



ESP Series

Against strong light safety light curtain

ESP series safety light curtain is specially designed for highlight environment, which can be used outside. Independent MCUS, self-inspection and overcurrent protection; ESPE choose unique lens to ensure 20m longest sensing distance; Transistor output can connect with PLC directly; Special enclosure can be installed with different method.



Product feature

- Great ability to resist strong light interference, no influence by sunshine
- 20m long protection distance
- Dual output signal and self-inspection method ensure reliable safety protection.
- Strong ability to against electromagnetic interference from diferent equipments motors.
- Anti-vibration circuit and aluminum alloy enclosure make sure curtains against vibration well.
- Wire synchronizaion technology
- Multiple installtion method is suitable for different machine.



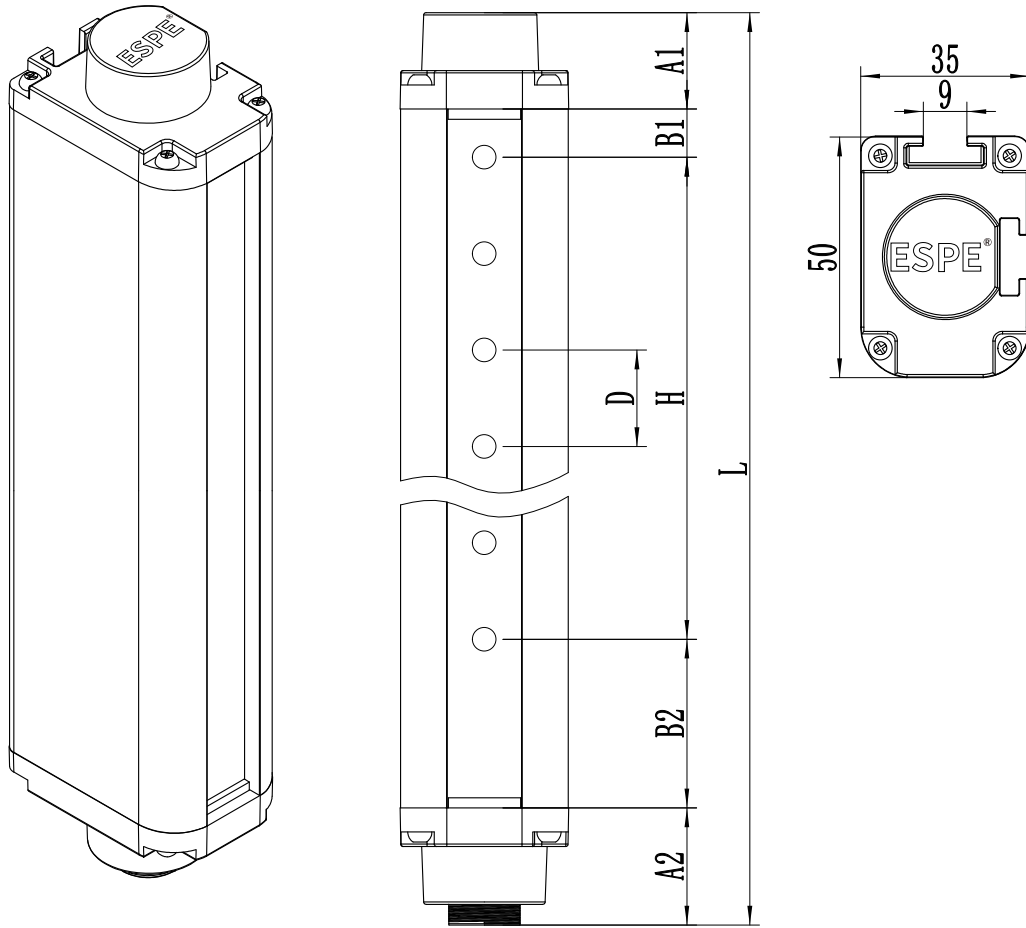
Technical Parameter

Parameter of safety light curtain

Power supply	DC10V~30V
Capacity	<5W
Beam space	20mm, 40mm
Resolution	30mm, 50mm
Beams	20mmbeam space: 8,16,24……160 40mm beam space: 8,16,24……80
Protective height	Protective height=(N-1)*beamgap, N is beam quantity.
Wave length	940nm
Response time	Protective height = (N-1)* beam gap
