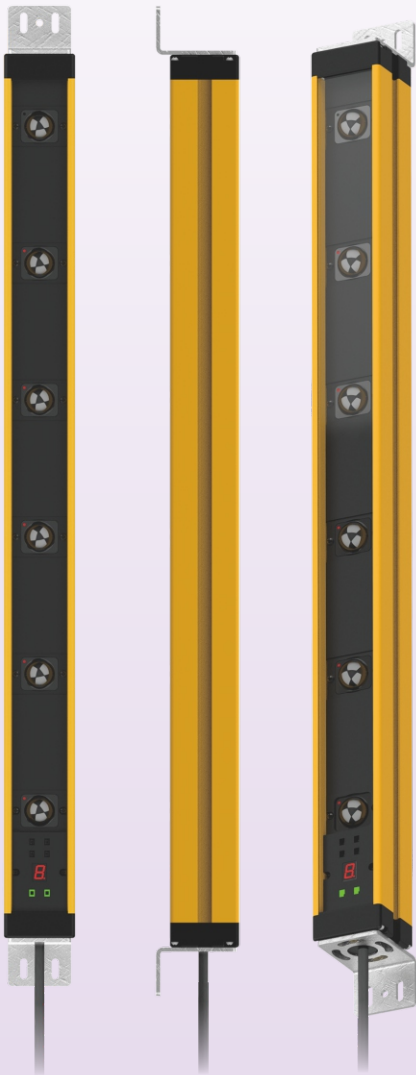




# SLC long-range safety light curtain



## Functional features

The SLC long-range safety light curtain is a new type of opposite-mode optoelectronic safety product developed using advanced technology. The light curtain itself has a high degree of safety and all products have the following advantages:

### ◆ CPU Self-Test

SLC long-range safety light curtain is using CPU self-test. when its own failure (such as light source is not in sight, the light source is not strong enough, the cast driver painting error, the main control circuit error, cable problems, as well as the receiver driver circuit error, the main control circuit error, CPU error) occurs, light curtain can ensure that no error signal is sent to the device under control to keep product safety.

### ◆ Dual independent OSSD output

In pursuit of better security, the light curtain uses dual independent OSSD outputs to automatically prevent failures. The light curtain can drive relays and safety PLCs directly, and provide relay monitoring for high-power loads.

### ◆ Easy maintenance

The light curtain will inform the user of the location and the reason for the failure through the specific digital tube and indicator. It is more convenient to maintain for users.

### ◆ Light synchronization

The use of light synchronization and special optical system make the light curtain equipped with strong anti-interference ability for electromagnetic signal, strobe light, welding arc light and surrounding light source.

### ◆ Excellent vibration resistance

The light curtain has excellent vibration resistance. Electronic components are soldered using SMT technology. The light curtain can be applied in different places because of a number of anti-vibration measures.

### ◆ Multi-faceted protection

When the area to be protected is not in a plane, it can be used in conjunction with a reflector.

### ◆ Wireless setup

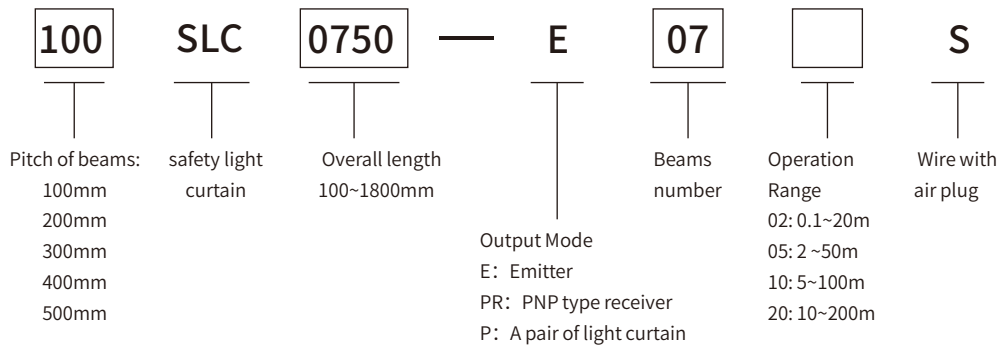
All functions of the SLC Light Curtain can be set up via a wireless communicator for easy maintenance.

