



Product Introduction

ESCH series s is a kind of infrared sensor for deviation correction and center detection of coiled material, which is mainly used for effective deviation correction of various material like corrugated paper, fabric, steel etc. Its effective solution to solve the problem of uneven strip force or conveyor defects, material conveying deviates from the center line or limited position, conveyor runs off the track, and the edge of the strip is irregular when crimped, resulting in a lot of strip edge material waste, increase the subsequent process work, affect the quality of strips, and need to increase production and maintenance labor for supervision, resulting in low production effectively.

Product Feature

- Support single-side correction, double-side combined correction, and center correction can be selected based on actual needs;
- Accuracy up to 1.25mm;
- With parallel scanning mode and cross scanning mode;
- Multiple output option: voltage mode, current mode, RS485 communication;
- Good anti-interference ability for electromagnetic signals, strobe lights, welding arcs and sunshine light.

Measuring Light Curtain

Product Parameter

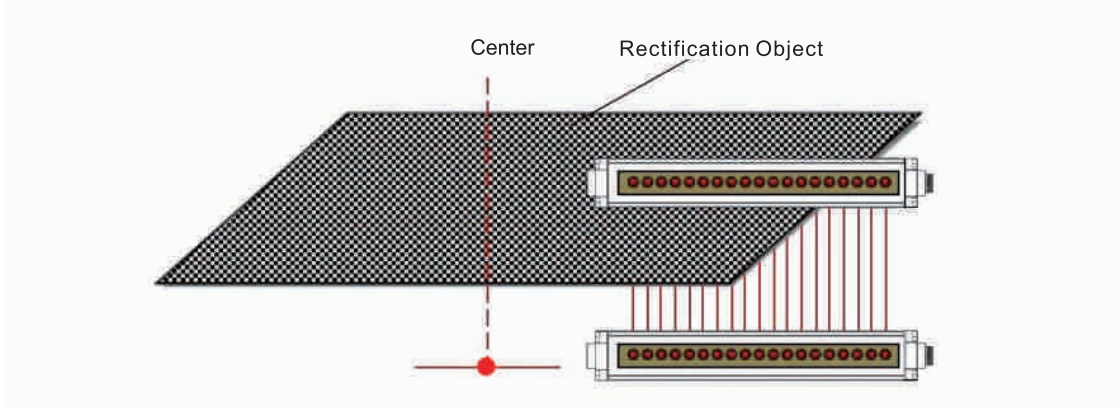
Power Supply	DC12V~30V
Capacity	<5W
Beam Space	2.5mm
Accuracy	1.25mm (cross scanning of 2.5mm), 2.5mm
Beam Space	32~544 (can be customized)
Correction Range	80~4000mm (standard)
Wavelength	940nm
Sensing Distance	0~200mm (With tube and brackets), 0~1000mm (Remark: please let us know with any reflectivity)
Output	Analog voltage: 0-5V, 0-10V
	Analog current: 4mA-20mA
	RS485 communication: Modbus RTU protocol
Anti-interference of Light	10000 Lux (angle >5°)
Communication	Communication: RS485, RS232
	Baud rate: 9600bps, 19200bps, 38400bps, 57600bps, 115200bps
	Protocol: Modbus-RTU
	Data sending: active mode, passive mode
Sensing Method	Thru-beam
Synchronization	Wire-syn
Enclosure Material	Aluminum alloy, PC tube
Enclosure Rate	IP65
Ambient Temperature	-10°C~55°C (No freezing)
Store Temperature	-30°C~70°C (No freezing)
Ambient Humidity	When temperature is 20°C, humidity<85%

Model Selection (e.g.: ESCH96025RYPS-L1-1)

