Power Measurement Control Unit

Zplus P
USER MANUAL

Sanmenxia ZhongyuanJingmi Co.,Ltd

To ensure your safe use of this instrument, please follow the following instructions.

[Dangerous Matters]

1. There is a risk of death and personal injury due to electric power inside the instrument and touching it!

2. Do not remove the casing except for professional maintenance personnel conducting maintenance inspections!

3. Before removing the casing, it is necessary to cut off the power and unplug the power plug!

[Notes]

The power supply and grounding wires of various components must be grounded for safety reasons!

[About Carrying Abroad]

Please inform our company in advance when taking this instrument out of the country due to various local regulations.

We are not responsible for any accidents that occur in the event of being carried abroad without declaration.

[Warranty Description]

1. This product warranty service is only valid under normal use.

2. Non product quality issues and malfunctions caused by abnormal use are not covered by warranty.

For example, malfunctions caused by the following circumstances, including but not limited to, are not covered by warranty:

(1) The display panel was shattered due to external impact.

(2) The user opened this product without authorization, which caused moisture and liquid ingress.

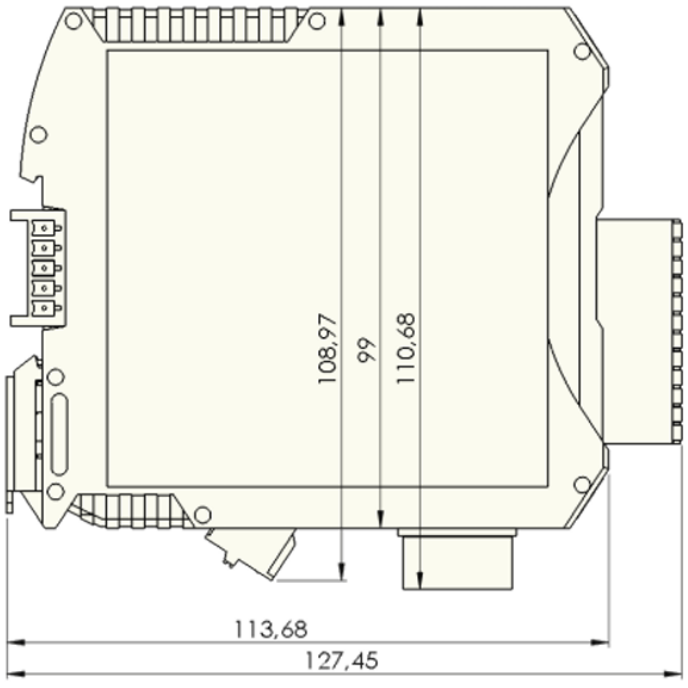
(3) The user's wiring error or abnormal power connection caused this product to malfunction.

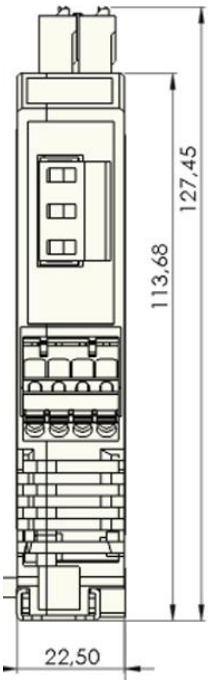
Catalogue

1、Description

Zplus P is a tool monitoring and measuring instrument used to measure effective power. It can monitor the effective power consumed by the spindle during cutting and detect the following process abnormalities:

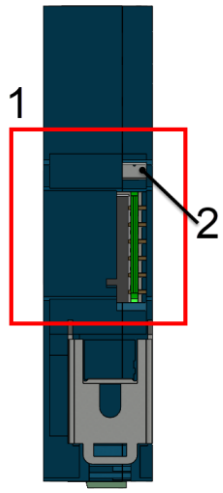
• Eliminating gaps/ Anti-collision
•Broken knife
•Lack of knife
•Overload
•Tool wear



