PRODUCT NEWS

Correction Reissue

Product Discontinuation Notices

Proximity Sensors

OMRON

Issue Date
August 4, 2014

No. 2014038CE(3)

Discontinuation Notice of Cylindrical Proximity Sensor Model E2E series.

<< REQUEST >>

There was modification in portion of Product Discontinuation notices of Product News No. 2014038CE(2) of May 2014 issue.
The changed points are as follows.
- The specifications and the characteristics of E2E-C05[] series are showed.

Please abolish old edition, replace the latest No. 2014038CE(3).

Product Discontinuation		Recommended Replacement
Cylindrical Proximity Sensor		Small-diameter Proximity Sensor
Model E2E-CR6[] series		**Model E2E-C03[] series or -C04[] series or No recommended replacement**
Model E2E-CR8[] series	→	**Model E2E-C04[] series**
Model E2E-C1[] series		**Model E2E-C05[] series or No recommended replacement**
Model E2E-X1[] series		**Model E2E-S05[] series**

[Discontinuation date]

The end of March, 2015

[Caution on recommended replacement]

The color of the operation indicator is changed to Yellow from Red.

[Difference from discontinued product]

Recommended replacement Model	Body Color	Dimen -sions	Wire connection	Mounting Dimensions	Charact -eristics	Operation ratings	Operation methods
Model E2E-C03[] series	--	**	**	**	*	*	**
Model E2E-C04[] series	--	**	**	**	*	*	**
Model E2E-C05[] series	--	**	**	**	*	*	**
Model E2E-S05[] series	--	**	**	**	*	*	**

** : Compatible
* : The change is a little/Almost compatible
-- : Not compatible
- : No corresponding specification

[Product Discontinuation and recommended replacement]

Product discontinuation	Recommended replacement
E2E-C1B1 2M	E2E-C05S01-WC-B1 2M will be released on July 2014.
E2E-C1B1 5M	E2E-C05S01-WC-B1 5M will be released on July 2014
E2E-C1B2 2M	E2E-C05S01-WC-B2 2M will be released on July 2014
E2E-C1C1 10M	E2E-C05S01-WC-C1 5M will be released on July 2014
E2E-C1C1 2M	E2E-C05S01-WC-C1 2M will be released on July 2014
E2E-C1C1 5M	E2E-C05S01-WC-C1 5M will be released on July 2014
E2E-C1C1-4 0.6M	No recommended replacement
E2E-C1C1-R 2M	E2E-C05S01-WC-C1-R 2M will be released on July 2014
E2E-C1C1-R 5M	E2E-C05S01-WC-C1-R 5M will be released on July 2014
E2E-C1C2 2M	E2E-C05S01-WC-C2 2M will be released on July 2014
E2E-C1C2 5M	E2E-C05S01-WC-C2 5M will be released on July 2014
E2E-C1C2-4 0.6M	No recommended replacement
E2E-C1C2-R 2M	E2E-C05S01-WC-C2-R 2M will be released on July 2014
E2E-C1R5MC1-10 5M	No recommended replacement
E2E-CR6B1 2M	E2E-C03SR8-WC-B1 2M
E2E-CR6B2 2M	E2E-C03SR8-WC-B2 2M
E2E-CR6B2-1 1M	E2E-C03SR8-WC-B2 2M E2E-C04S12-WC-B2 2M
E2E-CR6B2-2 1M	No recommended replacement
E2E-CR6C1 2M	E2E-C03SR8-WC-C1 2M
E2E-CR6C2 2M	E2E-C03SR8-WC-C2 2M
E2E-CR8B1 0.5M	E2E-C04S12-WC-B1 2M
E2E-CR8B1 2M	E2E-C04S12-WC-B1 2M
E2E-CR8B1 5M	E2E-C04S12-WC-B1 5M
E2E-CR8B1-10 2M	E2E-C04S12-WC-B1 2M
E2E-CR8B1-11 0.042M	E2E-C04S12-WC-B1 2M
E2E-CR8B1-12 0.042M	E2E-C04S12-WC-B1 2M
E2E-CR8B1-12 2M	E2E-C04S12-WC-B1 2M
E2E-CR8B1-M5	E2E-C04S12-MC-B1
E2E-CR8B1-R 5M	E2E-C04S12-WC-B1-R 5M E2E-C04S12-MC-B1
E2E-CR8B2 2M	E2E-C04S12-WC-B2 2M
E2E-CR8B2 5M	E2E-C04S12-WC-B2 5M
E2E-CR8B2-M5	E2E-C04S12-MC-B2
E2E-CR8B2-R 2M	E2E-C04S12-WC-B2-R 2M E2E-C04S12-MC-B2
E2E-CR8C1 10M	E2E-C04S12-MC-C1
E2E-CR8C1 2M	E2E-C04S12-WC-C1 2M
E2E-CR8C1 5M	E2E-C04S12-WC-C1 5M
E2E-CR8C1-10 2M	E2E-C04S12-WC-C1 2M
E2E-CR8C1-2 2M	E2E-C04S12-MC-C1
E2E-CR8C1-M5	E2E-C04S12-MC-C1
E2E-CR8C1-R 2M	E2E-C04S12-WC-C1-R 2M E2E-C04S12-MC-C1
E2E-CR8C1-R 5M	E2E-C04S12-WC-C1-R 5M E2E-C04S12-MC-C1

