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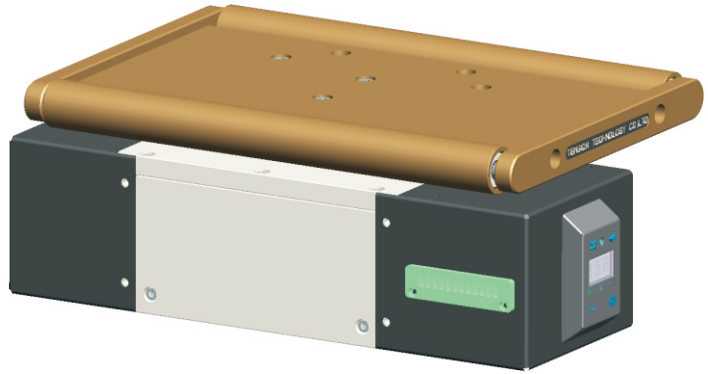
Thank you for purchasing our products. if you have any questions,
please contact us as follows。

Due to the continuous improvement of products,
such as the technical parameters in this manual are modified without prior notice.
If you have any questions or view the contents of this manual and the details of all time,
please put the consultation,
we will be very glad to answer your questions, advice and criticism.
Thank you again for your choice and your trust。

VALIDMAGNETICS

EPC series

EPC series correction device for mask machines



- ☐ EPC260
- ☐ EPC320
- ☐ EPC260H
- ☐ EPC320H

Introduction

Thanks for your purchase of our EPC series correction device, our valued customer.

EPC series correction device is specially developed for the mask machine because the fabric displacement is often occurs during the masks manufacturing process to reduce the efficiency and quality of the masks made. The accuracy of EPC series device reaches 1mm to remain high consistence of feeding fabrics for mask machines, both in low or high speed manufacturing process. This device great enhance the efficiency and the convenience of masks production than the past when frequent commissioning by operators was required.

❶ Caution

Please read this instruction carefully before using this device. Always pay attention to the safety and use it properly.

means harm, damage, hurts and property lost may happen if it is operated improperly.

Safety and environment

- Installation or disassembly with power on is prohibited.
- Connecting wires inside the box must be inspected by professionals or trained technicians, otherwise damages may be caused.
- Keep away the conductive objects like metal plate or inflammables like oil from device. It may cause fire or damage if those impurities are found internally.
- Operate the device only under the environment mentioned in this manual. Never place the device in high temperature and humidity area, dusty or places, with erosive air. Avoid vibration, crash or the device or damage may occur.

Transportation and installation

- Don't fall or crash the device
- Don't step on or place heavy object on the device

Maintenance and disposal

- Plug out the power cord from controller if it is not used in long period of time
- Handle it as industrial wastes for disposal

EPC series unwinding tension controller

Product Warranty Card

Username		Telephone	
Address			
Zipcode		Purchasedate	
Purchaseaddress			
Retailprice		SalesNO.	
Producttype		Product'sP/N	
Dealersignature		Usersignature	

(STAMPED)

Maintenance Records

	Date	Descriptionoffault	Partsreplaced	Serviceman	User signature
1					
2					
3					
4					
5					

This product manual was revised in April 2020.
Information content is subject to change without notice

❼ Troubleshoot and Maintenance

Condition	Possible cause	Solution
Display or indicating LED does not light up after power switching on	1. Power cord connection fails 2. Controller (for power part) broken	1. Check if the power cord's connection tight and correct. 2. Send back to factory if the controller broken due to the wrong connection
Only single direction when auto mode but it works normally in manual mode	1. Wrong direction for auto mode 2. Wrong sensor chosen or need to be calibrate	1. Press "Magnetic" button to switch the direction 2. Choose the suitable sensor and calibrate
Display turns dark without response after operating, while connections are correct	OLED display or PCBA broken	Send back to factory

❽ Packing List

You are welcome to purchase this series products, when you open the package, please accept the following content:

Series No.	Item	Quantity	Unit	Remarks
1	Correction Device	1	pc	
2	Terminals	1	pc	
3	Tighting ring	2	pc	
4	Installation base	2	pc	
5	Sensor base	1	pc	
6	Opto-electrical sensor	1	pc	
7	Screw nut	16	pc	
8	M5*4 Screw	6	pc	Fix the base
9	M4*40 Screw	2	pc	Fix the sensor
10	M8*16 Screw	4	pc	Fix the device
11	M8*35 Screw	4	pc	Fix the base
12	M8 ring for spring	4	pc	
13	M8 ring	4	pc	
14	M6*10 Screw	4	pc	Fix the base

Reminder: Please check the parts on the packing list upon receiving. Contact your local distributor or reseller should there are any missing parts.

