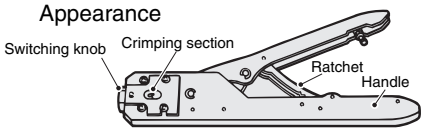
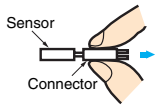
Accessories (Order Separately)

Ordering Information
Connectors and Connector Hold-down Clips

Applicable Sensor models
EE-SX67□ (A, P, R), EE-SX47□, EE-SY67□, EE-SPY31□/41□, EE-SPX303/403, EE-SPW311/411

Type		Cable length	Model	Remarks
Connector			EE-1001	
			EE-1001-1	L terminal and positive (+) terminal are already short-circuited.
			EE-1009 *1	
	Connector with Cable	1 m	EE-1006	4 conductors
			EE-1010 *1	
		2 m	EE-1006	4 conductors
			EE-1006D	3 conductors
			EE-1006L	2 conductors
			EE-1010 *1	
	Connector with Robot Cable	1 m	EE-1010-R *1	
		2 m	EE-1010-R *1	
NPN/PNP Conversion Connector		0.46 m (total length)	EE-2002	
Connector Hold-down Clip			EE-1006A	For EE-1006, EE-SX670□, 470, EE-SY671, and 672 only.
Connector Parts *2	Case (housing)		EE-1006H	100 per carton
	Dispersion Pins		EE-1006C	500 per carton
	Special Crimping Tool		EE-1006T	Appearance 

*1. EE-1009- or EE-1010-series Connectors have a builtin locking mechanism to prevent cable disconnection when only the cable is pulled. To remove the Connector from the Sensor, grip the top and bottom of the Connector firmly and push into the Sensor once before pulling out. The locking mechanism prevents the Connector from being removed by pulling on the cable only and enables removal only when the Connector (housing) is pulled.



*2. The case (housing) and dispersion pins (for hand-crimping) for EE-1006 Connectors can be ordered separately. Use the EE-1006T Special Crimping Tool to prepare the Connector.

Applicable Sensor models
EE-SX91□□-C1J-R (Connector Models)

Item	Cable length	Model	Remarks
Connector with Cable	2 m	EE-1016-R	Robot cable (standard)

Applicable Sensor models
EE-SX67□□-C1J-R (Connector Models)

Item	Cable length	Model	Remarks
Connector with Cable	2 m	EE-1016-R-1	Robot cable (standard)

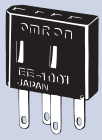
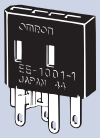
Applicable Sensor models
EE-SPX74□/84□

Item	Cable length	Model	Remarks
Connector with Cable	1 m	EE-1013	

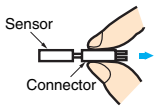
Applicable Sensor models
EE-SPX301/401, EE-SPY30□/40□, EE-SPZ301□/401□

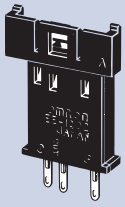
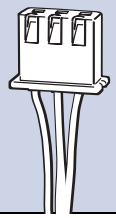
Item		Cable length	Model	Remarks
Connector			EE-1002	
	Connector with Cable	1 m	EE-1003	
NPN/PNP Conversion Connector		0.46 m (total length)	EE-2001	
Connector Hold-down Clip			EE-1003A	For EE-1003 only.

Ratings and Specifications

Item							
Product		Connector *1	Connector with Cable *1	Connector with Robot Cable *1	Connector	Connector (short-circuited between positive (+) and L terminals) *2	Connector with Cable
Model		EE-1009	EE-1010	EE-1010-R	EE-1001	EE-1001-1	EE-1006
Appearance							
Contact resistance		20 mΩ max. (at 20 mV max., 100 mA max.)			15 mΩ max. (at 100 VDC max.)		10 mΩ max. (100 VDC max.)
Insertion/removal durability		50 times min.			---		
Insertion strength		No. of poles × 6 N max.			50 N max.		
Surplus strength (housing holding strength)		No. of poles × 0.4 N max.			---		20 N max.
Standard cable length		---	2 m		---		2 m
Lock strength		No. of poles × 29 N min.			---		
Ambient humidity		–10 to +60°C			–10 to +75°C		–10 to 60°C
Material	Housing	Polybutylene phthalate (PBT)					
	Contact	Phosphor bronze (solder plating)					
Applicable Photomicrosensors		EE-SX67□ (A,P,R) (Connector Models only), EE-SX47□, EE-SY67□, EE-SPY31□/41□, EE-SPX303/403, EE-SPW311/411					

*1. The Connector has a built-in locking mechanism. To remove the Connector from the Sensor, grip the top and bottom of the Connector housing, as shown in the following diagram, and then pull out the Connector.
*2. EE-SX67□ and EE-SY67□ are the best used in the light-ON state.



