

ESN Series

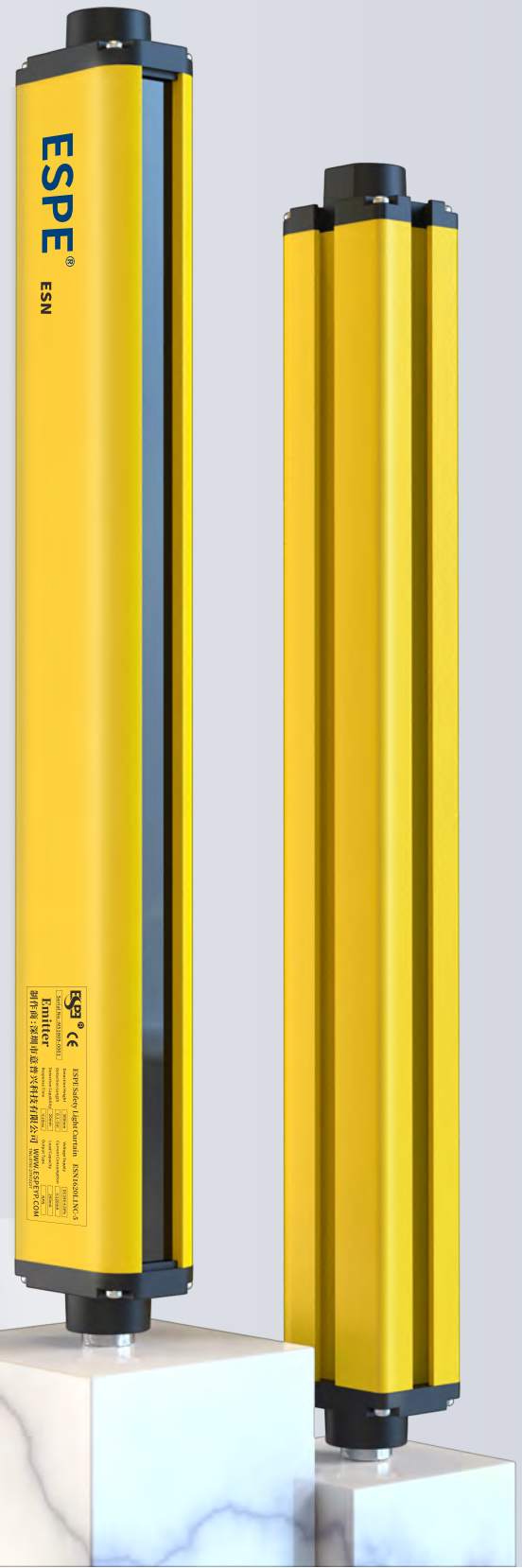
Universal safety light curtain

ESN series are designed with independent dual OSSD output; Great ability in self-inspection and circuit protection when overcurrent output; Special optical lens ensure safety light curtain with long sensing distance over 30 meters; Working voltage is during DC10v~30v; Transistor output (curtains can be directly connect with the PLC); Enclosure of safety light curtain with dual sliding slot for easy and multiple installation.



Product feature

- Low and wide voltage power supply ensure safety light curtain can work under DC10V-24V;
- Sensing distance is long up to 30 meters;
- High safety performance cause of dual-loop and self-inspection design;
- Strong anti-electromagnetic interference ability can effectively resist various electromagnetic interference;
- Good performance to anti vibration, as anti-shock circuit and thick aluminum alloy enclosure;
- Wire synchronization technology ensure the safety light curtain resist strong light;
- Multiple brackets ensure various installation methods to suitable for different application environment.