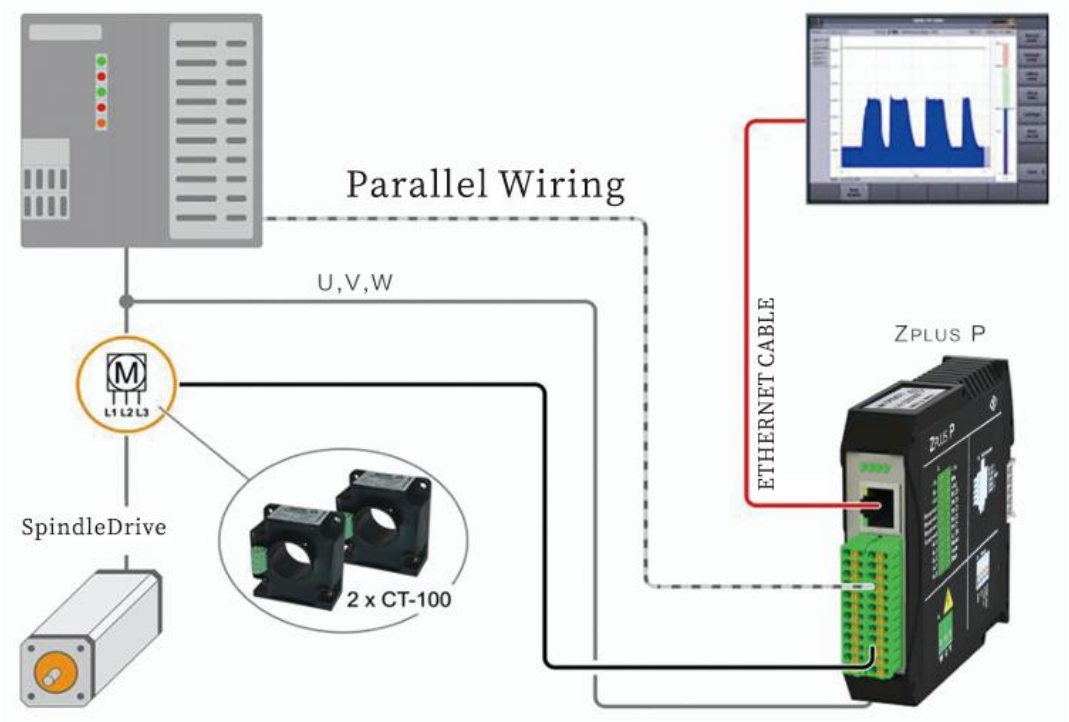


2、Installation

2.1、Mechanical installation

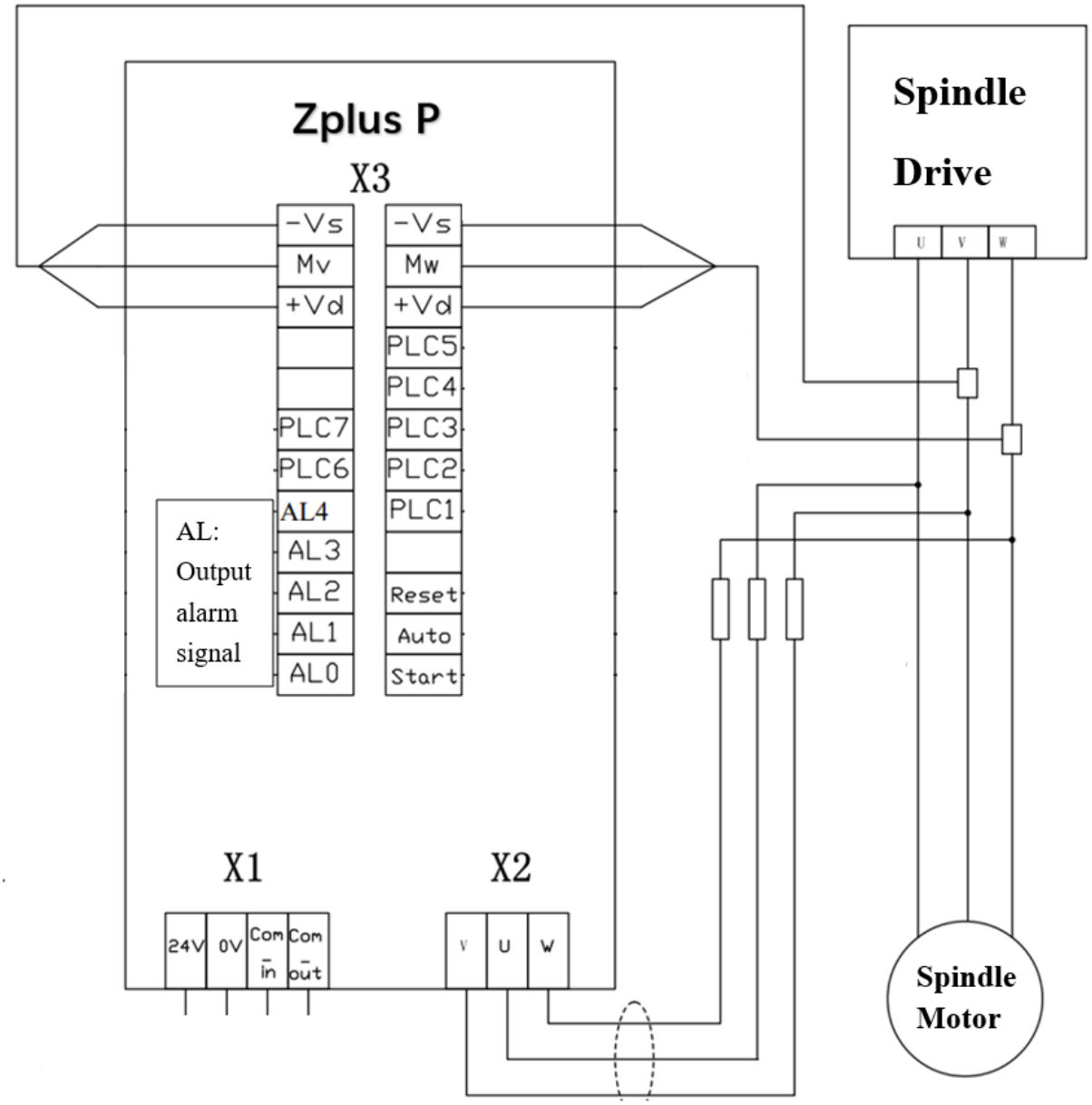
<table>
<tr>
<td rowspan="3"> 
</td>
<td>1. Mount the module on the standard support rail.</td>
</tr>
<tr>
<td>2. Press the module into the rail (metallic click sound).</td>
</tr>
<tr>
<td>3. The metal plate in the contact area of the module with the rail provides a safe earthing connection. There is an earth symbol on the back of the module.</td>
</tr>
</table>

2.2、Connection diagram



Sensor winding:：

2.3、Wiring diagram



※ Input signal:

[PLC1] Status is 1: Process 1.
[PLC2] Status is 1: Process 2.