Item				
Product		Connector	Connector with Cable	Connector with Cable
Model		EE-1002	EE-1003	EE-1013
Appearance				
Contact resistance		10 mΩ max. (at 10 mADC and 1 ADC)	20 mΩ max. (at minute current of 1 kHz and 500 VDC)	
Insertion strength		20 N max.	23.5 N max.	40 N max.
Surplus strength (housing holding strength)		15 N max. (initial) 10 N max. (ten times)	3.5 N max.	10 N max.
Cable length		---	1 m	
Ambient humidity		–10 to +75°C	–10 to +60°C	–10 to +55°C
Material	Housing	Nylon		
	Contact	Phosphor bronze (solder plating)		
Applicable Photomicrosensors		EE-SPX301/401, EE-SPY30□/40□, EE-SPZ301□/401□		EE-SPX74□/84□

(Unit: mm)

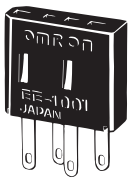
Dimensions

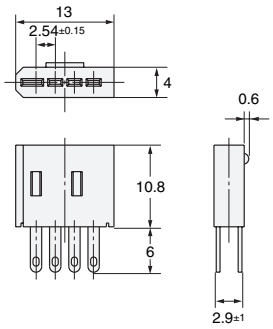
Tolerance class IT16 applies to dimensions in this datasheet unless otherwise specified.

Photomicrosensor Connectors and Connector Hold-down Clips

Connector

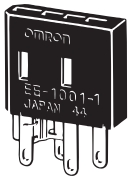
EE-1001

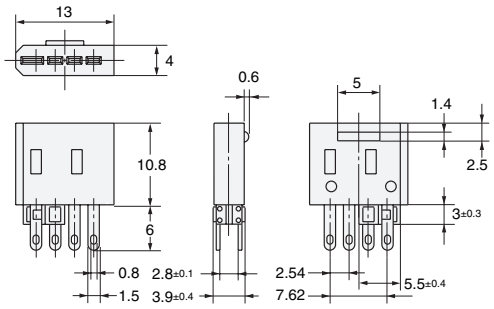




Connector (short-circuited between positive (+) and L terminals)