### ◆ Pulse-test

The dual output circuit has the ability of self-diagnostic. This function forces output shutdown transiently (self emitting and receiving) with short periodic pulses (no shadow work). If a shutdown pulse occurs and no feedback, the host will shut down the OSSD output to ensure safety.




## Model description




## Examples of SLC long-range safety light curtain models

Emitter unit




**TYPE:100SLC0250-E02S**  
(EMITTER)



- Protection height: 100mm
- Scanning range: 10~200m
- Supply voltage: 24VDC±10%
- Protection class: IP65


- Sensible object: 100mm
- Response time: ≤33ms
- Power consumption: ≤30W
- Ambient temp: 0~55°C

S/N:




1002821000200001

Receiver unit




**TYPE:100SLC0250-PR02S**  
(RECEIVER)



- Protection height: 100mm
- Scanning range: 10~200m
- Supply voltage: 24VDC±10%
- Protection class: IP65

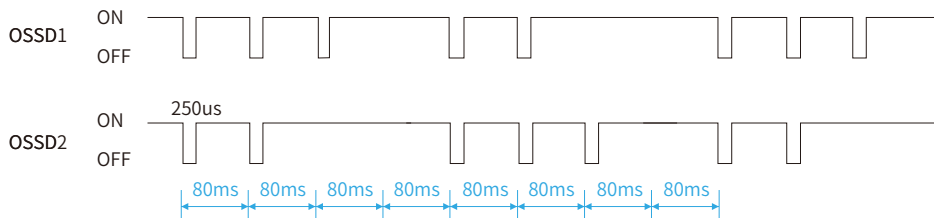
- Sensible object: 100mm
- Response time: ≤33ms
- Power consumption: ≤30W
- Ambient temp: 0~55°C

S/N:



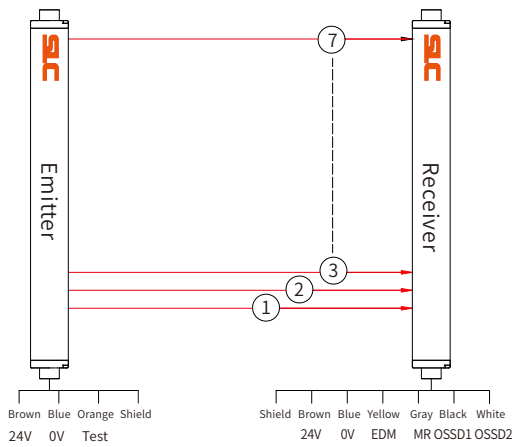
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## SLC long range safety light curtain OSSD output self-diagnostic timing