Product discontinuation	Recommended replacement
E2E-CR8C2 2M	E2E-C04S12-WC-C2 2M
E2E-CR8C2 5M	E2E-C04S12-WC-C2 5M
E2E-CR8C2-R 2M	E2E-C04S12-WC-C2-R 2M E2E-C04S12-MC-C2
E2E-X1B1 0.4M	E2E-S05S12-WC-B1 2M
E2E-X1B1 0.8M	E2E-S05S12-WC-B1 2M
E2E-X1B1 2M	E2E-S05S12-WC-B1 2M
E2E-X1B1 5M	E2E-S05S12-WC-B1 5M
E2E-X1B1-9-N 2M	E2E-S05S12-WC-B1 2M
E2E-X1B1-G1 2M	E2E-S05S12-WC-B1 2M
E2E-X1B1-M1J 0.3M	E2E-S05S12-CJ-B1 0.3M
E2E-X1B1-M5	E2E-S05S12-MC-B1
E2E-X1B1-R 2M	E2E-S05S12-WC-B1-R 2M E2E-S05S12-MC-B1
E2E-X1B1-R 5M	E2E-S05S12WC-B1-R 5M E2E-S05S12-MC-B1
E2E-X1B2 2M	E2E-S05S12-WC-B2 2M
E2E-X1B2 5M	E2E-S05S12-WC-B2 5M
E2E-X1B2-M1J 0.3M	E2E-S05S12-CJ-B2 0.3M
E2E-X1B2-M5	E2E-S05S12-MC-B2
E2E-X1C1 10M	E2E-S05S12-MC-C1
E2E-X1C1 2M	E2E-S05S12-WC-C1 2M
E2E-X1C1 5M	E2E-S05S12-WC-C1 5M
E2E-X1C1-3 2M	E2E-S05S12-WC-C1 2M
E2E-X1C1-G1 2M	E2E-S05S12-WC-C1 2M
E2E-X1C1-M5	E2E-S05S12-MC-C1
E2E-X1C1-R 2M	E2E-S05S12-WC-C1-R 2M E2E-S05S12-MC-C1
E2E-X1C1-R 5M	E2E-S05S12-WC-C1-R 5M E2E-S05S12-MC-C1
E2E-X1C2 2M	E2E-S05S12-WC-C2 2M
E2E-X1C2 5M	E2E-S05S12-WC-C2 5M
E2E-X1C2-9-N 2M	E2E-S05S12-WC-C2 2M
E2E-X1C2-M5	E2E-S05S12-MC-C2
E2E-X1C2-R 2M	E2E-S05S12-WC-C2-R 2M E2E-S05S12-MC-C2
E2E-CR8C2-M5	E2E-C04S12-MC-C2
E2E-X1C2-R-N 5M	E2E-S05S12-WC-C2-R 5M E2E-S05S12-MC-C2

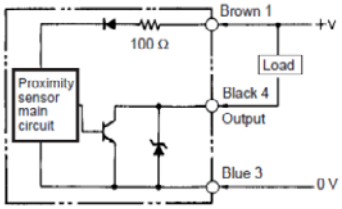
[Body color]

Product discontinuation Model E2E-CR6[]/-CR8[]/-C1[]/-X[] series	Recommendable replacement Model E2E-C03[]/-C04[]/-C05[]/-S05[] series
Case: Silver **Detecting surface: Light Gray**	**Case: Silver** **Detecting surface: Black**

[Wire connection]

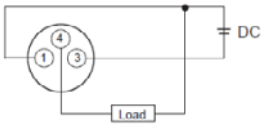
Product discontinuation Model E2E-CR6[]/-CR8[]/-C1[]/-X[] series	Recommendable replacement Model E2E-C03[]/-C04[]/-C05[]/-S05[] series

E2E-C/X□C□
NPN Open-collector Output

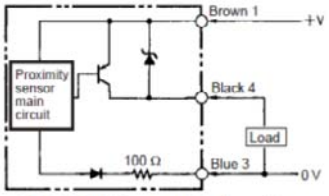


* E2E-CR6□ has no 100-Ω resistance.

