

WTZ-A(200)型 起重量限制器 使用说明书

[WT-176V2.0]

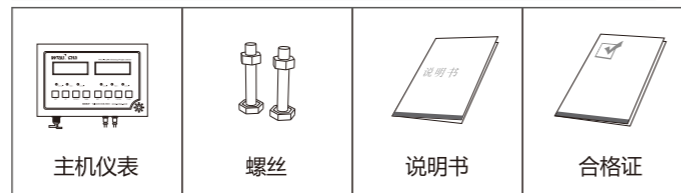
微特技术有限公司



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① 开箱清单



打开包装箱请检查起重量限制器的外观是否完好无损，清点所有配件。如有不符请立即通知销售人员沟通解决。

※传感器和电缆按商务合同约定内容执行。

② 产品说明

WTZ-A(200)型起重量限制器是一种新型智能式安全保护装置，通过重量传感器检测装载物重量，仪表实时显示实际载荷，当载荷达到其设定值的载荷时，发出声光报警信号，并可给出开关量输出。整个系统由传感器、连接电缆、微电脑主机等组成。本装置根据GB 12602-2009《起重机械超载保护装置》和GB/T 3811-2008《起重机设计规范》的有关要求设计生产。

③ 主要技术参数

- 重量测量范围：0T~400T或0T~9.99T
- 分辨率：0.1T或0.01T
- 综合误差：≤5%F.S.；
- 控制输出：≤4（开关量）
- 其他输出：Rs485（定制）
4-20mA（定制）
- 采用0.8吋高亮数码管显示；

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⑤ 仪表调试说明

1. 指示灯功能介绍

正常（绿灯）：表示仪表主机正常工作，起重机起重量在设定的额定起重量（rA1/rA2）的95%范围内（出厂默认）；

预警（黄灯）：当起重量达到设定的额定起重量（rA1/rA2）的95%时开始闪烁并发出报警声音；

控制（红灯）：当起重量达到设定的额定起重量（rA1/rA2）的105%时（出厂默认）点亮，发出报警声并输出继电器控制信号。

2. 主钩设置说明（主钩设置键对应在主钩显示窗口下面）

仪表通电后同时按主钩下面的设置跟增加键（仪表左侧）进入菜单界面，增加、减少键进行菜单切换，如需进入菜单项请按设置键，保存请按设置键，放弃请按去皮键退出。

L.C.H：重量传感器转换后的模数值（AD）

操作步骤：同时按下“设置+增加”键，窗口显示**L.C.H**进入菜单，再按“设置”键确认，显示数（AD）值。按“去皮”键退出；

r.R：额定起重量设置

操作步骤：同时按下“设置+增加”键显示**L.C.H**进入菜单，按“增加”键，循环切换菜单选项至**r.R**止，按“设置”键确认，窗口数值依次循环闪烁，按“增加”或“减少”键依次修改闪烁中的数值至需要的数值，修改完成后按“设置”键确认，窗口显示**GH**则设置完成，按“去皮”键退出。

再次修改则重复上述步骤；

b：重量标定

1、重量标定前的准备工作：

- 显示仪表安装就位；
- 重量传感器正确安装到位，且信号线缆接入仪表；
- 控制线引入吊机二次控制回路；
- 准备标准配重块（吊机额重的50-100%为宜）；
- 按仪表要求给仪表接入电源，窗口点亮；

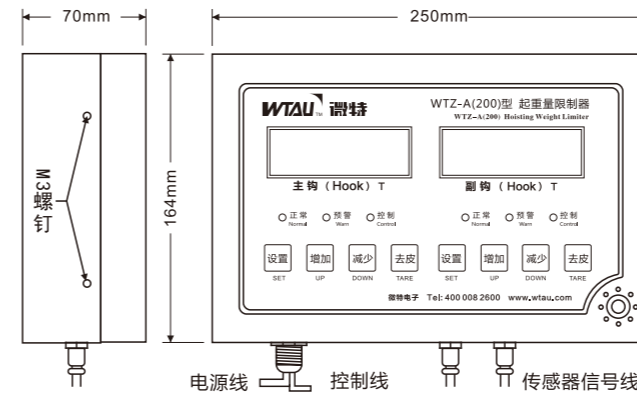
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工作环境温度：-20℃~60℃
工作环境相对湿度：90%RH（25℃不结露）
工作电压：AC 220V±10%、50Hz
（或定制AC 380V、DC24V）
预置输出接点容量：AC220V 7A
IP等级：称重传感器IP66；仪表IP54