Both [PLC1] and [PLC2] states 1: Process 3.
Before starting monitoring, you need to select a process, such as Process 1.
[Start] Start monitoring .
[Reset] After triggering an alarm, reset.

※ The number of turns wound by the two sensors must be consistent. If the motor output power is low, the number of turns wound by the sensors can be increased.

3、Software Usage Instructions

3.1、The IP address of the Zplus P module is **192.168.214.107,** and the IP address of the connected computer must be within the range of 192.168.214._ _, except for **192.168.214.107**.

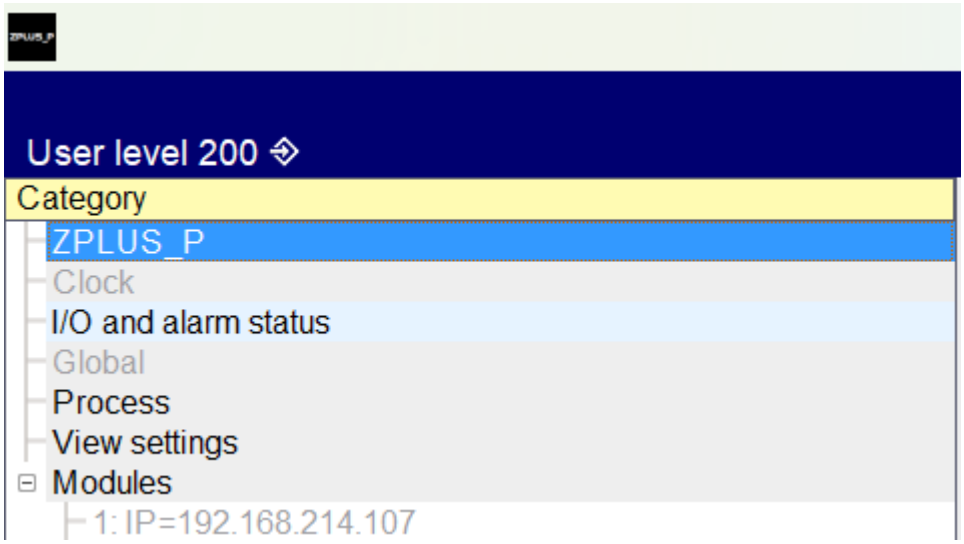
For example, changing the computer IP used to **192.168.214.10.**