Technical Parameter

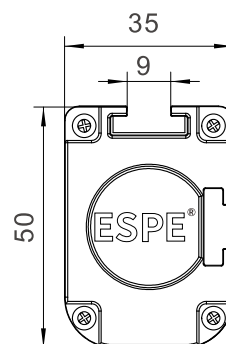
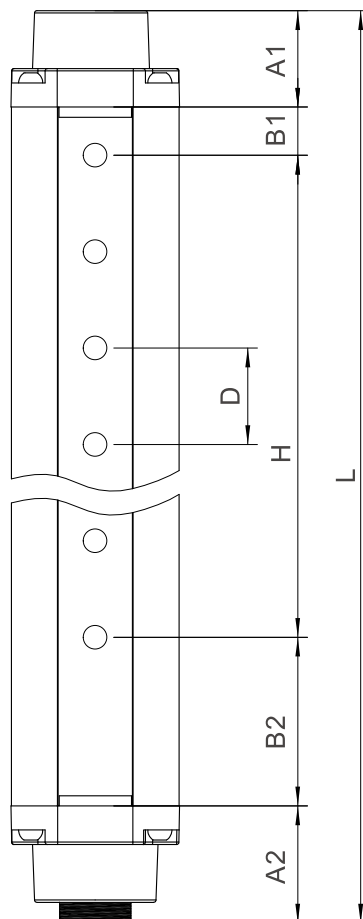
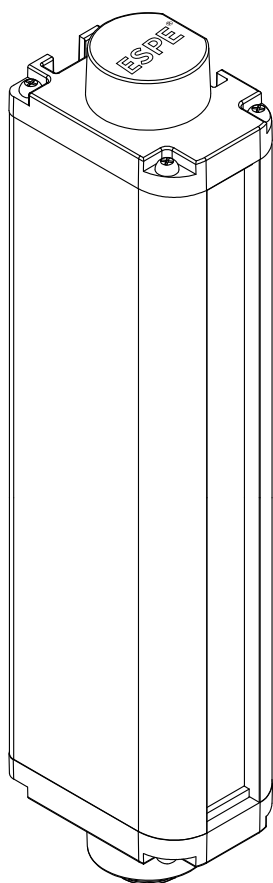
Parameter of safety light curtain	
Power supply	DC10V~30V
Capacity	<5W
Beam space	10mm, 20mm, 40mm
Resolution	20mm, 30mm, 50mm
Beams	10mm beam space:08,12,16.....496
	20mm beam space:4,6,8.....160
	40mm beam space:4,6,8.....122
Protective height	Protective height=(N-1)*beamgap, N is beam quantity.
Wave length	940nm
Response time	Protective height = (N-1)* beam gap
Type of output (OSSD)	PNP/ NPN semiconductors, current<200mA, residual voltage: 1V max. leakage current: 1mA max.(Except voltage influenced by lengthen wire).
Protective circuit	Overload voltage protection, power supply reverse polarity protection, over current protection
Sensing distance	0.1~0.5m, 0.1~2m, 0.1~5m, 0.1~10m, 0.1~20m, 0.1~30m(If reflective light environment, please let us know in advanced)
Anti-optical interference	10000 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:ESN1020L1NCC-5)

ESN	10	20	L1	N	C	C	—	5
▼	▼	▼	▼	▼	▼	▼		▼
Model	Beams	Beam space	Brackets	Output signal	Output contact	Scanning method		Sensing distance
ESN Series	04, 06, 08.....	10mm 20mm 40mm	L1Bracket N: NPN Output H1Bracket P: PNP Output	C : normally close		Parallel scanning C: cross scanning		0.5: 0.1~0.5M 2: 0.1~2M 5: 0.1~5M 10: 0.1~10M 20: 0.1~20M 30: 0.1~30M

EFP Series
 ESE Series
ESN Series
 ESQC Series
 ELG Series
 EB13 Series
 EB15 Series
 ESA Series
 ESP Series
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 ESCH Series
 ESCC Series
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 EPS Series
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 EPM Series
 EPK Series
 EDS-R Series
 EDS-L Series
 EMB-M01
 F27X Series

