



HENGSTLER

咨询热线：
400 666 1802

亨士乐（中国）
中文网址：www.hengstler.com.cn

HENGSTLER

GB Heavy duty Incremental Encoder WD10 Installation instructions

CN 重载增量编码器 WD10 安装说明书

P/N:703264-0001 Ver. B

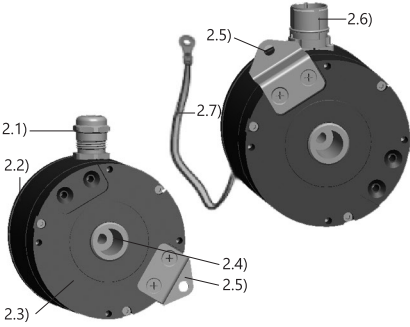
GB 1. Preface

These installation instructions are provided for the connection and starting procedure of your encoder. You will get further information from the WD10 datasheet, on request or on download from our Internet site, www.hengstler.com.cn

CN 1. 前言

这个安装说明书提供编码器连接和使用步骤的说明。你可以从 WD10 数据页上得到更多的信息，应请求可提供或者从我们的网站下载。
www.hengstler.com.cn

2. Parts of products 产品部件



GB
2.1 Cable gland
2.2 Terminal cover
2.3 Flange
2.4 Hollow shaft
2.5 Torque arm bracket
2.6 Connector
2.7 Earthing strap

CN
2.1 电缆密封接头
2.2 接线盒外壳
2.3 法兰
2.4 空心轴
2.5 扭矩支架
2.6 连接器
2.7 接地线

GB 3. Safety

Authorised persons
The encoder should only be assembled and dismantled by a qualified electrician, as the unit contains sensitive electronic circuits.

Risk of injury due to rotating shafts
Hair and items of clothing may become caught up in rotating shafts.
→ Prior to commencing all works, disconnect all power supplies and ensure that the working environment is Safe!

Risk of destruction due to static electricity
The CMOS modules contained in the encoder are very sensitive to high voltages such as can arise due to friction of the clothing.
→ Do not touch plug contacts or electronic components!

Risk of destruction due to mechanical overload
Rigid mounting will give rise to constraining forces which will permanently overload the bearings.
→ Never restrict the freedom of movement of the encoder! Use only the enclosed sheet steel springs or a suitable coupling to secure the unit!

Risk of destruction due to mechanical shock
Violent shocks, e.g. due to hammer blows, can lead to the destruction of the optical sensing system and the ball bearings.
→ Never use force! Assembly is simple provided that correct procedure is followed.

Risk of destruction due to overloading
→ The unit may only be operated within the limits specified in the technical data.

CN 3. 安全

合格的操作人员
编码器必须被有资质的电工装配和拆卸，因为装置包含敏感的电路。

由于旋转的轴造成伤害的风险
头发和衣服上的挂件可能被旋转的轴卷进去。
→ 在开始所有的工作之前，断开所有的电源并确保工作环境的安全！

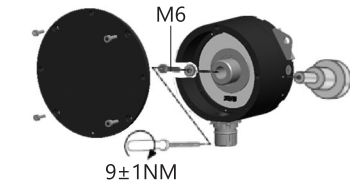
由于静电破坏造成的风险
编码器内部的 CMOS 模块对高电压非常敏感，例如由衣服摩擦产生的静电。
→ 不要接触插头或者电子器件！

由于机械过载引起损坏的风险
刚性安装将使约束力增加，并且永久使轴承过载。
→ 永远不要限制编码器的自由移动！只使用附带的弹簧片或者合适的联轴器保证装置正常工作！

由于机械冲击引起损坏的风险
强烈的冲击，例如锤击，能够导致光学传感系统和滚珠轴承的损坏。
→ 永远不要用力！按照下面的正确安装流程装配非常简单。

由于过载引起损坏的风险
→ 装置必须在技术数据指定的范围内使用。

4. Mechanical mounting 机械安装



GB
Mounting of hollow shaft

CN
安装空心轴



GB
Alternative mounting of torque arm

CN
可选安装扭臂



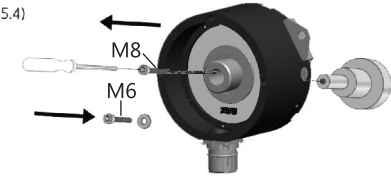
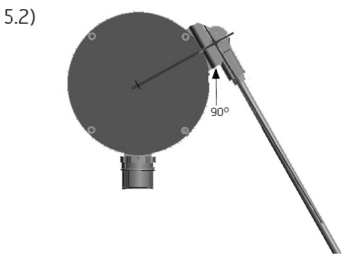
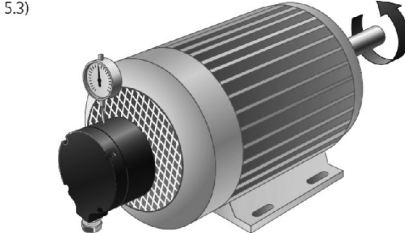
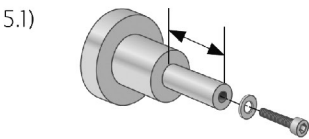
GB
Mounting of torque arm

CN
安装扭臂

GB
The torque arm Kit (P/N 116812-0001) needs to be ordered separately. It include the 420mm threaded rod (the user can cut on request), the matching screw, gasket, joint bearing and other components.

