OMRON **≝ E6B3-CWZ5G**

旋转编码器

使用说明书

感谢您使用欧姆龙产品。以下主要记载安装和使用本产品过 程中需注意事项。 使用本产品前,请仔细阅读本说明书,充分了解产品。

为了您的方便,请妥善保管好本说明书。

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安全上的注意

●警告表示的意思 如果不正确使用的话,有可能引起轻伤、中等 <u>小</u>注意 程度的伤害还有可能带来同样重大的物质损害。

●警告表示

⚠ 注意

通电状态下请勿拆开本产品。如触及内部会造成触电伤亡

安全上的要点

(1)使用时请不要超过额定电压范围。如施加额定电 压以上的电压时,会引起破裂和烧损。

- (2)高压线和动力线并行连线时,会因感应而发生误 动作或破损,所以请分开连线。
- (3)使用电源如发生浪涌,请在电源间接上浪涌吸收 器。为了避免干扰,请尽量在短距离之内连线。
- (4)在接通电源或切断电源时,容易发生错误脉冲, 所以请在接通电源1秒后、及切断电源1秒前使用。 (5)需注意电源极性等,不能错误连线,以免引起破
- 裂和烧损。

(6)注意不能让负载短路,以免引起破裂和烧损。 (7)请不要在可燃性、爆炸性的环境下进行使用。 (8)请不要拆卸、修理、改造本产品。



Thank for you selecting OMRON product. This sheet pri-

marily describes precautions required in installing and operating the product. Before operating the product, read the sheet thoroughly to

acquire sufficient knowledge of the product.For your convenience, keep the sheet at your disposal.

TRACEABILITY INFORMATION in EU Manufacture Manufacturer: Omron Corporation, Shiokoji Horikawa, Shimogyo-ku, Kyoto 600-8530 JAPAN Shanghai Factory No.789 Jinji Road, Jinqiao Export Processing District, Pudong New Area,Shanghai,201206 CHINA Omron Europe B.V. Wegalaan 67-69 2132 JD Hoofddorp, The Netherlands The following notice applies only to products that carry the CE mark

This is a class A product. In residential areas it may cause radio interference, in which case the user may be required to take adequate measures to reduce interference.

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正确使用方法

(1)旋转式编码器是由紧密部件构成的,因此使用时 要非常小心,不能跌落,以免损伤功能。

- (2)使用时请不要让水和油滴落在主体上。 (3)连线时要在电源切断的状态下进行。电源ON时,
- 输出线如接触电源,会引起输出回路破损。 (4)固定本体、进行导线连线时,请注意导线的拉伸 力度不要超过29.4N。
- (5) 请勿往轴上施加过大的载荷,以免引起产品破损。 用链条、传送带及齿轮连接时,先通过其他轴承, 再用耦合器与编码器结合。
- (6)如果安装误差大(偏心、偏角),就会有过大的 负载加在轴上,从而造成损坏或者缩短其使用年 限。
- (7) 当耦合器插入轴时, 请不要用锤子敲击等增加撞 击力。
- (8)安装、拆卸耦合器时,请勿进行不必要的弯曲、 压缩和拉伸。

■ 类型和规格	
类型 规格	E6B3-CWZ5G
电源电压	DC12 \sim 24V ($^{+15\%}_{-10\%}$)
消费电流	100mA以下
输出状态	互补输出
输出容量	输出电压: VH=Vcc-3V(1o=30mA) VL=2V以下(1o=-30mA)
	输出电流: ±30mA
最高响应频率	100kHz
输出相位差	A相、B相位差 90±45°
起动转矩	10mN・m以下
惯性力矩	1×10 ⁻⁶ kg・m ² 以下
允许最高转速	6000r/min
轴允许力	径向80N 轴向50N
环境温度	$-10 \sim +70 ^{\circ}\mathrm{C}$
环境湿度	35~85%RH

Precautions for Correct Use

(1) Since the product consists of high-precision components,

(3) Be sure to turn off the power supply before wiring. If the

is being supplied, the output circuit may be damaged.

the cord with force greater than 29.4 N.

load may cause the product break.

(4) If the product is mounted and wired with a cord, do not pull

(5) Be careful not to apply excessive load to the shaft. Excessive

connect a separate bearing before the coupling to the product.

case using the coupling or without coupling) the shaft will

be subjected to an excessive load which will damage it or shorten its service life.Be careful when installing.

(7) When inserting the shaft in the coupling, do not use excessive

(8) When installing or removing the coupling, do not apply an

force (by striking it with hammer.for example).

excessive being, compressing, or tensile force.

(6) If an installation error such as misalignment is too large,(in

output line contacts the power supply line while the power

(2) Be careful not to expose the product to water or oil.

handle it with utmost care.