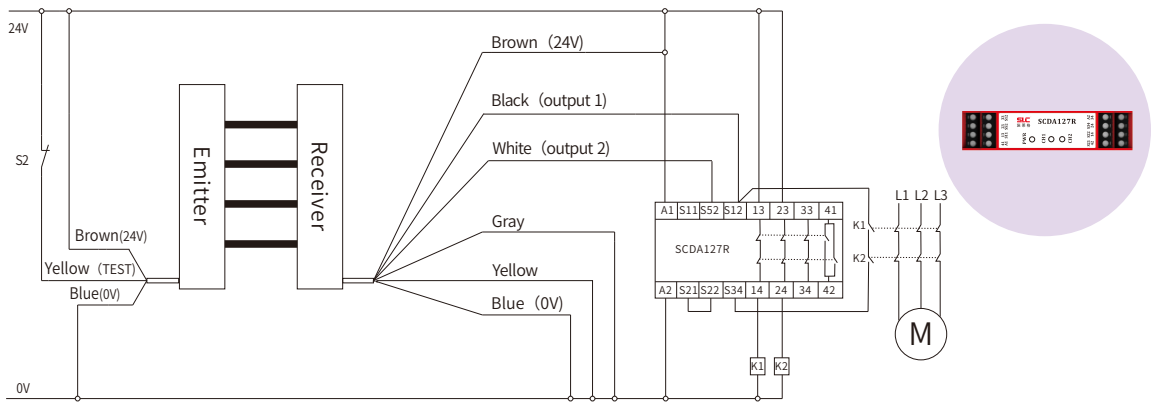
The SLC Long Range Safety Light Curtain has the function of OSSD output self-diagnostic. During the light curtain normal operation and OSSD output conduction, the timing control unit inside the light curtain turns off the OSSD1 and OSSD2 outputs in turn periodically and actively. The timing control unit will detect whether the OSSD1 or OSSD2's level has been flipped during a short shutdown period. If flipped, the corresponding OSSD switch is still in normal working state. If not detected, it indicates that the corresponding OSSD failure and the system will turn off the two OSSDs immediately to ensure functional safety. At this time, the digital tube on receiver displays 'd.' or 'H.'. However, this self-test pulse needs to be filtered out in the program when the load is a PLC or a smart device with MCU control. The above figure is the timing diagram of the self-diagnostic output waveform.

### SLC long range safety light curtain wiring definition



Name	Color	Description
Emitter	Brown	+24V DC, power supply
	Blue	GND, 0V of supply
	Orange	TEST testing line, tied to 24VDC or suspended for normal operation
Receive	Brown	+24V DC, power supply
	Blue	GND, 0V of supply
	Yellow	EDM, External contact status monitoring. Connected to +24V via normally closed contacts of the dual output controlled relay in series. Suspended or connected to 0V when EDM function is not used.
	Gray	MR. Manually reset the input signal. When the system is in locked state and the output will conduct after inputting 24VDC high pulse width of 100ms-1.5s. Conneand waiting for the reset, the system will reset to the normal cted to 0V if in auto reset mode.
	Black	OSSD1. Access to PLC, safety relay or general relay. EDM monitoring required when accessing to general relay.
	White	OSSD2. Access to PLC, safety relay or general relay. EDM monitoring required when accessing to general relay.

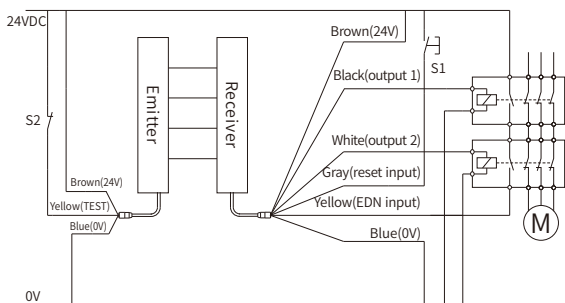
### SLC Long Range Safety light curtain (PNP) and General Relay Wiring Diagram



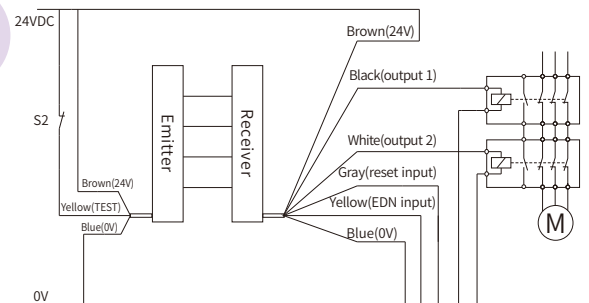
Drive the SCD127R safety relay module (auto reset, auto start)

