

产品规格承认书

SPECIFICATION FOR APPROVAL

隐藏式刹车断电传感器

HWBS (Hidden Wire Brake Sensor)

版本（VERSION）：V2.0

|                                                                                                                                                                                      |          |                                                                                                                                                                                                                                                                                                             |         |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| <div>客户名称<br/>Customer Name: _____</div> <div>地址<br/>Address: _____</div> <div>确认(签字并盖章)<br/>Approved by: _____</div>                                                                |          |                                                                                                                                                                                                                                                                                                             |         |
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| 制定                                                                                                                                                                                   | 主管       | 总工                                                                                                                                                                                                                                                                                                          | 经理      |
| Originality                                                                                                                                                                          | Supvisor | General Engineer                                                                                                                                                                                                                                                                                            | Manager |
|                                                                                                                                                                                      |          |                                                                                                                                                                                                                                                                                                             |         |

## 1.功能介绍 (Function introduce)

HWBS是天津嘉特机电技术有限公司根据专利技术设计生产，用于电动自行车、电动摩托车刹车感应检测的一种传感器。

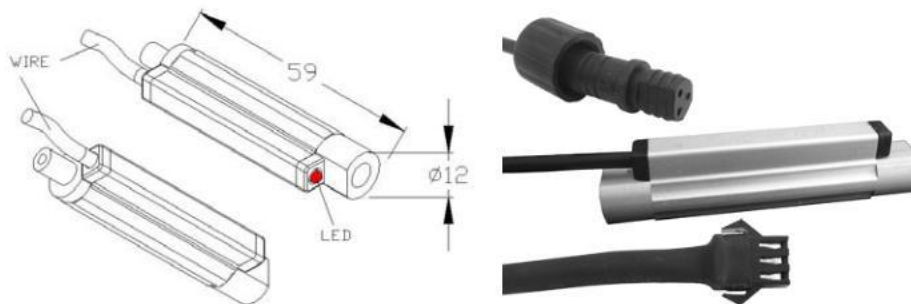
HWBS的特点在于，可以使用通用的刹车把，而不必使用专用的断电刹车把。传感器安装在刹线上，检测刹线的移动。HWBS是一种长寿命、小体积、免维护、微功耗、低电压供电、非接触检测型磁敏传感器。内部电路具有锁相环功能，在极其振动的环境下使用，也能保证信号的稳定输出。

HWBS is a patent product, designed by King-meter electric co., ltd. HWBS is a brake sensor, can be used on electric bicycle and electric motorcycle.

The features of HWBS is, can use generic brake, without the use of special brake lever. Sensor installed on the soft shaft of the brake, detection the movement of brake lines online. HWBS is a long life, small volume, free maintenance, micro-consumption electronic, low voltage power supply, non-contact detection of magnetic sensors. Internal PLL circuit can ensure the stable output even use in vibration situations.

## 2.外观尺寸、材料与图片 (Size, Material & Photos)

(Unit: mm)



HWBS外壳材料选用铝合金主体和尼龙堵头，所用材料有很好的抗氧化性和耐老化特性。

Aluminum shell and nylon stopper, are very good oxidation stability and aging characteristics.

## 3.技术参数及可靠性 (Specifications & Reliability)

- |                  |                                          |
|------------------|------------------------------------------|
| • 电压：4.5—6伏特（直流） | • Rated Voltage: 4.5-6V (DC)             |
| • 非刹车状态电流：2毫安    | • Current without brake: 2mA             |
| • 刹车状态电流：3.6毫安   | • Current with brake: 3.6mA              |
| • 引线拉力：>20牛顿     | • Lead tension: >20N                     |
| • 刹车响应时间：<0.001秒 | • Corresponding time when brake: <0.001S |
| • 响应距离：2-3毫米     | • Corresponding distance: 2-3mm          |
| • 机械寿命：>2百万次     | • Mechanical life: >2M times             |
| • 电气寿命：>2千万次     | • Electrical life: >20M times            |
| • 干态绝缘：>20兆欧     | • Insulation dry condition: >20M ohm     |
| • 湿态绝缘：>2兆欧      | • Insulation wet condition: >2M ohm      |

#### 4.接插件与引线 (Connector & Cable)

- 所用接插件可以根据客户要求定做。红：+5V，黄：地线，蓝：刹车信号
- 引线长度根据客户要求定做。
- The connector can be customize.
- The length of the cable also can be customize.
- Red: +5V, Yellow: GND, Blue: Brake Signal.

#### 5.可靠性测试 (Dependability Test)

| 测试项目<br>Test item                          | 测试条件<br>Test condition                             | 性能<br>Result |
|--------------------------------------------|----------------------------------------------------|--------------|
| 引线端子拉力强度<br>Tensile tests of the connector | 拉力20N<br>维持时间60S<br>>20N, 60S                      | 无拉脱现象<br>OK  |
| 外壳引线拉力强度<br>Tensile tests of the cable     | 拉力30N<br>维持时间60S<br>>30N, 60S                      | 无拉脱现象<br>OK  |
| 引线对外壳绝缘度1<br>Lead to shell insulation NO.1 | ZC25-3型兆欧表<br>干态, 湿度80%<br>Dry, Humidity 80%       | >20M         |
| 引线对外壳绝缘度2<br>Lead to shell insulation NO.2 | ZC25-3型兆欧表<br>喷淋态<br>Spray                         | >20M         |
| 耐高温测试<br>High temperature test             | 90±2℃<br>5V<br>>2hours                             | OK           |
| 低温测试<br>Low temperature test               | -20±2℃<br>5V<br>>8hours                            | OK           |
| 振动测试<br>Vibration test                     | 20Hz<br>5V<br>持续时间:2h                              | 工作正常<br>OK   |
| 恒定湿热<br>Constant damp                      | 45±2℃<br>5V<br>湿度90%±5%<br>>2hours<br>Humidity 90% | 工作正常<br>OK   |
| 喷淋模拟<br>Spray                              | 5V<br>>2hours                                      | 工作正常<br>OK   |

## 6.环保要求 (RoHS & PAHs)

符合 RoHS和 PAHs

With RoHS and PAHs Report

## 7.安装说明及调试 (Assemble & Adjustment)

刹车钢丝软轴直接穿进 HWBS中间孔即可。刹车调整方法直接按照正常的调整方法即可。

HBWS装在刹车软轴上后，不需要调整其任何部位，即可以正常工作。



前刹车安装图片



后刹车安装图片



安装在车架中间的图片(Assembled in the middle)

**The brake steel soft shaft directly into the middle hole HWBS. No additional adjustment about the HWBS.**

## 8.包装规格及数量 (Package & Quantity)

每 20个 HWBS有一个封闭包装袋。

每箱 600个。

纸箱尺寸: 440\*380\*210 (cm)

纸箱标明: 客户名称, 地址, 收件人, 订单号, 数量, 引线长度, 发货日期。

Every 20 HWBS in a closed bag

600 HWBS in a carton

Size of the carton: 440\*380\*210 (cm)

Label: Customer name, Address, Name, P.O. number, Quantity, Cable length, Date of shipment.

**9.技术确认 (Signature the Spec.)**

本确认书的认同，须经双方书面确认，任何一方单独修改无效。

本确认书在对方收到后，7个工作日内须签字盖章确认，逾期视为默认同意。

This confirmation, must be approved by both sides, any one party modification is invalid.

After receiving the confirmation in each other, 7 workdays must be signed confirmation, overdue as default agree.