

## Product Discontinuation Notices

August 1, 2011

Proximity Sensors

No. 2011245E

### Discontinuation Notice of Proximity Sensor E2CA series

#### Product Discontinuation

#### Recommended Replacement



E2CA series



ZX-E series

**Discontinuation date : The end of March, 2012**

#### Caution on recommended replacement

- Operation characteristics (Engineering data) will be changed.
  - No oil resistant.
  - Appearance will be changed.
- Connection method of sensor units will be changed to connector.  
Connection method of amplifier units will be changed to pre-wiring.

#### Difference from discontinued product

Model	Body Color	Dimensions	Wire connection	Mounting Dimensions	Characteristics	Operation ratings	Operation methods
ZX-E series	--	--	--	--	--	--	--

\*\* : Fully compatible

\* : The change is a little/Almost compatible

-- : Not compatible

- : No corresponding specification

### Product Discontinuation and recommended replacement

Product discontinuation	Recommended replacement
E2CA-X1R5A 3M	ZX-ED02
E2CA-X1R5A 5M	
E2CA-X2A 3M	ZX-EM02
E2CA-X2A 5M	
E2CA-X5A 3M	ZX-EM07M
E2CA-X5A 5M	
E2CA-X10A 3M	-
E2CA-X10A 5M	
E2CA-AL4C	ZX-EDA11 2M (Please select ZX-EDA41 2M if PNP output is requested.)
E2CA-AL4D	
E2CA-AL4E	
E2CA-AL4F	
E2CA-AN4C	-
E2CA-AN4D	
E2CA-AN4E	
E2CA-AN4F	

### Body color

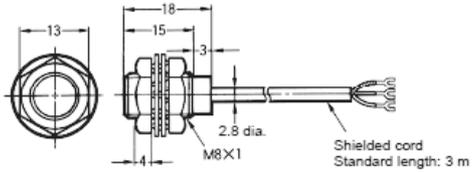
Product discontinuation E2CA series	Recommendable replacement ZX-E series
Sensor unit : Silver Amplifier unit : Light gray	Sensor unit : Silver Amplifier unit : Black

**Dimensions**

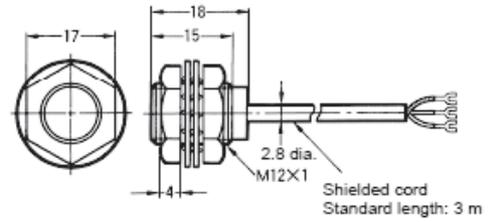
**Product discontinuation  
E2CA series**

**Sensor unit**

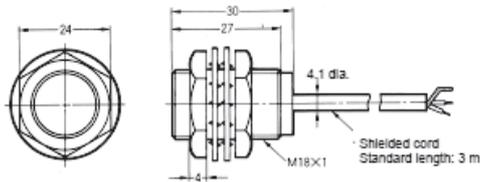
E2CA-X1R5 A



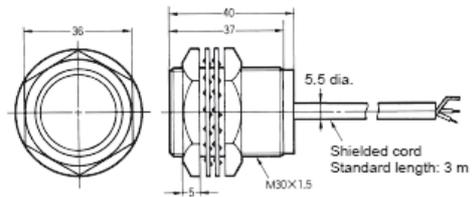
E2CA-X2A



E2CA-X5A

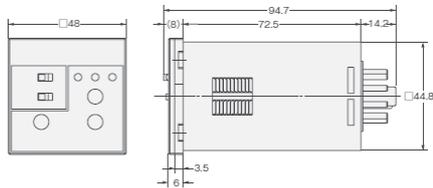


E2CA-X10A



**Amplifier unit**

E2CA-A□4□

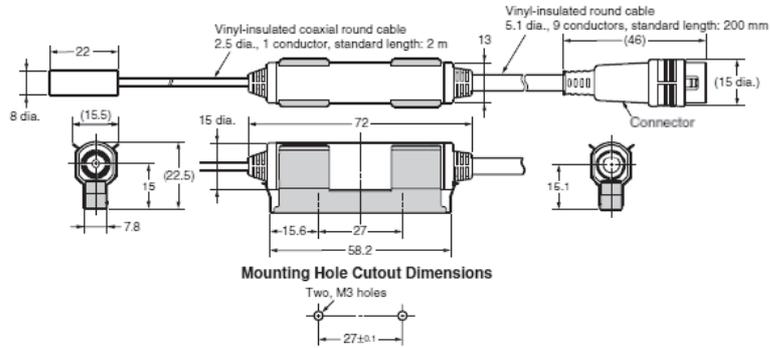


## Dimensions

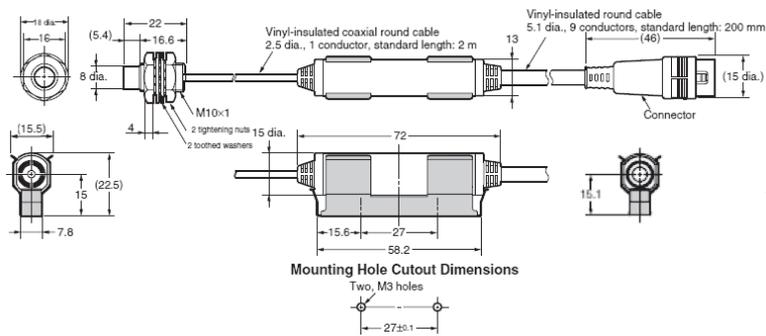
### Recommendable replacement ZX-E series

