RMA Series Electronic Tensioner Product Manual

☐ RMB-100-R/RD
☐ RMB-100L-R/RD
☐ RMB-200-R/RD
☐ RMB-200L-R/RD
☐ RMB-300-R/RD
☐ RMB-300L-R/RD

L type

R type

Failure 3:
Tension pulley slips while operating
Solution:
1.Change the wool felt if it is caused by oil or impurities on it.
2.Use the cotton thread with absolute alcohol, and then pull back and forth to clean the tension pulley

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Failure 4:
Tension pulsating exists
Solution:
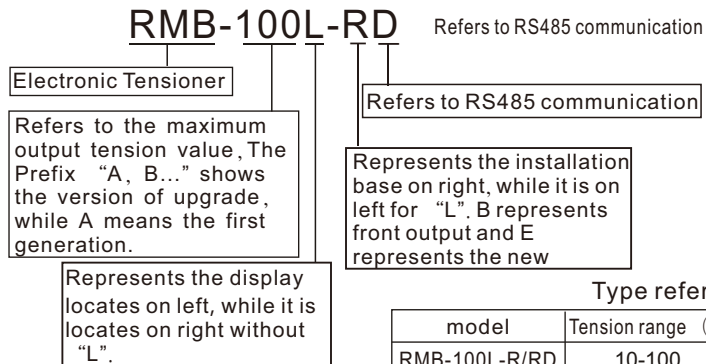To enter the demagnetization mode. Turn the tension wheel during the demagnetization or it will be invalid.

❶ Product Description

Features of RMB Series Electronic Tensioners:

1.Various tension values can be altered rapidly (outputtension is reference to the setting value)by switching the signal input so that intelligent control is achieved

2.Remote control with the support of RS485 communication port.

RMB-100L-RD   Refers to RS485 communication

- Electronic Tensioner
- Refers to the maximum output tension value, The Prefix "A，B…" shows the version of upgrade, while A means the first generation.
- Refers to RS485 communication
- Represents the installation base on right, while it is on left for "L". B represents front output and E represents the new
- Represents the display locates on left, while it is locates on right without "L".

Type reference table

model	Tension range （g. f)	Use the line-size range(mm)
RMB-100L-R/RD	10-100	Φ0.04 - Φ0.12
RMB-200L-R/RD	15-200	Φ0.06 - Φ0.16
RMB-300L-R/RD	30-300	Φ0.08 - Φ0.25

❾ Packing list

Welcome to buy our products, when you open the package, please check the following:

NO.	ITEMS	QUANTITY	PC	REMARKS
1	Electronic tensioner	1	Taiwan	Standard configuration
2	Tension rod	See the table below		
3	Fixed handle	1	a	Standard configuration
4	Tension spring	See the table below		
5	baize	2	slice	Standard configuration
6	Compression spring	1	article	Standard configuration
7	The power cord	1	article	Standard configuration
8	Line 485	1	article	Matching: Y N
9	Product description	1	part	Standard configuration

model	Tension rod	tension spring
RMB-100L-R/RD	SA2 SA3 1 the root	S2/S3/S4/S5 The article 2
RMB-200L-R/RD	SA3 SA4 1 the root	S2/S3/S4/S5 The article 2
RMB-300L-R/RD	SA3 SA5 1 the root	S2/S3/S4/S5 The article 2

Remark: Should there are any missing parts or inconsistence with the above table, please contact your local dealer immediately.

❻ Cautions

1. Do not touch or try to stop the tension arms and the wiring wheels or rolls.
2. Install the tensioner properly to prevent the falling of tensioner.
3. Adjust the pressure applied by the Baize Clip (avoid too high) and the force by spring to ensure the tension wheel is running properly.
4. Turn the tension wheel to eliminate the magnetism pulse when changing the current from large to small or it will affect the wiring performance.
5. Ensure the enameled wires go through the wire jump preventer and the wire wheels properly but not hanged over the contact roller so that the wheels rotate smoothly.
6. Keep away from oil contamination to the tension pulley, or it will affect the tensioner running smoothly. Use the cotton thread with absolute alcohol to clean it by pulling back and forth of the "O" shape part, if the oil contamination exists.
7. Baize clip, ceramic eyelet, wire roller and the tension arm are consumable parts. Charging is required for replacement even the tensioner is within the warranty period. Please contact our factory for the cost.
8. Over limit application or improper model using is prohibited. Repair or components disassembly can only be done in factory.
9. Clean the parts where wires passing through, especially for the waxed enameled wires are used. Periodically replace the Baize clip to keep the tension constant and avoid slipping. Otherwise, it will shorten the life of tensioner.

