

APS-30/31 Series

Features

Polycarbonate Resin Cylinder, 3-wire DC System

- Can be closely installed at a minimum 15 mm interval
- Long-selling product
- DC voltage / NPN output



Type

DC Voltage Output Type/3-wire DC System

Output Form		Operating Distance (mm)				Output Form	Model Number	Remarks
M12	Non-flush Mount Type	2				NPN NO	APS-30-2N	
		4				NPN NO	APS-30-4N	
M22	Non-flush Mount Type	7				NPN NO	APS-31-7N	

* For installation, use the provided dedicated resin nut.

Note: The manufacturing of these products will be discontinued after the discontinued components are finished.

APS-30/31 Series

DC Voltage Output Type/3-wire DC System Non-flush Mount Type

P L C



H M I



SENSOR



ENCODER



COUNTER



INFORMATION

Proximity
Sensor Lineup

Selection Guide

Outline

Cylinder Type

Square Type

Capacitive Type

APS-GMC

APS-GMD

APS-GK

APS-30/31

APS-CK

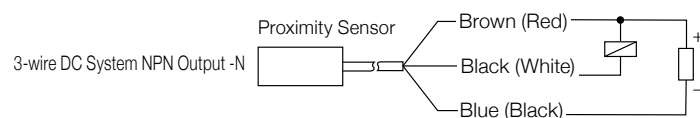
Effective Operating Distance			2 mm ±10%	4 mm ±10%	7 mm ±10%
Photo					
Remarks			Compact / High speed response Tight mounting is possible.	Compact	
Output Form	NPN NO	Model Number	APS-30-2N	APS-30-4N	APS-31-7N
		Price	Open	Open	Open
Rated Working Voltage			24 V DC (20 to 28 V DC) Allowable ripple rate: 3% p-p or less		24 V DC (10 to 30 V DC) Full wave rectification power supply can be used. (Mean value)
No-load Current			15 mA or lower	10 mA or lower	
Standard Target Object (mm)			Iron 10 x 10 x 1 t	Iron 20 x 20 x 1 t	Iron 30 x 30 x 1 t
Guaranteed Operating Distance			0 to 1.4 mm	0 to 2.8mm	0 to 4.9 mm
Reaction Material			Iron/Non ferrous metal (Operating distance changes depending on materials.)		
Hysteresis			Approx. 10%		
Operating Cycle Frequency			3 kHz	300 Hz	100 Hz
Output			Up to 60 mA (Load voltage: Not more than 40 V)		100mA (+40°C) 80mA (+50°C) (Load voltage: Not more than 50 V)
Voltage Drop			2.4 V or lower		
Off-state Current			300 μA or less		
Circuit Protection			—		Load short-circuit protection circuit
Use Ambient Temperature			-10 to +50°C		
Temperature Characteristics			Within ±20% (At the operating distance at +20°C)		
Withstand Voltage			500 V AC 50/60 Hz (1 minute)		
Insulation Resistance			50 MΩ or higher (500 V DC)		
Vibration Resistance			Double amplitude: 1.5 mm, 10 to 55 Hz (2 h each for X, Y and Z direction)		
Impact Resistance			300 m/s ² , within 11 ms (10 times each for X, Y and Z direction)		
Protection Level			IP65		IP50
Case Material			Polycarbonate (Case color: Blue for T type / Green for N type)		
Lead Wire			Oilproof vinyl chloride cable 1.5 m Outside diameter (Approx. ϕ3.5) 0.11 mm ² , 3 core		Oilproof vinyl chloride cable 1.5 m Outside diameter (Approx. ϕ6) 0.5 mm ² , 3 core
Tightening Torque			0.8 Nm or less		3 Nm or less
Weight (g)			Approx. 30		Approx. 100

* For installation, use the provided dedicated resin nut.

