

OMRON

E3X

光纤放大器

使用说明书

感谢您选择欧姆龙产品。
以下主要记载在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。
不要将此产品用作保证人身安全的安全装置或安全系统的部分使用。



1106512-5B

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此说明书罗列了在产品安装及使用过程中的注意事项，为了能正确安全使用本产品，请务必充分领会本说明书，使用完请妥善保管，以备随时查阅。

安全上的注意

警告表示的意思

注意 如果不正确使用，有可能导致死亡或重大伤害。

警告表示

警告
不可将传感器连接交流电源，有爆裂的危险。

安全上的要点

- 以下项目在安全确保方面非常重要，请务必遵守。
- 1、请不要在具有可燃性、爆炸性气体的环境下使用。
 - 2、请勿拆卸、修理、改造本产品。
 - 3、电源电压必须在额定值内。
 - 4、请使用额定值以下的负荷。

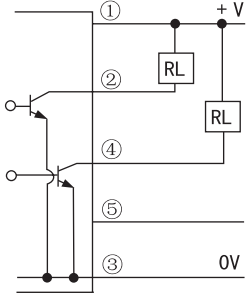
规格

E3X-□	NPN	A11/A16	A21
	PNP	A41/A46	A51
电源电压		10...30VDC	10...30VDC
波动(最大)		≤10%	≤10%
消费电流		≤35mA	≤35mA
控制输出(最大)		30VDC 100mA	30VDC 100mA
自己诊断输出		—	≤30VDC 50mA
定时功能 OFF延迟		—	10ms...100ms
响应时间 ON OFF		≤200 μs ≤200 μs	≤200 μs ≤200 μs
外部诊断输入		—	○
使用周围温度		-25...+55 °C	-25...+55 °C
使用周围湿度		35...85%RH	35...85%RH
保护构造		IEC60529 IP66 (A16/A46: IEC60529 IP65)	

