

Metal Cylindrical Type APS-GMC Series

DC 2-wire Type Sensor that can be Used Just Like a Limit Switch and Helps to Reduce Wiring



Features

- **Wiring-saving**

2-wire design reduces the wiring man-hours to two thirds of the conventional 3-wire design.

- **Power-saving**

In comparison to the current consumption of 10 to 20 mA with the 3-wire design, the 2-wire design consumes a current only at 0.55 mA or less the current when the output is OFF (Leakage current), thus to achieve power-saving.

- **Long operating distance**

The longer operating distance allows easy settings.

- **Supports both sink and source loads**

Since a load can be connected on either the positive or negative terminal, the sensor is capable of driving either a current sink or current source load.

- **Operation indicator LED**

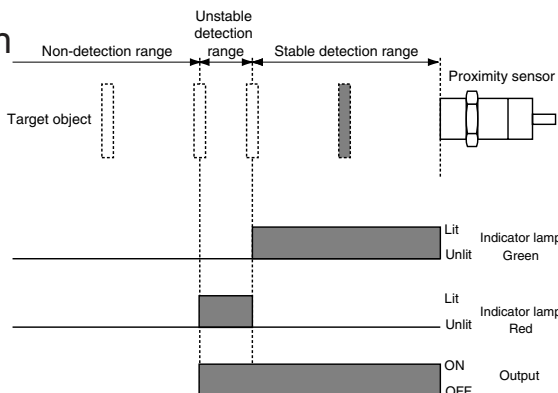
You can make reliable settings while seeing the indicator LED without having to use a clearance gauge or the like.

Types

DC 2-wire type

Shape	Operating distance (mm)	Output type	Model number
M8 Embedded type	2	N.O.	APS2-8GMC2-Z
M12 Embedded type	3	N.O.	APS3-12GMC2-Z
M18 Embedded type	7	N.O.	APS7-18GMC2-Z

Operation



Note: With a standard target object, the switching point for the indicator lamp is at a position approx. 80% of the operating distance. If the shape or material of the target object differs from the standard target object, the switching point for the indicator lamp may be shorter than approx. 80% of the operating distance.

APS-GMC

APS-GMD

APS-GM

APS-GK

APS-30/31

APS-CK

APS-S/M

APS-F/U

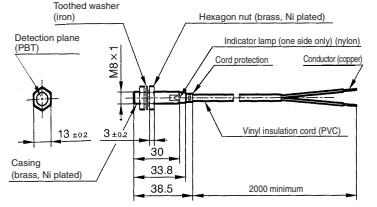
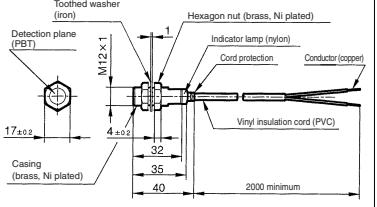
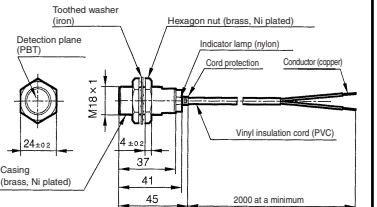
APS-10~15

