■ Model Number Legend

E2A□-□□□□□-□-□□-□□

1 2 3 4 5 6 7 8 9 10 11 12

Example: E2A-M12LS04-M1-B1 Standard, M12, long barrel, shielded, Sn=4 mm, M12 connector, PNP-NO
E2A-M08KN04-WP-B1 5M Standard, M8, short barrel, non-shielded, Sn=4 mm, pre-wired PVC cable, PNP-NO, cable length=5 m

1. Basic name

E2A

2. Sensing technology

Blank: Standard double distance

3. Housing shape and material

M: Cylindrical, metric threaded, brass

S: Cylindrical, metric threaded, stainless steel

4. Housing size

08: 8 mm

12: 12 mm

18: 18 mm

30: 30 mm

5. Barrel length

K: Standard length

L: Long body

6. Shield

S: Shielded

N: Non-shielded

7. Sensing distance

Numeral: Sensing distance: e.g. 02=2 mm, 16=16 mm

8. Kind of connection

WP: Pre-wired, PVC

M1: M12 connector (4-pole)

M3: M8 connector (4-pole)

M5: M8 connector (3-pole)

9. Power source and output

B: DC, 3-wire, PNP open collector

C: DC, 3-wire, NPN open collector

D: DC, 2-wire

E: DC, 3-wire, NPN voltage output

F: DC, 3-wire, PNP voltage output

10. Operation mode

1: Normally open (NO)

2: Normally closed (NC)

11. Specials (e.g., cable material, oscillating frequency)

12. Cable length

Blank: Connector type

Numeral: Cable type

Specifications

■ DC 3-wire Models

Item		Size	M8		M12	
		Type	Shielded	Non-shielded	Shielded	Non-shielded
			E2A-M08□S02-M1-B1 E2A-M08□S02-M1-B2 E2A-M08□S02-M1-C1 E2A-M08□S02-M1-C2 E2A-S08□S02-□□-B1 E2A-S08□S02-□□-B2 E2A-S08□S02-□□-C1 E2A-S08□S02-□□-C2	E2A-M08□N04-M1-B1 E2A-M08□N04-M1-B2 E2A-M08□N04-M1-C1 E2A-M08□N04-M1-C2 E2A-S08□N04-□□-B1 E2A-S08□N04-□□-B2 E2A-S08□N04-□□-C1 E2A-S08□N04-□□-C2	E2A-M12□S04-□□-B1 E2A-M12□S04-□□-B2 E2A-M12□S04-□□-C1 E2A-M12□S04-□□-C2	E2A-M12□N08-□□-B1 E2A-M12□N08-□□-B2 E2A-M12□N08-□□-C1 E2A-M12□N08-□□-C2
Sensing distance			2 mm ± 10%	4 mm ± 10%	4 mm ± 10%	8 mm ± 10%
Setting distance			0 to 1.6 mm	0 to 3.2 mm	0 to 3.2 mm	0 to 6.4 mm
Differential travel			10% max. of sensing distance			
Target			Ferrous metal (The sensing distance decreases with non-ferrous metal.)			
Standard target (mild steel ST37)			8×8×1 mm	12×12×1 mm	12×12×1 mm	24×24×1 mm
Response frequency (See note 1.)			1,500 Hz	1,000 Hz	1,000 Hz	800 Hz
Power supply voltage (operating voltage range)			12 to 24 VDC. Ripple (p-p): 10% max. (10 to 32 VDC)			
Current consumption (DC 3-wire)			10 mA max.			
Output type			-B models: PNP open collector -C models: NPN open collector			
Control output	**Load current (See note 2.)**		200 mA max. (32 VDC max.)			
	Residual voltage		2 V max. (under load current of 200 mA with cable length of 2 m)			
Indicator			Operation indicator (Yellow LED)			
Operation mode (with sensing object approaching)			-B1/-C1 models: NO -B2/-C2 models: NC For details, refer to the timing charts.			
Protection circuit			Power source circuit reverse polarity protection, Surge suppressor, Short-circuit protection		Output reverse polarity protection, Power source circuit reverse polarity protection, Surge suppressor, Short-circuit protection	
Ambient air temperature			Operating: −40°C to 70°C, Storage: −40°C to 85°C (with no icing or condensation)			
Temperature influence (See note 2.)			±10% max. of sensing distance at 23°C within temperature range of −25°C to 70°C ±15% max. of sensing distance at 23°C within temperature range of −40°C to 70°C			
Ambient humidity			Operating: 35% to 95%, Storage: 35% to 95%			
Voltage influence			±1% max. of sensing distance in rated voltage range ±15%			
Insulation resistance			50 MΩ min. (at 500 VDC) between current carry parts and case			
Dielectric strength			1,000 VAC at 50/60 Hz for 1 min between current carry parts and case			
Vibration resistance			10 to 55 Hz, 1.5-mm double amplitude for 2 hours each in X, Y and Z directions			
Shock resistance			500 m/s², 10 times each in X, Y and Z directions		1,000 m/s², 10 times each in X, Y and Z directions	
Standard and listings (See note 3.)			IEC60529: IP67, Degree of protection EN60947-5-2: EMC			
Connection method			-WP models: Pre-wired models (Standard length: 2 m) -M1 models: M12 4-pin connector models -M5 models: M8 3-pin connector models			
Weight (packaged)	**Pre-wired model**		Approx. 65 g		Approx. 85 g	
	M12 connector model		M12 connector models: Approx. 20 g M8 connector models: Approx. 15 g		Approx. 35 g	
Material	**Case**		Stainless steel or brass-nickel plated		Brass-nickel plated	
	Sensing surface		PBT			
	Cable		PVC			
	Clamping nut		Brass-nickel plated			

Note 1. The response frequency is an average value. Measurement conditions are as follows: standard target, a distance of twice the standard target distance between targets, and a setting distance of half the sensing distance.

2. When using any model at an ambient temperature between −40°C and −25°C and a power voltage between 30 and 32 VDC, use a load current of 100 mA max.,

3. For USA and CANADA : use class 2 circuit only.