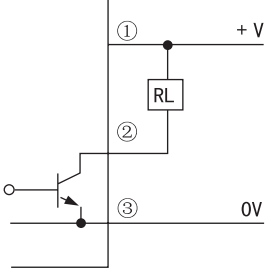
接线

NPN输出

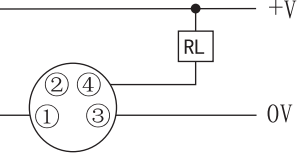
E3X-A21



E3X-A11

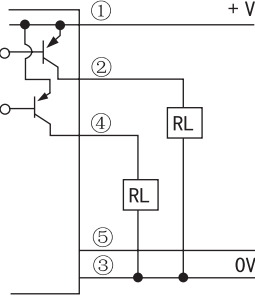


E3X-A16

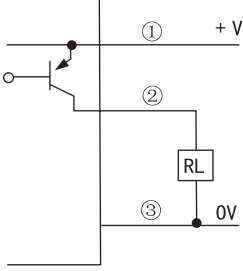


PNP输出

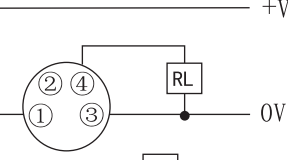
E3X-A51



E3X-A41



E3X-A46



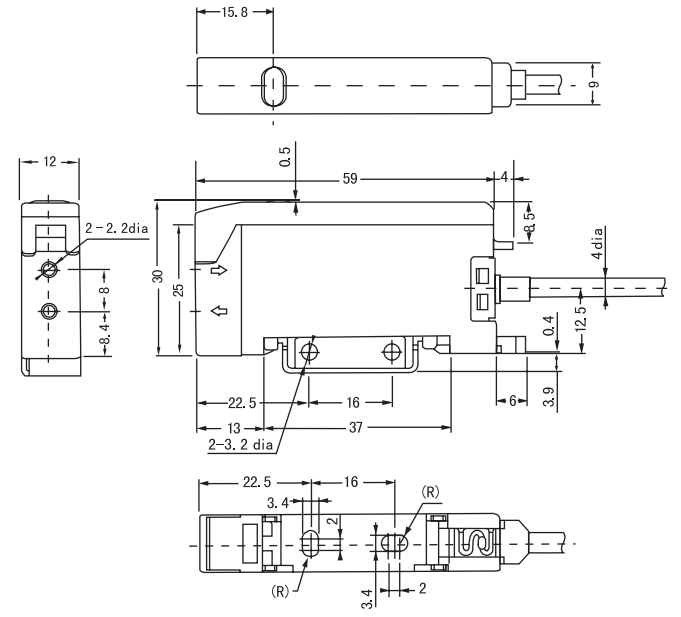
导线识别

①	②	③	④	⑤	⑤
褐	黑	蓝	橙	粉	外部诊断输入

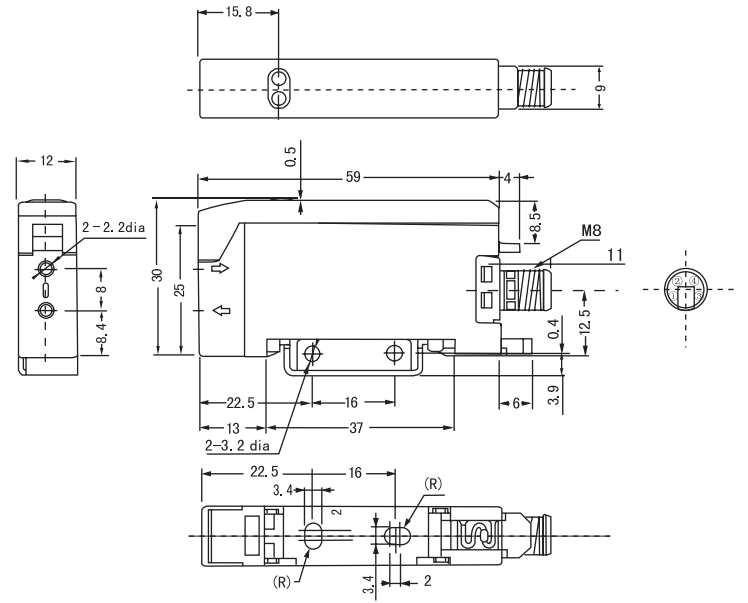
RL: 负载

尺寸

E3X-A11/A21/A41/A51



E3X-A16/A46



单位 (mm)

使用时的承诺事项

使用于下列用途时，与本公司营业担当商谈之后，根据规格书等确认的同时，对额定值性能方面请想出有裕度的使用方法及采取即使万一出现故障也能使危险降低到最小的安全回路等的安全对策。

- 1) 屋外的用途、潜在化学污染或者受到电气的妨害的用途或者在商品目录、使用说明书中没有记载的条件及环境下使用。
- 2) 原子力控制设备、焚烧设备、铁道·航空·车辆设备、医用机械、娱乐机械、安全装置及行政机关及根据个别业界的规定制造的设备。
- 3) 可能危及生命、财产的系统·机械·装置。
- 4) 煤气、水道、电气的供给系统及24小时连续运转系统等需要高信赖性的设备。
- 5) 其他，以上述的1)~4)为基准，需要高度安全性的用途。

*上述内容是适用条件的一部分。仔细阅读本公司的综合商品目录、数据表等最新版商品目录、手册中记载的保证免费事项的内容后再使用。

联络处所在地

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OMRON

E3X

OPTICAL FIBER PHOTOELECTRIC SENSOR

INSTRUCTION SHEET

Thank you for selecting OMRON product. This sheet primarily 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. Do not use this product as a safety device nor a part of safety systems for ensuring safety of persons.

TRACEABILITY INFORMATION:

Representative in EU: OMRON Europe B.V., Wegalaan 67-69, 2132 JD Hoofddorp, The Netherlands
 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

The following notice applies only to products that carry the CE mark:
 Notice: 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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This sheet primarily describes precautions required in installing and operating the product. Before operating the product, read this sheet thoroughly to acquire sufficient knowledge of the product. For your convenience, keep this sheet for your disposal.

Safety Note

● Meaning of warning symbol

CAUTION This symbol indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

● Warning symbol

WARNING
 Do not connect sensor to AC power supply. Risk of explosion.

Precautions for Safe Use

Be sure to follow the safety precautions below for added safety.

1. Do not use the sensor under the environment with explosive or ignition gas.
2. Never disassemble, repair nor tamper with the product.
3. Power supply must be within the ratings of the device.
4. Do not use the sensor over the rated values.

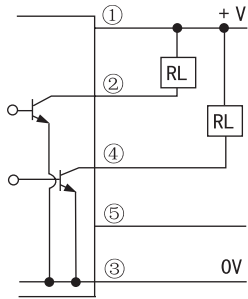
■ Specifications

E3X-□	NPN	A11/A16	A21
	PNP	A41/A46	A51
Supply voltage		10...30VDC	10...30VDC
Ripple(max)		≤10%	≤10%
Current consumption		≤35mA	≤35mA
Control output(max)		30VDC 100mA	30VDC 100mA
Self-diagnostic output		—	≤30VDC 50mA
Timer Function			
OFF delay		—	10ms...100ms
Response time			
ON		≤200 μs	≤200 μs
OFF		≤200 μs	≤200 μs
External check input		—	○
Operating temperature		-25...+55°C	-25...+55°C
Operating humidity		35...85%RH	35...85%RH
Degree of protection		IEC60529 IP66 (A16/A46: IEC60529 IP65)	