#### Sensor unit

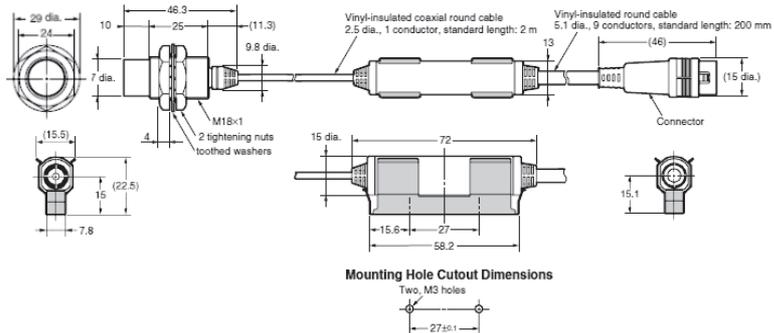
##### ZX-ED02



##### ZX-EM02



##### ZX-EM07M

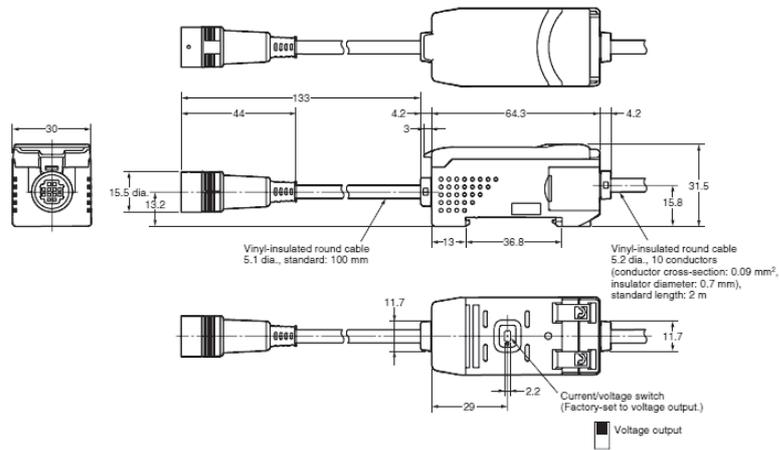


# Dimensions

## Recommendable replacement ZX-E series

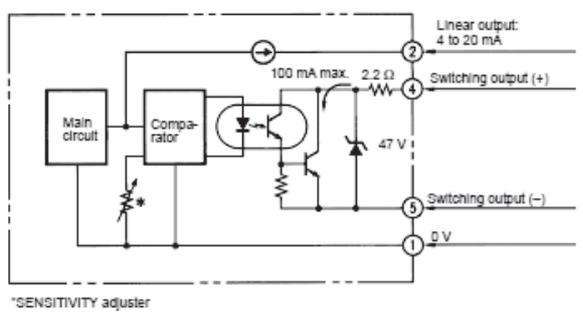
### Amplifier unit

ZX-EDA11



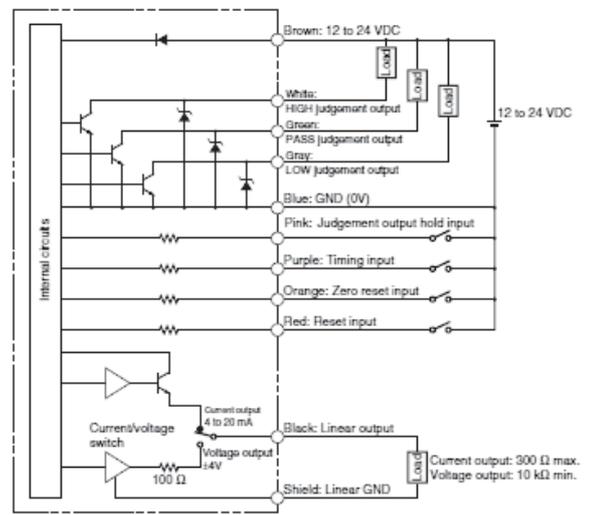
# Wire Connection

## Product discontinuation E2CA series

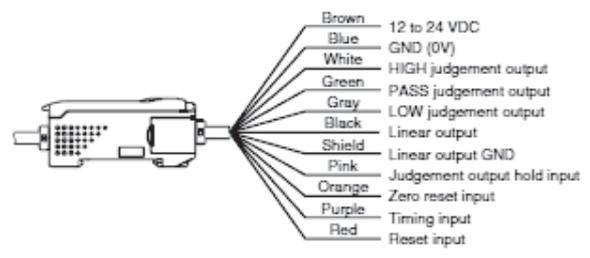
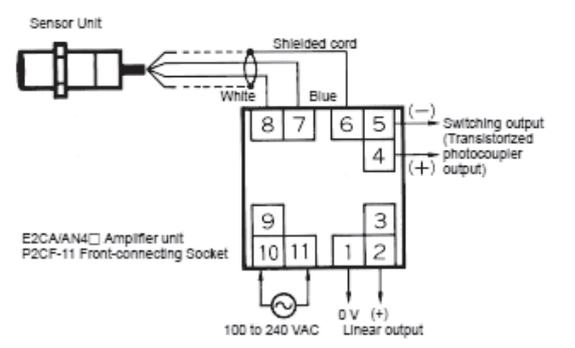
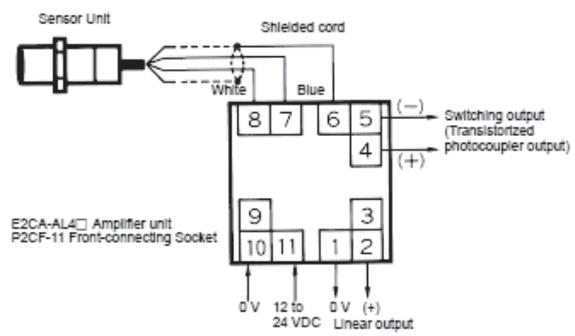


\*SENSITIVITY adjuster

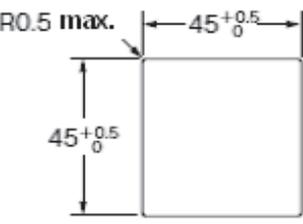
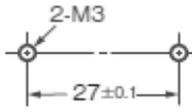
## Recommended replacement ZX-E series



### Connections between Sensors Units and Amplifier Units



## Mounting dimensions

Product discontinuation E2CA series	Recommendable replacement ZX-E series																		
<p><b>Sensor unit</b></p>  <table border="1"> <thead> <tr> <th>Model</th> <th>F (mm)</th> </tr> </thead> <tbody> <tr> <td>E2CA-X1R5A</td> <td><math>\varnothing 8.5 +0.5/0</math></td> </tr> <tr> <td>E2CA-X2A</td> <td><math>\varnothing 12.5 +0.5/0</math></td> </tr> <tr> <td>E2CA-X5A</td> <td><math>\varnothing 18.5 +0.5/0</math></td> </tr> <tr> <td>E2CA-X10A</td> <td><math>\varnothing 30.5 +0.5/0</math></td> </tr> </tbody> </table> <p><b>Adapter for flush mounting (adapter used)</b></p> 	Model	F (mm)	E2CA-X1R5A	$\varnothing 8.5 +0.5/0$	E2CA-X2A	$\varnothing 12.5 +0.5/0$	E2CA-X5A	$\varnothing 18.5 +0.5/0$	E2CA-X10A	$\varnothing 30.5 +0.5/0$	<p><b>Sensor unit</b></p>  <table border="1"> <thead> <tr> <th>Model</th> <th>F (mm)</th> </tr> </thead> <tbody> <tr> <td>ZX-ED02</td> <td><math>\varnothing 8.5 +0.5/0</math></td> </tr> <tr> <td>ZX-EM02</td> <td><math>\varnothing 10.5 +0.5/0</math></td> </tr> <tr> <td>ZX-EM07M</td> <td><math>\varnothing 18.5 +0.5/0</math></td> </tr> </tbody> </table> <p>Sensor unit (Preamplifier) Screw mounting</p>  <p><b>Amplifier unit</b> Din track mounting</p>	Model	F (mm)	ZX-ED02	$\varnothing 8.5 +0.5/0$	ZX-EM02	$\varnothing 10.5 +0.5/0$	ZX-EM07M	$\varnothing 18.5 +0.5/0$
Model	F (mm)																		
E2CA-X1R5A	$\varnothing 8.5 +0.5/0$																		
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## Operation methods

Product discontinuation E2CA series	Recommendable replacement ZX-E series
Operation with slide switch and volume	Operation with slide switch and push button.

