

**NO:** PX-074                      **PRODUCT:** E2Q2 Proximity Sensors  
**DATE:** August 2015            **TYPE:** Partial Discontinuation Notice

## DC Versions of E2Q2 Rectangular Inductive Proximity Sensors to be Discontinued; Replace with E2Q6 Series

**Discontinuation date: February 2016**

Note: Date is subject to change based on raw materials and components availability at the factory.

### Affected Parts



Discontinued product	Recommended replacement
E2Q2-N40MF3-H	No recommended replacement
E2Q2-N40ME3-H	No recommended replacement
E2Q2-N30MF3-U	No recommended replacement
E2Q2-N30MF3-H	E2Q6-N30MF3-H
E2Q2-N30MF3-G	No recommended replacement
E2Q2-N30MF3-50	No recommended replacement
E2Q2-N30ME3-U	No recommended replacement
E2Q2-N30ME3-H	E2Q6-N30ME3-H
E2Q2-N30ME3-G	No recommended replacement
E2Q2-N30ME3-50	No recommended replacement
E2Q2-N20F3-U	No recommended replacement
E2Q2-N20F3-H	E2Q6-N20F3-H
E2Q2-N20F3-G	No recommended replacement
E2Q2-N20F3-50	No recommended replacement
E2Q2-N20F1-H	No recommended replacement
E2Q2-N20F1-G	No recommended replacement
E2Q2-N20E3-U	No recommended replacement
E2Q2-N20E3-H	E2Q6-N20E3-H
E2Q2-N20E3-G	No recommended replacement
E2Q2-N20E3-50	No recommended replacement
E2Q2-N20E1-H	No recommended replacement
E2Q2-N20E1-G	No recommended replacement
E2Q2-N15F1-52	No recommended replacement
E2Q2-N15F1-51	No recommended replacement

# Cautions on Applying Replacements

- The body color is black and the material is polyamide.
- The indicator position is changed.
- The supply voltage range expands to 10 to 30 VDC.
- The influence of temperature is  $\pm 15\%$  max.
- Changing sensing direction is easier.



See the detail of differences on the following pages.

## Detail of Differences

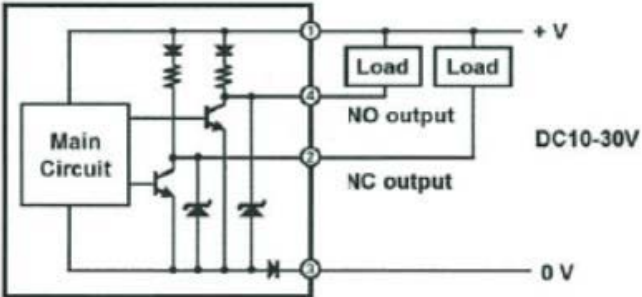
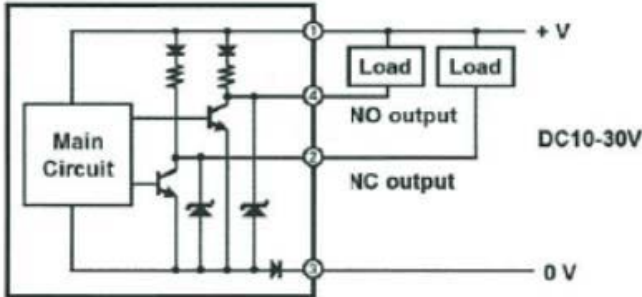
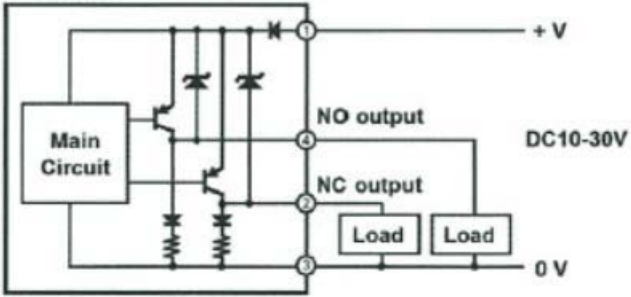
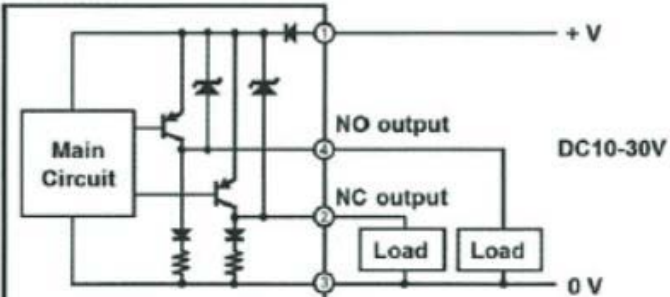
### Reference Documentation

Description	Media	Publication number
E2Q2 Proximity Sensor Datasheet	PDF	<a href="#">CEDSAX4</a>
E2Q6 Proximity Sensor Datasheet	PDF	<a href="#">D26I-E-01</a>