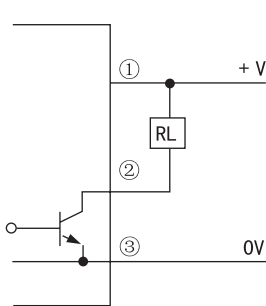
■ Wiring

NPN OUTPUT

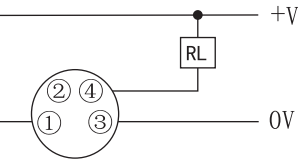
E3X-A21



E3X-A11

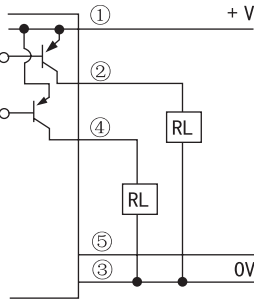


E3X-A16

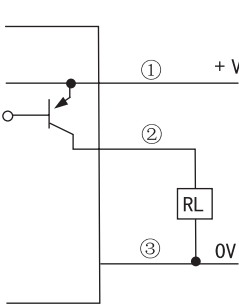


PNP OUTPUT

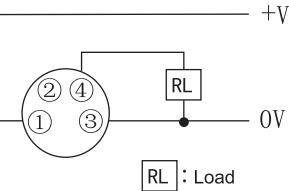
E3X-A51



E3X-A41



E3X-A46

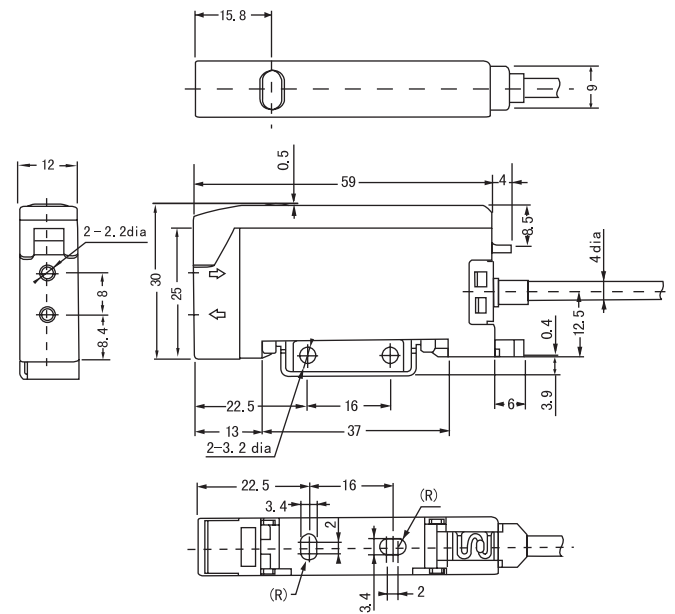


Wiring identification

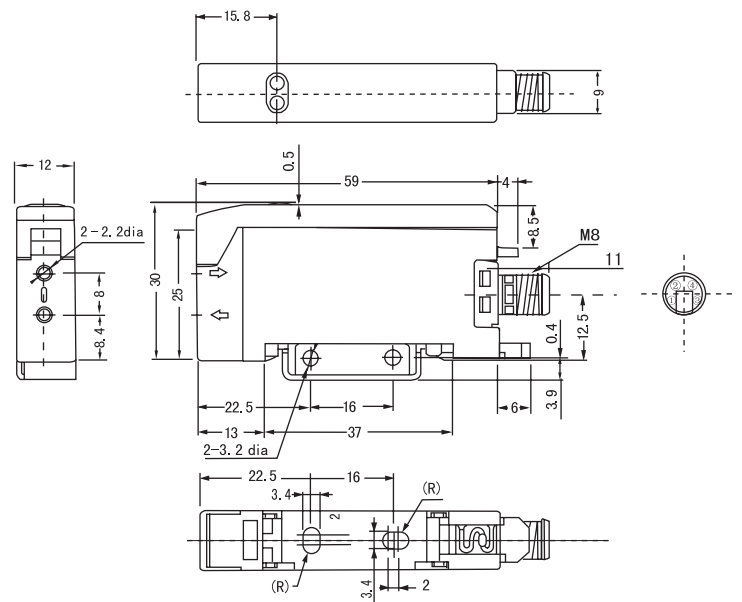
①	②	③	④	⑤	⑤
Brown	Black	Blue	Orange	Pink	External check input

■ Dimensions

E3X-A11/A21/A41/A51



E3X-A16/A46



Unit (mm)

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 used. 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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OMRON Corporation