Type of output (OSSD)	PNP/ NPN semiconductors, current<200mA, residual voltage: 1V max. (Except voltage influenced by lengthen wire).leakage current: 1mA max.
Protective circuit	Overload voltage protection, power supply reverse polarity protection, over current protection
Sensing distance	0.1~2m, 0.1~5m, 0.1~10m, 0.1~20m(If reflective light environment, please let us know in advanced)
Anti-optical interference	100,000 Lux (angle>5°)
Sensing method	Through-beam type
Synchronization	wire synchronization
Enclosure material	Aluminum alloy
Enclosure rating	IP65
Housing cross-section	35*50mm
Vibration resistance	10Hz...55Hz,double amplitude each inX, Y and Z directions for 20 times.
Ambient operating temperature	-10°C~55°C (with no freezing)
Storage temperature	-30°C~70°C (with no freezing)
Ambient operating humidity	when temperature is 20°C, humidity max 85%

Explanation of model number(For example:ESP1620L1NCC-5)

ESP	16	20	L1	N	C	C	5
▼	▼	▼	▼	▼	▼	▼	▼
Model	Beams	Beam space	Brackets	Output signal	Output contact	Scanning method	Sensing distance
ESP Series	08,16, 24……	20mm 40mm	L1Bracket H1Bracket	N:NPN P:PNP	C : normally close	Parallel scanning C: cross scanning	2: 0.1~2M 5: 0.1~5M 10: 0.1~10M 20: 0.1~20M



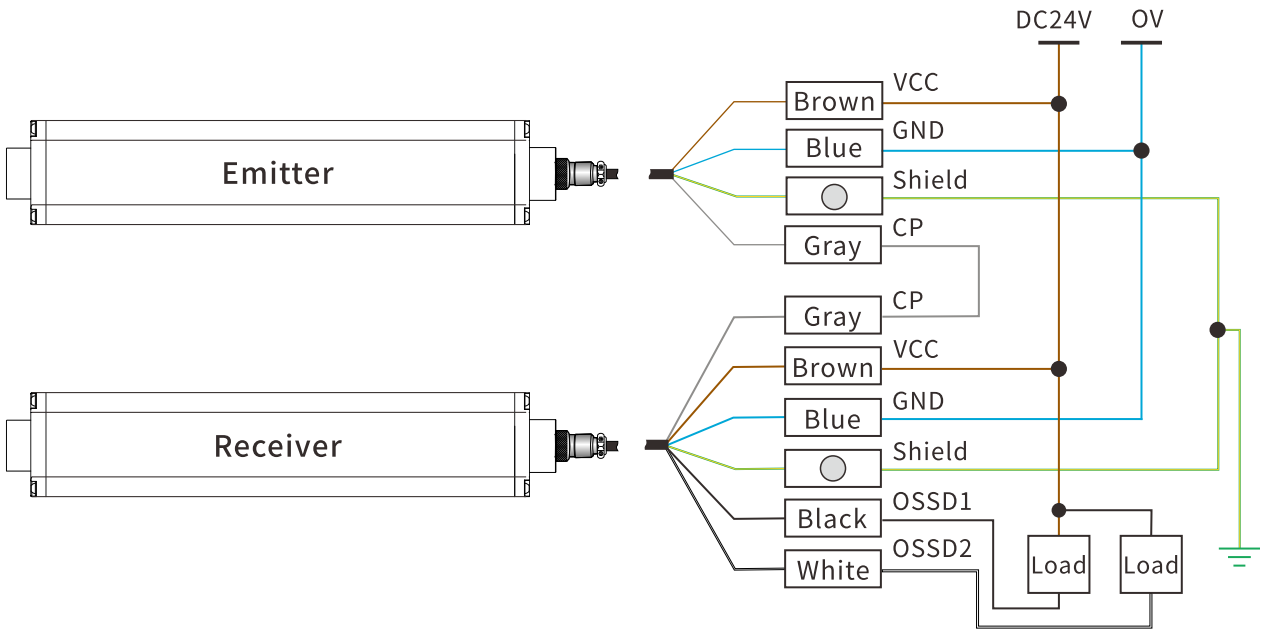
A1: Upper cover
 A2: Bottom cover+ aviation cap
 B1: Upper stop-work range
 B2: Bottom stop-work range
 D: Beam space
 H: Protective height
 L: Total height