3.2、The Zplus P module is connected to the computer through a network cable, and when the operating software is opened, it prompts to connect to the module.

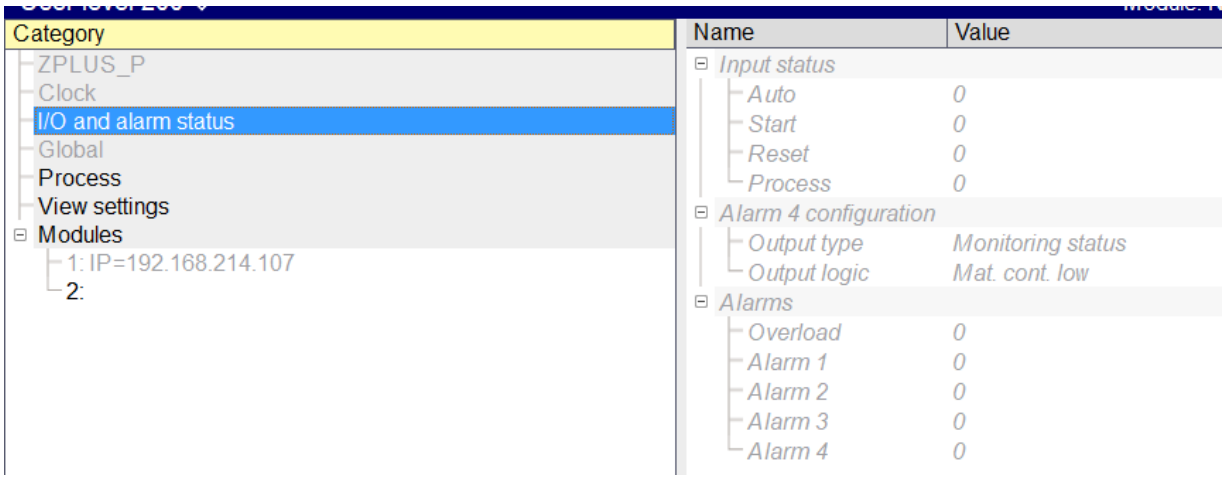
※ The operating software can be downloaded from the official website of Zhongyuanjingmi under 【 Support and Service 】 → 【 Download Center 】.

3.3、Press **[L]** on the software interface to display the password input interface. Enter the password **[4713]** and change the user level to **200**.

