

**NO:** PX-080                      **PRODUCT:** E2C Proximity Sensors  
**DATE:** November 2015            **TYPE:** Modification Notice

## Solid State Output Rating Modified for E2C Proximity Sensors with Separate Amplifiers

**Effective date:** September 2015 production

**Reason for Modification:** To comply with the China compulsory certification CCC, the solid state output rating was changed to match the DC supply voltage rating.



### Affected Parts

Models	Specification
E2C-AM4A	---
E2C-AM4A-5	DC12-24
E2C-GE4A	---
E2C-GF4A	---
E2C-JB4CH	2M
E2C-JC4A	2M
E2C-JC4A	5M
E2C-JC4AP	2M
E2C-JC4AP	5M
E2C-JC4CH	2M
E2C-JC4CH-1	2M
E2C-JC4DH	2M
E2C-JC4EH	2M
E2C-JC4EH	5M

See the following pages for detail of differences.

# Detail of Differences

## Control Output Voltage - Catalog

Before the change					
Item	Model	E2C-GE4A	E2C-GF4A	E2C-JC4A E2C-JC4AP	E2C-AM4A
Power supply voltage (operating voltage range)		12 to 24 VDC (10 to 30 VDC), ripple (p-p): 10% max. *1			
Current consumption		25 mA max.		45 mA max.	50 mA max.
Sensing distance adjustment range *2		20% min. of rated sensing distance with 4-turn potentiometer		20% to 100% of rated sensing distance with 4-turn potentiometer	
Differential travel adjustment range		Differential travel fixed (10% max. of sensing distance)			1% to 5% of rated sensing distance
Response time	Solid-state	(Refer to the response frequency of the Proximity Sensor.)			
	Relay	---			
Control outputs	Solid-state	NPN Load resistance: 4.7 kΩ, <b>(40 VDC max.)</b> (Residual voltage: 1.5 V max.)	PNP Load resistance: 4.7 kΩ, <b>(40 VDC max.)</b> (Residual voltage: 1.5 V max.)	NPN Open-collector output <b>(40 VDC max.)</b> (Residual voltage: 0.7 V max.) (E2C-JC4AP: 1 V max.)	NPN/PNP output Open-collector output <b>(40 VDC max.)</b> (Residual voltage: 1.5 V max.)
	Relay	---			
Indicators		Detection indicator (red) (OPERATION)		Detection indicator (red) (OPERATION) Stability indicator (green) (STABILITY)	Detection indicator (red) (OPERATION) Stability indicator (green) (STABILITY)
Operation mode		Changed with NO/NC switch.			
Self-diagnostic output		---		(E2C-JC4AP only) Output transistor turns ON when Sensor open circuit or unstable sensing is detected; solid-state NPN open-collector <b>(40 VDC max.)</b> (Residual voltage: 1 V max.)	---

Item	Model	E2C-JC4CH	E2C-JC4DH	E2C-JC4EH	
Power supply voltage *1 (operating voltage range)		12 to 24 VDC (10 to 30 VDC), ripple (p-p): 10% max.			
Current consumption		45 mA max.			
Sensing distance adjustment range *2		20% to 100% of rated sensing distance 4-turn potentiometer			
Control outputs	Load current	NPN open collector, 100 mA max.			<b>(40 VDC max.)</b>
	Residual voltage	0.8 V max.			

Control Output Voltage – Catalog (continued)

After the change					
Item	Model	E2C-GE4A	E2C-GF4A	E2C-JC4A E2C-JC4AP	E2C-AM4A
Power supply voltage (operating voltage range)		12 to 24 VDC (10 to 30 VDC), ripple (p-p): 10% max. *1			
Current consumption		25 mA max.		45 mA max.	50 mA max.
Sensing distance adjustment range *2		20% min. of rated sensing distance with 4-turn potentiometer		20% to 100% of rated sensing distance with 4-turn potentiometer	
Differential travel adjustment range		Differential travel fixed (10% max. of sensing distance)			1% to 5% of rated sensing distance
Re-response time	Solid-state	(Refer to the response frequency of the Proximity Sensor.)			
	Relay	---			
Control outputs	Solid-state	(30 VDC max.) 7 kΩ, 100 mA max. (40 VDC max.) (Residual voltage: 1.5 V max.)	PNP Load resistance: 4.7 kΩ, 100 mA max. (30 VDC max.) 1.5 V max.)	NPN Open-collector output 100 mA max. (30 VDC max.) V max.) (E2C-JC4AP: 1 V max.)	NPN/PNP output Open-collector output 200 mA max. (30 VDC max.) V max.)
	Relay	---			
Indicators		Detection indicator (red) (OPERATION)		Detection indicator (red) (OPERATION) Stability indicator (green) (STABILITY)	Detection indicator (red) (OPERATION) Stability indicator (green) (STABILITY)
Operation mode		Changed with NO/NC switch.			
Self-diagnostic output		---		(E2C-JC4AP only) Output transistor turns ON when Sensor open circuit or unstable sensing is detected; solid-state NPN open-collector 50 mA max. (40 VDC max.) (Residual voltage: 1 V max.)	---

  

Item	Model	E2C-JC4CH	E2C-JC4DH	E2C-JC4EH	
Power supply voltage *1 (operating voltage range)		12 to 24 VDC (10 to 30 VDC), ripple (p-p): 10% max.			
Current consumption		45 mA max.			
Sensing distance adjustment range *2		20% to 100% of rated sensing distance 4-turn potentiometer			
Control outputs	Load current	NPN open collector, 100 mA max.		(30 VDC max.)	
	Residual voltage	0.8 V max.			