## Ratings and Specifications

### Sensor unit (Common specifications)

Item		Model	Product discontinuation E2CA-X1R5A / X2A / X5A / X10A	Recommended replacement ZX-ED02 / EM02 / EM07M
Sensing object			Ferrous metal	
Ambient temperature range			Operating and storage: -25 to +70 °C (with no icing or condensation)	Operating: -10 to +60 °C Storage: -20 to +70 °C (with no icing or condensation)
Ambient humidity range			Operating and storage: 35% to 95% (with no condensation)	Operating and storage: 35% to 85% (with no condensation)
Insulation resistance			50 MΩ min. (at 500 VDC)	
Vibration resistance			Destruction: 10 to 55 Hz with a 1.5-mm double amplitude for 2 hours each in X, Y, Z directions	
Shock resistance			Destruction: 500 m/s <sup>2</sup> , for 3 times each in X, Y, Z directions	
Degree of protection			IEC 60529 IP67 (oil resistance to OMRON in-house standard)	IEC 60529 IP67
Connection method			Pre-wired model	Connector model
Materials	Case		Brass	Brass (Preamplifier: PES)
	Sensing surface		ABS	Heat-resistant ABS
	Tightening nut		Brass (nickel-plated)	Brass (nickel-plated) (except ZX-ED02)
	Toothed washer		Iron (zinc-plated)	Iron (zinc-plated) (except ZX-ED02)
Accessories			-	Mounting bracket for amplifier, Instruction manual

### Sensor unit (Individual specifications)

Item	Model	Product discontinuation				Recommended replacement		
		E2CA-X1R5A	E2CA-X2A	E2CA-X5A	E2CA-X10A	ZX-ED02	ZX-EM02	ZX-EM07M
Sensing range		0.3 to 1.5 mm	0.4 to 2 mm	1 to 5 mm	2 to 10 mm	0 to 2 mm		0 to 7 mm
Standard sensing object		Iron 8×8×1 mm	Iron 12×12×1 mm	Iron 18×18×1 mm	Iron 30×30×1 mm	Iron 30×30×3 mm		Iron 60×60×3 mm
Linear output	Resolution	0.05% F.S.	0.05% F.S.	0.05% F.S.	0.05% F.S.	0.8μm		2.8μm
	Linearity	±2% F.S.	±1.5% F.S.	±1.5% F.S.	±2% F.S.	±0.5% F.S.		±10% F.S.

## Ratings and Specifications

### Amplifier unit

Item	Model	Product discontinuation		Recommended replacement
		E2CA-AN4[]	E2CA-AL4[]	ZX-EDA11
Power supply voltage		100 to 240 VAC 50/60 Hz	12 to 24VDC, ripple(p-p) 10% max.	12 to 24VDC $\pm$ 10%, ripple(p-p) 10% max.
Current consumption		60 mA max.	70 mA max.	140 mA max.
Linear output		4 to 20 mA, (with permissible load resistance of 0 to 300 $\Omega$ )		Current output: 4 to 20 mA/F.S., Max. load resistance: 300 $\Omega$ Voltage output: $\pm$ 4 V ( $\pm$ 5 V, 1 to 5 V), Output impedance: 100 $\Omega$
Switching output		100 mA max. transistor photocoupler output at 40 VDC max with residual voltage of 2 V max.		NPN open-collector outputs, 30 VDC, 50 mA max. Residual voltage: 1.2 V max.
Voltage influence (including sensor)		$\pm$ 0.5% FS max. of linear output current at a voltage between 90% and 110% of the rated power supply voltage	$\pm$ 0.5% FS max. of linear output current at a voltage between 80% and 120% of the rated power supply voltage	0.5% F.S. of linear output value at $\pm$ 20% of power supply voltage
Ambient temperature range		Operating and storage: -10 to 55 °C (with no icing or condensation)		Operating and storage: 0 to 50 °C (with no icing or condensation)
Ambient humidity range		Operating and storage: 35% to 85% (with no condensation)		Operating and storage: 35% to 85% (with no condensation)
Insulation resistance		50 M $\Omega$ min. (at 500 VDC)		20 M $\Omega$ min. (at 500 VDC)
Dielectric strength		1,500 VAC at 50/60 Hz for 1 minute	1,000 VAC at 50/60 Hz for 1 minute	1,000 VAC at 50/60 Hz for 1 minute
Vibration resistance		10 to 25 Hz, 2-mm double amplitude for 2 hours each in X, Y, and Z directions		10 to 150 Hz, 0.7-mm double amplitude for 80 minutes each in X, Y, and Z directions
Shock resistance		100 m/s <sup>2</sup> , for 3 times each in X, Y, Z directions		300 m/s <sup>2</sup> , for 3 times each in X, Y, Z directions
Degree of protection		IEC 60529 IP40		IEC 60529 IP40
Connection method		Terminal method		Pre-wired model
Material	Case	Polycarbonate, PPO		Polybutylene terephthalate
	Cover	-		Polycarbonate
Accessories		Instruction manual		Instruction manual