

# Highly Reliable Magnetic Sensor Switching Output Type

# ALPS®

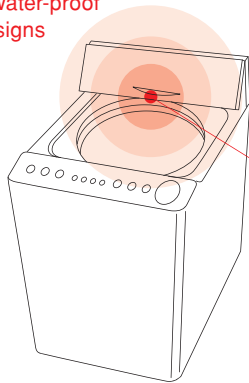
**New  
2007**

HGD□□ Series

## Non-contact sensor using high precision magnetic elements contributes to increased flexibility in set design.

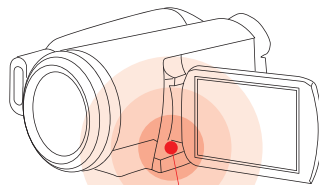
**Effect**

High flexibility in water-proof and drip-proof designs



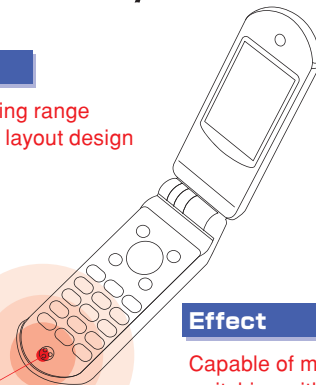
**Effect**

Wide sensing range for ease of layout design



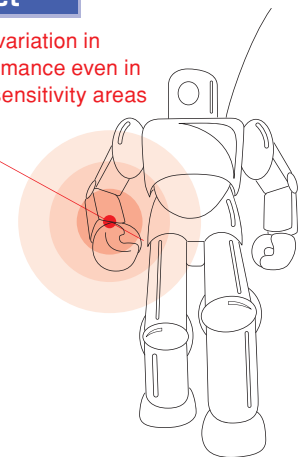
**Effect**

Capable of multiple-function switching with only one sensor (Dual Polarity/Dual Output Type)



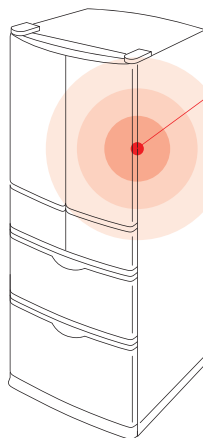
**Effect**

Little variation in performance even in high-sensitivity areas



**Effect**

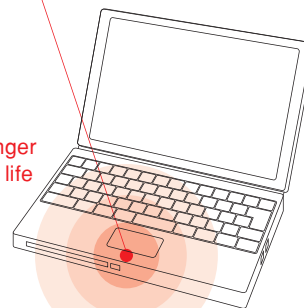
Superior operating temperature characteristics for ease of layout design



**A wide range and stable sensing increase flexibility in choosing sensor and magnet mounting locations.**

**Effect**

Contributes to longer battery operating life



**Compact size, high performance, high functionality and high reliability achieved through Alps' unique magnetic sensing device technologies, circuit design technologies and simulation technologies.**

- High sensitivity (2.0mT).
- High flexibility in sensitivity design (from high to low sensitivity).
- Compact and low-profile (2.1×2.1×0.75mm for the SON Type and 1.1×0.9×0.55mm for the MAP Type).
- Low current consumption (2.0μA Ave.).
- Diverse lineup (functions, operating magnetic field and package specifications).

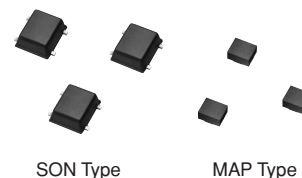


SON Type	MAP Type	Full size
0.75mm	0.55mm	
2.1mm	1.1mm	
2.1mm	0.9mm	

We offer increased flexibility in set design, improved set quality and reduced assembly processes.