## Control Output Voltage – Instruction Sheet

Before the change

Model		E2C-AM4A
Power supply voltage (Operating voltage range)		12 to 24 V DC(10 to 30 V DC), ripple(p-p): 10% max. (see note 1)
Current consumption		50 mA max.
Sensing distance adjustable range(see note 2)		20% to 100% of rated sensing distance
Differential travel		1% to 5% of rated sensing distance
Response time	DC solid-state	Refer to the response frequency
	Relay	
Control output	DC solid-state	200 mA max.at 40 V with a residual voltage of 1.5 V max.,NPN and PNP open collector output

Model		E2C-GE4A	E2C-GF4A
Power supply voltage (Operating voltage range)		12 to 24 V DC(10 to 30 V DC), ripple(p-p): 10% max. (see note 1)	
Current consumption		25 mA max.	
Sensing distance adjustable range(see note 2)		20% min. of rated sensing distance	
Differential travel		10% max.of sensing distance	
Control output	DC solid-state	100 mA max.at 40V with a residual voltage of 1.5 V max.NPN output with a resistance of 4.7kΩ	100 mA max.at 40V with a residual voltage of 1.5V max.PNP output with a resistance of 4.7kΩ

Item \ Model	E2C-JC4A
Supply voltage (Operating voltage range)	12 to 24V DC, ripple (p-p) : 10% max. (10 to 30V DC)
Current consumption	45mA max.
Control output	NPN open collector 100mA max. 40V DC

Model		E2C-JC4AP
Power supply voltage (Operating voltage range)		12 to 24 V DC (10 to 30 V DC), ripple (p-p): 10% max. (see note 1)
Current consumption		45mA max.
Sensing distance adjustable range (see note 2)		20% to 100% of rated sensing distance with a 4-turn potentiometer
Differential travel		10% max. of sensing distance
Control output	DC solid-state	100mA max. at 40V with a residual voltage of 1V max. NPN open collector output

Item \ Model	E2C-JC4□H
Supply voltage	12 to 24 V DC, ripple(p-p):10%max. (10 to 30 V DC) *
Current consumption	45mAmax.
Control output	NPN open collector100mA max. 40V DC
Output mode	NO/NC selectable
Cord length compensation	3/5m selectable with switch
Detecting distance	Adjustable withrotatable knob
Indicator	Detecting
Ambient operating temperature	- 10 to 55°C (No freezing )
Degree of protection	IEC60529 IP20

Control Output Voltage – Instruction Sheet continued

After the change

Model		E2C-AM4A	
Power supply voltage (Operating voltage range)		12 to 24 V DC(10 to 30 V DC), ripple(p-p): 10% max. (see note 1)	
Current consumption		50 mA max.	
Sensing distance adjustable range(see note 2)		20% to 100% of rated sensing distance	
Differential travel		1% to 5% of rated sensing distance	
Response time	DC solid-state	Refer to the response frequency	
	Relay		
Control output	DC solid-state	200 mA max. at 30V with a residual voltage of 1.5 V max.,NPN and PNP open collector output	

Model		E2C-GE4A	E2C-GF4A
Power supply voltage (Operating voltage range)		12 to 24 V DC(10 to 30 V DC), ripple(p-p): 10% max. (see note 1)	
Current consumption		25 mA max.	
Sensing distance adjustable range(see note 2)		20% min. of rated sensing distance	
Differential travel		10% max. of sensing distance	
Control output	DC solid-state	100 mA max. at 30V with a residual voltage of 1.5 V max.,NPN output with a resistance of 4.7kΩ	100 mA max. at 30V with a residual voltage of 1.5V max.,PNP output with a resistance of 4.7kΩ

Model	E2C-JC4A
Supply voltage (Operating voltage range)	12 to 24V DC, ripple (p-p) : 10% max. (10 to 30V DC)
Current consumption	45mA max.
Control output	NPN open collector 100mA max. 30V DC

Model		E2C-JC4AP
Power supply voltage (Operating voltage range)		12 to 24 V DC (10 to 30 V DC), ripple (p-p): 10% max. (see note 1)
Current consumption		45mA max.
Sensing distance adjustable range (see note 2)		20% to 100% of rated sensing distance with a 4-turn potentiometer
Differential travel		10% max. of sensing distance
Control output	DC solid-state	100mA max. at 30V with a residual voltage of 1V max. NPN open collector output

Model	E2C-JC4□H
Supply voltage	12 to 24 V DC, ripple(p-p):10%max. (10 to 30 V DC) *
Current consumption	45mAmax.
Control output	NPN open collector100mA max. 30V DC
Output mode	NO/NC selectable
Cord length compensation	3/5m selectable with switch

Specifications in this product news are as of the issue date and are subject to change without notice. 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.