APS-30/31 Series

Connection and Operation

Connection/Operation



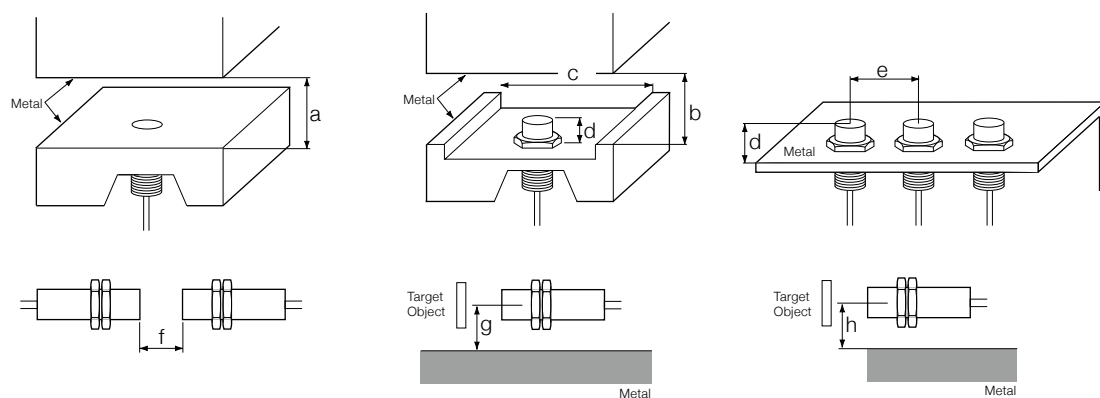
(Target Object Not Present Present)

Output OFF ON

Note: indicates a load. Operation indication is only available for models having LED.

Installation / Effects of Surrounding Metal

Since the proximity sensor is affected by surrounding metal, install it remotely enough from the described dimensions.



(Unit: mm)

Model Number	a	b	c	d	e	f	g	h
APS-30-2N	—	5	15	7	15	20	7	5
APS-30-4N	—	10	20	7	30	40	10	8
APS-31-7N	—	18	50	15	70	90	18	15

APS-GMC

APS-GMD

APS-GK

APS-30/31

APS-CK

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Connection and Operation/Dimensions

P L C



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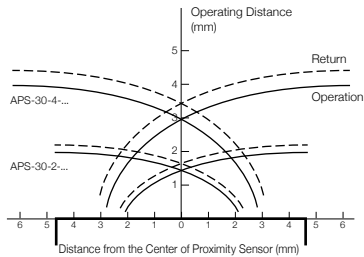
APS-GK

APS-30/31

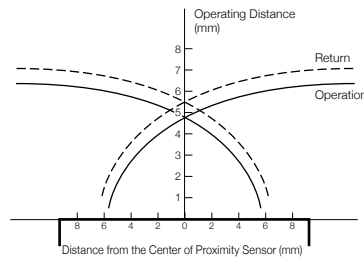
APS-CK

Detection Range Diagram (Representative Examples)

APS-30-2N
APS-30-4N

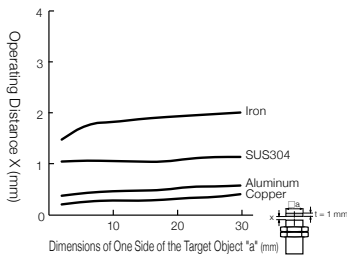


APS-31-7N

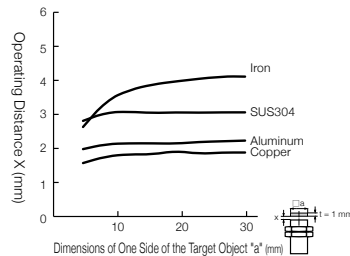


Shape Based Characteristics (Representative Examples)

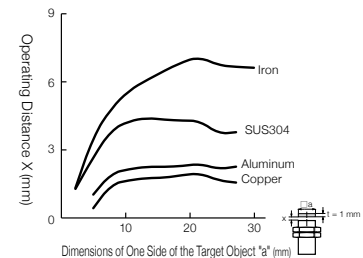
APS-30-2N



APS-30-4N

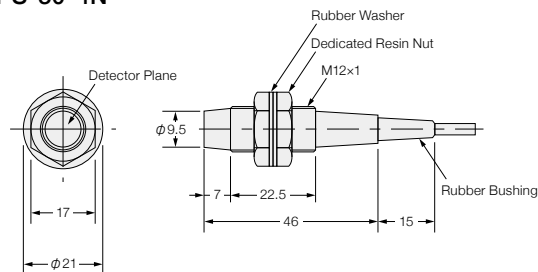


APS-31-7N



Dimensions (Unit: mm)

APS-30-2N
APS-30-4N



APS-31-7N