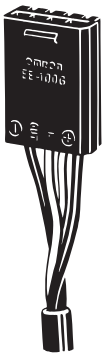
EE-1001-1

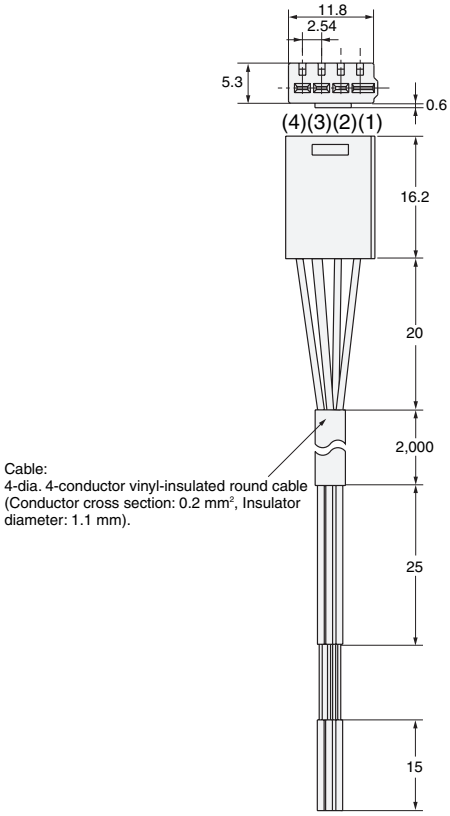




Connector with Cable

EE-1006





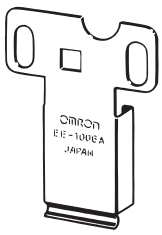
Terminal Arrangement

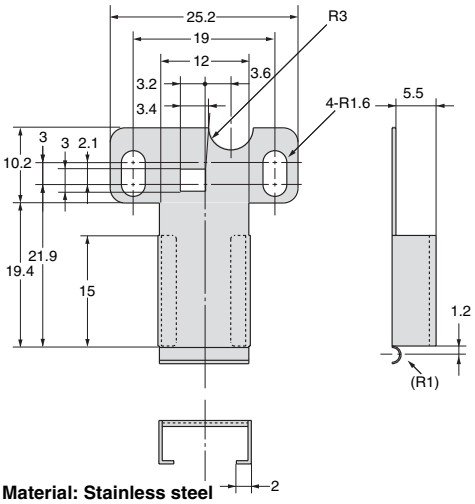
(1)	⊕	Brown
(2)	L	Pink
(3)	OUT	Black
(4)	⊖	Blue

Connector Hold-down Clip

EE-1006A

(Can be used only with EE-1006 Connectors for the Photomicrosensors listed below.)





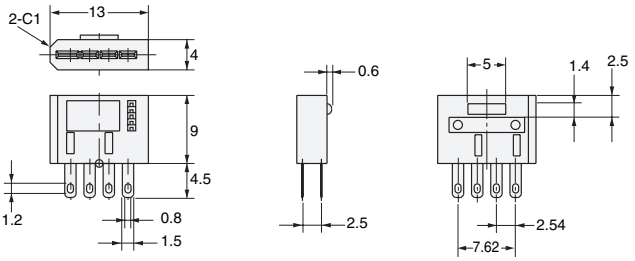
Material: Stainless steel

Applicable Photomicrosensors	EE-SX67□ (A,P,R) (Connector Models only), EE-SX47□, EE-SY67□, EE-SPY31□/41□, EE-SPX303/403, EE-SPW311/411	For EE-SX670□, 470□, EE-SY671, and 672 only.

Photomicrosensor Connectors

Connectors

EE-1009

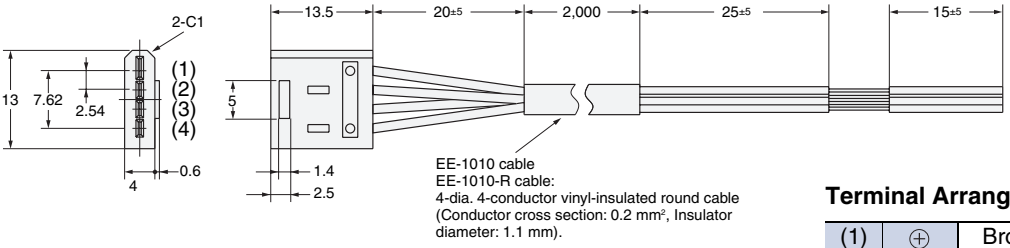


Connector with Cable

EE-1010

Connector with Robot Cable

EE-1010-R



Terminal Arrangement

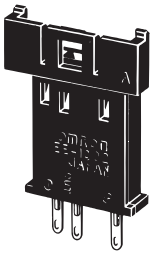
(1)	⊕	Brown
(2)	L	Pink
(3)	OUT	Black
(4)	⊖	Blue

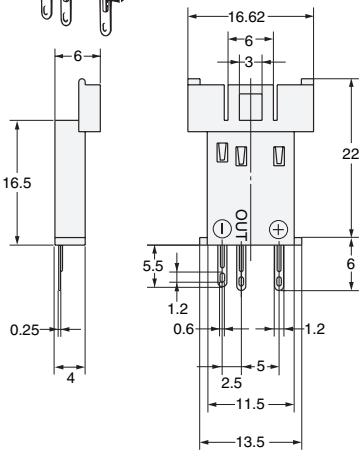
Applicable Photomicrosensors	EE-SX67□ (A,P,R) (Connector Models only), EE-SX47□, EE-SY67□, EE-SPY31□/41□ EE-SPX303/403, EE-SPW311/411