E2E-CR8C[]-M5/E2E-X1C[]-M5

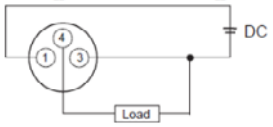


E2E-C/X□B□
PNP Open-collector Output

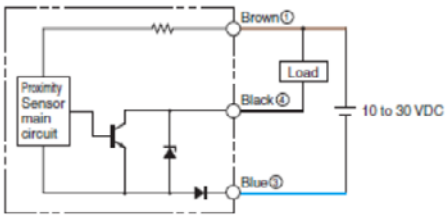


* E2E-CR6□ has no 100-Ω resistance.

E2E-CR8B[]-M5/E2E-X1B[]-M5



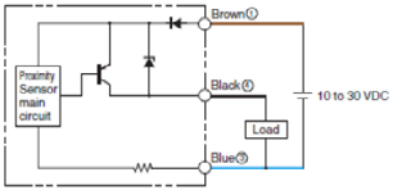
E2E-C/S[][][]-[][]-C[]



Connector pin arrangement

M8

E2E-C/S[][][]-[][]-B[]



Connector pin arrangement

M8

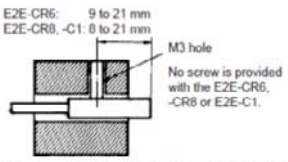
[Mounting dimensions]

Product discontinuation Model E2E-CR6[]/-CR8[]/-C1[]/-X[] series	Recommendable replacement Model E2E-C03[]/-C04[]/-C05[]/-S05[] series

Mounting Holes

Dimensions	3 dia.	4 dia.	M5	5.4 dia.
F (mm)	$3.3^{+0.3}_{0}$ dia.	$4.2^{+0.5}_{0}$ dia.	$5.5^{+0.5}_{0}$ dia.	$5.7^{+0.5}_{0}$ dia.

Refer to the following to mount the E2E-CR6, -CR8 and E2E-C1 non-screw models.

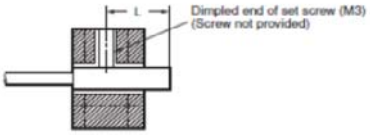


Tighten the screw to a torque of 0.2 N·m maximum to secure the E2E-CR6, -CR8 and a torque of 0.4 N·m maximum to secure the E2E-C1.

Mounting Hole Dimensions

Dimension	3 dia.	4 dia.	5.4 dia	6.5 dia.	M4	M5
F (mm)	$3.3^{+0.5}_{0}$	$4.2^{+0.5}_{0}$	$5.7^{+0.5}_{0}$	$7^{+0.5}_{0}$	$4.5^{+0.5}_{0}$	$5.5^{+0.5}_{0}$

〈Mounting unthreaded cylindrical models (E2E-C□)〉



Size / Item	3 dia.		4 dia.		5.4 dia	6.5 dia.	
	Shielded	Unshielded	Shielded	Unshielded	Shielded	Shielded	Unshielded
L *	9 to 21 mm	15 to 27 mm	8 to 21 mm	14 to 27 mm	8 to 21 mm	12 to 26 mm	
Torque	0.2 N-m max.				0.4 N-m max.		

* Excluding the operation indicator area.

When using a set screw, tighten it to the torque indicated in the table above.

[Dimensions]

Product discontinuation Model E2E-CR6[]/-CR8[]/-C1[]/-X[] series	Recommendable replacement Model E2E-C03[]/-C04[]/-C05[]/-S05[] series

