

Экономичные световые завесы безопасности ESN

Технические характеристики

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ESN Series

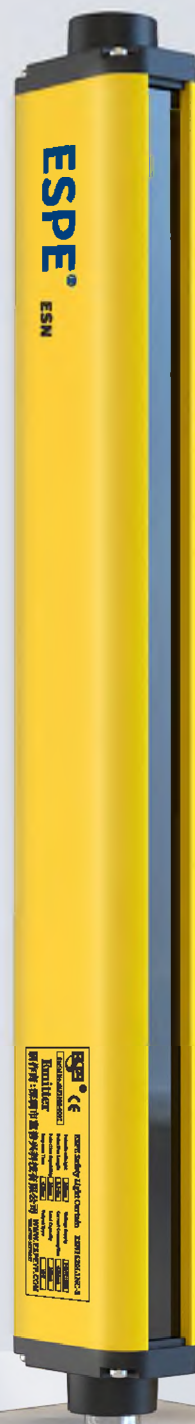
Universal safety light curtain

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.



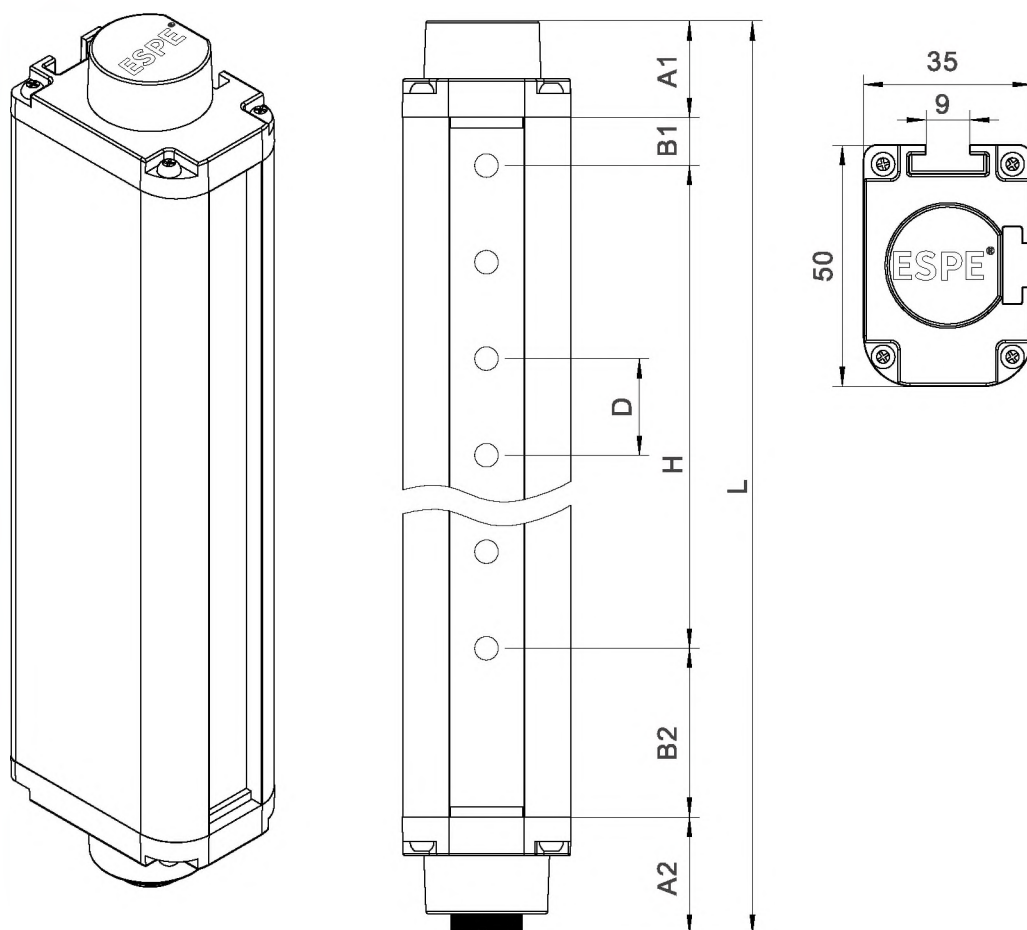
Technical Parameter

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

Size of product



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

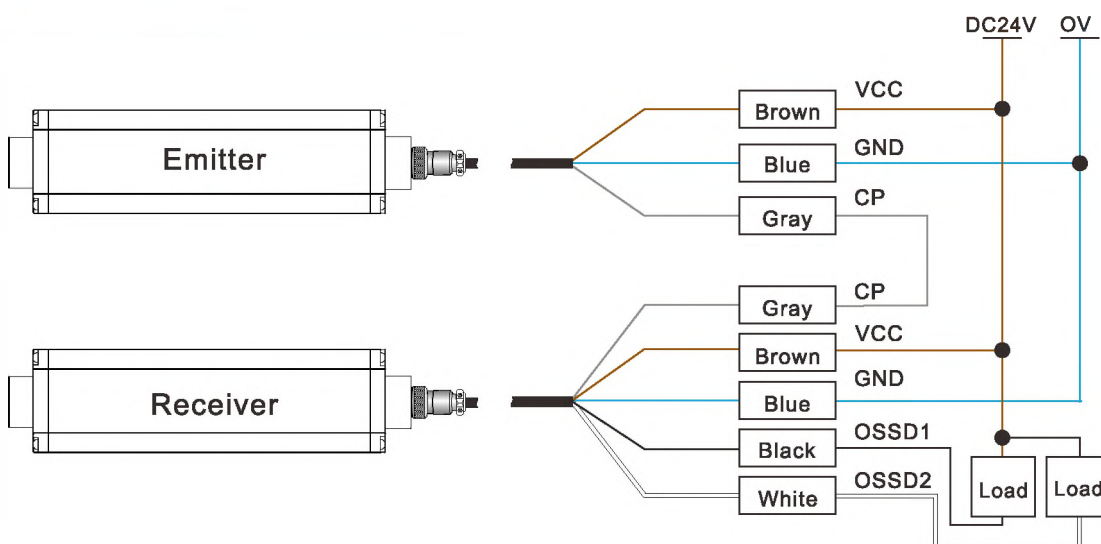