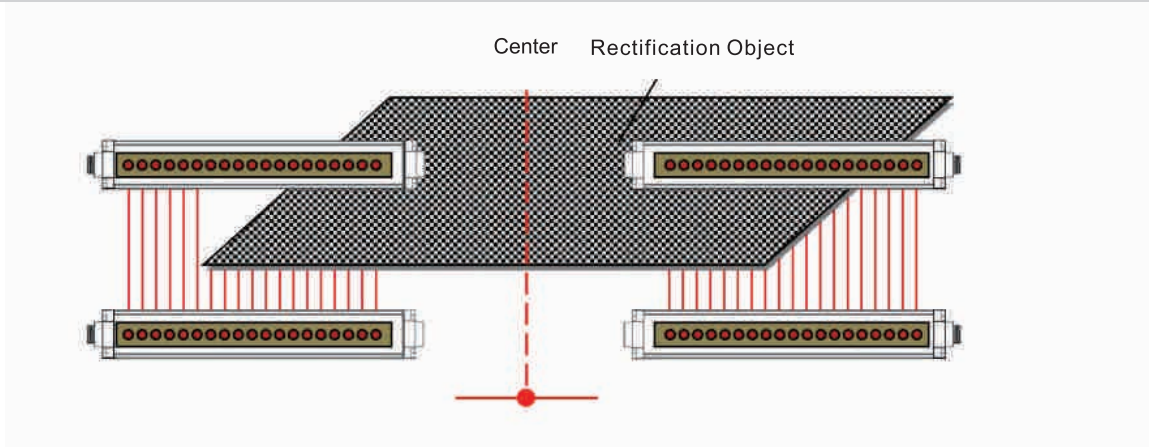
Product Series	Beams	Beam Space	Output	Scanning	Rectification	Bracket	Sensing Distance
ESCH	96	025	RY	P	S	L1	1
	32, 64, 96...	2.5mm	Digital output RY: RS485 passive RZ: RS485 active Analog output I: 4-20mA U: 0-10V U1: 0-5V	P: parallel scanning C: cross scanning S: single side scanning	S: single side D: dual side	Single side (bracket) L1: L1 side mounting L2: L2 bracket Dual side (middle blind area) 120+N*80 (N=32, 64...) Remark: total length<4000mm	Single correction 05: 0.1~0.5m 1: 0.1~1m No mark: dual side correction

Rectification Method

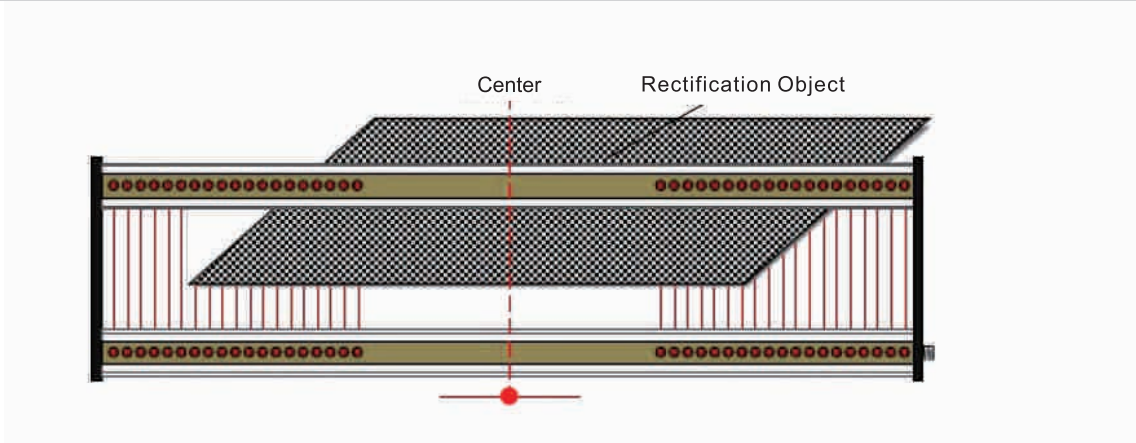
Single side correction: a single set of light curtain is used for detection without protective tube, and output a group of signal.



Bilateral rectification: two set of light curtains combined for rectification without protective tubes, each output detection signal independently.