Fig. 1: E2E-CR6□□

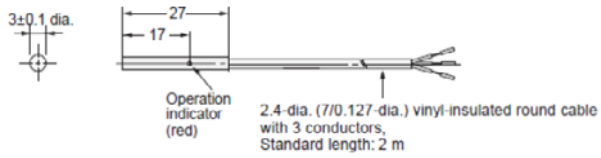


Fig. 2: E2E-CR8□□

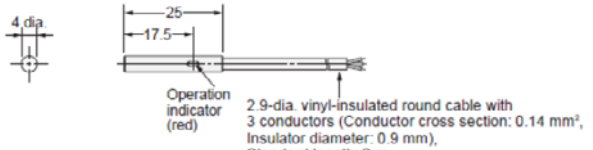


Fig. 3: E2E-C1□□

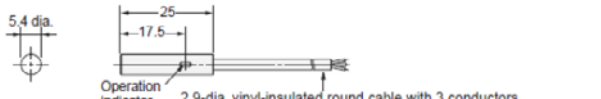
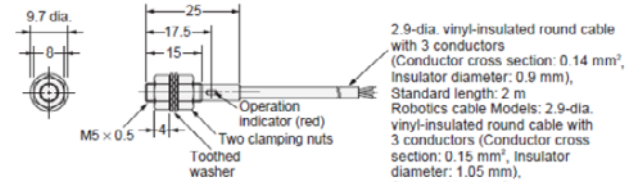
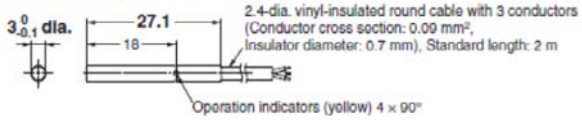