❼ Maintance

1. Periodically clean the tensioner, wool-felt clip, tension wheel, ceramic eyelet, wire rollers according to the usage situation. Replace the wool-felt if necessary to ensure the tensioner works properly.

❽ Failures

Failures 1:
Enameled wires got stuck in the tension wheel to cause the rotation stop.
Solution:
Unscrew the fixing screw to take out the tension wheel and clean the impurities inside.

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Failure 2:
Wire get stuck with tension arm or wire roller or not running

Solution:
1. Too thin wires may get stuck outside the wire roller. Please examine carefully and wire again;
2. Replace the wire roller if it is caused by the ageing of wire roller after long time usage.
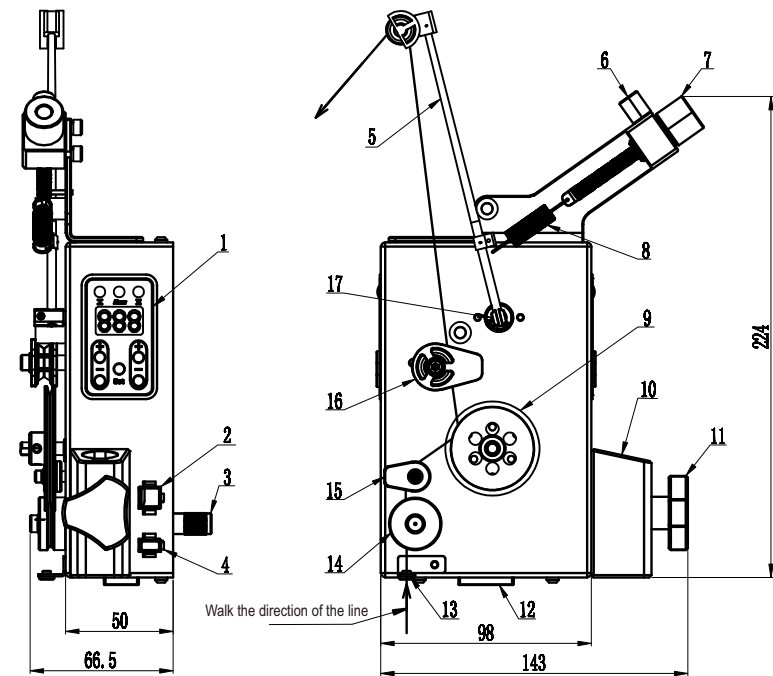
❷ External Structure

Figure 1

❶ Display screen ❷ 4 core port ❸ Wool felt adjusting KNOB ❹ 2 core port ❺ Tension bar
❻ Locking KNOB ❼ ANTI-TENSION KNOB ❽ Tension Spring ❾ Tension wheel
❿ Mounting seat ⓫ Fix The handle ⓬ 485 COMM interface ⓭ Porcelain Eye
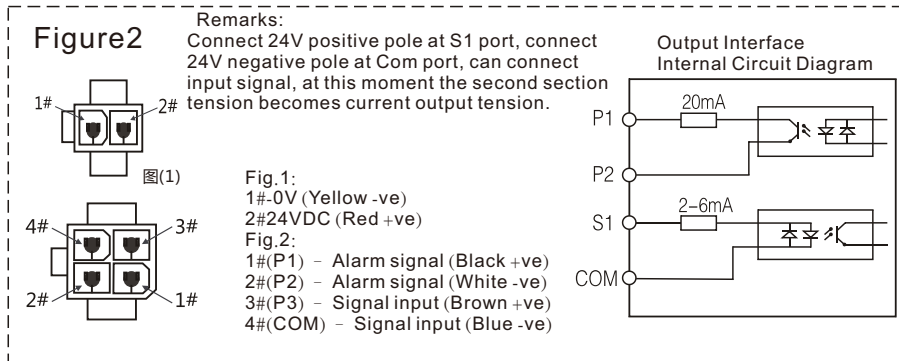⓮ Wool felt clamp ⓯ Jumper arrester ⓰ Jumper arrester ⓱ Tension Rod holder

❸ Cautions

1. Temperature range: -5℃-40℃   Humidity range: 30%-80%.
2. Cleaning requirements of enamelled wire: Keep the enamelled wire without any oil, dust and impurity outside. If the surface of enamelled wire sticked with waxiness, you'd better clean wire rolling frequently and replace wool clampingring regularly. Otherwise, it will cause frequent tension change or wire-through wheel skidding, and shorten operating life of O Ring in tension pulley.