Size of product



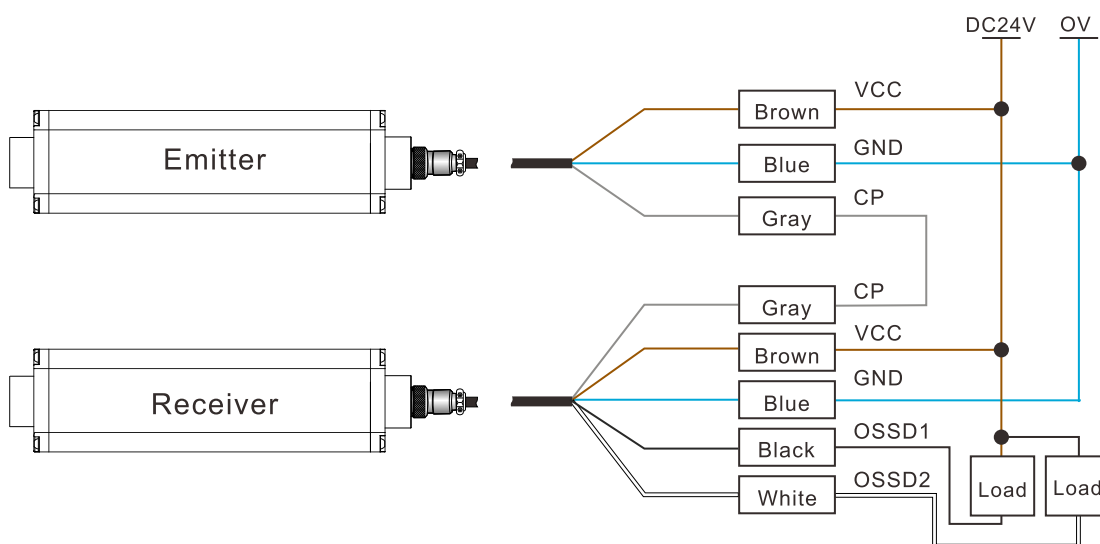
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A1: Upper cover
 A2: Bottom cover + aviation plug
 B1: Upper stop-work range
 B2: Bottom stop-work range
 D: Beam space (10mm/ 20mm/40mm)
 H: Protection height
 L: Total height

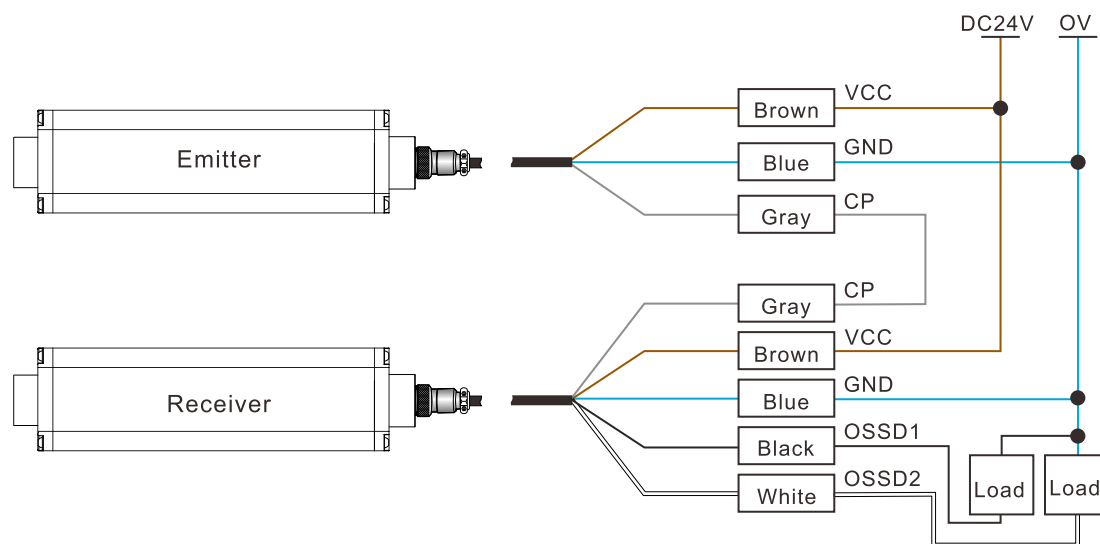
A1=20mm; A2=25mm
 When D=10mm, B1=5mm; B2=30mm
 When D=20mm, B1=10mm; B2=35mm
 When D=40mm, B1=10mm; B2=35mm
 H is protective height: $H = (\text{beams} - 1) \times \text{beam space}$
 L is total height: $L = A1 + A2 + B1 + B2 + H$