❷ Features

EPC series correction devices are able to connect with different types of correction sensors. It has OLED display with buttons so that it can be operated simply and conveniently with auto and manual mode. It has “set center” and “magnetize” function, all with single button operation.

Characteristics:

▲Rapid response supported with high performance motor

▲High speed CPU

▲Support Ultra-sonic sensors, Opto-electrical sensors for different materials

▲Button with optional Chinese menu display, easier to be used

▲Special material is used to enhance the precision and life, reduce the noise .

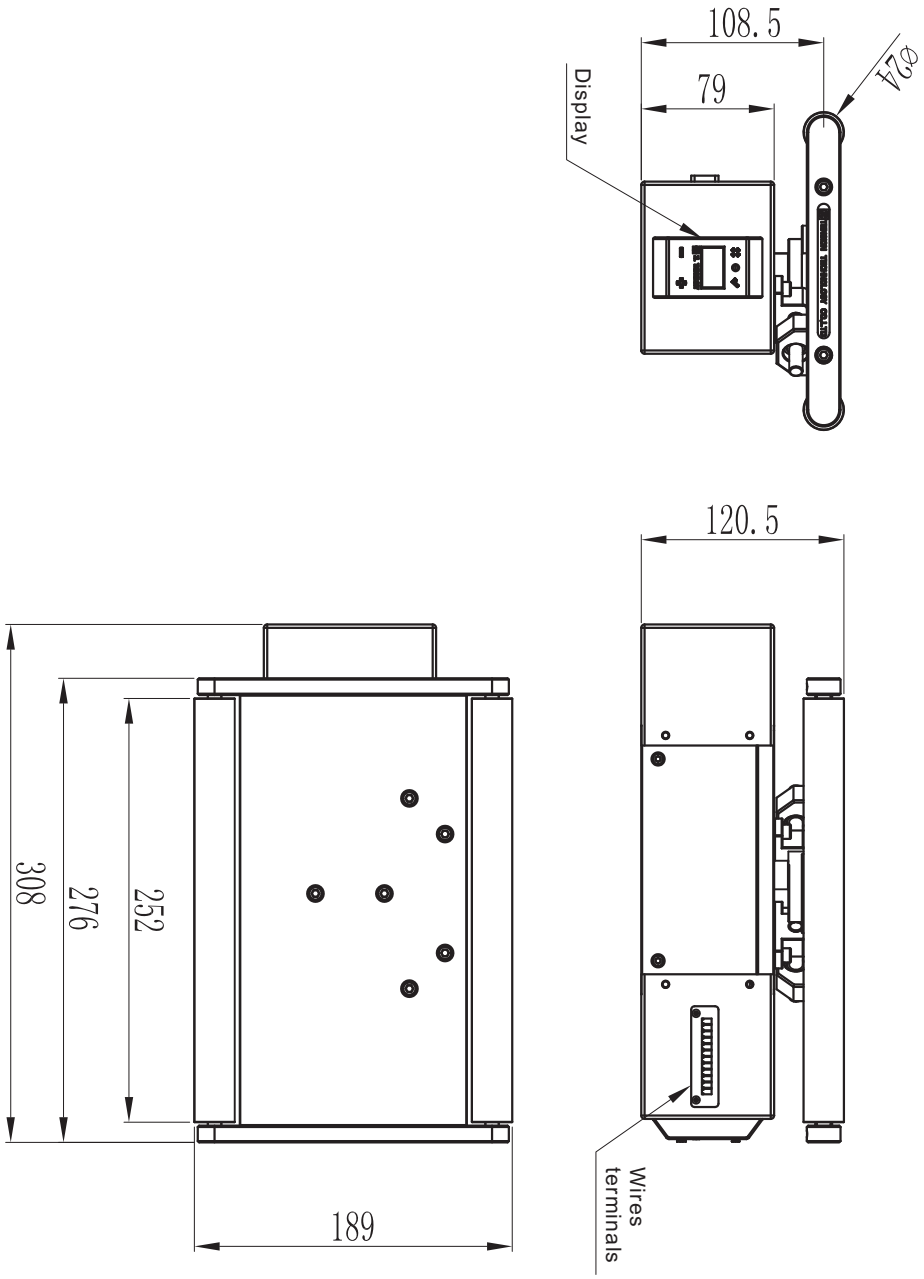
▲Warning alarm is enabled when input material is used up.

