



THIENTRU CO., LTD

TENSION CONTROLLER

Model: HTC-301



Please carefully read this manual before use to ensure the product is safely installed, managed and maintained.

Features of the product and precautions

Chapter 1 _ Before Use

1. Controls Descriptions
2. Specifications
3. External Dimensions
4. Installation and Wiring

Chapter 2 _ Setup

1. Setup Menu Table
2. Zero Adjustment
3. Span Adjustment

Features of the product

Major functions of HTC-301

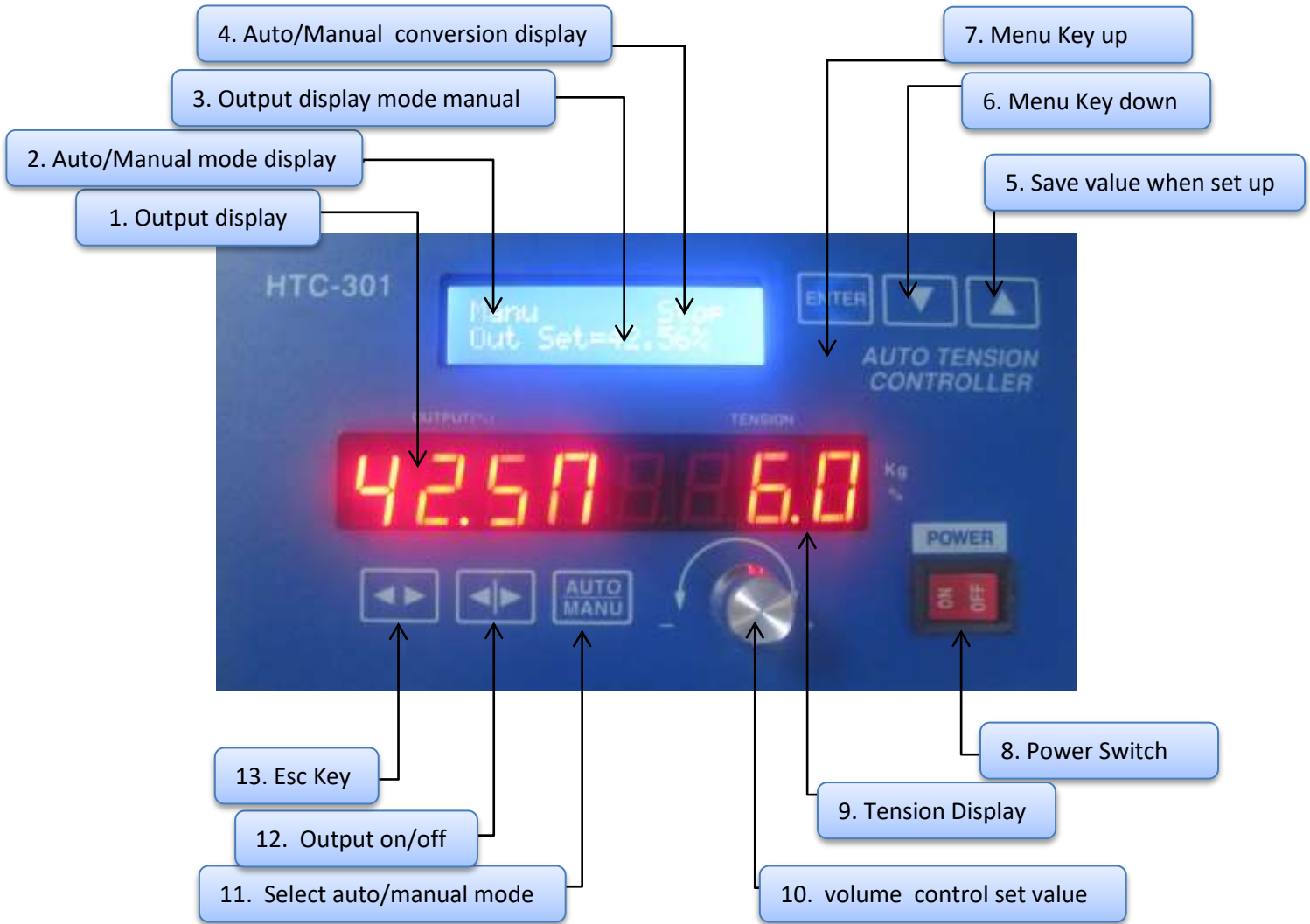
- *Standard function of tension*
- *Function to indicate tension's actual weight by using the load cell*
- *Warning by setting tension (KG) when cutting textiles (Ordermade)*
- *Emergency stop function by off switch*
- *Two way setting function by using the LCD meter*
- *Interlocking voltage output (DC 0~10V) in proportion to the output brake operating voltage*
- *Auto/Manual conversion by external contact point automatically*