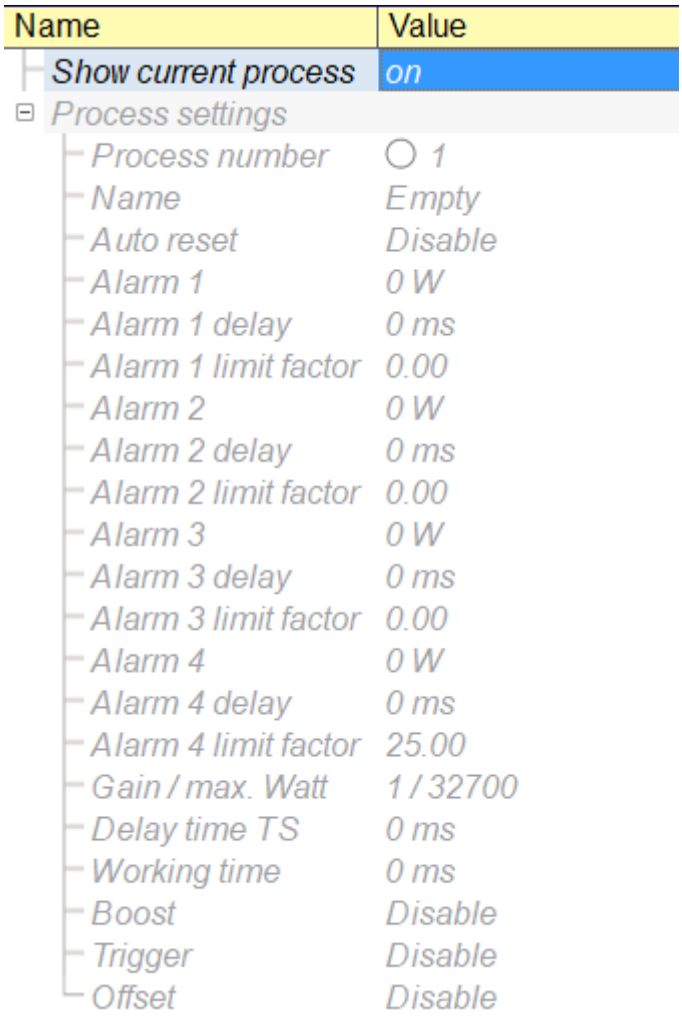
3.4、Click on  on the right to enter the settings interface.



3.5、Click on **[I/O and alarm status]** to view the I/O status.



3.6、Click on the left **[Process]** to modify the alarm signal points.



The alarm signal point is set based on the power value curve displayed by the software in the actual working state of the machine tool.

Alarm delay time refers to the allowable time from exceeding the limit value to issuing an alarm.

【Alarm 1】and 【Alarm 2】 are alarms when the power value exceeds the set value.

【Alarm 3】: An alarm is triggered when the power value is lower than the set value.

※ 【Alarm 1】 【Alarm 2】【Alarm 3】 When 0, it is always closed, and when 1, it is always open.

【Alarm 4】can be used to eliminate air travel, and feedback will be issued when the power value is higher than the set value.

Select the alarm logic for output alarm 4 in the 【Alarm 4 Configuration】 section on the right side of **[**I/O and alarm status**]**.

Mat.Cont.low: [Alarm 4] is always closed when it is 0 and always open when it is 1.

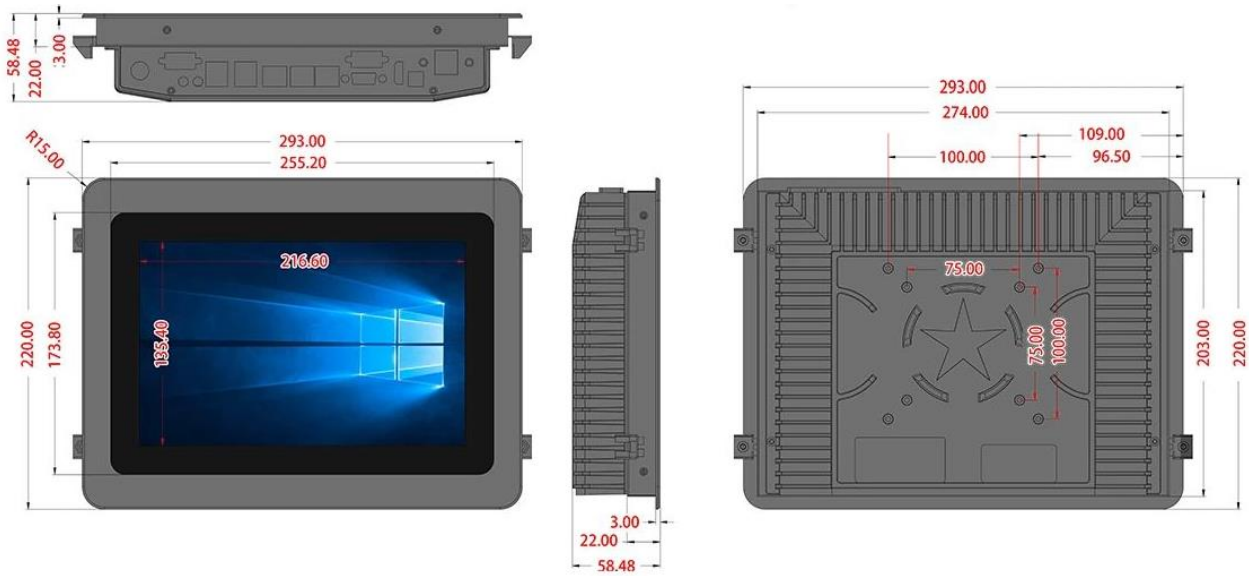
Mat.Cont.High: [Alarm 4] is always on when it is 0 and always off when it is 1.