APS-CU

CS

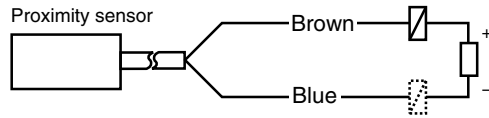
Metal Cylindrical Type APS-GMC Series


DC 2-wire, Embedded Type

Effective operating distance	3 mm ±10%	7 mm ±10%	10 mm ±10%		
Dimensions (mm)					
Remarks	Operation indicator LED feature Short-circuit protection feature				
Output type	NO	Model number	APS2-8GMC2-Z	APS3-12GMC2-Z	APS7-18GMC2-Z
		Price	¥5,900	¥6,500	¥7,350
Rated operating voltage	DC+12/+24V (DC+10 through +30V)				
Standard target object (mm)	Iron 8 × 8 × 1t		Iron 12 × 12 × 1t		Iron 18 × 18 × 1t
Rated operating distance	0 to 1.4 mm		0 to 2.1 mm		0 to 4.9 mm
Responding material	Iron/nonferrous metal (operating distance changes depending on materials.)				
Differential travel	15% or less of operating distance				
Switching frequency	2 kHz		1.5 kHz		500 Hz
Rated operating current	3 to 100 mA				
Voltage drop	3 V or less				
Leakage current	0.55 mA or less				
Indicator lamp	Operation indicator: lit red or green when output is ON Setting indicator: lit green within stable detection range				
Operating temperature	-25 to +70 °C				
Temperature characteristics	Within ±10% (of operating distance at +25 °C)				
Withstand voltage	1000 VAC, 50/60Hz (1 minute)				
Insulation resistance	50 MΩ or higher (500 VDC)				
Vibration resistance	Double amplitude: 1.5 mm, 10 to 55 Hz (2 hours in X, Y and Z directions)				
Impact resistance	980 m/s ² , within 11 ms (10 cycles each in X, Y and Z directions)				
Protection grade	IP67				
Casing material	Casing	Stainless steel		Brass nickel plated	
	Detection plane	PBT		PBT	
	Indicator lamp	Nylon		Nylon	
	Cord protection	PBT		PBT	
Lead wire	Oil-resistant cable 2 m Outer diameter (approx. ø4.1), 0.3 mm ² 2-wire			Oil-resistant cable 2 m Outer diameter (approx. ø5.7), 0.5 mm ² 2-wire	
Tightening torque	Area within 10 mm from the detection plane: 9 Nm or less Area from the above to the cable: 12 Nm or less		Area within 10 mm from the detection plane: 20 Nm or less Area from the above to the cable: 30 Nm or less		70 Nm or less
Weight	Approx. 50 g		Approx. 60 g		Approx. 130 g

Connection/Operation

DC 2-wire type -Z



Load can be connected either side (+ or -) of the power source.
Note:  indicates a load.

(Target object

Not present	Present
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Output

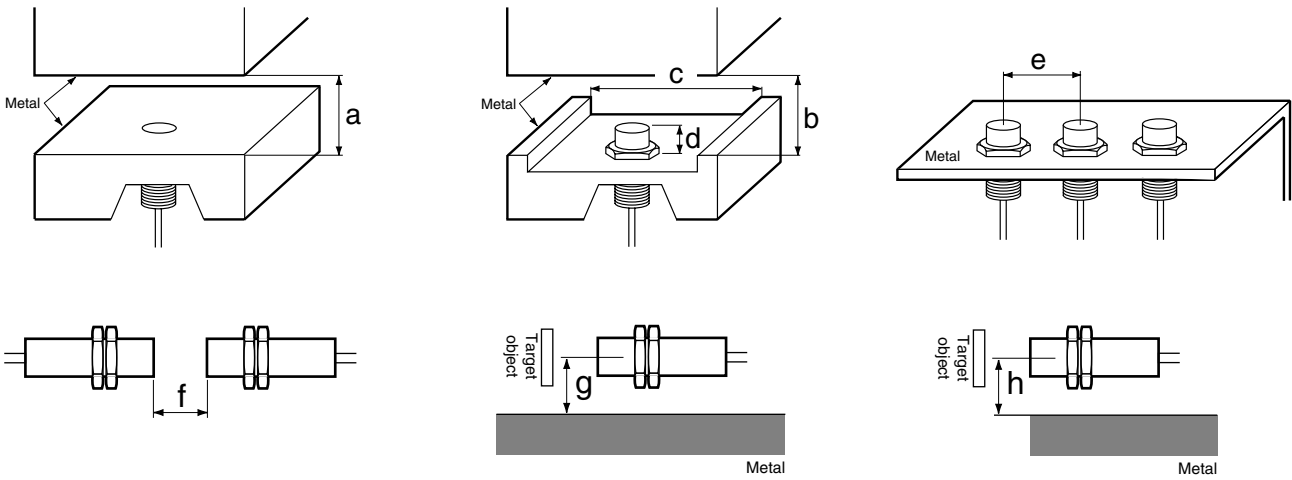
OFF	ON
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Operation indication

OFF	ON
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Installation and Influence of Surrounding Metals

A proximity sensor is susceptible to surrounding metals. When installing the sensor, secure a sufficient distance longer than the indicated dimension.