CN
客户部件
拉杆组件包 (P/N 116812-0001) 需要单独订购。包括420mm螺纹拉杆（用户可根据需要裁剪），配套的螺钉、垫片和关节轴承等部件。

5. Check points for mechanical mounting 机械安装检查要点



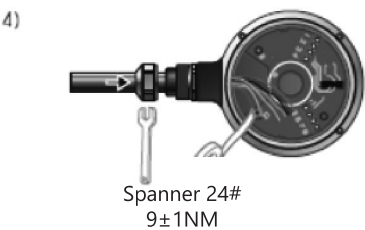
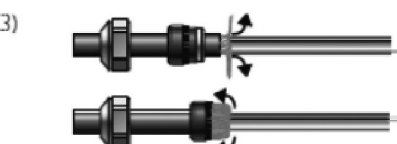
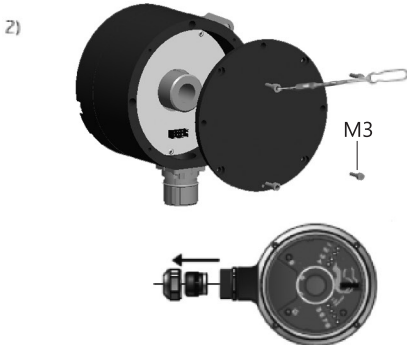
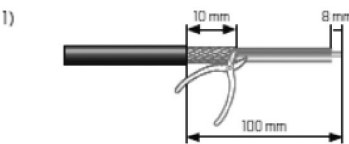
GB

5.1 Check that the dimensions of the mating shaft match the specifications in the encoder's data sheet. Fix the encoder with an M6 screw (ISO 4762) with minimum 9 mm thread in use. 5.2 Fix the encoder with an insulated torque arm. It must be fitted at 90 degrees angle to the direction of the bracket, for optimum accuracy of measurement. 5.3 Check the encoder's radial runout with slow rotation of complete assembly. The runout should not exceed 0.1 mm, as this may shorten the encoder's service life or influence the system accuracy. 5.4 Dismounting: Use M8 screw, if necessary, to detach the encoder.

CN

5.1 检查连接轴的尺寸是否符合编码器数据表中的规格。使用 M6 螺丝 (ISO 4762) 配合最小 9 mm 螺纹来固定编码器。5.2 使用绝缘扭矩臂固定编码器。安装角度必须和托架方向成 90 度，以确保最佳的测量精度。5.3 通过完整组件的慢速旋转来检查编码器的径向偏移。偏移不应超过 0.1 mm，否则将缩短编码器的使用寿命或影响系统的精度。5.4 如有需要，使用 M8 螺丝以在更换时拆卸编码器。

6. Electrical mounting 电气安装



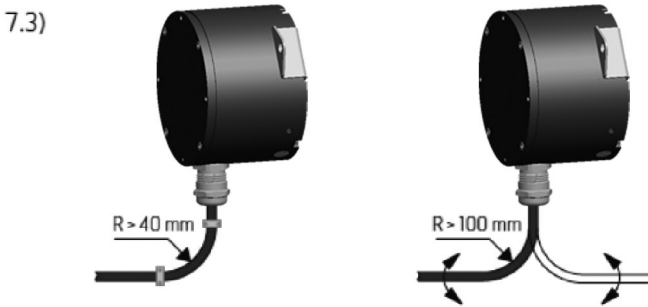
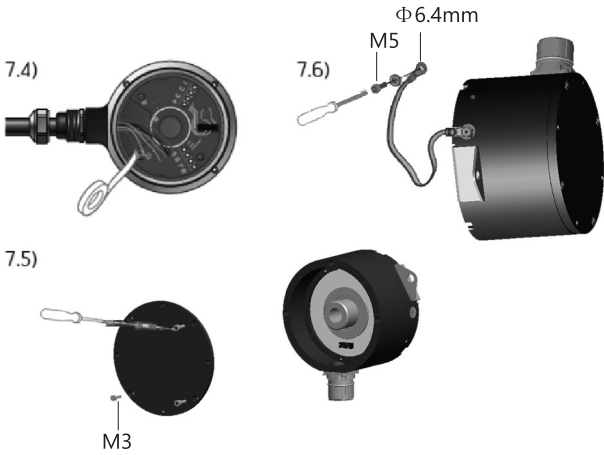
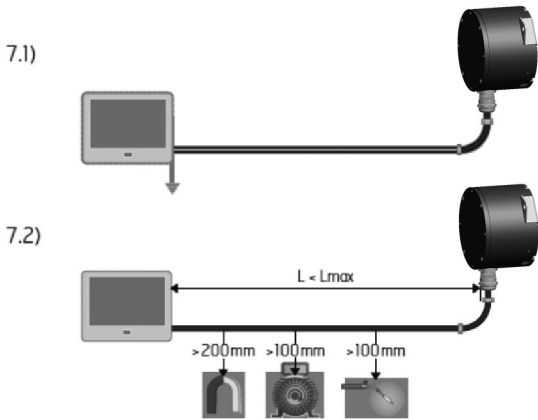
GB

Fit cable*, using the following steps:
Step 1. Strip the cable according to the dimensions in the illustration.
Step 2. Open the terminal cover and unscrew the cable bushing.
Step 3. Fold the cable shield backwards over the shell ring.
Step 4. Connect the wires according to the product label.
Insulate any wire that is not being used.
Tighten all terminal screws (including any unused ones).