When D=40mm, B1=10mm; B2=35mm

H is protective height: $H = (\text{beams} - 1) * \text{beam space}$

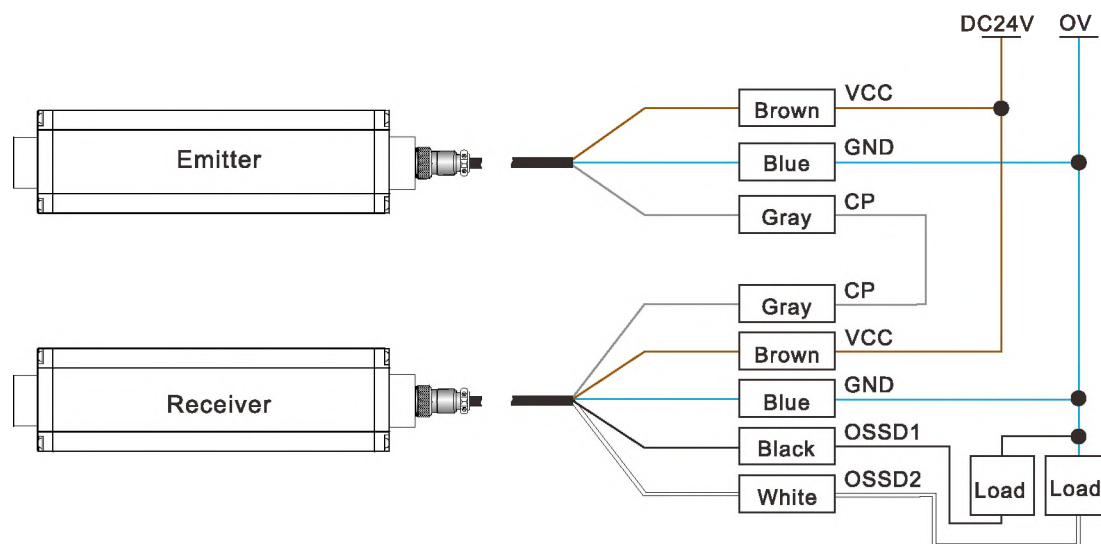
L is total height: $L = A1 + A2 + B1 + B2 + H$

Wire connection

NPN type

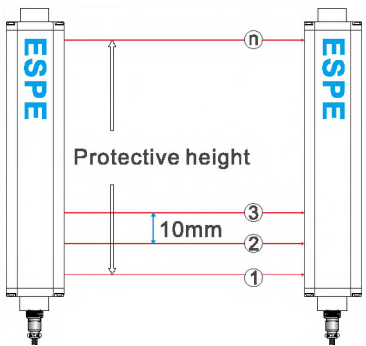
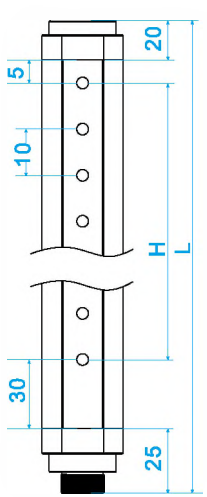
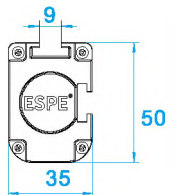


PNP type



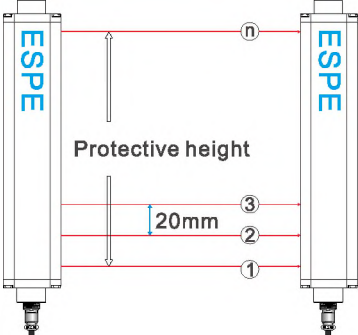
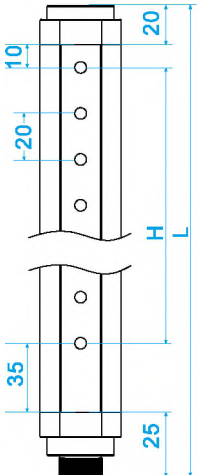
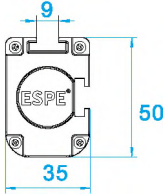
ESN selection sheet