【Delay Time TS】 refers to the delay time for monitoring after receiving the start signal.

After modifying the settings, click on the bottom right corner  **to save.**

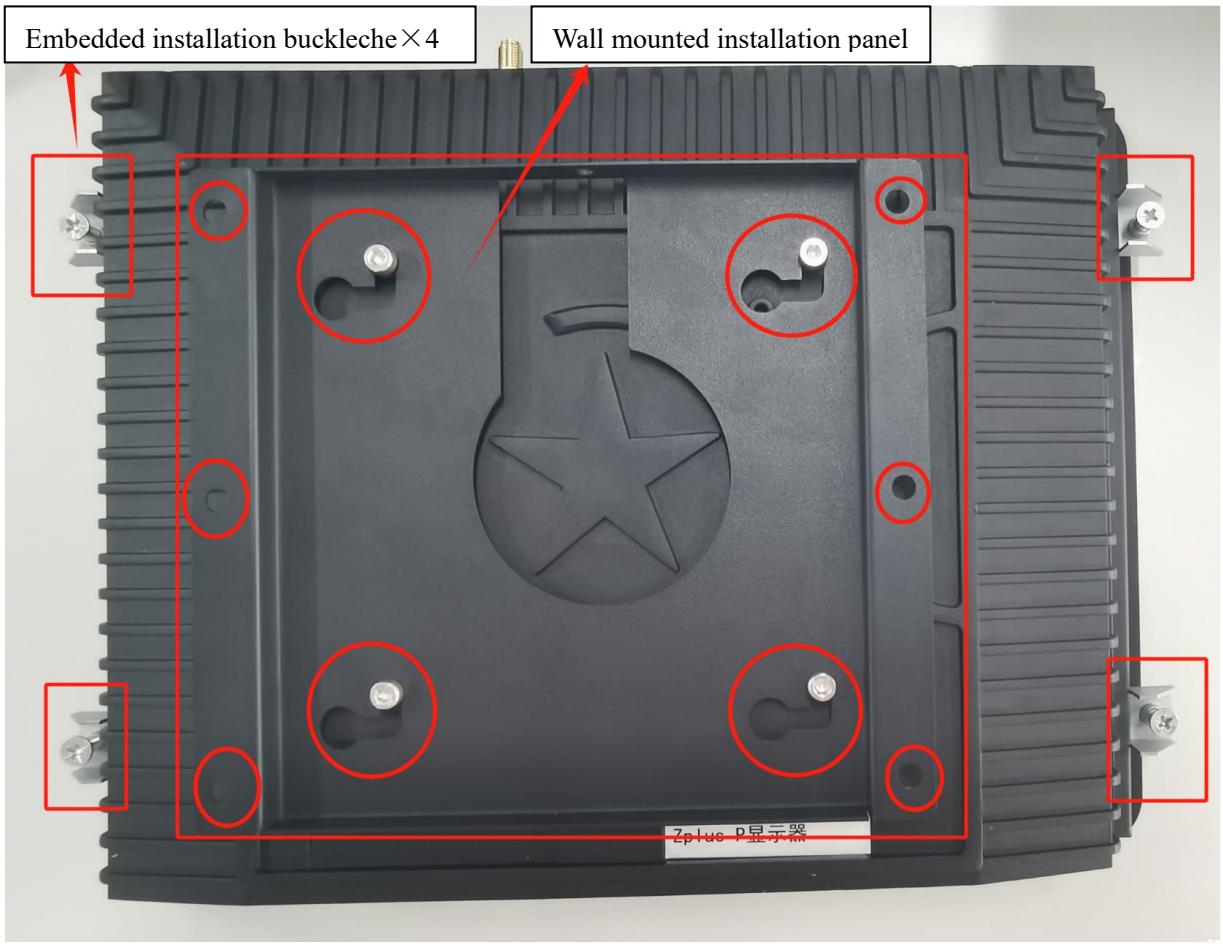
4、 Installation instructions for monitor (optional)