Wire connection

NPN type



PNP type



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EFB Series

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ESR Series

EDL-R1 Series

EPL Series

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EPM Series

EPK Series

EDS-R Series

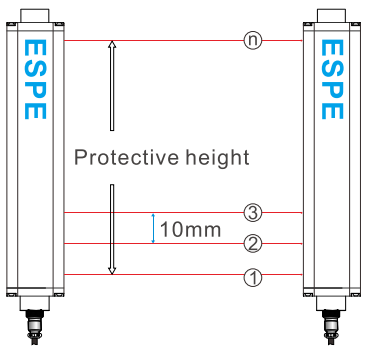
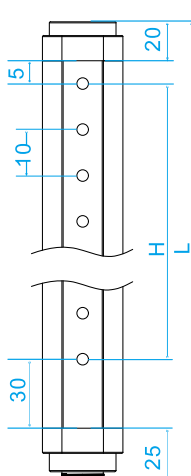
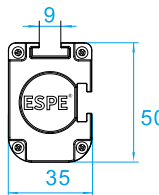
EDS-L Series

EMB-M01

F27X Series

ESN selection sheet

- Beam space 10mm, resolution 20mm

Picture	Beams (n)	Protective height (mm)	Total height (mm)	Mode	Size L*W*H(mm)
	08	70	150	ESN0810	35*50*150
	12	110	190	ESN1210	35*50*190
	16	150	230	ESN1610	35*50*230
	20	190	270	ESN2010	35*50*270
	24	230	310	ESN2410	35*50*310
	28	270	350	ESN2810	35*50*350
	32	310	390	ESN3210	35*50*390
	36	350	430	ESN3610	35*50*430
	40	390	470	ESN4010	35*50*470
	44	430	510	ESN4410	35*50*510
	48	470	550	ESN4810	35*50*550
	52	510	590	ESN5210	35*50*590
	56	550	630	ESN5610	35*50*630
	60	590	670	ESN6010	35*50*670
	64	630	710	ESN6410	35*50*710
	68	670	750	ESN6810	35*50*750
	72	710	790	ESN7210	35*50*790
	76	750	830	ESN7610	35*50*830
	80	790	870	ESN8010	35*50*870
	84	830	910	ESN8410	35*50*910
	88	870	950	ESN8810	35*50*950
	92	910	990	ESN9210	35*50*990
	96	950	1030	ESN9610	35*50*1030
	100	990	1070	ESN10010	35*50*1070
	104	1030	1110	ESN10410	35*50*1110
	108	1070	1150	ESN10810	35*50*1150
	112	1110	1190	ESN11210	35*50*1190
	116	1150	1230	ESN11610	35*50*1230
	120	1190	1270	ESN12010	35*50*1270
	124	1230	1310	ESN12410	35*50*1310
H is protective height: $H = (\text{beams} - 1) * \text{beam space}$ L is total height = $A1 + A2 + B1 + B2 + H$	128	1270	1350	ESN12810	35*50*1350
					
	496	4950	5030	ESN49610	35*50*5030

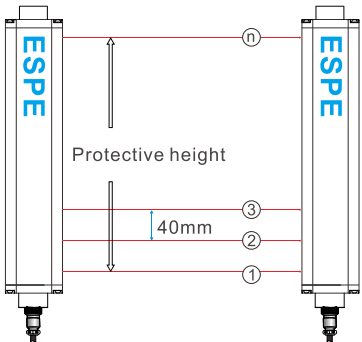
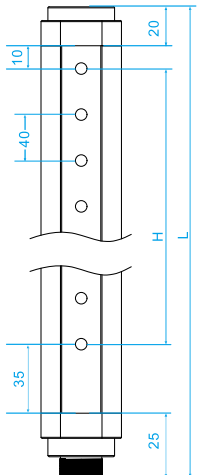
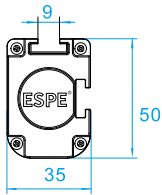
Safety Light Curtain

- | |
|-------------------|
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<https://www.espeyp.com>