▲Flexible installation

Specifications:

Voltage	DC24V, 48W power supply
Control accuracy	1mm
Control method	Closed-loop control
Control response	≤0. 01see
Environment	0℃-40℃ (湿度80%RH以下)

Outline diagram: EPC260



❺ Buttons functions

1. “ √ ” To confirm or select (manual / auto mode switch) ;
2. “ × ” To exit or long press 5 seconds ;
3. “ + ” page switching or manual adjustment of routing;
4. “ — ” page switching or manual adjustment of routing;

❻ Interface (Long press “√” to enter the menu)

Parameter setting 1 Auto speed: 50 Manual speed: 10	Auto speed: The speed of machine during auto mode of device. Manual speed: The speed of machine during manual mode of device.
Parameter setting 2 Blind zone: 30 Starting status: Auto	Blind zone: The non-moving / react scope of device during auto correction Starting status: Auto / Manual mode when starting up.
Parameter setting 3 Auto pole: positive Manual pole: positive	Auto pole: The correction device movement direction in auto mode (related to the installation direction of sensor). Manual pole: The correction device movement direction in manual mode.
Parameter setting 4 Default output: Communication address: 1	Default output: To set default “On” or “Off” for the alarm signal when fabrics used up (no fabrics feeding) Communication address: N/A

Calibration steps:

1.Long press “SET” for 3 seconds above until all indicator LEDs blink.
2.Remove the fabrics, short press “SET” button once, the indicator LEDS rolling on, while the middle blue LED blinks.
3.Entirely cover the (U shaped) light source of sensor with the fabrics, short press “SET” button once and wait 3 seconds for auto calibration of fabric material.
4.Check if the calibration is well done as follows:
Remove the material / fabric (without covering the sensor), one side of indicator LEDs are all on; while another side of indicator LEDs are all on with material covered entirely the sensor.

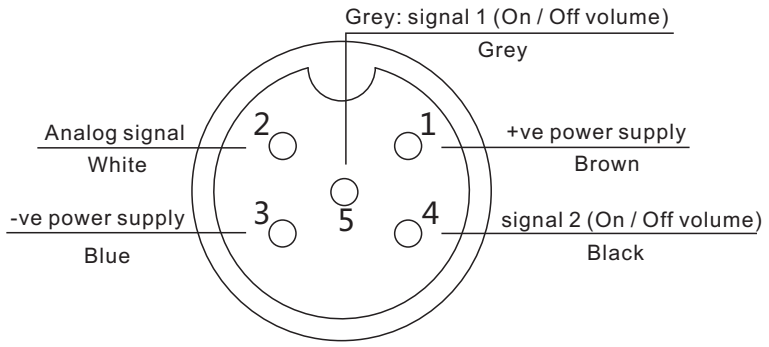
There are three status to be selected to satisfy difference accuracy requirement:

Red and yellow LEDs blink after calibration on materials.
1.Long press “SET” button for 7 seconds until the middle blue LED blinks (For 0.5mm status)
2.Short press “SET” button once, and two yellow LEDs blink (For 1.5mm status)
3.Short press “SET” button once, and two read LEDs blink (For 3mm status)
4.Select either 3 status above, and long press “SET” for 6 seconds to save and exit.