❹ Tensioner installation and commissioning

1.Installation

Step 1: Insert the foot mounting into the fixed link and tighten it by fasten the handle.

Step 2: Loosen the fastening nut on the fixing base of tension arm, and insert the tension arm into the rotating shaft and then tighten the fixing screw

Step 3: Choose the appropriate tension arm and tension spring according to the range of wire diameter and tension value. The higher of tension applied, the thicker of tension arm is required.

Step 4: Connect the terminals as figure 2 shows, with details below:
Input power supply: 24VDC+/- 10% (1A)   Input signal: 24VDC

Figure2

Remarks:
Connect 24V positive pole at S1 port, connect 24V negative pole at Com port, can connect input signal, at this moment the second section tension becomes current output tension.

图(1)

Fig.1:
1#-0V (Yellow -ve)
2#24VDC (Red +ve)
Fig.2:
1#(P1) – Alarm signal (Black +ve)
2#(P2) – Alarm signal (White -ve)
3#(P3) – Signal input (Brown +ve)
4#(COM) – Signal input (Blue -ve)

Output Interface Internal Circuit Diagram

P1
20mA
P2
S1
2–6mA
COM

1.Product tuning

Step1: Route the wire refers to the fig1 and use the wool felt regulator knob to adjust the tightness to thewire (clockwise turning to be tight, anticlockwise turning to be loose). Tightness of Baize clipdepends on the value of tension. In small tension, tightness should be just enough to hold thewire from falling out from the Baize clip while it should be tight for large tension.

Step2: Tune the"feedback tension knob" to a back tension that is match with theoperating tension (Stage1 and Stage2) according to the requirement. Change the spring to start again theprocess if the tension reaches the limit and cannot be tuned by the knob anymore.

Feedback tension knob
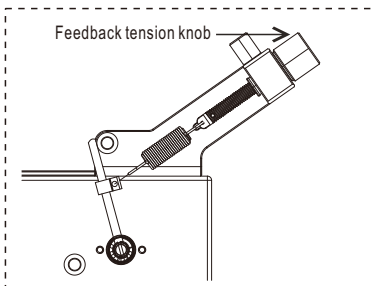
Figure3

Rotate the feedback tension knob to adjust the back tension.
Clockwise: Back tension increases
Anti-clockwise: Back tension decreases

❺ Interface menu:
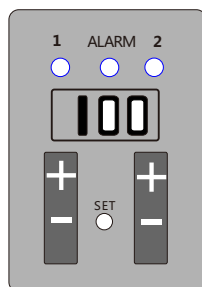
This machine has 3 lights and 5 keys. The "ALARM"indicator light is always on to indicate the disconnection ALARM. The "1"indicator light is always on to show that the current tension in the first paragraph is effective. The display value of the Nixie tube is the set value of the first paragraph. The "2"indicator light is always on to show that the current second tension is effective, the display value of the Nixie tube is the set value of the second paragraph.

Steps 1

1"indicator under the"+""-"operation key, corresponding to adjust the first paragraph tension. At this time, "1"indicator light flashing to remind the user is setting the first tension, and for the current output tension, digital tube display for the first set value. If you need to exit after setting, you can press the "SET"button in the middle or wait for 60 seconds without operation to exit automatically

Steps 2

Steps 3 The" +""-"key under the "2"indicator corresponds to an adjustable second tension. At this point, the "2"indicator light flashing, reminding the user is setting the second tension, and for the current output tension, digital tube display for the second set value. If you want to exit after setting up, you can press the "SET"key in the middle or wait for 60 seconds without any operation to exit automatically.

Steps 4 Long Press "SET"key, you can enter the parameter setting interface. There are four parameters, P01 ~ P04

Parameter serial number	Parameter name	Range	Notes
P01	First tension value	0-100	
P02	Second tension	0-100	
P03	Modbus communication station number	1-255	
P04	Alarm port output mode	0-1	0 means the alarm output signal is normally open, and 1 means normally closed

Here's how it works:

Long Press "SET" key more than 2 seconds to enter the menu interface

Go to the menu

Press "or" - "to switch different parameters

Short press the "SET"key to enter the parameter settings

A digital flicker indicates that a parameter setting interface has been entered

Press or - to adjust the size of this parameter

Press "" or - "to adjust the result , the number flashing

When the adjustment is complete, press the "SET" button to exit

When you exit, the display changes to a menu interface

Long press the "SET"button to return to the run interface

When you exit, the display changes to the running interface。