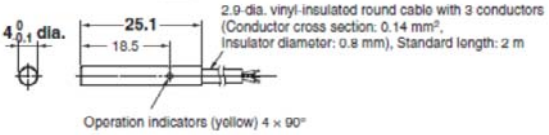
Fig. 4: E2E-X1□□



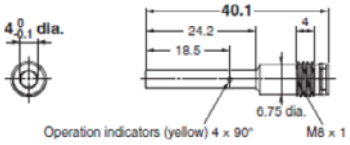
E2E-C03SR8-WC-□□



E2E-C04S12-WC-□□

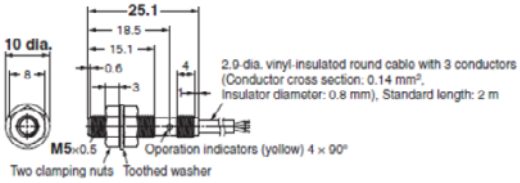


E2E-C04S12-MC-□□

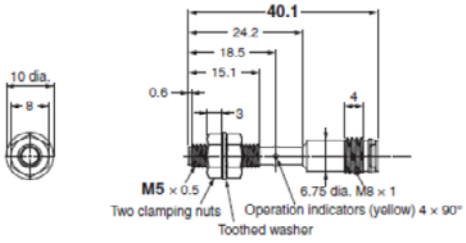


E2E-C05S01-WC-□□

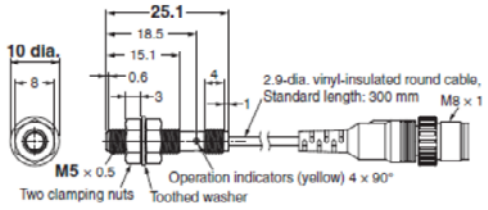
E2E-S05S12-WC-□□



E2E-S05S12-MC-□□



E2E-S05S12-CJ-□□



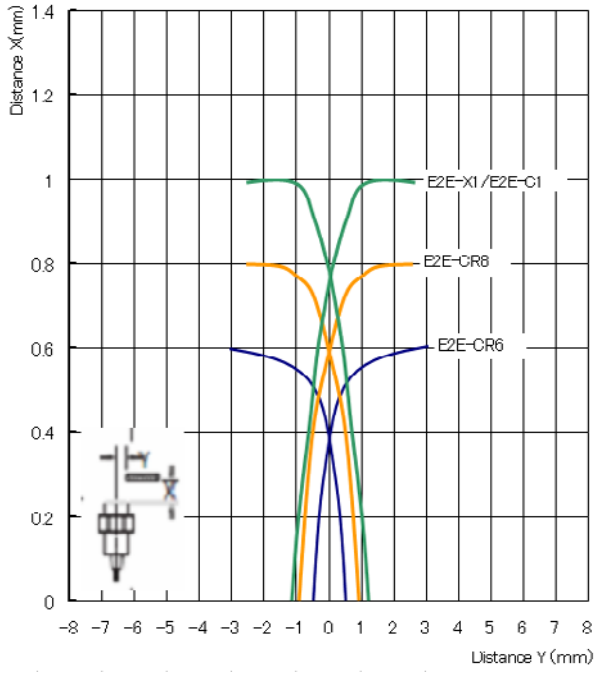
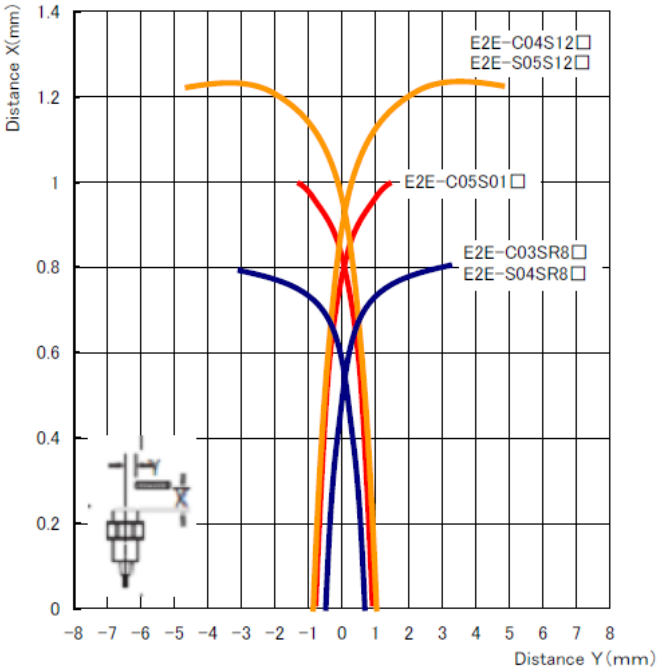
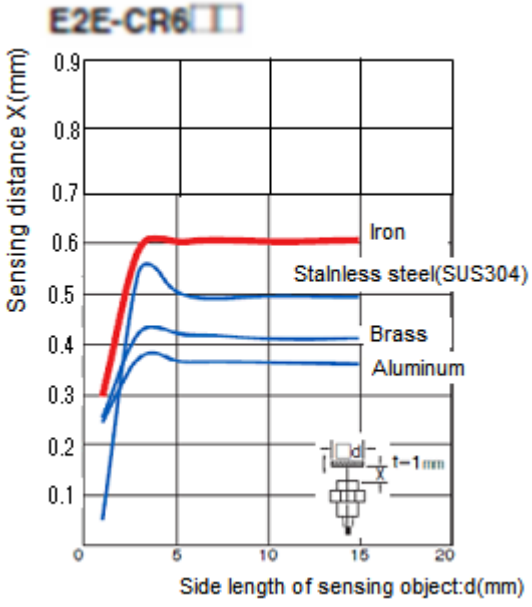
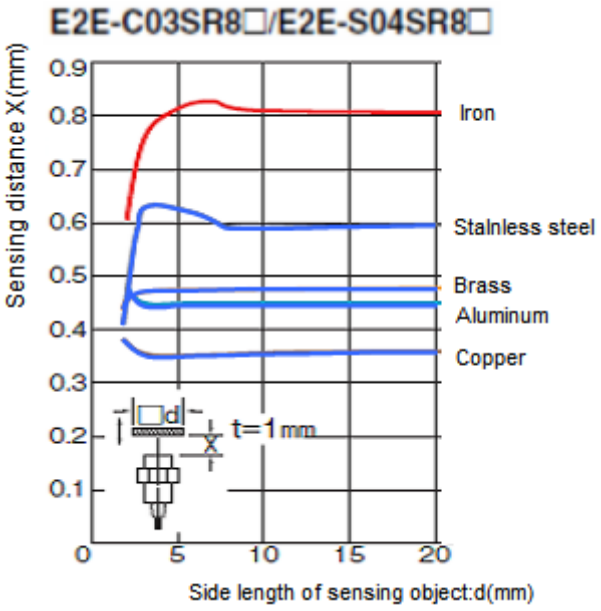
[Characteristics]