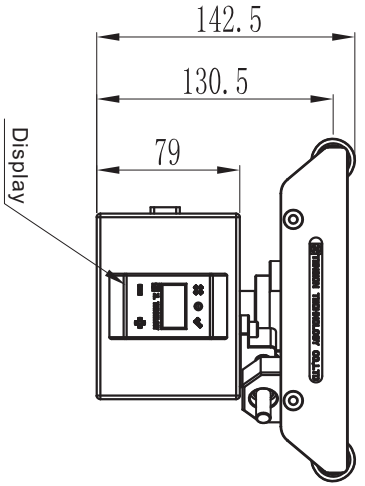
Features:

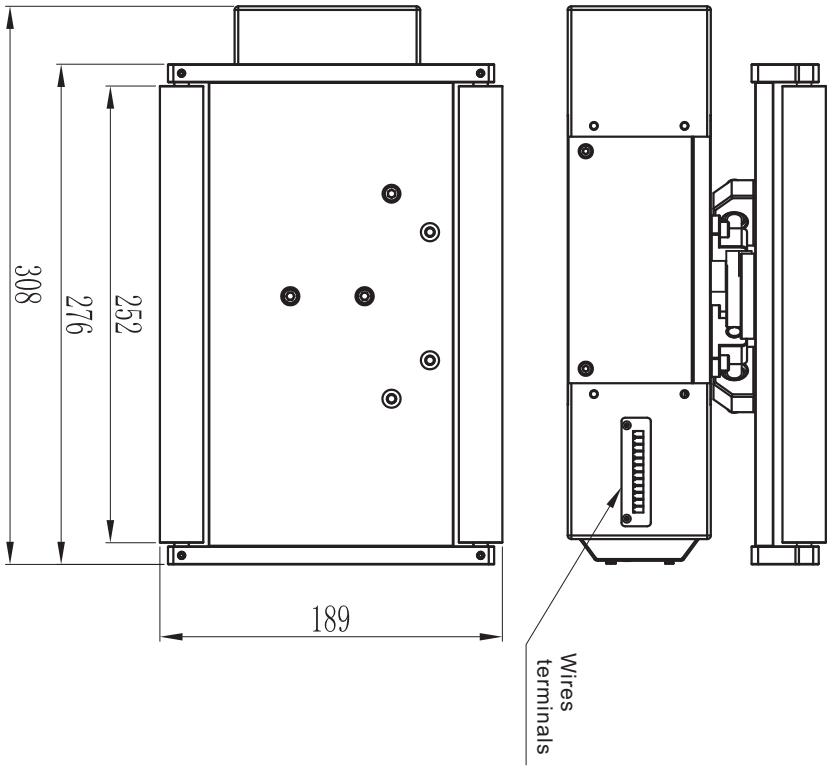
▲Support analog output or On / Off volume output
▲Suitable for non-transparent or transparent thin film edge tracing application
▲Opposite visible light sensing
▲100k frequency wavelength encoding , which is not affected by light or environment
▲5mm range of testing and 0.02mm accuracy
▲High stability and accuracy

Connection diagram:

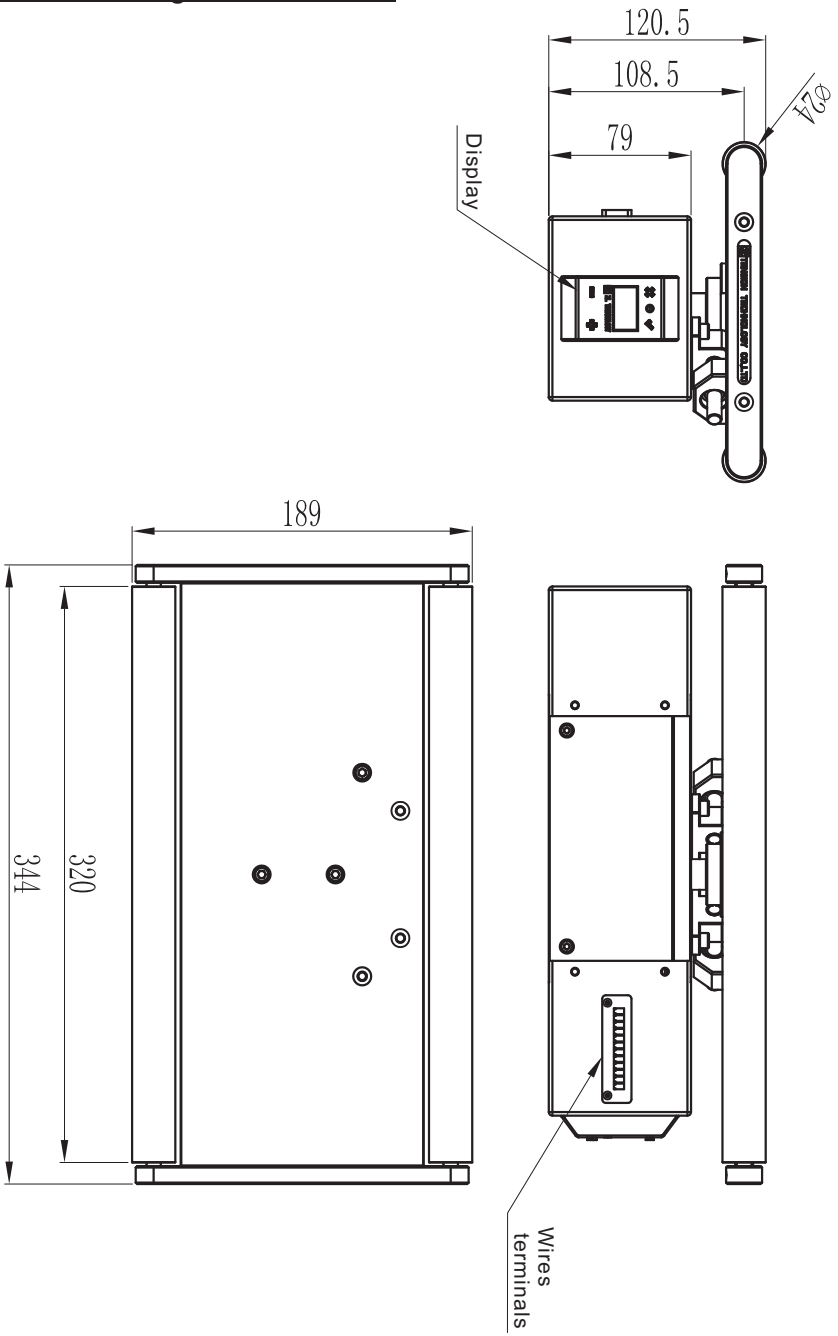


EPC260H





Outline diagram: EPC320



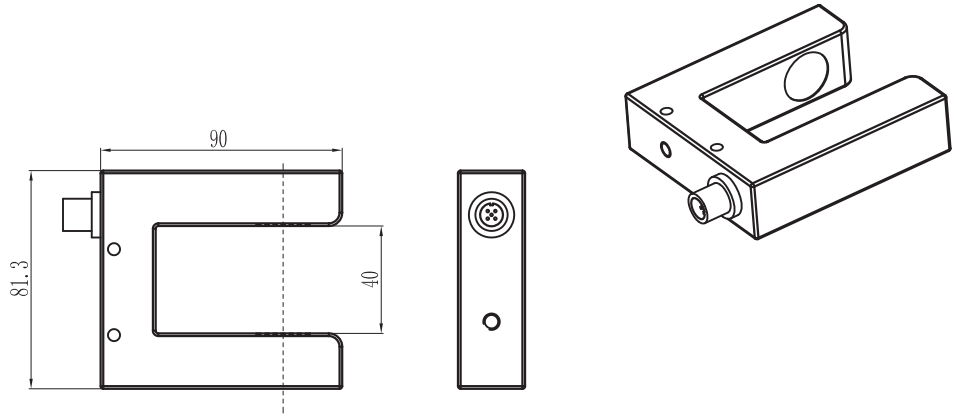
❹ Sensor introduction

PS-400S opto-electrical sensor is based on the opposite light sensing principle, which is suitable for edge tracing for fabrics.

