

# Magnetic Sensor Switching Output Type (Connector Connection Model)

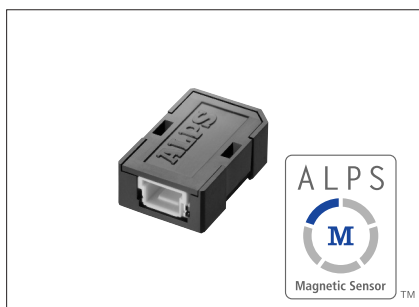
HGDFPA Series



Compact and high precision. More flexible mounting and easy connection by built-in connector.

**Magnetic Sensors**

- Piezo Sensors
- Resistive Sensors
- Resistive Sensors



Minimum order unit (pcs.) : 1,000 pcs.

**Typical Specifications**

Items	Specifications		
	HGDFPA002A	HGDFPA003A	HGDFPA004A
<b>Drive voltage</b>	Typ. 5V (4.5V min. to 5.5V max.)		Typ. 12V (10.8V min. to 13.2V max.)
<b>Supply current</b>	Typ. 1.7mA		Typ. 5.3mA
<b>Output saturation voltage</b>	max. 0.4V (Output sink current =10mA)		
<b>Output leakage current</b>	max. 1 $\mu$ A (sensor OUT "HI")		
<b>Reference detection distance (L)(mm)</b> Magnet20×20×10mm/ Surface magnetic flux430mT	Vertical installation : 80 to 98 Horizontal installation : 60 to 78	Vertical installation : 115 to 175 Horizontal installation : 70 to 95	Vertical installation : 80 to 98 Horizontal installation : 60 to 78
<b>Connector</b>	501568-0307 ( MOLEX JAPAN CO.,LTD. HOUSING 501330-0300)		
<b>Output type</b>	Open-collect type		
<b>Operating temperature range</b>	-20°C to +60°C		

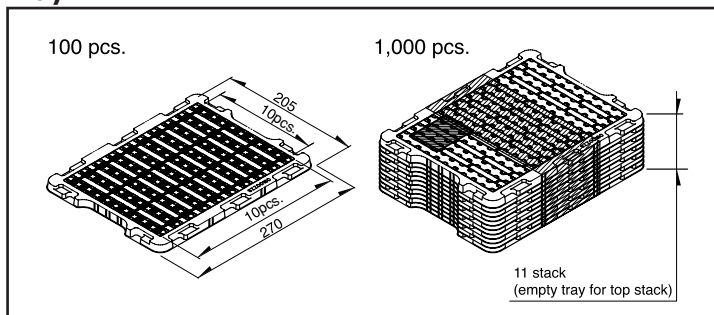
**Note**

※ Also compatible with high voltage drive. Please contact us for details.

**Packing Specifications**

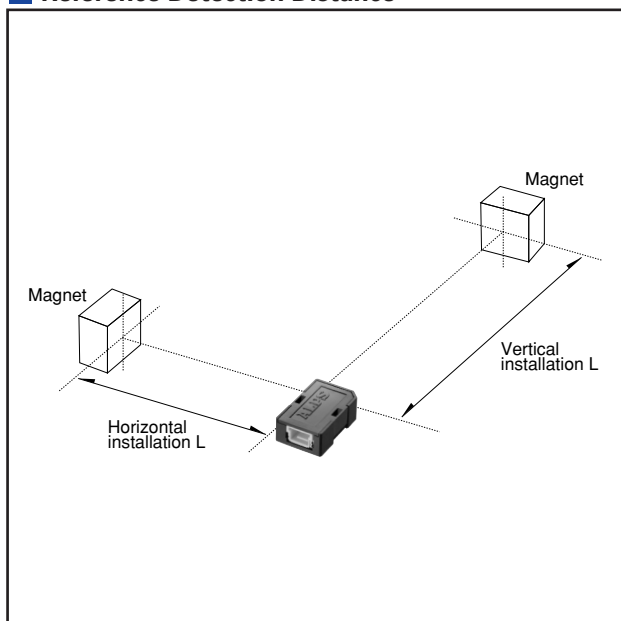
**Tray**

Unit:mm



Number of packages (pcs.)			Export package measurements (mm)
1 tray	1 case /Japan	1 case /export packing	
100	1,000	2,000	444 × 294 × 98