A1=20mm; A2=25mm
 When D=20mm, B1=10mm; B2=35mm
 When D=40mm, B1=10mm; B2=35mm
 H is protective height: $H=(\text{beams}-1)*\text{beam space}$
 L is total height: $L=A1+A2+B1+B2+H$

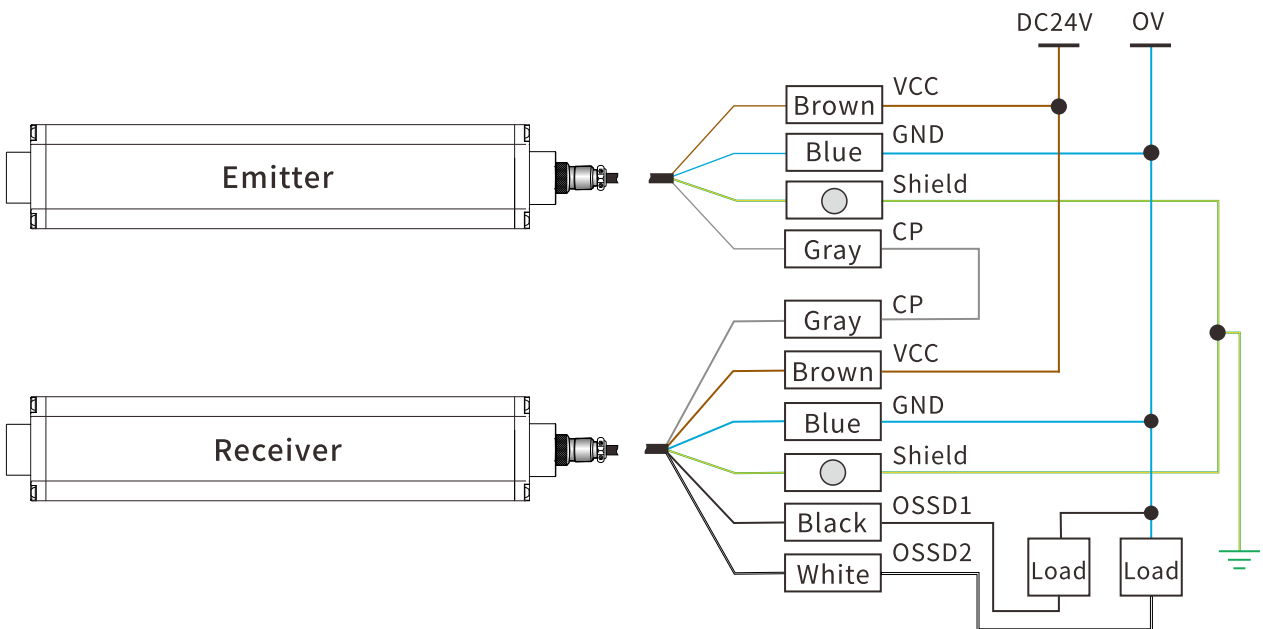
- EFP Series
- ESE Series
- ESN Series
- ESQC Series
- ELG Series
- EB13 Series
- EB15 Series
- ESA Series
- ESP Series**
- EFB Series
- ESF Series
- ESCL Series
- ESCF Series
- ESCH Series
- ESCC Series
- ESR Series
- EDL-R1 Series
- EPL Series
- EPS Series
- EPC Series
- EPM Series
- EPK Series
- EDS-R Series
- EDS-L Series
- EMB-M01
- F27X Series