(in mm)

Model number	a	b	c	d	e	f	g	h
APS2-8GMC2-Z	8	-	-	-	16	20	8	4
APS3-12GMC2-Z	8	-	-	-	24	30	9	6
APS7-18GMC2-Z	20	-	-	-	36	50	13.5	9

APS-GMC

APS-GMD

APS-GM

APS-GK

APS-30/31

APS-CK

APS-S/M

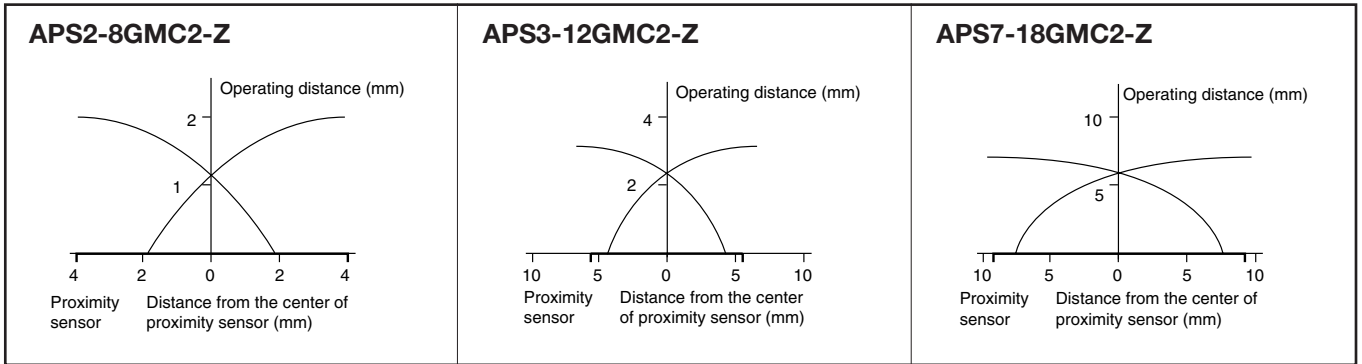
APS-F/U

APS-10~15

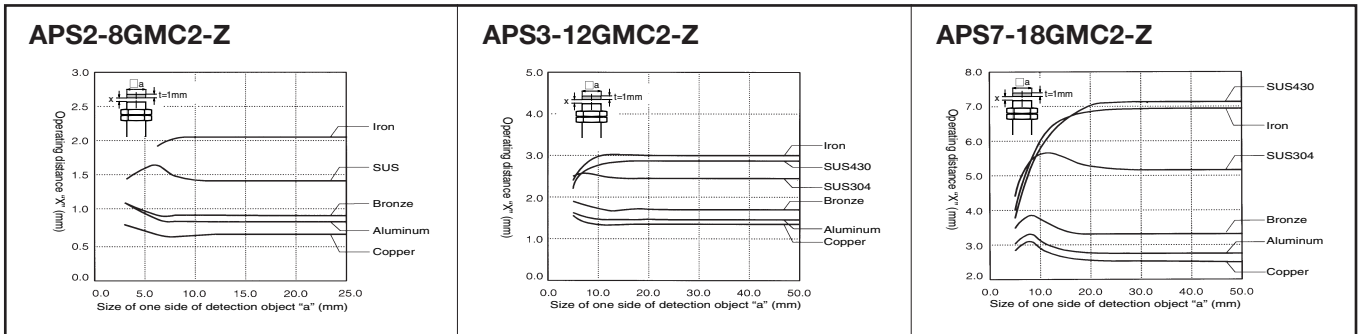
APS-CU

CS

Detection Area Diagrams (Representative Examples)



Shape Characteristics (Representative Examples)



APS-GMC

APS-GMD

APS-GM

APS-GK

APS-30/31

APS-CK

APS-S/M

APS-F/U

APS-10~15

APS-CU

CS