ESN selection sheet

- Beam space 40mm, resolution 50mm

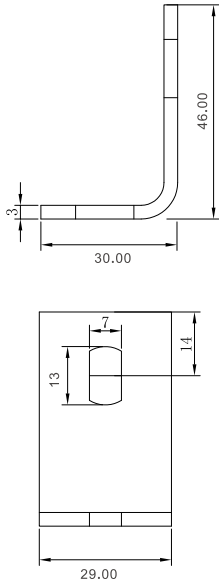
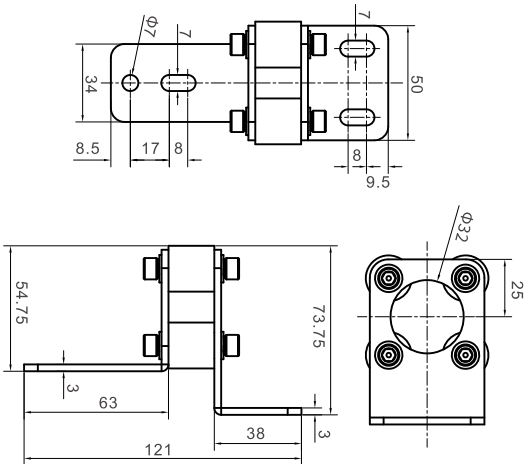
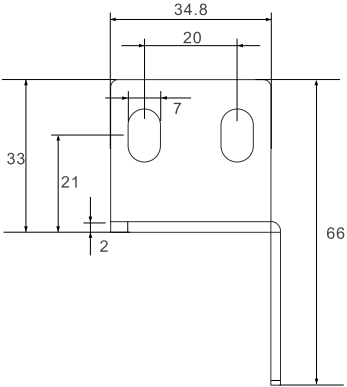
Picture	Beams (n)	Protective height (mm)	Total height (mm)	Mode	Size L*W*H(mm)
	04	120	210	ESN0440	35*50*210
	06	200	290	ESN0640	35*50*290
	08	280	370	ESN0840	35*50*370
	10	360	450	ESN1040	35*50*450
	12	440	530	ESN1240	35*50*530
	14	520	610	ESN1440	35*50*610
	16	600	690	ESN1640	35*50*690
	18	680	770	ESN1840	35*50*770
	20	760	850	ESN2040	35*50*850
	22	840	930	ESN2240	35*50*930
	24	920	1010	ESN2440	35*50*1010
	26	1000	1090	ESN2640	35*50*1090
	28	1080	1170	ESN2840	35*50*1170
	30	1160	1250	ESN3040	35*50*1250
	32	1240	1330	ESN3240	35*50*1330
	34	1320	1410	ESN3440	35*50*1410
	36	1400	1490	ESN3640	35*50*1490
	38	1480	1570	ESN3840	35*50*1570
	40	1560	1650	ESN4040	35*50*1650
	42	1640	1730	ESN4240	35*50*1730
	44	1720	1810	ESN4440	35*50*1810
	46	1800	1890	ESN4640	35*50*1890
	48	1880	1970	ESN4840	35*50*1970
	50	1960	2050	ESN5040	35*50*2050
	52	2040	2130	ESN5240	35*50*2130
	54	2120	2210	ESN5440	35*50*2210
	56	2200	2290	ESN5640	35*50*2290
	58	2280	2370	ESN5840	35*50*2370
	60	2360	2450	ESN6040	35*50*2450
	62	2440	2530	ESN6240	35*50*2530
	64	2520	2610	ESN6440	35*50*2610
					
	122	4840	4930	ESN12240	35*50*4930
					

H is protective height:

$H = (\text{beams} - 1) * \text{beam space}$

L is total height = $A1 + A2 + B1 + B2 + H$

Option for brackets

Picture	Bracket Name	Accessories	Bracket Size
	L1 back/ side mounting	1. L brackets(4 pcs) 2. Sliding blocks (4pcs) 3. M6 grommet (4 pcs) 4. M6 pad(4 pcs) 5. M6*16 screw(4 pcs) 6. M6*8 screw(4 pcs)	
	Shock-absorbing bracket	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)	
	H1 upper & bottom mounting	1. H brackets (4pcs) 2. Sliding blocks (4pcs) 3. M6 grommet (4pcs) 4. M6 pad(4pcs) 5. M6*16 screw(8pcs) 6. M6*8 screw(4pcs)	

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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

Application case



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

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EPC Series

EPM Series

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EMB-M01

F27X Series