④ 安装连接

1. 仪表安装尺寸

本机器为壁挂式安装，可固定在驾驶室墙壁上，安装方法如下：



(图1)

- 卸下M3螺钉，翻开机盖；
- 用合适的螺钉将仪表固定在驾驶室内(安装尺寸见图2)；
- 根据端口定义将信号线及控制线正确连接(见图2)；
- 盖上仪表盖，恢复M3螺钉安装。

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标定方法1 操作步骤(再次标定重复A-B步骤)：

A、吊机空钩运行至地面1米处，待吊钩稳定后，长按“去皮”键3秒，窗口数值闪烁，按“去皮键”显示**GH**则表示操作成功；

B、起吊配重离地1米处，待吊钩稳定后，按“设置+增加”键显示**L.C.H**进入菜单，按“增加”键切换菜单选项至**b**止，按“设置”键确认，窗口数值依次循环闪烁，按“增加”或“减少”键依次修改闪烁中的数值至需要的数值，修改完成后按“设置”键确认，窗口显示**GH**则设置完成，按“去皮”键退出。

标定方法2 操作步骤(再次标定重复A-B步骤)：

A、吊机空钩运行至地面1米处，待吊钩稳定后，长按“去皮”键3秒，窗口数值闪烁，按“去皮键”显示**GH**则表示操作成功；

B、起吊配重离地1米处，待吊钩稳定后，长按“设置”键3秒，窗口数值依次循环闪烁，设置方法同标定方法1。

验证方法：起吊原配重或另配一重块，仪表的显示值在起吊的配重块实际重量值的±5%以内的范围即算合格。误差范围过大需重新标定或咨询厂家技术人员！

r.F：满载报警点（额重的百分比），出厂默认95%

操作步骤：同时按下“设置+增加”键显示**L.C.H**进入菜单，按“增加”键切换菜单选项至**r.F**止，按“设置”键确认，窗口数值依次循环闪烁，按“增加”或“减少”键依次修改闪烁中的数值至需要的数值，修改完成后按“设置”键确认，窗口显示**GH**则设置完成，按“去皮”键退出。(主副钩满载报警点统一在主钩设置，设置完毕后，副钩满载报警点同主钩设置值。)

r.P：超载控制点（额重百分比），出厂默认105%

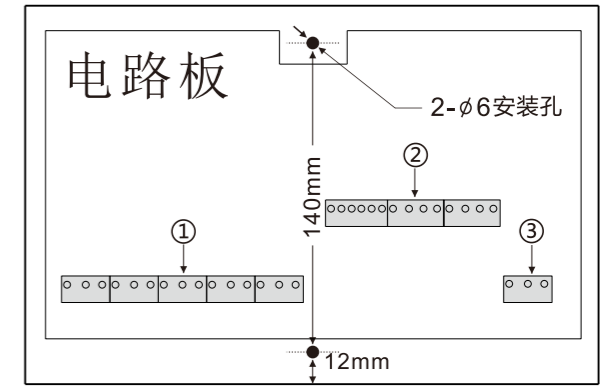
操作步骤：同时按下“设置+增加”键显示**L.C.H**进入菜单，按“增加”键切换菜单选项至**r.P**止，按“设置”键确认，窗口数值依次循环闪烁，按“增加”或“减少”键依次修改闪烁中的数值至需要的数值，修改完成后按“设置”键确认，窗口显示**GH**则设置完成，按“去皮”键退出。(主副钩超载报警点统一在主钩设置，设置完毕后，副钩超载报警点同主钩设置值)