1. External dimensions of the monitor



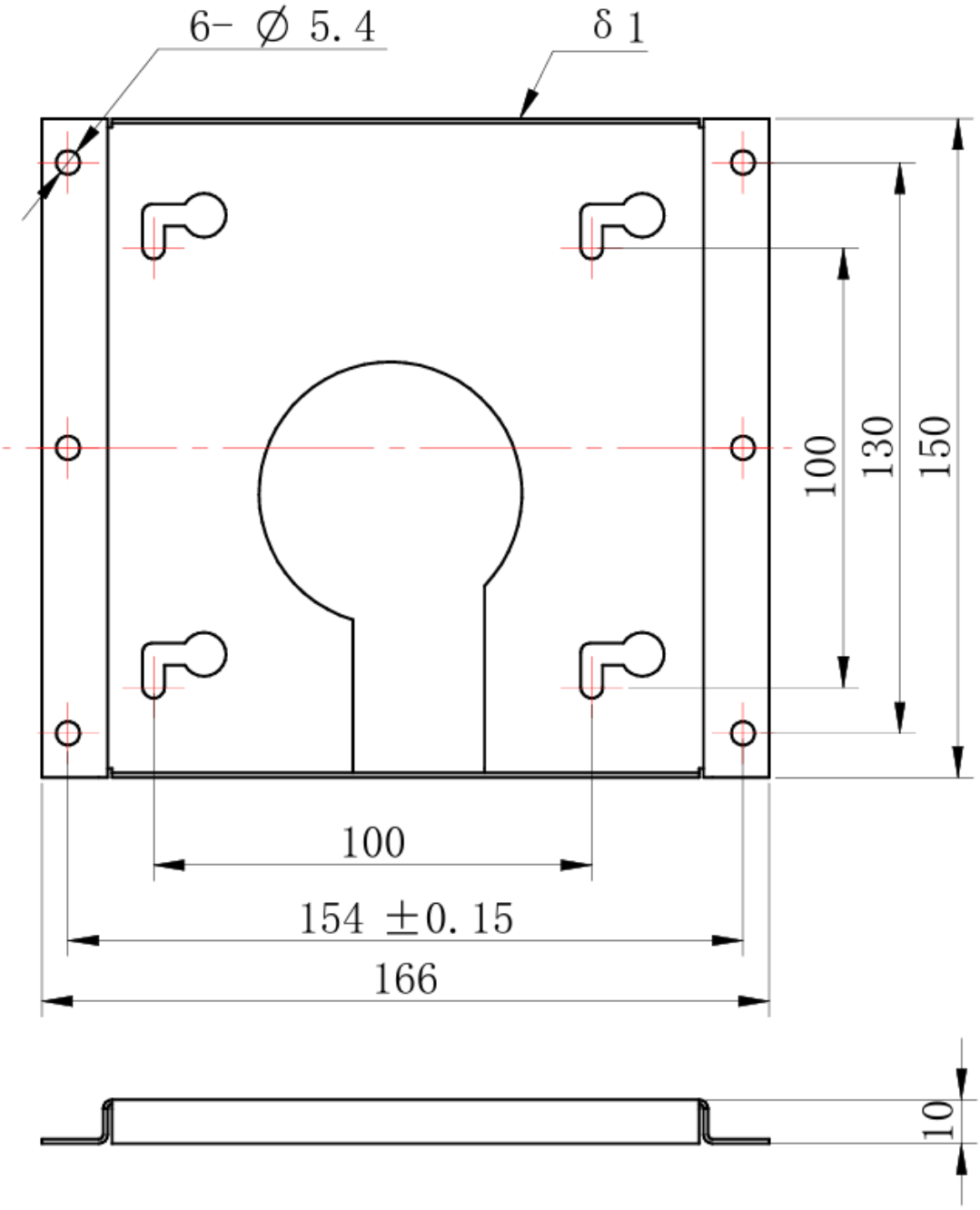
2. Installation method

As shown in the figure, there are two installation methods available: embedded and wall mounted



Embedded installation hole size: 274mm × 203mm

Wall mounted board size diagram:



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中原精密

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