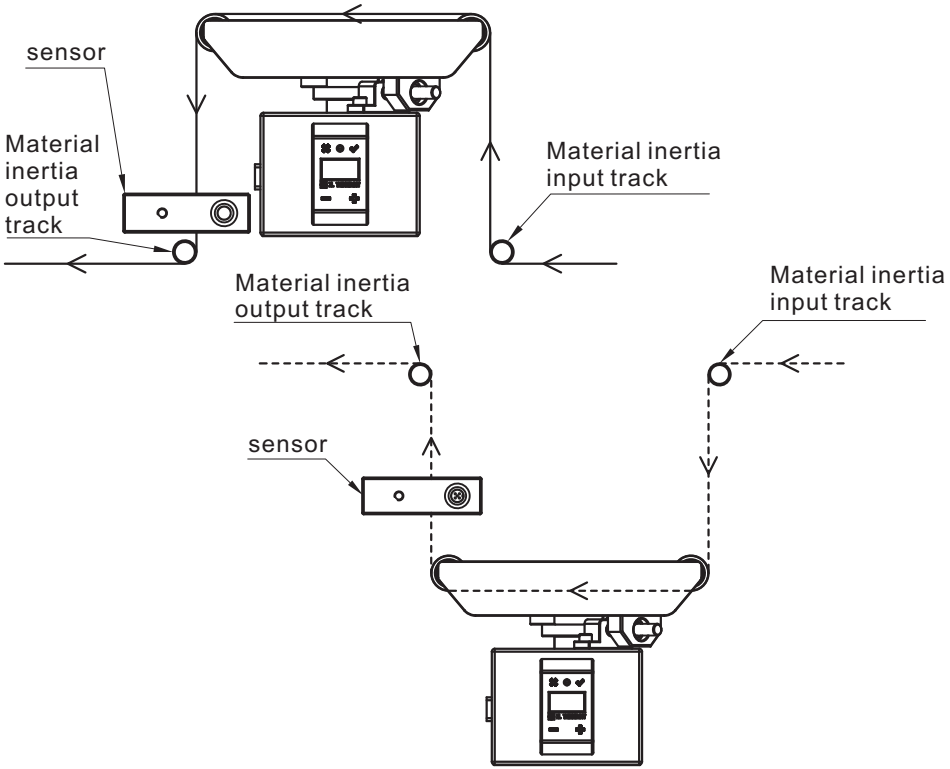
Specifications:

Tracing method	Edge tracing
Power input	DC10~30V
Output signal	Analog 0-5V double channel NPN type
Testing scope	8mm(+/-4)
Adjustable accuracy	(+/-0.02mm)
Testing method	Opto-electrical sensing
Wavelength / Response frequency	100KHz / 1K HZ
Protection level	Ip54
Weight	250g
Environment	(-10 to 80 C, RH90%)
Outcase material	Aluminium alloy
Material calibration	Necessary