### SLC long range safety light curtain (PNP) and general relay wiring diagram

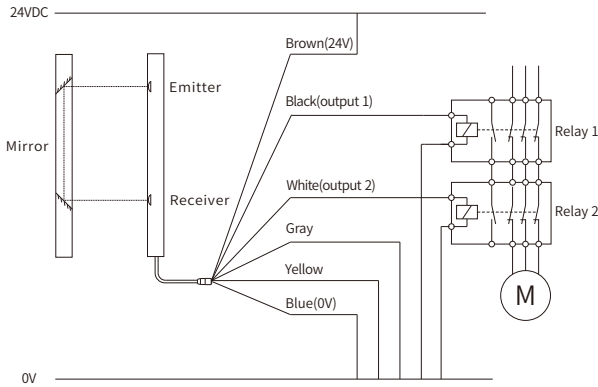
#### Wiring diagram - Manual reset with EDM



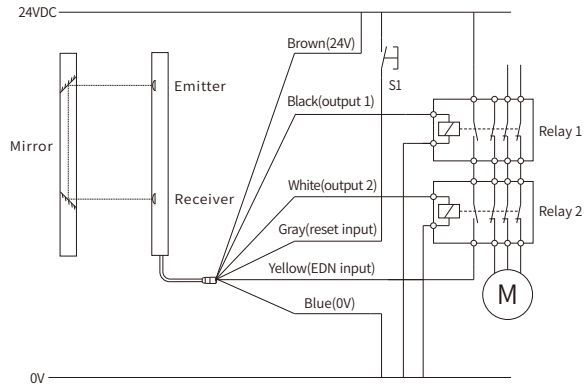
#### Wiring diagram - Auto reset



Wiring diagram – One Beam, auto reset



Wiring diagram – One Beam, manual start, a manual reset, EDM



## SLC long range light curtain specifications and selection guide



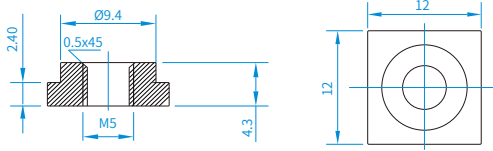
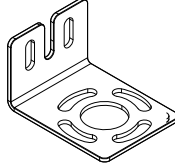
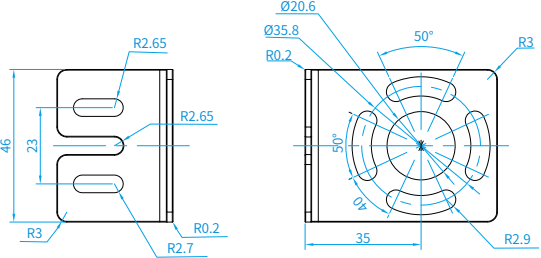


Beam Spacing: 100mm、200mm、300mm、400mm、500mm

Shape	Wavelength (nm)	Emitter	PNP type receiver	Response time(ms)	Beam Spacing	Protected Height (mm)	Dimension (mm)	
	940	000SLC0150-E01□□S	000SLC0150-PR01□□S	12.3	100	Single point shooting, no light axis spacing	50×52×150	
		100SLC0250-E02□□S	100SLC0250-PR02□□S	14.0		100	50×52×250	
		100SLC0350-E03□□S	100SLC0350-PR03□□S	15.6		200	50×52×350	
		100SLC0450-E04□□S	100SLC0450-PR04□□S	17.2		300	50×52×450	
		100SLC0550-E05□□S	100SLC0550-PR05□□S	18.8		400	50×52×550	
		100SLC0650-E06□□S	100SLC0650-PR06□□S	20.4		500	50×52×650	
		100SLC0750-E07□□S	100SLC0750-PR07□□S	22.1		600	50×52×750	
		200SLC0350-E02□□S	200SLC0350-PR02□□S	14.0	200	200	50×52×350	
		200SLC0550-E03□□S	200SLC0550-PR03□□S	15.6		400	50×52×550	
		200SLC0750-E04□□S	200SLC0750-PR04□□S	17.2		600	50×52×750	
		200SLC0950-E05□□S	200SLC0950-PR05□□S	18.8		800	50×52×950	
		200SLC1150-E06□□S	200SLC1150-PR06□□S	20.4	300	1000	50×52×1150	
		200SLC1350-E07□□S	200SLC1350-PR07□□S	22.1		1200	50×52×1350	
		300SLC0450-E02□□S	300SLC0450-PR02□□S	14.0		300	300	50×52×450
		300SLC0750-E03□□S	300SLC0750-PR03□□S	15.6	600		50×52×750	
		300SLC1050-E04□□S	300SLC1050-PR04□□S	17.2	900		50×52×1050	
		300SLC1350-E05□□S	300SLC1350-PR05□□S	18.8	400	1200	50×52×1350	
		400SLC0550-E02□□S	400SLC0550-PR02□□S	14.0		400	400	50×52×550
		400SLC0950-E03□□S	400SLC0950-PR03□□S	15.6			800	50×52×950
		400SLC1350-E04□□S	400SLC1350-PR04□□S	17.2	1200		50×52×1350	
		500SLC0650-E02□□S	500SLC0650-PR02□□S	14.0	500	500	500	50×52×650
		500SLC1150-E03□□S	500SLC1150-PR03□□S	15.6			1000	50×52×1150
		500SLC1650-E04□□S	500SLC1650-PR04□□S	17.2			1500	50×52×1650
		460SLC0650-E01□□S	460SLC0650-PR01□□S	12.3			Transceiver integrated, used with mirror column, protected height adjustable	50×52×650