● 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

ESN selection sheet

● Beam space 20mm, resolution 30mm

Picture	Beams (n)	Protective height (mm)	Total height (mm)	Mode	Size L*W*H(mm)
	04	60	125	ESN0420	35*50*125
	06	100	190	ESN0620	35*50*190
	08	140	230	ESN0820	35*50*230
	10	180	270	ESN1020	35*50*270
	12	220	310	ESN1220	35*50*310
	14	260	350	ESN1420	35*50*350
	16	300	390	ESN1620	35*50*390
	18	340	430	ESN1820	35*50*430
	20	380	470	ESN2020	35*50*470
	22	420	510	ESN2220	35*50*510
	24	460	550	ESN2420	35*50*550
	26	500	590	ESN2620	35*50*590
	28	540	630	ESN2820	35*50*630
	30	580	670	ESN3020	35*50*670
	32	620	710	ESN3220	35*50*710
	34	660	750	ESN3420	35*50*750
 Front view	36	700	790	ESN3620	35*50*790
	38	740	830	ESN3820	35*50*830
	40	780	870	ESN4020	35*50*870
	42	820	910	ESN4220	35*50*910
	44	860	950	ESN4420	35*50*950
	46	900	990	ESN4620	35*50*990
	48	940	1030	ESN4820	35*50*1030
	50	980	1070	ESN5020	35*50*1070
	52	1020	1110	ESN5220	35*50*1110
	54	1060	1150	ESN5420	35*50*1150
	56	1100	1190	ESN5620	35*50*1190
	58	1140	1230	ESN5820	35*50*1230
	60	1180	1270	ESN6020	35*50*1270
	62	1220	1310	ESN6220	35*50*1310
	64	1260	1350	ESN6420	35*50*1350
					
 Top-view	160	3180	3270	ESN16020	35*50*3270

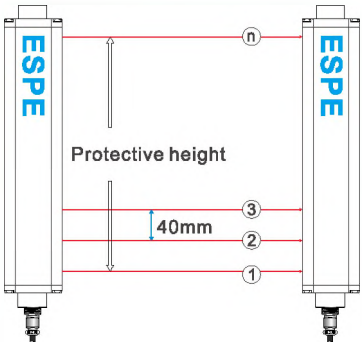
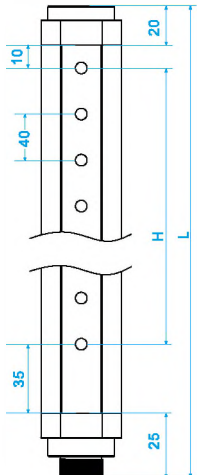
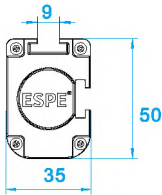
H is protective height:

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

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

ESN selection sheet

- Beam space 40mm, resolution 50mm

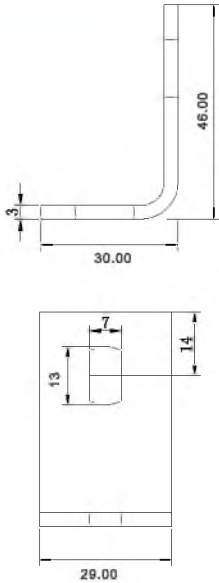
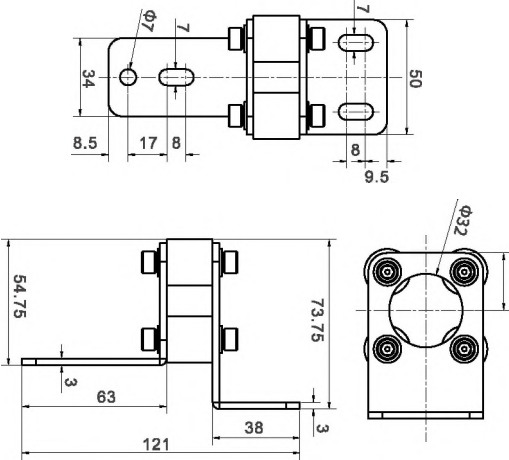
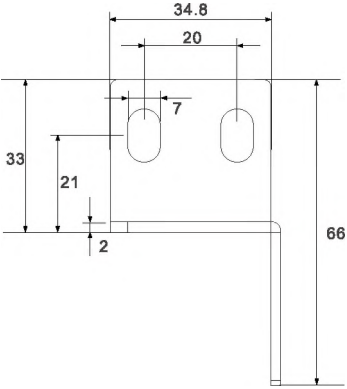
Picture	Beams (n)	Protective height (mm)	Total height (mm)	Mode	Size L*W*H(mm)
	04	120	210	ESN0440	35*50*210
	06	200	290	ESN0640	35*50*290
	08	280	370	ESN0840	35*50*370
	10	360	450	ESN1040	35*50*450
	12	440	530	ESN1240	35*50*530
	14	520	610	ESN1440	35*50*610
	16	600	690	ESN1640	35*50*690
	18	680	770	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)	

Application case



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