E.r.r：工厂模式，需密码方可进入

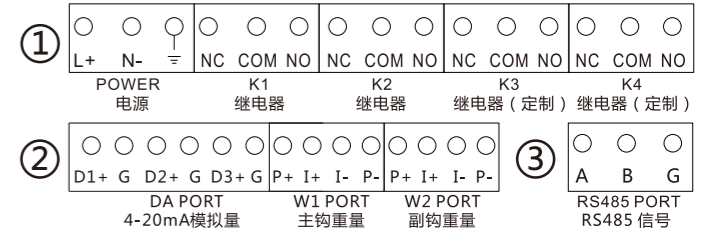
3. 副钩设置说明（副钩设置键对应在副钩显示窗口下面）

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2. 仪表端口定义



(图2)



| 继电器K* | NC(常闭端) | COM(公共端) | NO(常开端) |
|-------|---------|----------|---------|
|-------|---------|----------|---------|

| DA | D*+(4-20MA输出+) | G(4-20MA输出-) |
|----|----------------|--------------|
|----|----------------|--------------|

| 仪表电路板(W1/W2)端子 | | 传感器 |
|----------------|--|-----|
| P1+/P2+ | | 电源+ |
| I1+/I2+ | | 信号+ |
| I1-/I2- | | 信号- |
| P1-/P2- | | 电源- |

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仪表通电后同时按副钩下面的设置和增加键进入菜单界面，增加、减少键进行菜单切换，如需进入菜单项请按设置键，保存请按设置键，放弃请按去皮键退出。

r.c.H：副钩重量传感器信号处理后的模数值（AD），设置步骤同主钩模数值

r.R：副钩额定起重量，设置方式同主钩额定起重量设置

b：副钩重量标定设置，方法同主钩重量标定设置

⑥ 维护和故障处理

1. 仪表的维护

- 按标识及接线图正确安装本系统；
- 本产品属于精密仪表，注意防水，离人断电；
- 谨慎操作，非专业人员或无专业人士指导请勿操作；
- 精度校正周期为3~6个月一次，定期检查，维护。

2. 故障排除

- 仪表通电无显示、指示灯不亮
处理方法：检查有误供电，检查保险管是否正常或咨询厂家；
- 超载后蜂鸣器不报警
处理方法：检查**r.P**设置是否正确或质询厂家；
- 起吊后显示误差过大
处理方法：重新操作**b**步骤。

⑦ 服务体系

WTZ-A(200)型起重量限制器质保期为一年。（自交付之日起12个月内，因用户的非正常使用，电源电压超标以及其它外力造成的损坏不在质保范围内。）

※本标准产品(不含定制)功能最终解释权属微特公司所有。

产品返修时请注明详细的故障现象、使用工地、联系方式等内容。

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WTZ-A(200) HOISTING WEIGHT LIMITER Operation Manual

[WT-176V2.0]

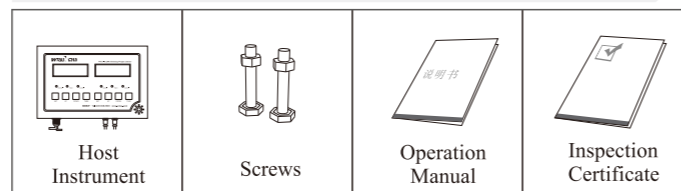
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1 Unpacking list



please confirm if the hoisting weight limiter appearance is in good,condition and check all the components,if anything is missing,please contact with seller.

※sensors and cables is business contract matching parts.

2 Product Description

The WTZ-A (200) type weight limiter is a new type of intelligent safety protection device. The weight of the load is measured by the weight sensor. The instrument displays the actual load in real time. When the load reaches the rated value of its rated load, Alarm signal, and can give the switch output. The whole system consists of sensors, connecting cables, microcomputer host and so on. This device is designed and manufactured according to the relevant requirements of GB 12602-2009 "Lifting Machinery Overload Protection Device" and GB / T 3811-2008 "Crane Design Code".

3 Technical Specifications

Weight test range: 0T-400T or 0T-9.99T
Resolving power: 0.1T or 0.01T
Composite error: ≤5%F.S.
Output: ≤ 4 (switching value)
other output : Rs485 / 4-20mA

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5 Display Calibration

1.indicator light function

Normal(green) : It means the display work normal, and overload weight is limited in the 95% set rated load.