Precautions for Installation

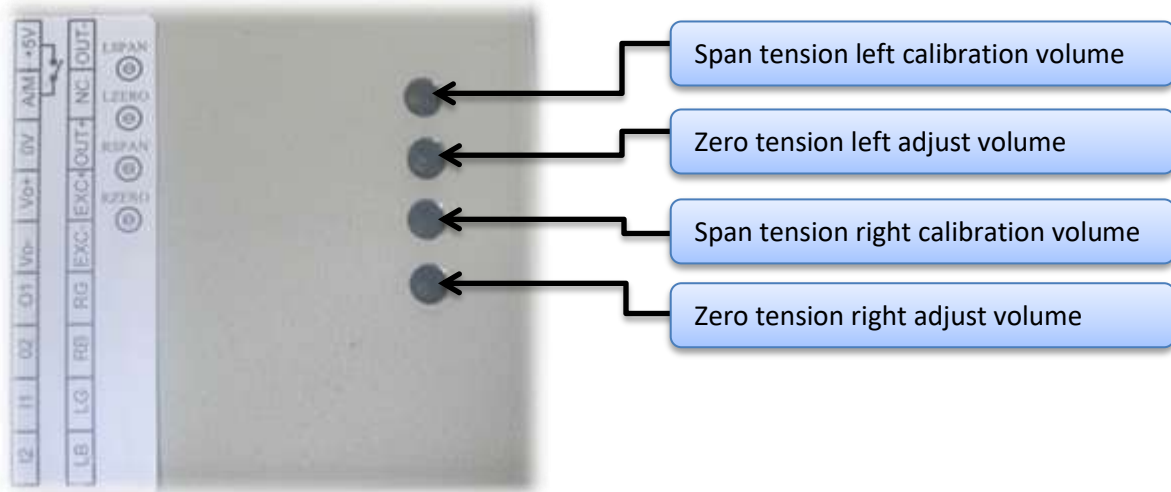
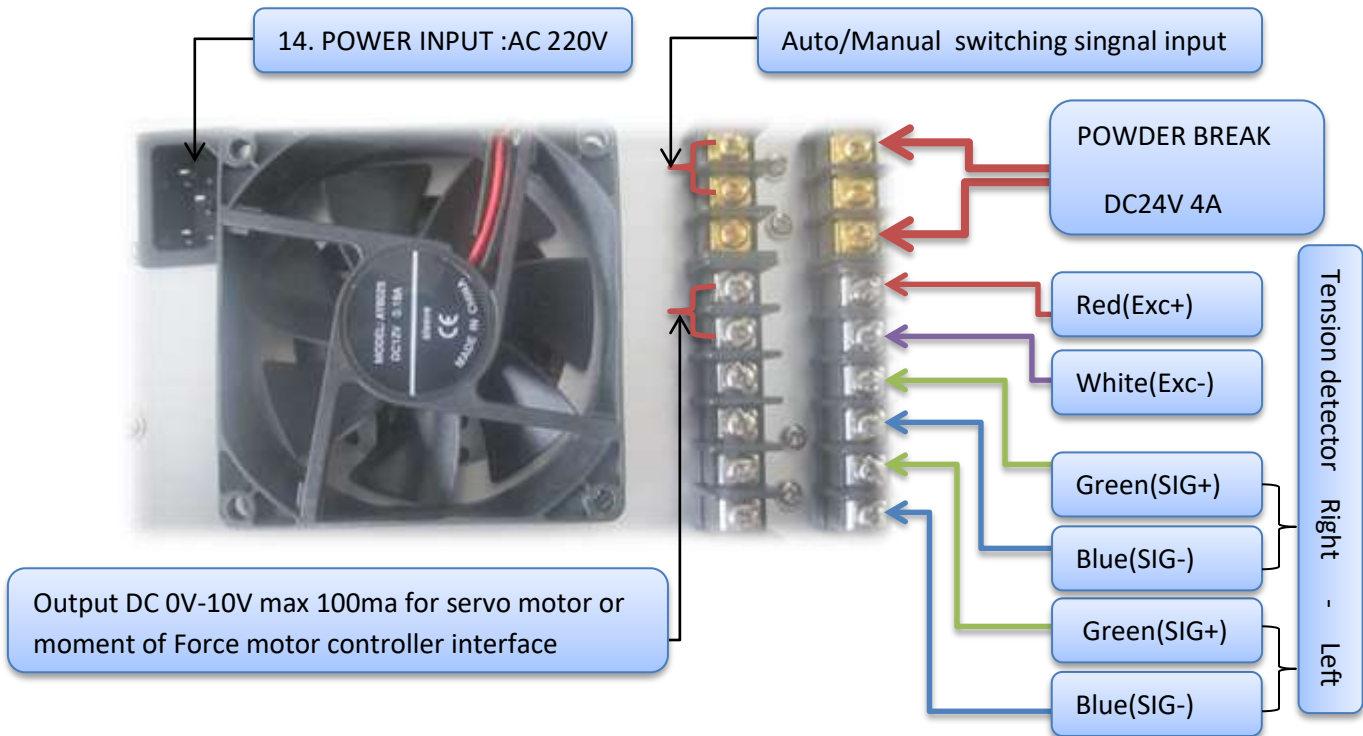
- *Maintain the right vertical and horizontal angles of the product for installation.*
- *Install the product in a place devoid of vibration, shock, high temperature or humidity, direct sunlight, much dust, or air containing much salt or ions.*
- *Do not install the product within the vicinity of inflammable gases or steam or dust.*
- *Wire the product as provided in the following drawings and check if all cables are properly connected.*
- *Ensure the earthling terminal is correctly grounded.*
- *Ensure the product is detached from the power supply cables or the cables with much electrical noise.*
- *Make sure the load resistor is connected before measuring the outputs.*