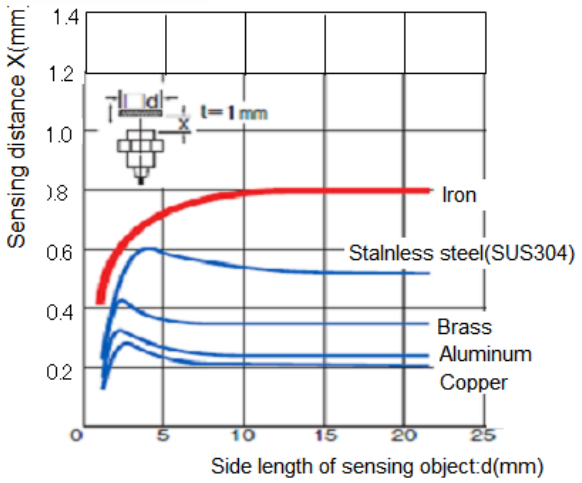
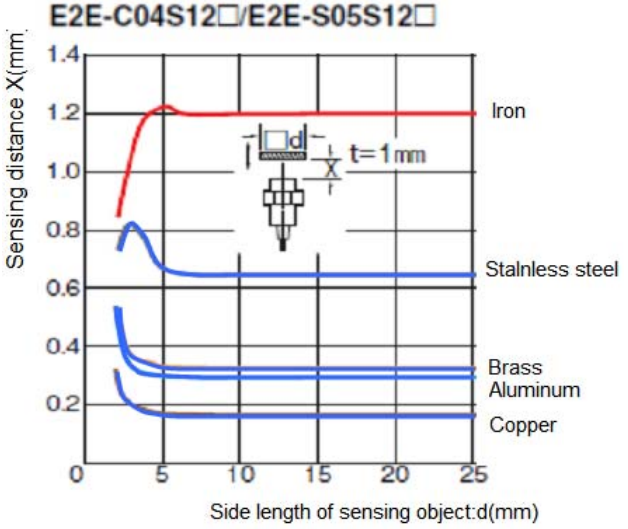
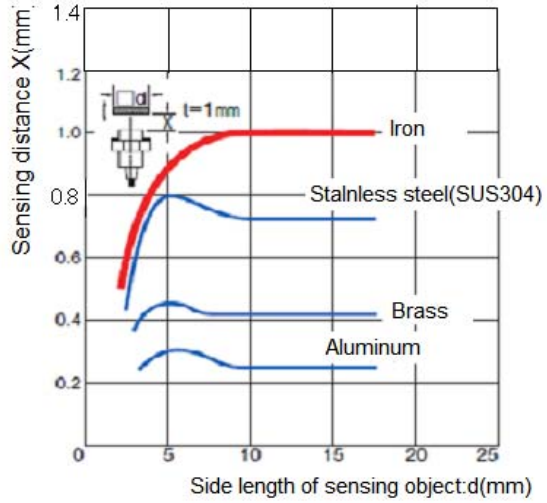
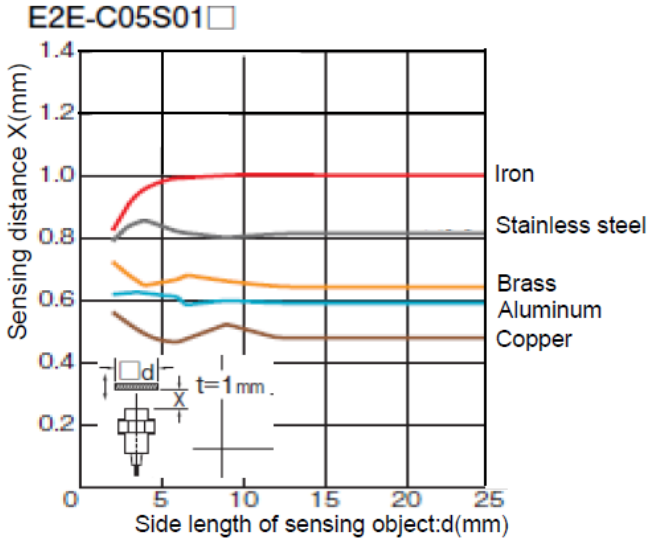
Item		Product discontinuation Model E2E-C1[] series	Recommendable replacement Model E2E-C05[] series
Size		5.4 dia.	5.4 dia.
Type		Shielded	Shielded
Item		E2E-C1C[]/B[]	E2E-C05S01[]
Sensing distance		1 mm ±15%	1 mm ±10%
Setting distance		0 to 0.7 mm	0 to 0.7 mm
Differential travel		15% max. of sensing distance	15% max. of sensing distance
Sensing object		Ferrous metals (The sensing distance decreases with non-ferrous metal, refer to Engineering Data)	Ferrous metals (The sensing distance decreases with non-ferrous metal, refer to Engineering Data)
Standard sensing object		Iron: 5 × 5 × 1 mm	Iron: 5.4 × 5.4 × 1 mm
Response speed		3 kHz	4 kHz
Power supply voltage (operating voltage range)		12 to 24 VDC (10 to 30 VDC), ripple (p-p): 10% max.	10 to 30 VDC (including 10% ripple (p-p))
Current consumption		17 mA max.	10 mA max.
Control output	Load current	Open-collector output 100 mA max. (at 30 VDC max.)	Open-collector output 100 mA max.
	Residual voltage	2 V max. (Load current 100 mA, Cable length 2 m)	2 V max. (Load current 100 mA, Cable length 2 m)
Indicator		Operation indicator (red LED)	Operation indicator: Yellow (complete with European standard EN60947-5-2) Light during output.
Operation mode (with sensing object approaching)		C1/-B1 Models: NO C2/-B2 Models: NC For details, refer to Timing Charts.	B1/B2: PNP open collector, C1/C2: NPN open collector B1/C1 models: NO, B2/C2 models: NC
Protection circuits		Power supply reverse polarity protection, surge suppressor	Output reverse polarity protection, Power source circuit reverse polarity protection, Surge suppressor, Load short-circuit protection