### Body Color

Discontinued product E2Q2	Recommended replacement E2Q6
<p>Gray</p> 	<p>Black</p> 

### Wiring Diagrams

Discontinued product E2Q2	Recommended replacement E2Q6
<p><b>NPN</b></p> 	<p><b>NPN</b></p> 
<p><b>PNP</b></p> 	<p><b>PNP</b></p> 

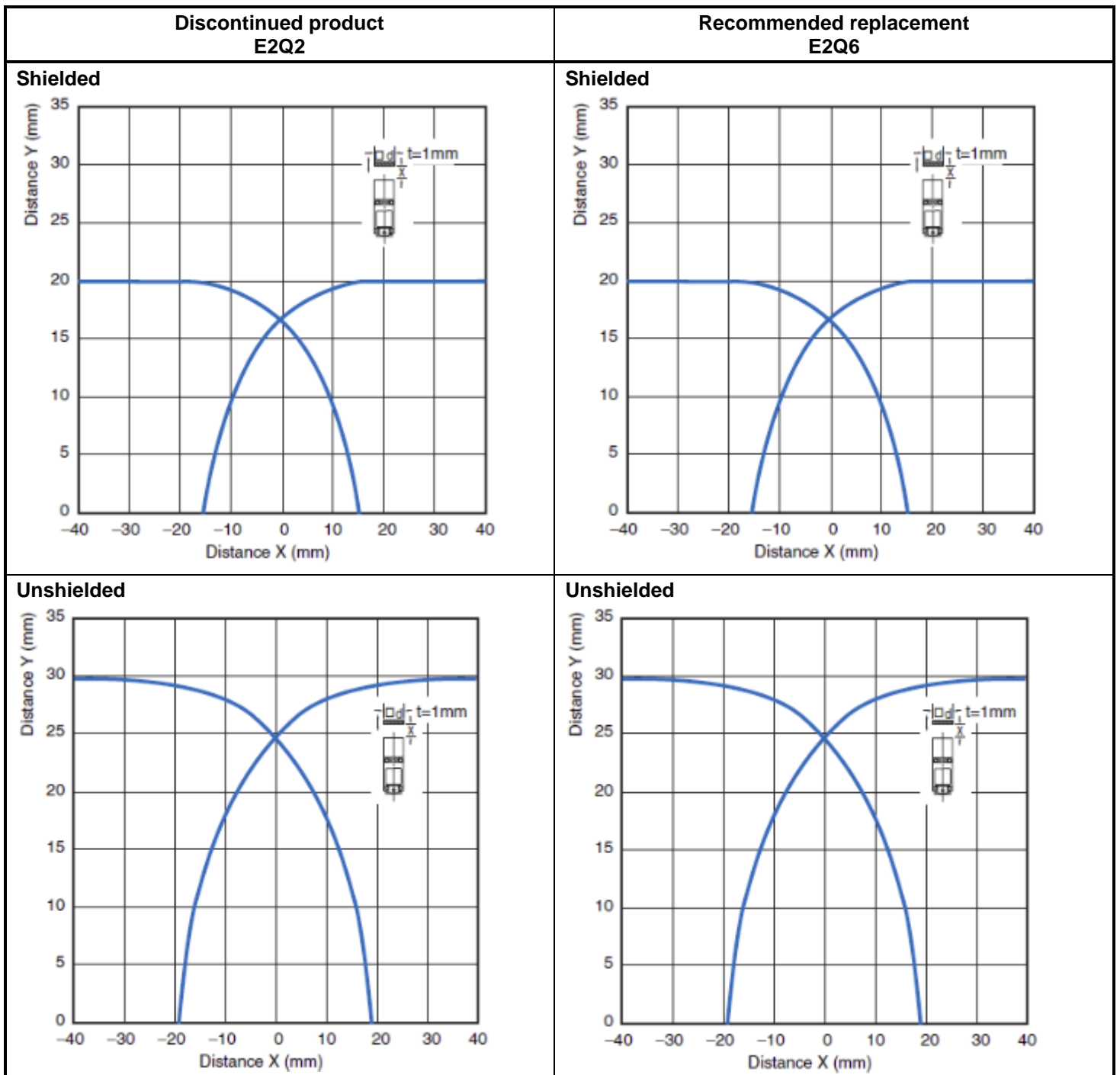
## Characteristics

Discontinued product E2Q2			Recommended replacement E2Q6			
Item	Shielding Model	Shielded E2Q2-N20□3-H	Unshielded E2Q2-N30M□3-H	Model	E2Q6-N20□3-H	E2Q6-N30M□3-H
	Sensing distance		20 mm±10%	30 mm±10%	Sensing distance	20mm±10%
Set distance		0 to 16 mm	0 to 24 mm	Setting distance	0~16mm	0~24mm
Differential travel		15% max. of sensing distance		Differential travel	15% max. of sensing distance	
Sensing object		Ferrous metal (The sensing distance decreases with non-ferrous metal. Refer to Engineering Data on page 3.)		Sensing object	Ferrous metals (The sensing distance decreases with non-ferrous metal.)	
Standard sensing object		Iron, 60 × 60 × 1 mm	Iron, 90 × 90 × 1 mm	Standard sensing object	Iron, 60X60X1mm	Iron, 90X90X1mm
Response frequency		150 Hz	100 Hz	Response frequency	150Hz	100Hz
Power supply voltage (operating voltage range)		12 to 48 VDC (10 to 60 VDC), ripple (p-p): 10% max.		Power supply voltage	10 to 30VDC, including 10% ripple(p-p)	
Current consumption/Leakage current		20 mA max.		Current consumption	20mA max.	
Control output	Switching capacity	200 mA max.		Load current	200mA max.	
	Residual voltage	3 V max. with a 200 mA load current		Residual voltage	2VDC max.(at 200mA load current)	
Indicators		Power indicator (green) Detection indicator (yellow)		Indicators	Detecting indicator(yellow LED), Power indicator(green LED)	
Operation mode (with sensing object approaching)		E3 Models: NPN NO+NC F3 Models: PNP NO+NC Refer to the timing charts under I/O Circuit Diagrams on page 4 for details.		Operation mode (with sensing object approaching)	E type : NPN NO+NC F type : PNP NO+NC	
Protection circuits		Reverse polarity protection, load short-circuit protection		Protection circuits	Output short circuit,Power supply reverse polarity protection,Output supply reverse polarity protection	
Ambient temperature		Operating: -25 to 70°C (with no icing or condensation) Storage: -40 to 70°C (with no icing or condensation)		Insulation resistance	50MΩ min. (at 500VDC) between current-carrying parts and case	
Ambient humidity		Operating: 35% to 85% (with no condensation) Storage: 35% to 95% (with no condensation)		Dielectric strength	1,000VAC, 50/60Hz for 1 min. between current-carrying parts and case	