Chapter 1 _ Before Use

1. Controls Descriptions



4. Installation and Wiring



Chapter 2 _ Setup

1. Setup Menu Table

```
Auto      Stop
Tens Set=0.0 k9
```

Sets to Auto mode if signal input Auto/Manual switching is connected .

```
Auto      Run
Tens Set=0.0 k9
```

When [Menu conversion button] is pressed at Menu mode, the LCD displays the following readouts.

```
Manu      Run
Out Set=2.31 %
```

Shows the current output voltage value at manual mode.

```
Total Tension
= 0.0 k9
```

Indicates the current tension by KG unit.

```
LEFT TENSION
=0.0 k9 Enb
```

Indicates the current left tension by KG unit.

```
RIGHT TENSION
=0.0 k9 Enb
```

Indicates the current right tension by KG unit.

```
PID OUT
= -1
```

Output value of PID.

```
PID ERROR
= 0
```

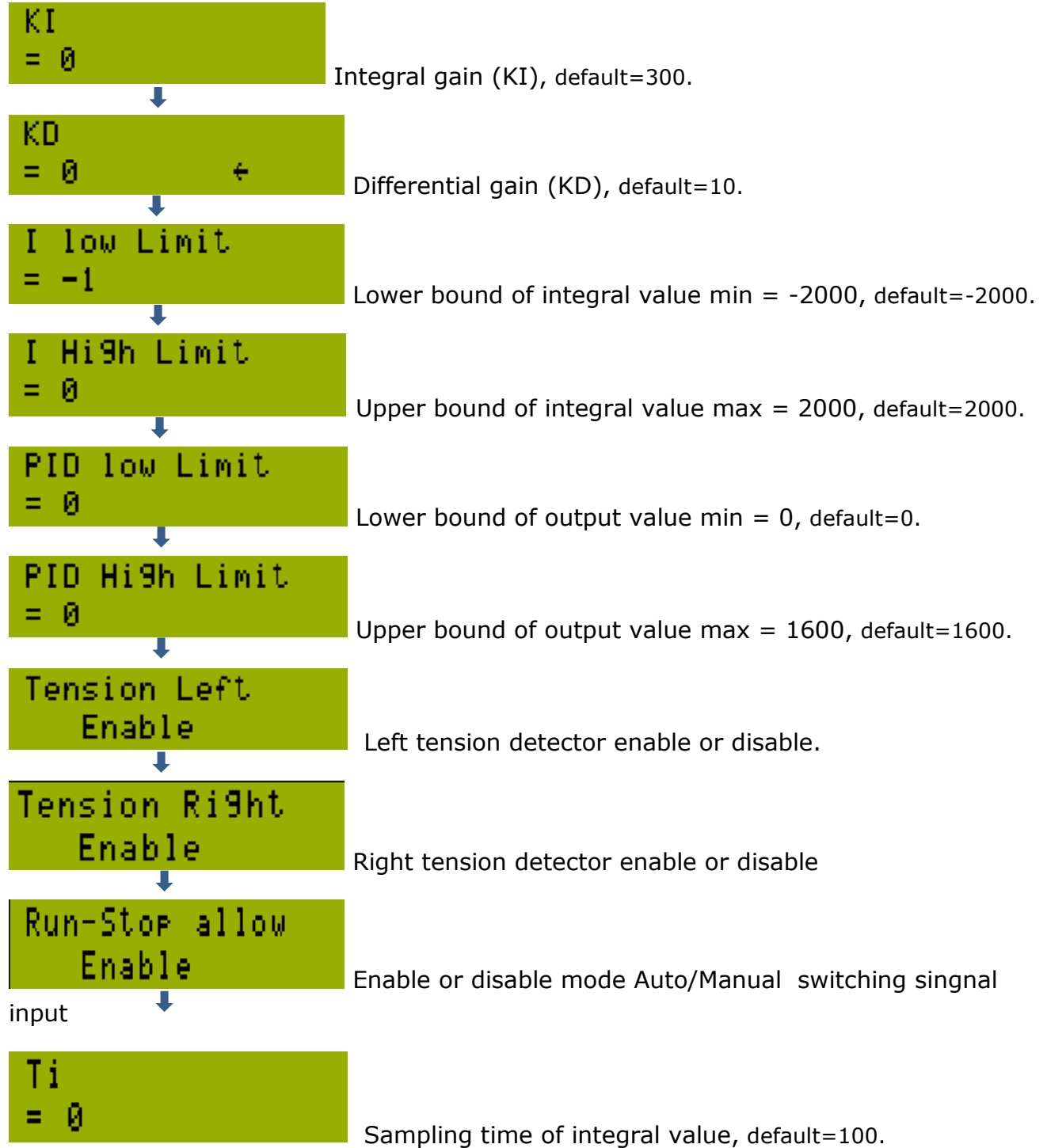
Error value of PID.

```
PASSWORD
= 0
```

Set Password 3991.

