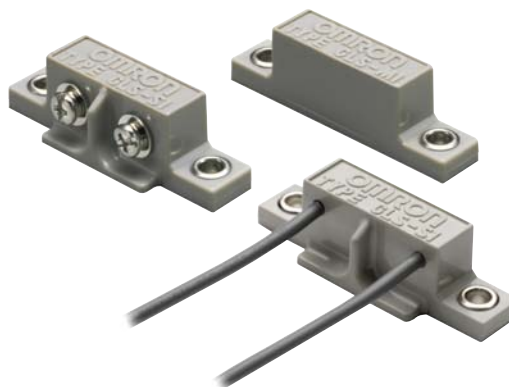


Easy-to-use, Simple Magnetic Proximity Sensor

- Permanent magnetic used to operate the reed switch.
- Ideal for detecting opening and closing of doors.



Be sure to read *Safety Precautions* on page 2.

Ordering Information

Terminal Block Model (Sensor)

| Name | Model |
|--------|--------|
| Set | GLS-1 |
| Sensor | GLS-S1 |
| Magnet | GLS-M1 |

Pre-wired Model (Sensor)

| Name | Model |
|--------|-------------|
| Set | GLS-1L |
| Sensor | GLS-S1-L 1M |
| Magnet | GLS-M1 |

Ratings and Specifications

| Item | Model | GLS-1 | GLS-1L |
|------------------------------------|--------|---|---|
| Sensing distance | | 15 mm *1 | |
| Contact circuit | | SPST-NO | |
| Switching capacity *2 | | Maximum operating voltage: 100 VDC Maximum operating current: 0.1 A DC Maximum switching capacity: 10 W (for both open and closed contacts) | |
| Contact dielectric strength | | 250 VDC for 1 min with a leakage current of 1 mA max. | |
| Response frequency | | 20 Hz max. | |
| Ambient temperature range | | Operating/Storage: -20 to 60°C (with no icing or condensation) | |
| Ambient humidity range | | Operating/storage: 35% to 85% (with no condensation) | |
| Contact resistance | | 150 mΩ max. | 250 mW max. (including conductor resistance of lead wire) |
| Dielectric strength | | 1,000 VAC for 1 min between terminals and case | |
| Life expectancy | | 50,000,000 times min. with 0.1-A resistive load at 24 VDC | |
| Vibration resistance | | Destruction: 10 to 55 Hz, 1.5-mm double amplitude for 2 hours each in X, Y, and Z directions | |
| Shock resistance | | Destruction: 300 m/s ² 3 times each in X, Y, and Z directions | |
| Degree of protection | | IP40 (IEC) | |
| Connection method | | Terminal block | Pre-wired (standard cable length: 1 m) |
| Materials | Sensor | ABS | |
| | Magnet | | |

*1. Notice that the actual distance is 15 mm min.

*2. AC power cannot be used.

Safety Precautions

Refer to *Warranty and Limitations of Liability*.

⚠ WARNING

This product is not designed or rated for ensuring safety of persons either directly or indirectly. Do not use it for such purposes.

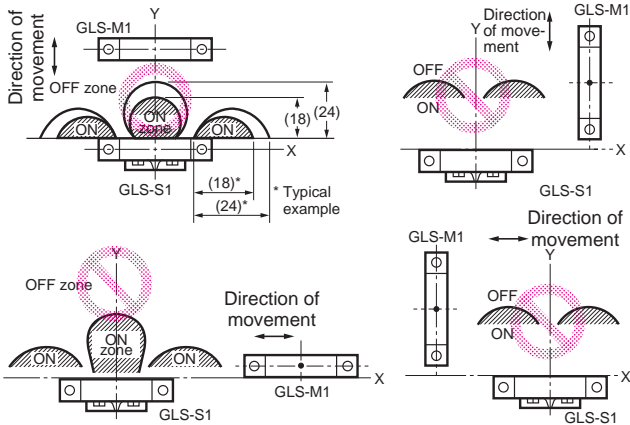


Precautions for Correct Use

Do not use this product under ambient conditions that exceed the ratings.

● **Design**

Sensing area



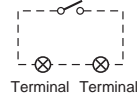
● **Mounting**

Mounting

The characteristics of the GLS will change if the GLS is mounted to ferrous materials, such as a steel plate.

● **Wiring**

Internal Wiring Diagram



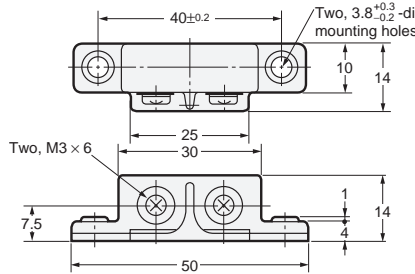
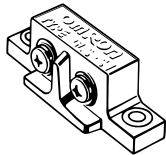
● **Miscellaneous**

Do not impose excessive shock on the Sensor (e.g., dropping the Sensor from a height of 800 mm or more). Otherwise, the Sensor may malfunction.