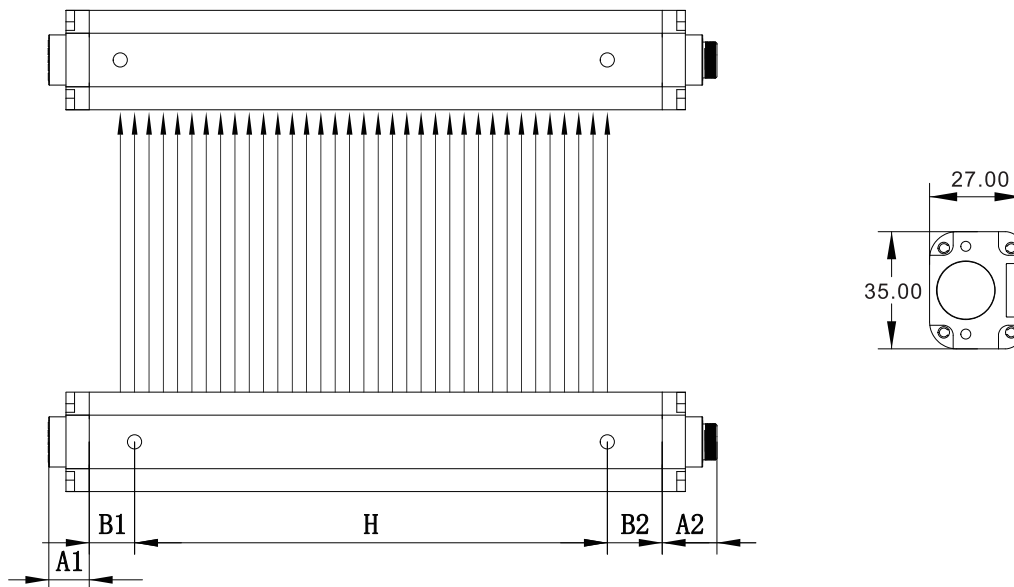
Centering rectification: Whole set light curtain with protective tube and special mounting brackets from two sides. Internal circuit calculate and compare data by special algorithm then optionally output single group or two group of signal.



Measuring Light Curtain

Product Size

Single-sided& Double-sided Rectification (without protective tube)

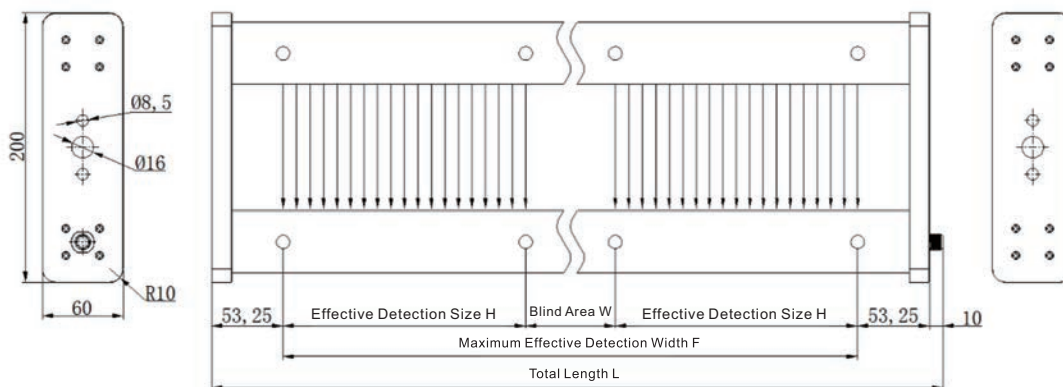


B1: up blind area
B2: bottom blind area
D: beam space
H: detection length
L: total length

A1=14mm, A2=20mm
When D=2.5mm, B1=6.25mm, B2=81.28mm

L is total length: $L=A1+A2+B1+B2+H$
H is detection length: $H=(\text{beams}-1) \times \text{beam space}$

Centering Rectification (with protective tube)



Middle Blind Ar: $W=120\text{mm}+(80\text{mm} \times N)$, $N=1,2,3...$ (total length < 4000mm)
Effective detection size $H=\text{beam space} \times (\text{beams}-1)$
Maximum effective detection width $F=H \times 2+W$
Total length $L=116.5\text{mm}+W+H \times 2$ (total light curtain < 4000mm)