Wire connection

NPN type



PNP type



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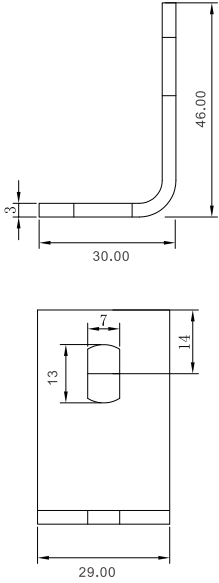

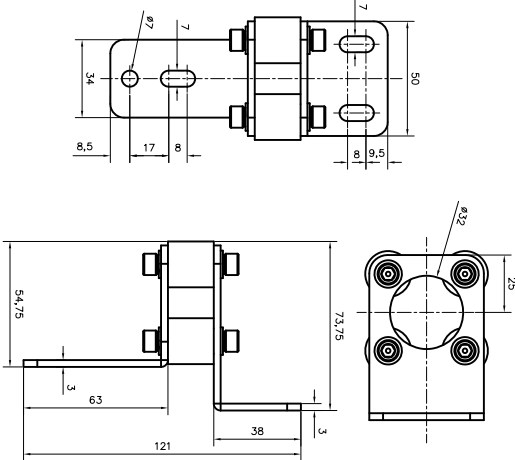

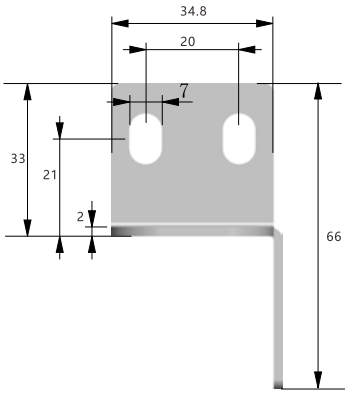
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ESP selection sheet

● Beam space 20mm, resolution 30mm

Picture	Beams (n)	Protective height (mm)	Total height (mm)	Mode	Size L*W*H(mm)
<p>Front view</p> <p>Top-view</p> <p>H is protective height: $H = (\text{beams} - 1) * \text{beam space}$ L is total height: $L = A1 + A2 + B1 + B2 + H$</p>	08	140	230	ESP0820	35*50*230
	16	300	390	ESP1620	35*50*390
	24	460	550	ESP2420	35*50*550
	32	620	710	ESP3220	35*50*710
	40	780	870	ESP4020	35*50*870
	48	940	1030	ESP4820	35*50*1030
	56	1100	1190	ESP5620	35*50*1190
	64	1260	1350	ESP6420	35*50*1350
	72	1420	1510	ESP7220	35*50*1510
	80	1580	1670	ESP8020	35*50*1670
	88	1740	1830	ESP8820	35*50*1830
	96	1900	1990	ESP9620	35*50*1990
	104	2060	2150	ESP10420	35*50*2150
	112	2220	2310	ESP11220	35*50*2310
	120	2380	2470	ESP12020	35*50*2470
	128	2540	2630	ESP12820	35*50*2630
136	2700	2790	ESP13620	35*50*2790	
144	2860	2950	ESP14420	35*50*2950	
152	3020	3110	ESP15220	35*50*3110	
160	3180	3270	ESP16020	35*50*3270	

Option for brackets

Picture	Bracket Name	Accessories	Size
	<p>L1 side-mounting bracket</p>	<ol style="list-style-type: none"> 1. L1 brackets(4 pcs) 2. Slide block (4pcs) 3. M6 grommet (4 pcs) 4. M6 pad(4 pcs) 5. M6*16 screw(4 pcs) 6. M6*8 screw(4 pcs) 	
	<p>Shock-absorbing bracket</p>	<ol style="list-style-type: none"> 1. Bracket body (4pcs) 2. Slide block (8 pcs) 3. M6 grommet (8 pcs) 4. M6 pad(8 pcs) 5. M6*16 screw (8 pcs) 6. M6*8 screw (8 pcs) 	
	<p>H1 upper & bottom mounting</p>	<ol style="list-style-type: none"> 1. H brackets (4pcs) 2. Sliding pot (4pcs) 3. M6 grommet (4pcs) 4. M6 pad(4pcs) 5. M6*16 screw(8pcs) 6. M6*8 screw(4pcs) 	

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Application case



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