Dimensions

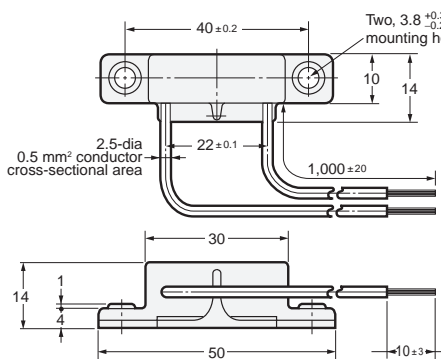
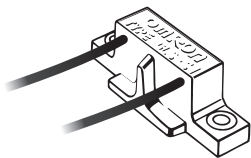
(Unit: mm)
Tolerance class IT16 applies to dimensions in this data sheet unless otherwise specified.

Sensor (terminal block)
GLS-S1

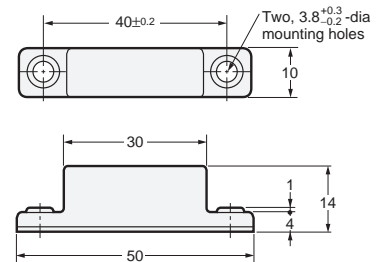
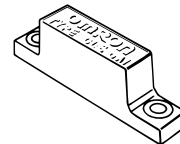


Note: Tighten each M3 screw of the terminal block to a torque of 0.59 N·m. max.

Sensor (pre-wired)
GLS-S1-L



Magnet
GLS-M1



Read and Understand This Catalog

Please read and understand this catalog before purchasing the products. Please consult your OMRON representative if you have any questions or comments.

Warranty and Limitations of Liability

WARRANTY

OMRON's exclusive warranty is that the products are free from defects in materials and workmanship for a period of one year (or other period if specified) from date of sale by OMRON.

OMRON MAKES NO WARRANTY OR REPRESENTATION, EXPRESS OR IMPLIED, REGARDING NON-INFRINGEMENT, MERCHANTABILITY, OR FITNESS FOR PARTICULAR PURPOSE OF THE PRODUCTS. ANY BUYER OR USER ACKNOWLEDGES THAT THE BUYER OR USER ALONE HAS DETERMINED THAT THE PRODUCTS WILL SUITABLY MEET THE REQUIREMENTS OF THEIR INTENDED USE. OMRON DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED.

LIMITATIONS OF LIABILITY

OMRON SHALL NOT BE RESPONSIBLE FOR SPECIAL, INDIRECT, OR CONSEQUENTIAL DAMAGES, LOSS OF PROFITS OR COMMERCIAL LOSS IN ANY WAY CONNECTED WITH THE PRODUCTS, WHETHER SUCH CLAIM IS BASED ON CONTRACT, WARRANTY, NEGLIGENCE, OR STRICT LIABILITY.

In no event shall the responsibility of OMRON for any act exceed the individual price of the product on which liability is asserted.

IN NO EVENT SHALL OMRON BE RESPONSIBLE FOR WARRANTY, REPAIR, OR OTHER CLAIMS REGARDING THE PRODUCTS UNLESS OMRON'S ANALYSIS CONFIRMS THAT THE PRODUCTS WERE PROPERLY HANDLED, STORED, INSTALLED, AND MAINTAINED AND NOT SUBJECT TO CONTAMINATION, ABUSE, MISUSE, OR INAPPROPRIATE MODIFICATION OR REPAIR.

Application Considerations

SUITABILITY FOR USE

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At the customer's request, OMRON will provide applicable third party certification documents identifying ratings and limitations of use that apply to the products. This information by itself is not sufficient for a complete determination of the suitability of the products in combination with the end product, machine, system, or other application or use.

The following are some examples of applications for which particular attention must be given. This is not intended to be an exhaustive list of all possible uses of the products, nor is it intended to imply that the uses listed may be suitable for the products:

- Outdoor use, uses involving potential chemical contamination or electrical interference, or conditions or uses not described in this catalog.
- Nuclear energy control systems, combustion systems, railroad systems, aviation systems, medical equipment, amusement machines, vehicles, safety equipment, and installations subject to separate industry or government regulations.
- Systems, machines, and equipment that could present a risk to life or property.

Please know and observe all prohibitions of use applicable to the products.

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 PRODUCTS ARE PROPERLY RATED AND INSTALLED FOR THE INTENDED USE WITHIN THE OVERALL EQUIPMENT OR SYSTEM.

PROGRAMMABLE PRODUCTS

OMRON shall not be responsible for the user's programming of a programmable product, or any consequence thereof.

Disclaimers

CHANGE IN SPECIFICATIONS

Product specifications and accessories may be changed at any time based on improvements and other reasons.

It is our practice to change model numbers when published ratings or features are changed, or when significant construction changes are made. However, some specifications of the products may be changed without any notice. When in doubt, special model numbers may be assigned to fix or establish key specifications for your application on your request. Please consult with your OMRON representative at any time to confirm actual specifications of purchased products.

DIMENSIONS AND WEIGHTS

Dimensions and weights are nominal and are not to be used for manufacturing purposes, even when tolerances are shown.

PERFORMANCE DATA

Performance data given in this catalog is provided as a guide for the user in determining suitability and does not constitute a warranty. It may represent the result of OMRON's test conditions, and the users must correlate it to actual application requirements. Actual performance is subject to the OMRON Warranty and Limitations of Liability.

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2013.2

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