Single-sided Rectification Model Selection Table

- Detection accuracy 2.5mm

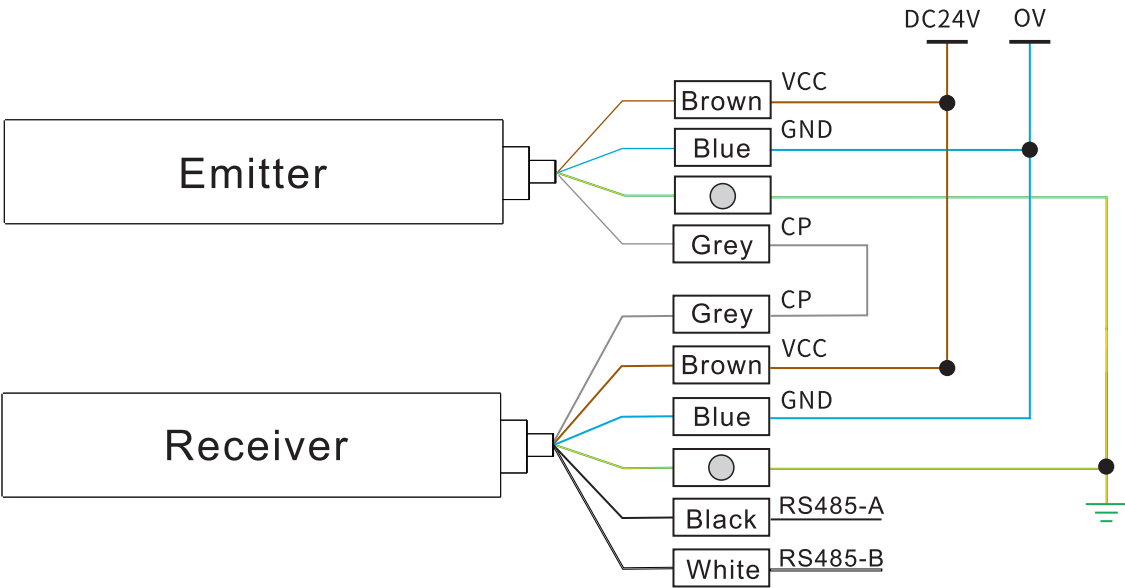
Beams (n)	Detection Area (mm)	Model
32	77.5	ESCH32025
64	157.5	ESCH64025
96	237.5	ESCH96025
128	317.5	ESCH128025
160	397.5	ESCH160025
192	477.5	ESCH192025
224	557.5	ESCH224025
256	637.5	ESCH256025
288	717.5	ESCH288025
320	797.5	ESCH320025
352	877.5	ESCH352025
384	957.5	ESCH384025
416	1037.5	ESCH416025
448	1117.5	ESCH448025
480	1197.5	ESCH480025
512	1277.5	ESCH512025
544	1357.5	ESCH544025