Outline of sensor diagram

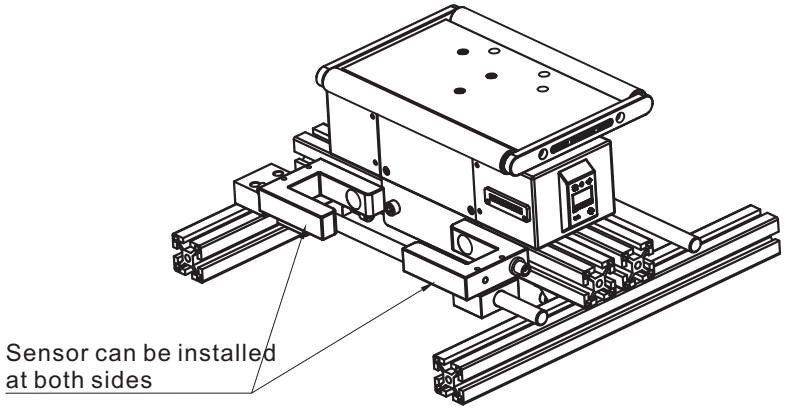


EPC260H/320H material feeding diagram

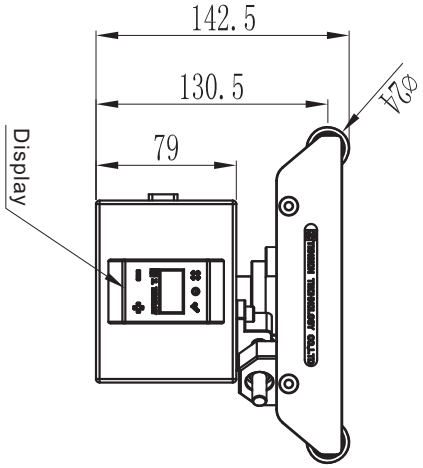


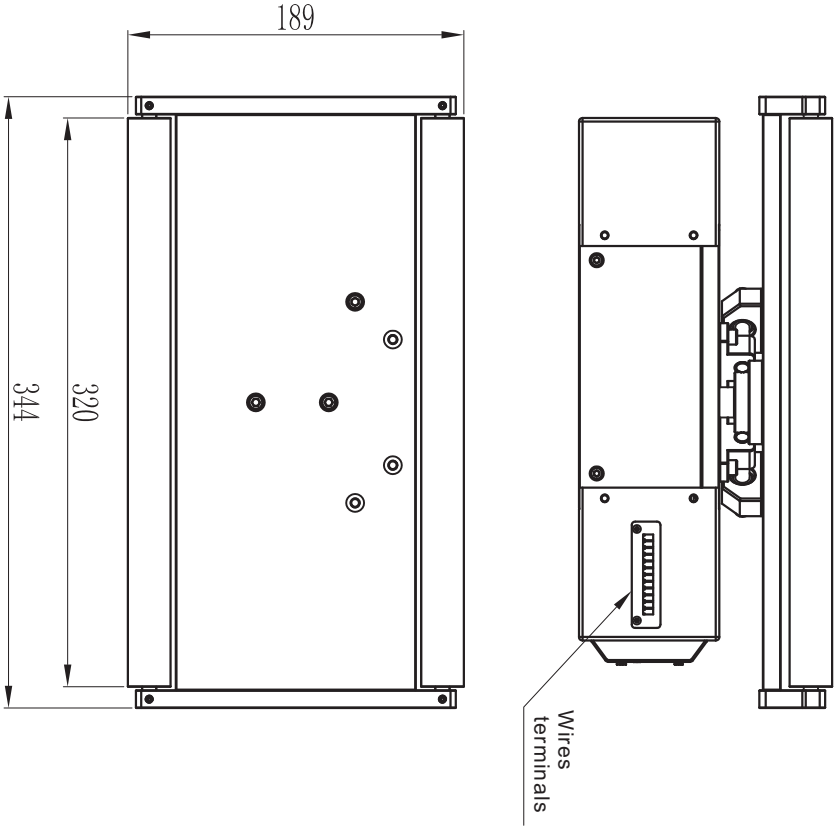
❸ Sensor installation position

Sensor is placed between the rolling system and inertia tracks as show below:

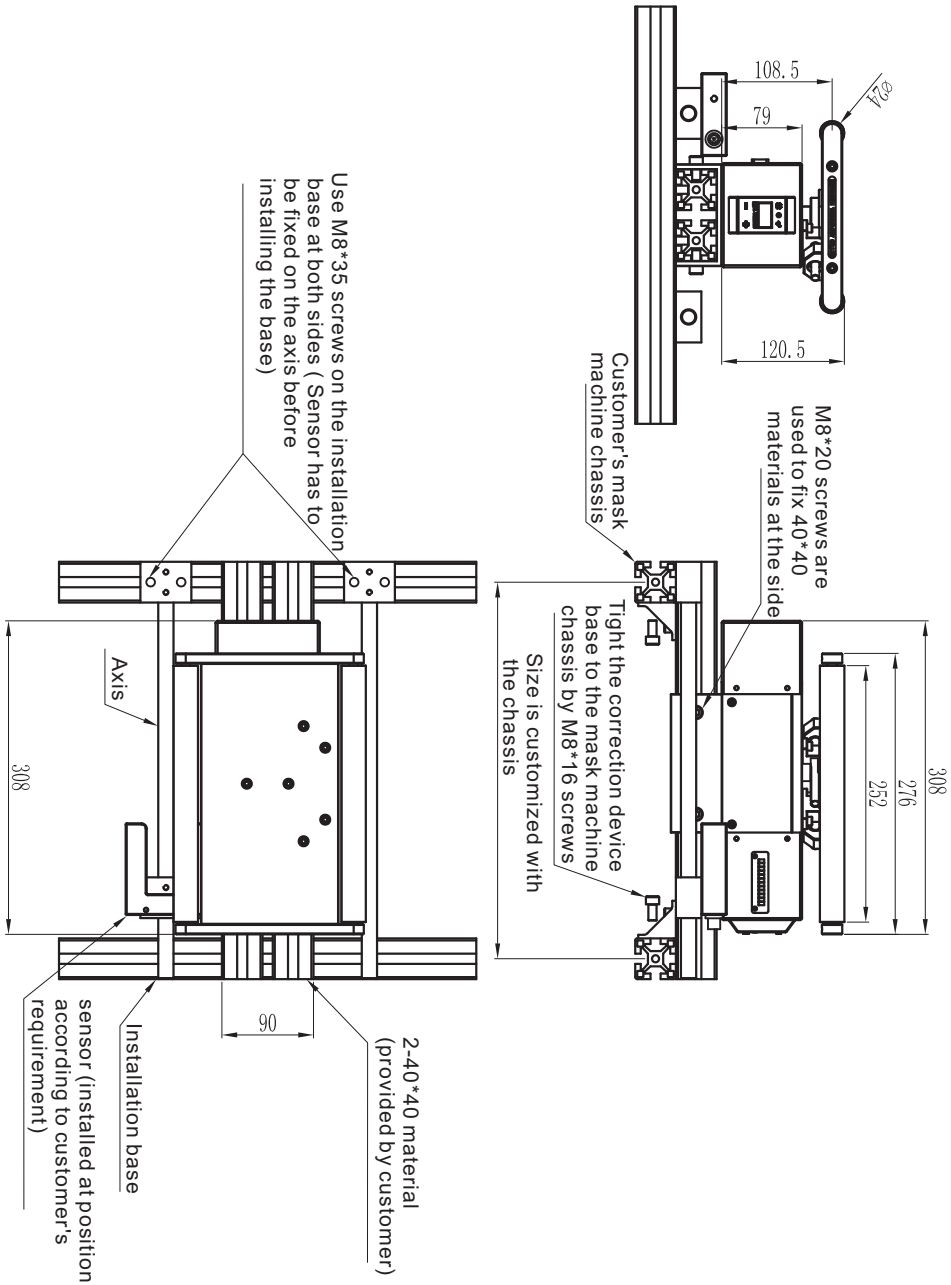


EPC320H

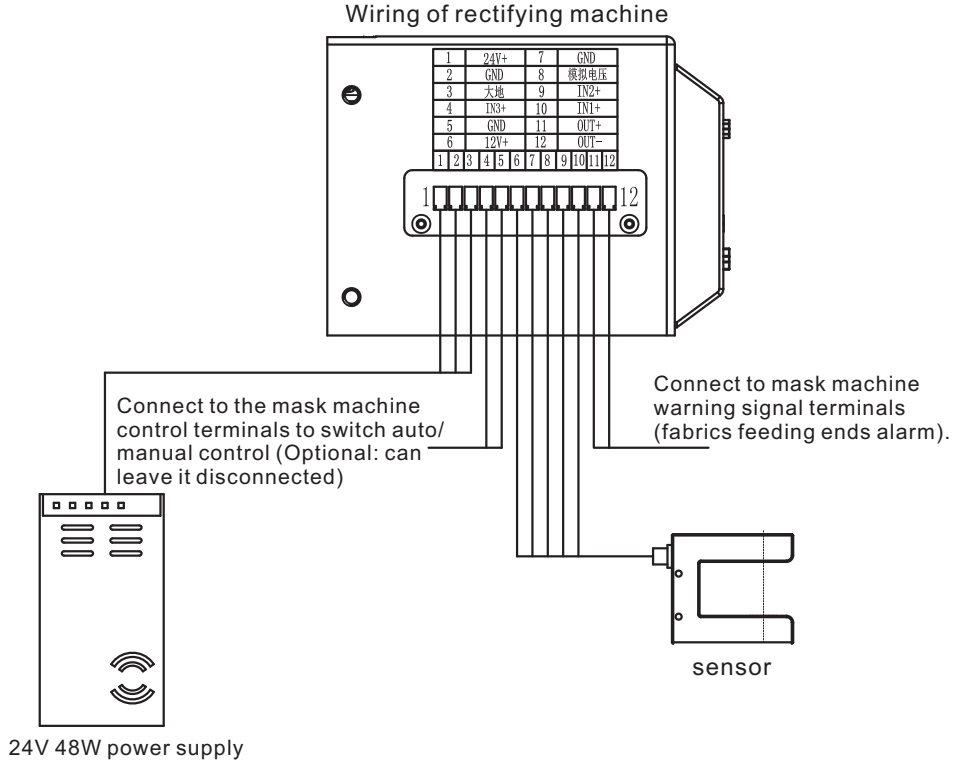




Installation dimension diagram:



Correction device connection



EPC260/320 materials feeding diagram