CN

通过下列步骤安装电缆*：
第1步：按照图示尺寸剥开电缆。
第2步：打开接线盒外壳，拧下电缆套管。
第3步：将电缆屏蔽层向后对折包在环箍上。
第4步：按照产品标签所示意接线。
并对未使用导线进行绝缘处理。
拧紧所有接线盒螺丝（包括所有未使用的螺丝）。

7. Check points for electrical mounting 电气安装检查要点



GB

- 7.1 Use a shielded twisted-pair cable. The shielding must be connected to the chassis at both ends and be earthed at one point.
- 7.2 Keep potential sources of disturbance at the recommended distance from the cable. Make sure that the length of the cable does not exceed the value specified in the product data sheet.
- 7.3 Ensure that the cable's bending radius exceeds the permitted minimum value.
- 7.4 Treat all wires as live. Any wires not in use must be insulated.
- 7.5 Do not combine old encoder parts with new ones, when replacing a worn out encoder.
- 7.6 If the product comes with an earthing strap, this must be connected to the chassis of the machine.

CN

- 7.1 使用屏蔽双绞线电缆。屏蔽电缆必须连接到底座两端，并单点接地。
- 7.2 请将潜在干扰源放置在离电缆建议的距离外。确保电缆长度不超过产品数据表中的规定值。
- 7.3 确保电缆的弯曲半径超过所允许的最小值。
- 7.4 将所有导线视为带电线路。必须对所有未使用的导线做绝缘处理。
- 7.5 更换坏的编码器时，请勿将新旧编码器部件相互结合。
- 7.6 如果产品有接地带，必须将其连接到底座。

8. Ordering data 订购信息

8.1 中文

订购信息

型号	脉冲数 ¹	输出	法兰 ²	防护等级	轴	连接
<input type="checkbox"/> /	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
WD10	1024 2048	T 5V 输入, TTL (RS422)输出 I 9-30V 输入, HTL互补输出 M 9-30V 输入, TTL (RS422)输出	1 旋转拉杆120° 2 旋转拉杆30°	7 IP67(轴端IP66)	7 Φ12mm绝缘空心轴 8 Φ16mm绝缘空心轴 9 Φ17mm 1:10绝缘锥孔空心轴	1 M23连接器, 12针CW 2 M23连接器, 12针CCW 4 M20电缆密封接头,适用于Φ8-11mm 5 M20电缆密封接头,适用于Φ11-14mm

¹ 最常用的脉冲数用粗体标注，应要求可提供其它脉冲数。
² 拉杆组件包需要单独订购，订货料号116812-0001, 包括长度420mm螺纹拉杆（用户可根据需要裁剪），配套的螺钉、垫片和关节轴承组件。

8.2 English

Type	PPR ¹	Output	Flange ²	Protection	Shaft	Connection
<input type="checkbox"/> /	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
WD10	1024 2048	T 5V Input, TTL(RS422) Output I 9-30V Input, HTL Complimentary Output M 9-30V Input, TTL (RS422) Output	1 120° Torque bracket 2 30° Torque bracket	7 IP67(Shaft end IP66)	7 Φ12mm, insulated up to 2.5kV 8 Φ16mm, insulated up to 2.5kV 9 Φ17mm, taper shaft, insulated up to 2.5kV	1 M23 Connector, radial 12pin, CW 2 M23 Connector, radial 12pin, CCW 4 M20 cable gland, radial Φ8-11mm 5 M20 cable gland, radial Φ11-14mm

¹ The usual PPR is marked in bold, and other pulses should be provided on request.
² The torque arm Kit (P/N 16812-0001) needs to be ordered separately. It include the 420mm threaded rod (the user can cut on request), the matching screw, gasket, joint bearing and other components.

福迪威传感工业控制集团

上海办事处

地址：上海市长宁区福泉北路
518弄9号楼2层
邮编：200335
咨询热线：400 666 1802

广州办事处

地址：广州市天河区体育东路116号
财富广场东塔13层08单元
邮编：510620
咨询热线：400 666 1802

天津办事处

地址：天津市西青区泰达微电子
工业园微五路28号
邮编：300385
咨询热线：400 666 1802

电子邮件：info@hengstler.com.cn
中文网址：www.hengstler.com.cn

HENGSTLER

* 本文档的信息可能随时更改。
* Specification in this document can be changed without prior notice.