Remark: Besides above models, other light curtains can be customized

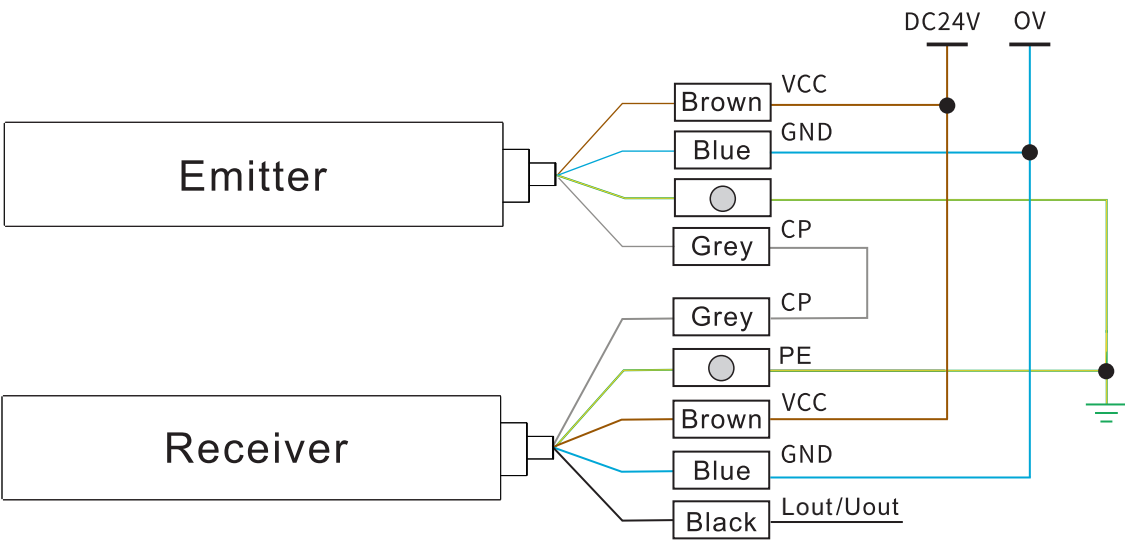
Measuring Light Curtain

Single-sided and Double-sided Rectification Wiring Diagram

RS485 Output

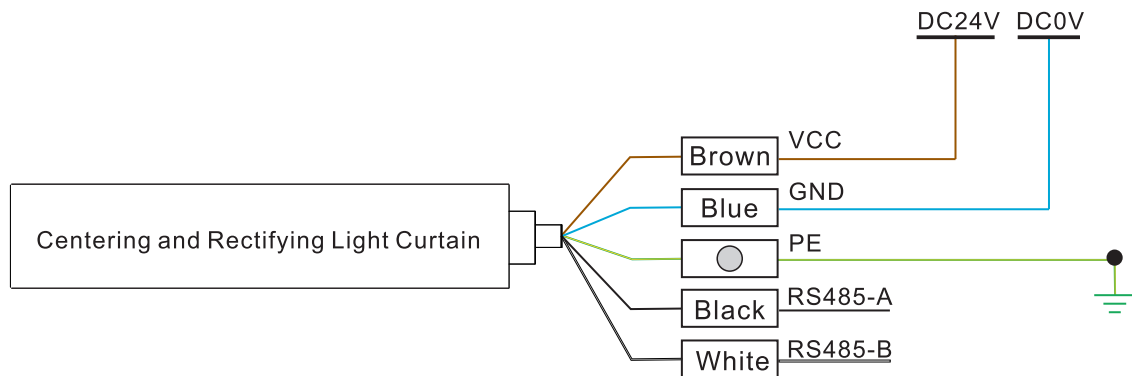


Analog Output

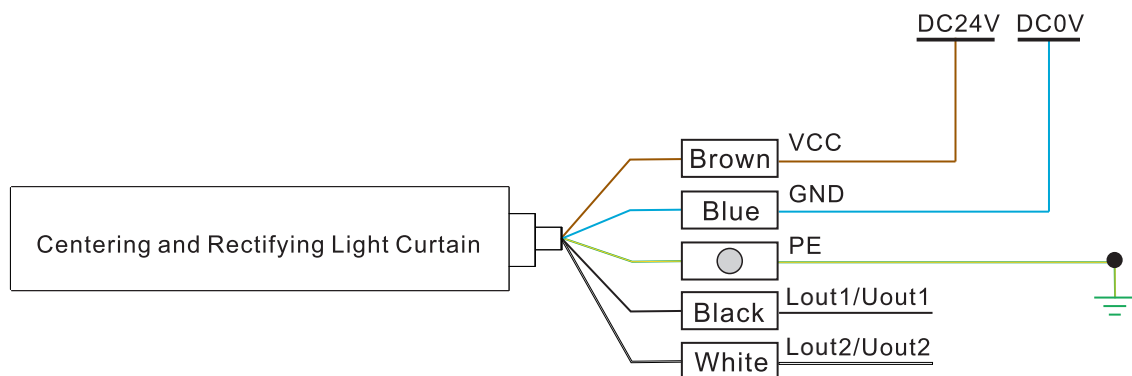


Centering Rectification Wiring Diagram

RS485 Output

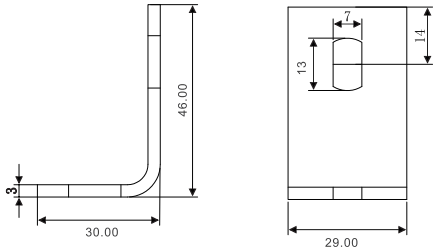
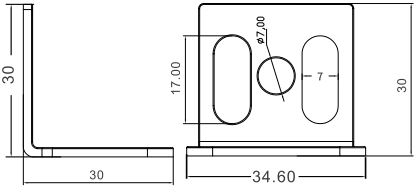


Analog Output



Measuring Light Curtain

Brackets of Single-sided/ Doble-sided Rectification

Picture	Bracket	Accessory	Bracket Size
	L1 bracket	L bracket (2pcs) Slider (2pcs) M6 pad (2pcs) M6 spring washer (2pcs) M6*16 screw (2pcs) M6*8 screw (2pcs)	
	L2 back of end cover bracket	Up & bottom bracket (2pcs) M3*6 screw (4pcs)	

Brackets of Centering Rectification

Picture	 Install the fixing hole
Bracket	Protective Tube
Bracket Size	