**Reference Detection Distance**

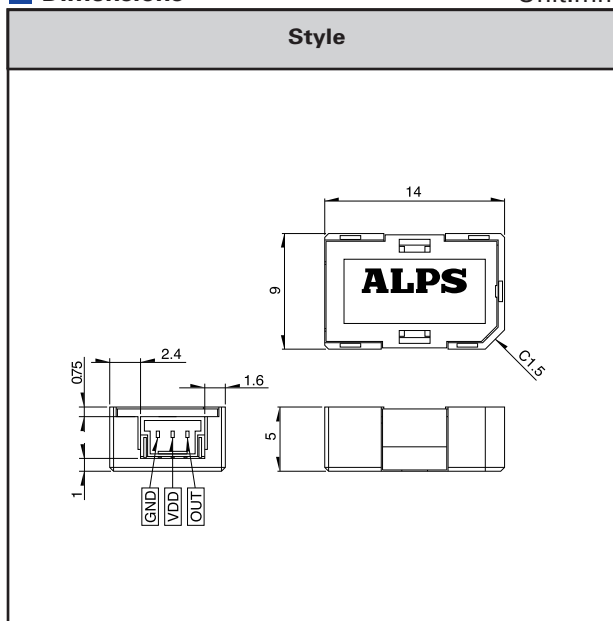


**Note**

Please place purchase orders per minimum order unit N (integer).

**Dimensions**

Unit:mm



# Index for Functions

Style	Series	Photo	Type	Package / Size		Function	Drive voltage	Operating magnetic field	Automotive use	Page					
Magnetic	HGDE□		Switching output (Detection switch)	MAP	1.3×0.9×0.55mm	Single polarity / Single output	Typ.1.8V	Hon 2.0mT	—	499					
						Dual polarity / Single output									
				SON	2.1×2.1×0.75mm	Single polarity / Single output									
						Dual polarity / Single output									
				SOT23	2.9×2.8×1.1mm	Single polarity / Single output									
						Dual polarity / Single output									
	HGDF□	SON	2.1×2.1×0.75mm	Single polarity / Single output	Typ.5V	—	—	—	—						
				Dual polarity / Single output											
		SOT23	2.9×2.8×1.1mm	Single polarity / Single output											
				Dual polarity / Single output											
HGDFPA□		Switching output (Connector Connection Model)	14×9×5mm	Dual polarity / Single Output (open collector output)	Typ.5V Typ.12V	—	—	—	501						
										Snap-in type	14.15×13.2×5mm	Dual polarity / Single output	Typ.5V	Hon 0.6mT	—
HGPP□		Latch output type (direction of rotation)	MAP	1.3×0.9×0.55mm	1-phase alternating output Sampling period 1.3msec	Typ.1.8V	Hon 1mT/ Hoff -1mT	●	503						
					SOT23					2.9×2.8×1.1mm	1-phase alternating output Sampling period 35μ sec				
			HGPD□		Incremental encoding output (direction of rotation/rotation direction)					MAP	2×1×0.55mm	2-phase alternating output Sampling period 1.3msec	Typ.1.8V	—	—
												SOT23			
HGAR□		Linear analog output (Rotation detection)	2×1.5×0.65mm	Output:Typ.±75mV (rotation angle±30°)	1.5 to 5.5V	—	—	505							
Geomagnetic	HSCD□		Geomagnetic detection	2.5×2.5×0.7mm	Output resolution 0.3 μT / LSB	Ana:2.4 to 3.6V Digi:1.7 to 2.3V	±0.6mT	—	506						

**Magnetic Sensors**  
Piezo Sensors  
Resistive Sensors  
Resistive Sensors

**Note**

●marks in "Available for automotive use" indicate that all of the series products can work at the operating temperature range from -40°C to +85°C.