Photomicrosensor Connectors and Connector Hold-down Clips

Connector

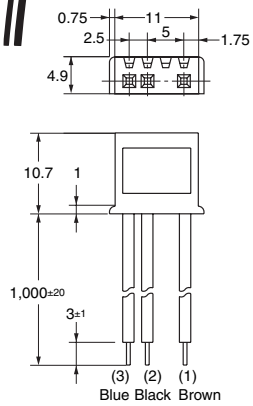
EE-1002





Connector with Cable

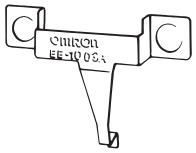
EE-1003

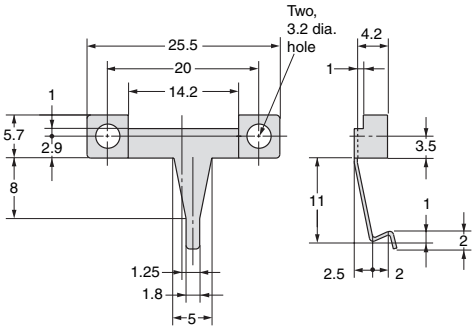


Cable:
1.61-dia. 1-conductor vinyl-insulated round cable
(Conductor cross section: 0.33 mm^2).

Connector Hold-down Clips (For EE-1003 only)

EE-1003A

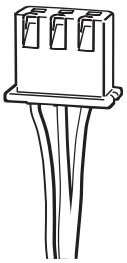


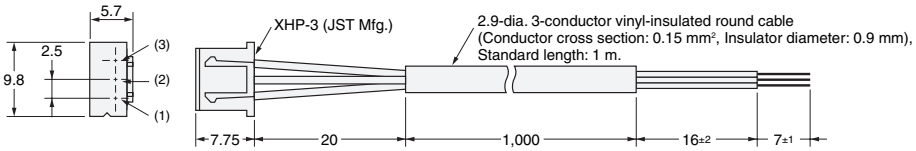


Applicable Photomicrosensors	EE-SPX301/401, EE-SPY30□/40□, EE-SPZ301□/401□

Connector with Cable

EE-1013

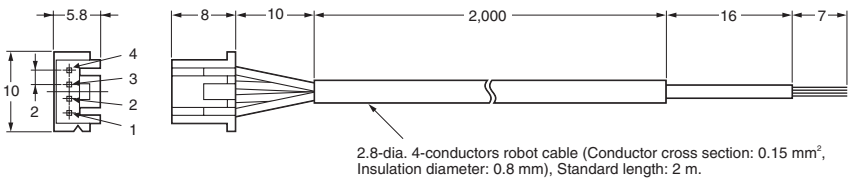




Applicable Photomicrosensors	EE-SPX74□/84□

Connector with Robot Cable

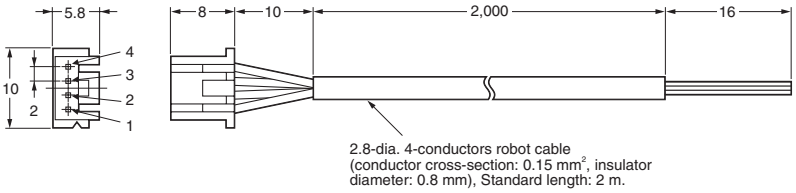
EE-1016-R



Applicable Photo-microsensors	EE-SX91□-C1J-R (Models with Junction Connectors)

Connector with Cable (Connection with Robot Cable)

EE-1016-R-1



Applicable Photo-microsensors	EE-SX67□-C1J-R EE-SX67□P-C1J-R

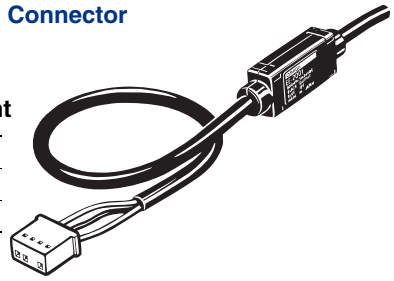
NPN to PNP Transistor Output Conversion Connectors