Ambient temperature		Operating/Storage: -25°C to 70°C (with no icing or condensation)	Operating/Storage: -25°C to 70°C (with no icing or condensation)
Ambient humidity		Operating/Storage: 35% to 95%RH	Operating/Storage: 35% to 95%RH (with no condensation)
Temperature influence		±15% max. of sensing distance at 23°C in the temperature range of -25°C to 70°C	±15% max. of sensing distance at 23°C in the temperature range of -25°C to 70°C
Voltage influence		±2.5% max. of sensing distance in the rated voltage range ±15%	±2.5% max. of sensing distance at rated voltage in the rated voltage ±15% range
Insulation resistance		50 MΩ min. (at 500 VDC) between current-carrying parts and case	50 MΩ min. (at 500 VDC) between current-carrying parts and case
Dielectric strength		500 VAC at 50/60 Hz 1 min. between current-carrying parts and case	500 VAC at 50/60 Hz 1 min. between current-carrying parts and case
Vibration resistance		10 to 55 Hz, 1.5-mm double amplitude for 2 hours each in X, Y, and Z directions	Destruction: 10 to 55 Hz, 1.5-mm double amplitude for 2 hours each in X, Y, and Z directions
Shock resistance		500 m/s^2 10 times each in X, Y, and Z directions	Destruction: 500 m/s^2 10 times each in X, Y, and Z directions
Degree of protection		IEC 60529 IP67 (Pre-wired models: in-house standard for oil resistance (former JEM standard equivalent to IP67g))	IEC 60529 IP67, in-house standards: oil-resistant
Connection method		Pre-wire models (Standard length 2 m), connector models	Pre-wire models (Standard length 2 m)
Weight (packed state)	Pre-wired models	Approx. 60 g	Approx. 35 g
	Connector models	Approx. 60 g	---
Material	Case	Brass-nickel plated	Brass-nickel plated
	Sensing surface	Heat-resistant ABS	Heat-resistant ABS
	Clamping nuts	---	---
	Toothed washer	---	---
Accessories		Instruction manual	Instruction manual, Model label