Protected Height: Effective height of the test rod detected = (n+1) × beam spacing  
 □ Numbers for the operation range according to the requirements. 02:0.1-2m, 05:2-50m, 10:5-100m  
 For NPN type interface, please select SCDA127R safety relay for use.  
 ※ Affected by product configuration and manufacturing process, the actual product size, weight may be different, please refer to the actual product



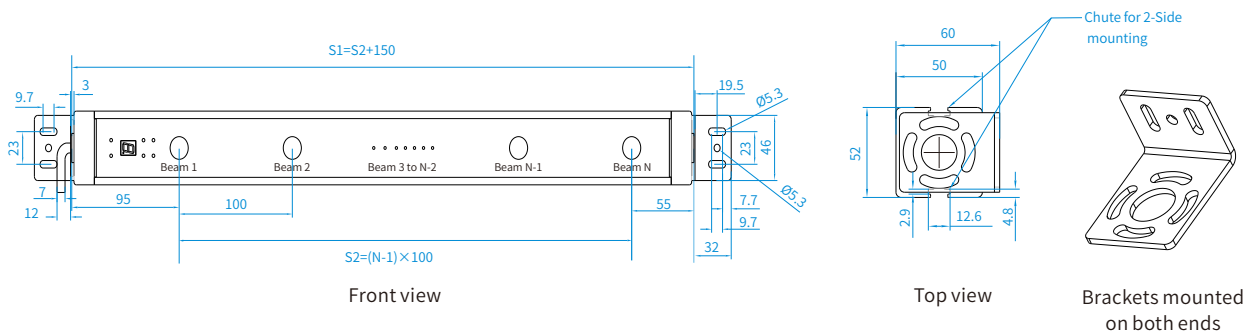
### SLC long range safety light curtain accessories

Name	Shapel	Model	Description	Outline	QTY.															
Safety module		SCDA127R	Safety output for SLC long range light curtains	See Safety Relay Module Information for details	1															
T-block		SLCT-01	Slot mounting for light curtains		4															
Two-end Mounting Bracket		SLCD05	For SLC long range safety light curtains installation at both ends		4															
Cable with 8-pole, 8-pin		SLC8060	6m Cable with 8-pole, 8-pin	 Max. wire diameter 16mm	2															
<p>Cable type description</p> <table border="1"> <thead> <tr> <th>SLC</th> <th>5</th> <th>030</th> </tr> </thead> <tbody> <tr> <td>Product Series</td> <td>Number of cable cores.</td> <td>Cable length</td> </tr> <tr> <td></td> <td>3:3 core wire</td> <td>030:3m</td> </tr> <tr> <td></td> <td>5:5 core wire</td> <td>060:6m</td> </tr> <tr> <td></td> <td></td> <td>100:10m</td> </tr> </tbody> </table>					SLC	5	030	Product Series	Number of cable cores.	Cable length		3:3 core wire	030:3m		5:5 core wire	060:6m			100:10m	
SLC	5	030																		
Product Series	Number of cable cores.	Cable length																		
	3:3 core wire	030:3m																		
	5:5 core wire	060:6m																		
		100:10m																		

Note: Affected by product configuration and manufacturing process, the actual product size, weight may be different, please refer to the actual product.