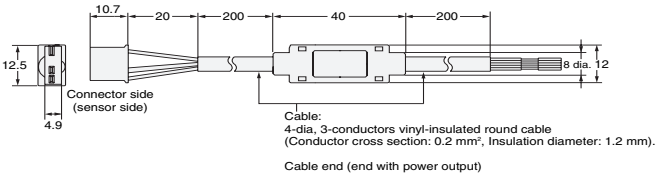
NPN/PNP Conversion Connector

EE-2001

Terminal Arrangement

(1)	⊕	Brown
(2)	OUT	Black
(3)	⊖	Blue



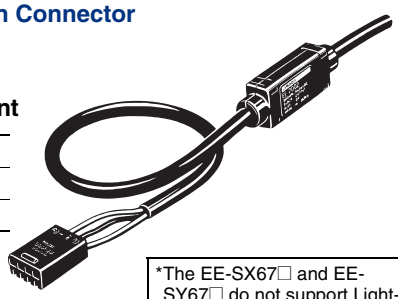


NPN/PNP Conversion Connector

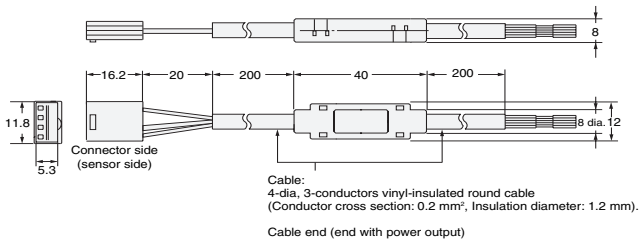
EE-2002 *

Terminal Arrangement

(1)	⊕	Brown
(2)	OUT	Black
(3)	⊖	Blue



*The EE-SX67□ and EE-SY67□ do not support Light-ON mode.



Applicable Photomicrosensors	EE-SPX301/401, EE-SPY30□/40□, EE-SPZ301□/401□	EE-SX67□ (A,P,R) (Connector Models only), EE-SX47□, EE-SY67□, EE-SPY31□/41□, EE-SPX303/403, EE-SPW311/411

Read and Understand This Catalog

Please read and understand this catalog before purchasing the products. Please consult your OMRON representative if you have any questions or comments.

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OMRON's exclusive warranty is that the products are free from defects in materials and workmanship for a period of one year (or other period if specified) from date of sale by OMRON.

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Application Considerations

SUITABILITY FOR USE

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At the customer's request, OMRON will provide applicable third party certification documents identifying ratings and limitations of use that apply to the products. This information by itself is not sufficient for a complete determination of the suitability of the products in combination with the end product, machine, system, or other application or use.

The following are some examples of applications for which particular attention must be given. This is not intended to be an exhaustive list of all possible uses of the products, nor is it intended to imply that the uses listed may be suitable for the products:

- Outdoor use, uses involving potential chemical contamination or electrical interference, or conditions or uses not described in this catalog.
- Nuclear energy control systems, combustion systems, railroad systems, aviation systems, medical equipment, amusement machines, vehicles, safety equipment, and installations subject to separate industry or government regulations.
- Systems, machines, and equipment that could present a risk to life or property.

Please know and observe all prohibitions of use applicable to the products.

NEVER USE THE PRODUCTS FOR AN APPLICATION INVOLVING SERIOUS RISK TO LIFE OR PROPERTY WITHOUT ENSURING THAT THE SYSTEM AS A WHOLE HAS BEEN DESIGNED TO ADDRESS THE RISKS, AND THAT THE OMRON PRODUCTS ARE PROPERLY RATED AND INSTALLED FOR THE INTENDED USE WITHIN THE OVERALL EQUIPMENT OR SYSTEM.

PROGRAMMABLE PRODUCTS

OMRON shall not be responsible for the user's programming of a programmable product, or any consequence thereof.

Disclaimers

CHANGE IN SPECIFICATIONS

Product specifications and accessories may be changed at any time based on improvements and other reasons.

It is our practice to change model numbers when published ratings or features are changed, or when significant construction changes are made. However, some specifications of the products may be changed without any notice. When in doubt, special model numbers may be assigned to fix or establish key specifications for your application on your request. Please consult with your OMRON representative at any time to confirm actual specifications of purchased products.

DIMENSIONS AND WEIGHTS

Dimensions and weights are nominal and are not to be used for manufacturing purposes, even when tolerances are shown.

PERFORMANCE DATA

Performance data given in this catalog is provided as a guide for the user in determining suitability and does not constitute a warranty. It may represent the result of OMRON's test conditions, and the users must correlate it to actual application requirements. Actual performance is subject to the OMRON Warranty and Limitations of Liability.

ERRORS AND OMISSIONS

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2008.12

In the interest of product improvement, specifications are subject to change without notice.

OMRON Corporation
Industrial Automation Company

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