Temperature influence	Shielded model	±10% max. of sensing distance at 23°C in the temperature range of -25 to 70°C		Vibration resistance	10 to 55 Hz, 1.5mm double amplitude each in X, Y and Z directions	
	Unshielded model	±15% max. of sensing distance at 23°C in the temperature range of -25 to 70°C		Shock resistance	300 m/s <sup>2</sup> for 3 times each in six directions	
Voltage influence		±2% max. of sensing distance at within a range of ±10% of rated power supply voltage		Degree of protection	IEC60529 IP67	
Insulation resistance		50 MΩ min. (at 500 VDC) between current-carrying parts and case		Connecting method	Terminal block	
Dielectric strength		E□ Model and F□ Model: 1,000 VAC, 50/60 Hz for 1 min. between current-carrying parts and case		Materials	Case	Polyamide (PA)
		Y Model: 4,000 VAC, 50/60 Hz for 1 min. between current-carrying parts and case			Terminal base	Polyamide (PA)
Vibration resistance (destruction)		10 to 55 Hz, 1.5-mm double amplitude for 2 hours each in X, Y, and Z directions			Sensing face	Polyamide (PA)
Shock resistance (destruction)		500 m/s <sup>2</sup> 10 times each in X, Y, and Z directions				
Degree of protection		IEC IP67 *				
Connection method		Terminal block				
Weight		Approx. 240 g				
Materials	Case	Polybutylene terephthalate (PBT)				
	Terminal block	Polybutylene terephthalate (PBT)				
	Sensing surface	Polybutylene terephthalate (PBT)				

# Dimensions



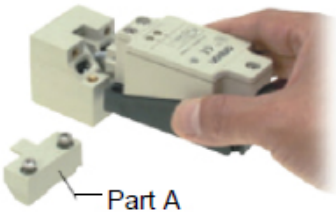





Discontinued product E2Q2	Recommended replacement E2Q6
<p><b>Overall</b></p>	<p><b>Overall</b></p>
<p><b>Mounting Holes</b></p>	<p><b>Mounting Holes</b></p>

# Operation Ratings





## Operation Methods

<p style="text-align: center;"><b>Discontinued product E2Q2</b></p>	<p style="text-align: center;"><b>Recommended replacement E2Q6</b></p>
<p>1. Remove the two screws on the back of the sensor.</p> 	<p>1. Remove the two screws.</p> 
<p>2. Remove the two screws on the back of the sensor.</p> 	<p>2. Lift the sensing surface and separate it from the case.</p> 
<p>3. When positioning the sensing surface to the side, rotate the head to the required position, then fit it into the case. The possible positions are 0, 90, 180 and 270 degrees. Do not forcefully rotate the sensing surface.</p> 	<p>3. When positioning the sensing surface to the side, rotate the head to the required position, then fit it into the case. The possible positions are 0, 90, 180 and 270 degrees. Do not forcefully rotate the sensing surface.</p> 
<p>4. Remove the two screws on the back of the sensor.</p> 	<p>4. Secure the head with the screws.</p> 

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