### SLC long range safety light curtain dimensions

#### Dimensions for 100mm beam spacing



S1: Total length of light curtain.  $S1=S2+150\text{mm}$ . N: Numbers of Beams, 2-7  
 S2: Detection height.  $S2= (N-1) *100\text{mm}$ . N: Numbers of Beams, 2-7

Affected by product configuration and manufacturing process, the actual product size, weight may be different, please refer to the actual product.










## SLC long range safety light curtain technical parameters











SLC long-range safety light curtain			
Standard	ISO13849-1(PLe,Cat.4)	Electrical parameters	
	IEC61496-1/2, EN61496-1/2, GB/T19436-1/2(Type4);		
Certification	EN61496-1/2(Type4),ISO13849-1 ( PLe, Cat.4)	Power Supply Voltage	24VDC±10%
		Power Consumption Max	≤10W(No load)
Optical Parameters		Response Time	See selection tabe
Detection height	100~1500mm	Output Feedback	External relay status feedback
Detection Range	0.1~20M, 2~50M, 5~100M(940nm);10~200M(905nm)	Dual Output	2 PNP outputs; 300mA drive load capacity per circuit
Beam Numbers	1~7(940nm), 1~19(905nm)	Reset from lockout conditions	Input high pulse width of 100ms - 1.5s during lockout conditions and waiting for reset
Beam Spacing	100mm/200mm/300mm/400mm/500mm	protection class	IP65(IP67/IP69 optional)
Wavelength	940nm/905nm	Operating temperature	-10~55°C
Synchrony	Optical Synchronization	Relative Humidity	15%~95%
Effective aperture angle	±2.5°@3m	Shock Resistance	10g/20ms
Anti-interference certification	>10000Lux		

## SLC long range safety light curtain digital tube and indicator description

### Emitter Display

State	Feature description	Illustrate
	Normal working	Green light on LED digital tube no display
	Test the mode of operation	Flashing green light LED digital tube display 2-N
	Supply voltage failure	Red light on.LED digital tube display P.
	Emission lamp Supply voltage failure	Red light on.LED digital tube display U.
	Select circuit fault	Red light on.LED digital tube display C.
	Light-emitting tube open circuit fault	Red light on.LED digital tube display 1.-N.
	Light-emitting tube short-circuit fault	Red light on.LED digital tube display d.

### Reciever Display Description:

State	Feature description	Illustrate
	Normal working	Orange, green light on LED digital tube display 9
	Light spot occlusion display	Red light on.LED digital tube display1-N
	Light spot disturbance display	Red light on.LED digital tube display 1.-N.
	Wait for startup/restart	Flashing yellow light Orange, red light on LED digital tube display 9
	Supply voltage failure	Red light on.LED digital tube display P.
	Select circuit fault	Red light on.LED digital tube display C.
	Peripherals monitor for failures	Red light on.LED digital tube display E.
	The output load is overloaded	Red light on.LED digital tube display d.
	Output drive pipe failure	Red light on.LED digital tube display H.
	Reset line failure	Red light on.LED digital tube display f

LED display instructions:

- (1) The green light indicates that there is output;
- (2) The red light indicates no output;
- (3) The orange light means that the light reception is normal;
- (4) The yellow light is always off in automatic mode, and the yellow light is always on in manual mode (double flashing indicates power-on start, wait for the reset button to be pressed; Single flash means reset, wait for reset key to follow)