Warning(yellow): When weight already at the 95% set rated load,it start lighting and warning.

Control(red): When the weight at the 105% rated load, it will start warning and send signal to relay.

2.The main hook Settings(Set under the main hook)

After the instrument is powered on, press the "Set + UP" button simultaneously into the menu(Lower left of the main hook), UP and DOWN button to switch the menu, if want to get into menu , press set. If want to save data, press set. Give up press TARE.

L.C.H :load cell signal AD value.

Step: press the "Set + UP" button simultaneously, window display **L.C.H** into the menu, press set for ok, will display AD value. Press 'TARE' for quit,

r.R :rated overload

Step:press the"Set+UP"button simultaneously, show **L.C.H** into menu ,press 'UP' , change menu till **r.R** , press 'SET' for ok. The value start sequential twinkle, press 'UP' or 'DOWN' to Change the value in the twinkle. Press 'set' for ok after finished all. display **OH** means setting finished. Press 'TARE' for quit.

Please change the upper step again.

b.i :weight calibration

1.Preparation for weight calibration

- Display unit installation.
- Load cell installation with signal into.
- Control cable into crane second control circuit.
- Preparing the clump weight (50% -100% of crane SWL)
- Give power supply for display, window light.

Calibration 1, step(Operating A-B to set up again):

A.empty hook till 1 meter away from ground. After stable the

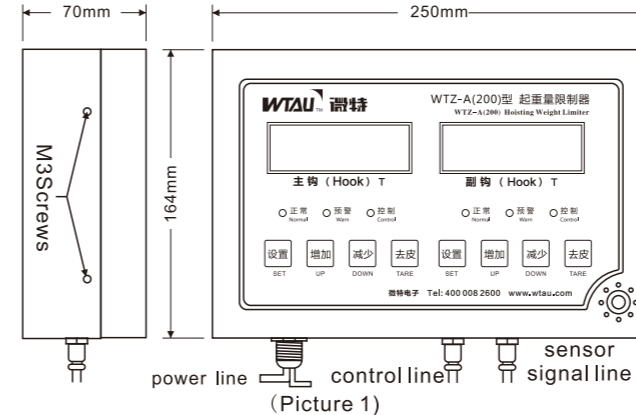
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0.8mm high lighten nixie tube display
Working condition temperature
Work relative humidity: 90%RH (25 no condensation)
Work voltage:AC 220V ±10%、50Hz (or customization AC 380V、DC24V)
Preset output volume:AC220V 7A
IP grass: load cell IP 66. Display:IP54

4 Installation and Connection

1.Installation of the display instrument

The instrument can be fixed to the wall of the driver cab.The procedure of installation is as follows:



- unload M3 screws ,open the machine lid;
- Use appropriate screw to fix instrument in the driving room (installation size as picture 2)
- According to the port description connect power lines and control lines (picture 2) ;
- cover the machine lid, restore install the M3 screws.

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hook, long press 'TARE' for 3 second. And value twinkle, press 'TARE' indicate **OH** Means setting finished.

B.Lifting Hook with clump weight away from ground 1 meter , after hook stable, press " function" show **L.C.H** into menu, press 'UP' change menu to **r.F** Press 'SET' for ok. Wind value sequential twinkle, press 'UP' or 'DOWN' to Change the value in the twinkle. Press ' SET' for ok after finished. Window display **OH** means finished. Press 'TARE' for quit.

Calibration 2, step(Operating A-B to set up again):

A.'TARE' setting is finished.(setting like the calibration 1-A)

B.Long press " setting" 3 seconds, the setting method is same as the calibration 1-B.

Solution : Lift one clump weight, the display value show the clump weight within ±5% of actual clump weight is qualified. Lifting again if error range bigger or ask for help to WTAU.

r.F : Full load warning point (percent of SWL), out of factory is 95%.

Step:press the"Set+UP" show **L.C.H** get into menu, press: UP" change page till **r.F**, press" setting" for ok. Wind value sequential twinkle, press 'UP' or 'DOWN' to Change the value in the twinkle.Press" set" for ok after finished. Window display **OH** means finished. Press TARE for quit. (The auxiliary hook's full load warning point is same value as main hook)

r.P : Overload control point,(percent of SWL), out of factory is 105%.