[Characteristics]

Item		Product discontinuation Model E2E-CR6[]/-CR8[]/-C1[]/-X[] series				Recommendable replacement Model E2E-C03[]/-C04[]/S05[] series		
Size		3 dia.	4 dia.	M5	5.4 dia.	3 dia.	4 dia.	M5
Type		Shielded				Shielded		
Item		E2E -CR6C[]/B[]	E2E -CR8C[]/B[]	E2E -X1C[]/B[]	E2E-C1C[]/B[]	E2E -CR03S[]	E2E -C04S[]	E2E -S05S[]
Sensing distance		0.6 mm ±15%	0.8 mm ±15%	1 mm ±15%		0.8 mm ±10%	1.2 mm ±10%	
Setting distance		0 to 0.4 mm	0 to 0.5 mm	0 to 0.7 mm		0 to 0.56 mm	0 to 0.84 mm	
Differential travel		15% max. of sensing distance				15% max. of sensing distance		
Sensing object		Ferrous metals (The sensing distance decreases with non- ferrous metal, refer to Engineering Data)				Ferrous metals (The sensing distance decreases with non-ferrous metal, refer to Engineering Data)		
Standard sensing object		Iron: 3 × 3 × 1 mm	Iron: 5 × 5 × 1 mm			Iron: 3 × 3 × 1 mm	Iron: 4 × 4 × 1 mm	
Response speed		2 kHz	3 kHz			5 kHz	4 kHz	
Power supply voltage (operating voltage range)		12 to 24 VDC (10 to 30 VDC), ripple (p-p): 10% max.				10 to 30 VDC (including 10% ripple (p-p))		
Current consumption		10 mA max.	17 mA max.			10 mA max.		
Control output	Load current	Open-collector output 80 mA max. (at 30 VDC max.)	Open-collector output 100 mA max. (at 30 VDC max.)			50 mA max.	100 mA max.	
	Residual voltage	1 V max. (Load current 80 mA, Cable length 2 m)	2 V max. (Load current 100 mA, Cable length 2 m)			2 V max.		
Indicator		Operation indicator (red LED)				Operation indicator: Yellow (complete with European standard EN60947-5-2) Light during output.		
Operation mode (with sensing object approaching)		C1/-B1 Models: NO C2/-B2 Models: NC For details, refer to Timing Charts.				B1/B2: PNP open collector, C1/C2: NPN open collector B1/C1 models: NO, B2/C2 models: NC		
Protection circuits		Power supply reverse polarity protection, surge suppressor				Output reverse polarity protection, Power source circuit reverse polarity protection, Surge suppressor, Load short-circuit protection		
Ambient temperature		Operating/Storage: -25°C to 70°C (with no icing or condensation)				Operating/Storage: -25°C to 70°C (with no icing or condensation)		
Ambient humidity		Operating/Storage: 35% to 95%RH				Operating/Storage: 35% to 95%RH (with no condensation)		
Temperature influence		±15% max. of sensing distance at 23°C in the temperature range of -25 to 70°C				±15% max. of sensing distance at 23°C in the temperature range of -25°C to 70°C		
Voltage influence		±5% max. of sensing distance in the rated voltage range ±10%	±2.5% max. of sensing distance in the rated voltage range ±15%			±2.5% max. of sensing distance at rated voltage in the rated voltage ±15% range		
Insulation resistance		50 MΩ min. (at 500 VDC) between current-carrying parts and case				50 MΩ min. (at 500 VDC) between current-carrying parts and case		
Dielectric strength		500 VAC at 50/60 Hz 1 min. between current-carrying parts and case				500 VAC at 50/60 Hz 1 min. between current-carrying parts and case		
Vibration resistance		10 to 55 Hz, 1.5-mm double amplitude for 2 hours each in X, Y, and Z directions				Destruction: 10 to 55 Hz, 1.5-mm double amplitude for 2 hours each in X, Y, and Z directions		
Shock resistance		500 m/s^2 10 times each in X, Y, and Z directions				Destruction: 500 m/s^2 10 times each in X, Y, and Z directions		
Degree of protection		IEC 60529 IP66	IEC 60529 IP67 (Pre-wired models: in-house standard for oil resistance (former JEM standard equivalent to IP67g))			IEC 60529 IP67, in-house standards: oil-resistant		
Connection method		Pre-wire models (Standard length 2 m)	Pre-wire models (Standard length 2 m), connector models			Pre-wire models M8 Pre-wired connector models M8 connector models		
Weight (packed state)	Pre-wired models	Approx. 60 g				Approx. 25 g	Approx. 35 g	Approx. 35 g
	Connector models	---	Approx. 60g	Approx. 60g	Approx. 60 g	---	Approx. 10g	Approx. 15 g
Material	Case	Stainless steel (SUS303)		Brass-nickel plated		SUS303 (EN1.4305)		
	Sensing surface	Heat-resistant ABS				Heat-resistant ABS		
	Clamping nuts	---		Brass-nickel plated		No		SUS430 (EN1.4016)
	Toothed washer	---		Iron-zinc plated		No		SUS303 (EN1.4305)
Accessories		Instruction manual				Instruction manual, Model label		

[Operation ratings]

Product discontinuation Model E2E-CR6[]/-CR8[]/-C1[]/-X[] series	Recommendable replacement Model E2E-C03[]/-C04[]/-C05[]/-S05[] series
Sensing Area	**Sensing Area**
	
Influence of Sensing Object Size and Material	**Influence of Sensing Object Size and Material**
	

Product discontinuation Model E2E-CR6[]/-CR8[]/-C1[]/-X[] series	Recommendable replacement Model E2E-C03[]/-C04[]/-C05[]/-S05[] series
E2E-CR8□□  	E2E-C04S12□/E2E-S05S12□ 
E2E-X1□□ E2E-C1□□  	E2E-C05S01□ 

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Only main changes in specifications are described in this document. Please be sure to read the relevant catalogs, datasheets, product specifications, instructions, and manuals for precautions and necessary information when using products.