■ 输出回路图

■ 安装尺寸



■ 外形尺寸图





■接线 外部接线时,请注意不要错误连线。 规 格 E6B3-CWZ5G 线色 端子名 电源(+Vcc) 裼 黑 输出A相 白 输出B相 输出Z相

0V

橙

蓝

OUTPUT CIRCUIT DIAGRAM

30mA max.

Brown 12 to 24V DC

Black : OUTPUT White : OUTPUT

- OUTPUT

-Blue OV

E6B3-CWZ5G

7.5Ω

7.5Ω ≹ V

Main

ircuit

使用时的承诺事项

- ①为了确保安全,请勿将本产品直接或间接用于人体检测。需要 使用该用途时,请选用本公司传感器综合样本中刊登的安全传 感器。
- ②使用于下列用途时,请与本公司营业担当商谈、并根据规格书 等确认后,采用相对于额定性能留有一定余裕度的使用方法或 者采取即使出现故障也能使危险度降低到最小的安全电路的对
- a) 屋外使用、用于有潜在的化学污染或者有电气妨害时,或者 是产品手册、使用说明书等没有记载的条件或环境中使用时 b)用于原子能控制设备、焚烧设备、铁路•航空•车辆设备、
- 医疗设备、娱乐器械、安全装置以及按照行政机关或个别业 界规定制造的设备时 c)用于可能危及生命、财产的系统•机械•装置时
- d)用于煤气、水道、电力供给系统或者24小时连续运转系统等 的高可靠性设备时
- e) 用于其他,以上述a) ~d) 为基准,需要高度安全性的用途时 *上述内容是适用条件的一部分。请参阅本公司综合产品手册• 数据等最新版商品目录、手册中记载的保证·免责事项内容后 再使用。



OUTLINE DRAWING



MOUNTING Especially when linking with a chain, timing belt, or gears,



Meaning of Signal Words



Alert statements

CAUTION

Do not attempt to take ant unit apart while the power is being supplied. Doing so may result in electric shock

Precautions for Safe Use

- 1)Do not use the product in excess of the rated voltage Applying voltages beyond the rated voltage range may cause the product to breakor burn.
- 2)Avoid wiring the product's cables parallel to power lines or high-voltage lines.Doing so may cause the priduct to malfunction due to induction or may cause the damage the product.
- 3)If surge occurs in the power supply, connect a surge absorber between the power supply terminals to absorb the surge Minimize the wiring length to prevent the product from being affected by noise,etc.
- 4)Since improper pulses may occur when the power is turned on or off, use the devices connected to this product at least 1.0 seconds before or after the power is turned on or off.
- 5)Be careful when wiring, such as being careful with the polarities of the power supply. Incorrect wiring may break or burn the product. 6)Do not short-circuit the load. Doing so may break or burn the product.
- 7)Do not use the encorder under the environment with explosive or ignition gas.

8)NEVER disassemble, repair nor tamper with the product.

RATING

Item	E6B3-CWZ5G
Supply voltage	12 to 24V DC $\binom{+15\%}{-10\%}$
Current consumption	100mA max.
Output circuit configuration	Complementary output
Output capacity	Output resistance: "H"level output voltage: Vcc-3V min.(at output current:+30mA) "L"level output voltage: 2V max. (at output current:-30mA) Output cerrent: ±30mA max.
Maximum response frequency	100kHz
Phase different of output	$90\pm45^{\circ}$ between output A and output B
Starting torque	10mN • m max.
Moment of inertia	1×10^{-6} kg \cdot m ² max.
Slewing speed	6000r⁄min
Shaft loading	Radial : 80N max. Axial : 50N max.
Ambient temperature	$-10 \text{ to } +70^{\circ}\text{C}$
Ambient humidity	35 to 85%RH

Suitability for Use

THE PRODUCTS CONTAINED IN THIS SHEET ARE NOT SAFETY RATED. THEY ARE NOT DESIGNED OR RATED FOR ENSURING SAFETY OF PERSONS, AND SHOULD NOT BE RELIED UPON AS A SAFETY COMPONENT OR PROTECTIVE DEVICE FOR SUCH PURPOSES Please refer to separate catalogs for OMRON's safety rated products

OMRON shall not be responsible for conformity with any standards, codes, or regulations that apply to the combination of the products in the customer's application or use of the product.

Take all necessary steps to determine the suitability of the product for the systems, machines, and equipment with which it will be us Know and observe all prohibitions of use applicable to this product

NEVER USE THE PRODUCTS FOR AN APPLICATION INVOLVING SERIOUS RISK TO LIFE OR PROPERTY WITHOUT ENSURING THAT THE SYSTEM AS A WHOLE HAS BEEN DESIGNED TO ADDRESS THE RISKS, AND THAT THE OMRON PRODUCT IS PROPERLY RATED AND INSTALLED FOR THE INTENDED USE WITHIN THE OVERALL EQUIPMENT OR SYSTEM. See also Product catalog for Warranty and Limitation of Liability.

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