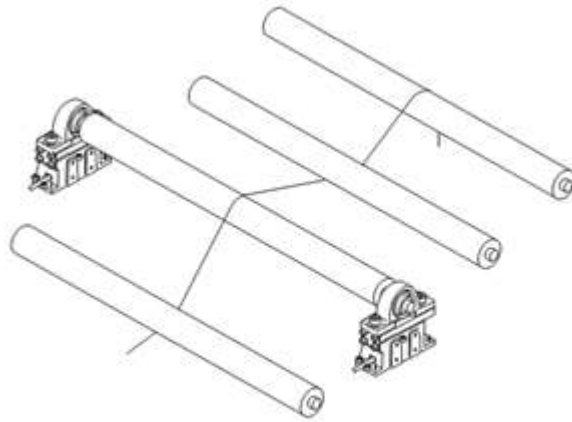
```
KP
= 0
```

Proportional gain (KP), default=100.



2. Zero Adjustment

Zero adjustment of tension detector---corrects the weight load of the detecting roller or bearings.



When is pressed at Menu key, the LCD displays the following.

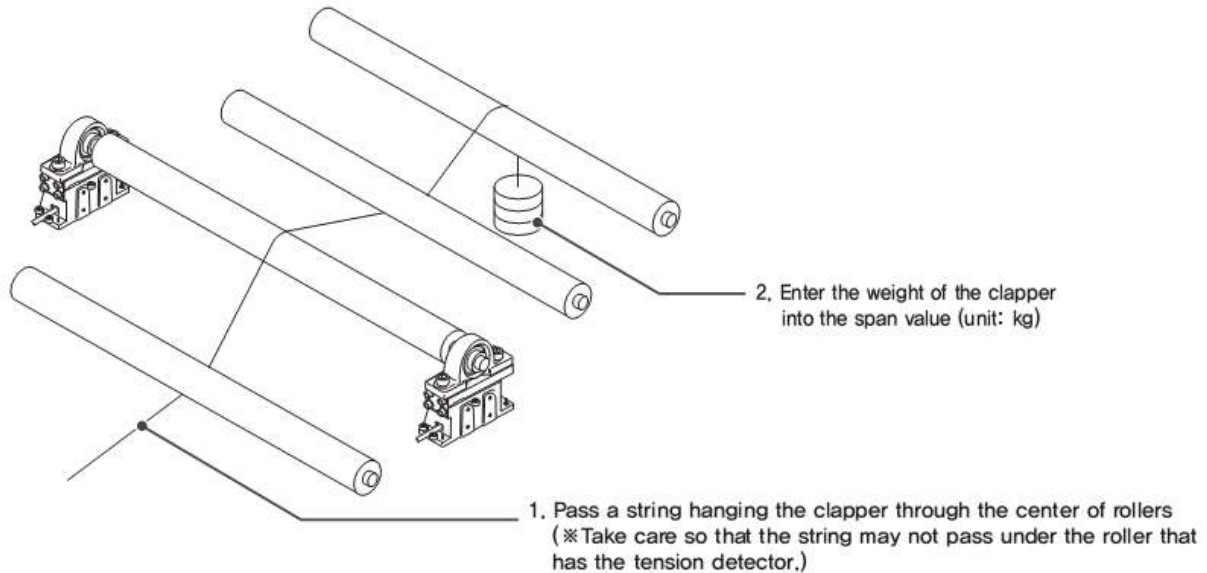
LEFT TENSION	RIGHT TENSION
=0.0 k9 Enb	=0.0 k9 Enb

If left tension tensions value not equal to zero then adjust the volume to the value Zero.

2) Zero tension right calibration the same.

3. Span Adjustment

Span Adjustment-Before starting Span adjustment, install a clapper whose weight is already known as below.



LEFT TENSION	RIGHT TENSION
=0.0 k9 Enb	=0.0 k9 Enb

Check if the clapper is hanging as above picture, then turn [adjust volume Span left] of the control panel till the displayed value reaches the half value of the clapper weight.
 (*As the value comes a bit late on the display, please turn the volume slowly watching displayed value)

2) Span tension right calibration the same.