Step: press the "Set + UP" show **L.C.H** into the menu, Press" UP" change page to menu till **r.P** , press " Set" for ok. Wind value sequential twinkle,press 'UP' or 'DOWN' to Change the value in the twinkle.Press"set"for ok after finished.display **OH** means finished. Press TARE" for quit. (The auxiliary hook's overload alarm point is same value as main hook)

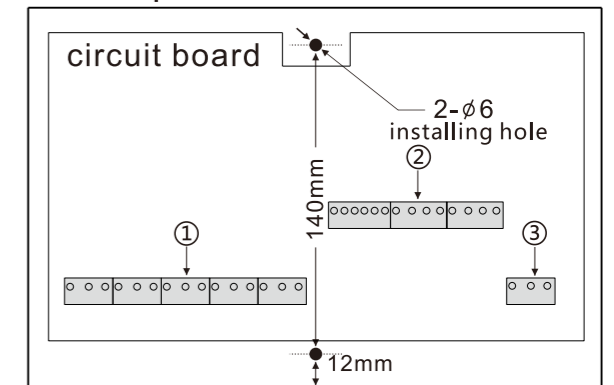
E.r.r :factory model : need password to get into

2.The auxiliary hook Settings(Set under the auxiliary hook)

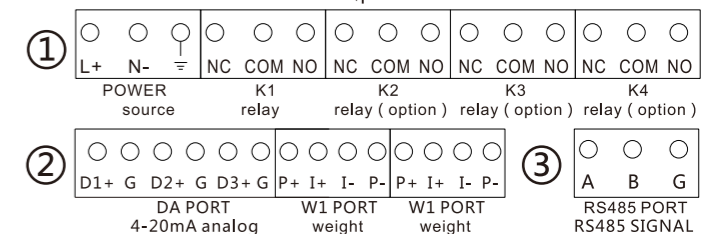
After the instrument power on, press the "Set + UP" button simultaneously into the menu(Lower right of the auxiliary hook), Up and Down button to switch the menu , if want to get into

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2. Port description



(picture 2)



| | | | |
|----------|-----------|------------------|----------|
| relay K* | NC(close) | COM(common port) | NO(open) |
|----------|-----------|------------------|----------|

| | | |
|----|---------------------|------------------|
| DA | D*+(4-20MA output+) | G(4-20MAoutput-) |
|----|---------------------|------------------|

| circuit board contact(W1/W2) | sensor |
|------------------------------|---------|
| P1+/P2+ | power+ |
| I1+/I2+ | signal+ |
| I1-/I1- | signal- |
| P1-/p1- | power- |

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menu,press set.If want to save data, press set. Give up press Tare.

r.c.H : the Auxiliary hook's load cell signal AD value, operation step same with the main hook model value.

r.R : The auxiliary hook's Rated lifting capacity,operation step same with the main hook rated lifting capacity.

b.i : The auxiliary hook's weight of the calibration,operation step same with the main hook weight of the calibration

6 Maintenance

1. Maintenance precaution:

- Pls installing system according to electron diagram;
- Precision products, pay attention to waterproof, trun off the power when all the people left ;
- Careful operation, non-professional personnel or no professional guidance do not operate; ;
- 3 ~ 6 months for a precision calibration cycle, regularly check and maintenance.

2.Fault phenomena and troubleshooting method:

- Instrument electricity no display, light is not bright. method: check the power supply and insurance tube or contact the manufacturer;
- Buzzer not alarm when overload. method : check **r.P** setting or contact the manufacturer;
- Display error is too large After lifting . method : resetting the **b.i** .

7 Product assurance

WTZ-A100 Overload limiter" s guarantee period is 12 months which is from the installation acceptance delivery date on. But except follow damage reasons which are non-normal use, excessive supply voltage, and other external damage.

※This standard products (excluding customization) function finally explain belongs to the WTAU.

pls indicate the specific symptoms, contact information,use site and other content when the product returned for repair.

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