# Highly Reliable Magnetic Sensor Switching Output Type

HGD□□ Series



**Contributes to increased flexibility in set design through a diverse lineup. High reliability achieved through high precision, compact, low-profile types made possible by magnetic sensing device technologies.**

## Applications

**Detects opening and closing of lids and doors of all types of consumer products, including mobile phones, laptop PCs, electronic home appliances and more.**

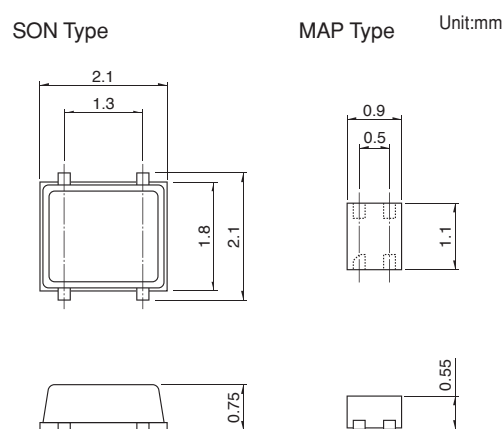
## Typical Specifications

Items	Specifications
Drive voltage	Typ. 3.0V (2.4V min. ~ 3.6V max.)
Current consumption	2.0μA Ave.

## Products List

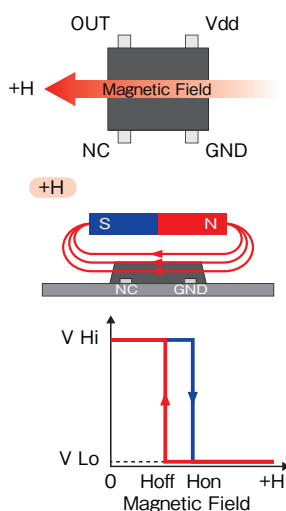
Package Specifications/Size	Function	Operating magnetic field	
MAP Type (Mold Array Package) 1.1×0.9×0.55mm	Single Polarity/Single Output	Hon 2.0 mT	Hon 3.0 mT
	Dual Polarity/Single Output		
	Dual Polarity/Dual Output		
SON Type (Small Outline Nonleaded) 2.1×2.1×0.75mm	Single Polarity/Single Output	Hon 2.0 mT	Hon 3.0 mT
	Dual Polarity/Single Output		
	Dual Polarity/Dual Output		

## Dimensions

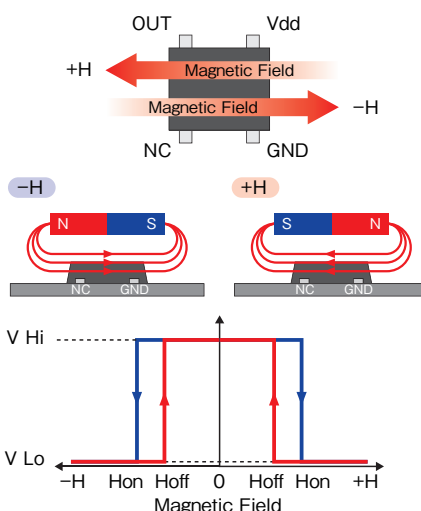


## Diagram of function types

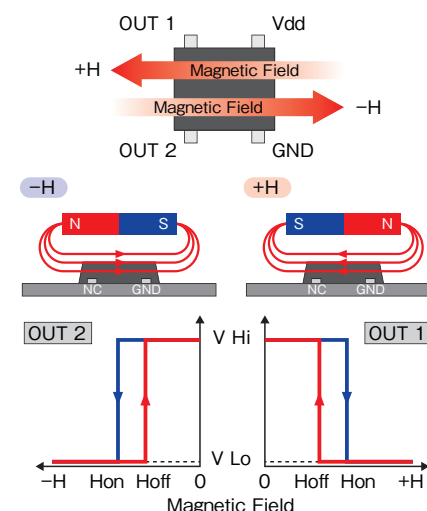
### Single Polarity/Single Output Type



### Dual Polarity/Single Output Type



### Dual Polarity/Dual Output Type



## Cautions for Use

1. Specification indicated in this catalog is outline only. When employing the product, use of an officially authorized specification for supply contract is recommended.
2. Unless specifically indicated otherwise, products in this catalog have been designed and manufactured for use in ordinary electronic equipment and devices, such as AV equipment, electric home appliances, office machines, and communications equipment. Equipment manufacturers are consequently advised that when these products are planned for equipment that requires a high degree of safety and reliability, especially those apparatuses like medical equipment, aviation and aircraft equipment, space equipment, and burglar alarm equipment, the manufacturers should assure equipment safety by providing protection circuits and redundant circuitry and should fully study the suitability of such products for the intended equipment.
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## Inquiries about Products

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