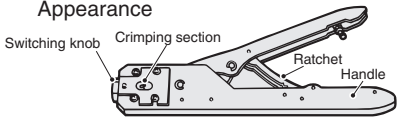


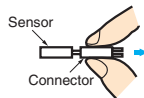
## Accessories (Order Separately)

### 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	1 m	EE-1001		
		EE-1001-1	L terminal and positive (+) terminal are already short-circuited.	
		EE-1009 *1		
	Connector with Cable	2 m	EE-1006	
			EE-1010 *1	
			EE-1006	4 conductors
			EE-1006D	3 conductors
	Connector with Robot Cable	2 m	EE-1006L	2 conductors
			EE-1010 *1	
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 built-in 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 purchased separately. Use the EE-1006T Special Crimping Tool to prepare the Connector.

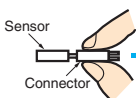
Applicable Sensor models EE-SPX301/401, EE-SPY30□/40□, EE-SPZ301□/401□			
Item	Cable length	Model	Remarks
Connector		EE-1002	
	Connector with Cable	1 m	EE-1003
NPN/PNP Conversion Connector	0.46 m (total length)	EE-2001	
Connector Hold-down Clip		EE-1003A	For EE-1003 only.

Applicable Sensor models EE-SPX74□/84□			
Item	Cable length	Model	Remarks
Connector with Cable	1 m	EE-1013	

Ratings/Characteristics

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), 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.

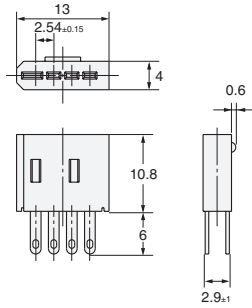
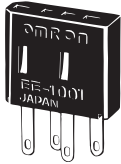
Item	Product	Connector	Connector with Cable	Connector with Cable
	Model	EE-1002	EE-1003	EE-1013
Appearance				
Contact resistance		10 mΩ max. (at 10 mA DC and 1 ADC)	20 mΩ max. (at minute current of 1 kHz and 500 VDC)	
Insertion strength		20 N max.	23.5 N max.	40 N max.
Surplus strength (housing holding 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□

Dimensions (Unit: mm)

Photomicrosensor Connectors and Connector Hold-down Clips

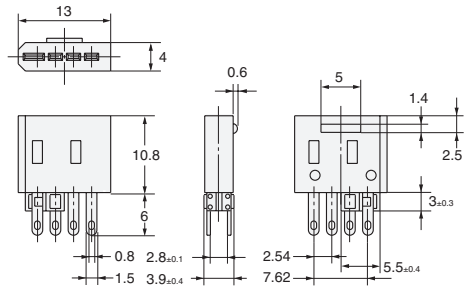
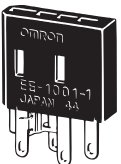
Connector

EE-1001



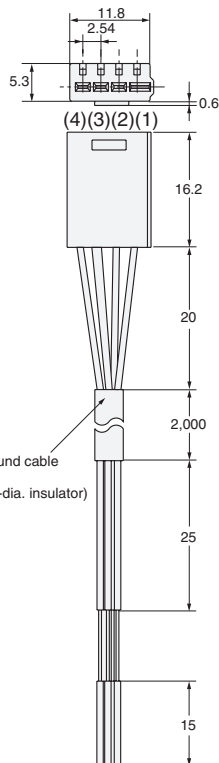
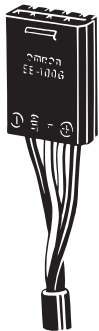
Connector (short-circuited between positive (+) and L terminals)

EE-1001-1



Connector with Cable

EE-1006



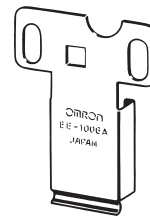
Cable:  
Vinyl-insulated round cable  
of 4 dia., 4 cores,  
(0.2 mm<sup>2</sup> with 1.1-dia. insulator)

Terminal Arrangement

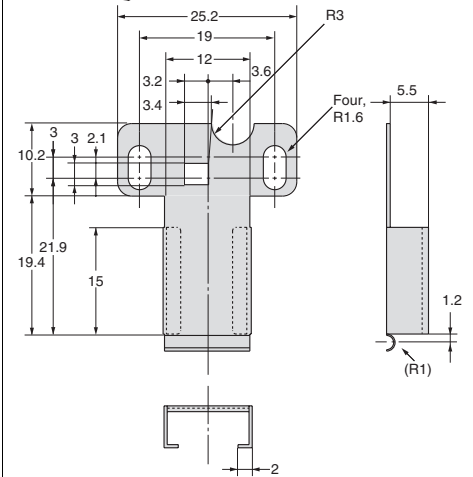
(1)	⊕	Brown
(2)	L	Pink
(3)	OUT	Black
(4)	⊖	Blue

Connector Hold-down Clip

EE-1006A



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



Material: Stainless steel

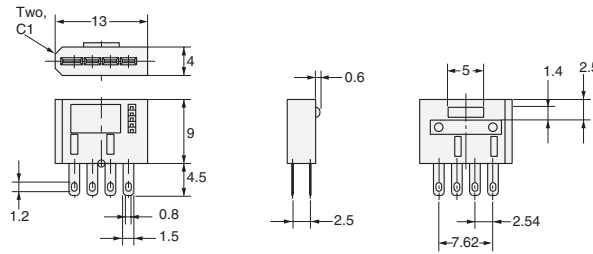
Applicable Photomicrosensors	EE-SX67□(A,P,R), EE-SX47□, EE-SY67□,
	EE-SPY31□/41□, EE-SPX303/403, EE-SPW311/411

For EE-1006, EE-SX670□, 470, EE-SY671, and 672 only.

Photomicrosensor Connectors

Connectors

EE-1009

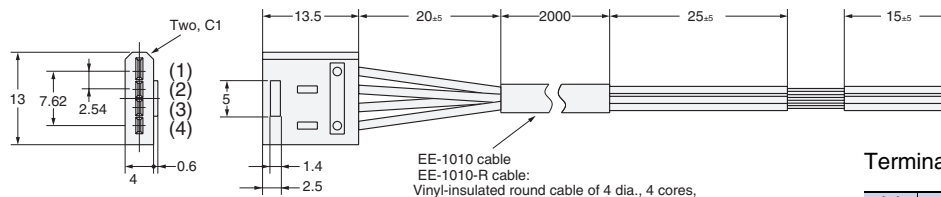


Connector with Cable

EE-1010

Connector with Robot Cable

EE-1010-R



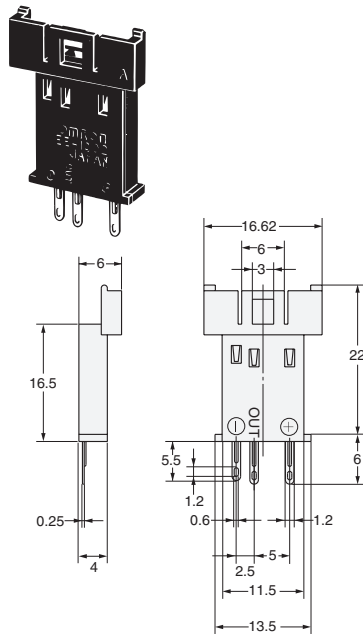
Terminal Arrangement

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

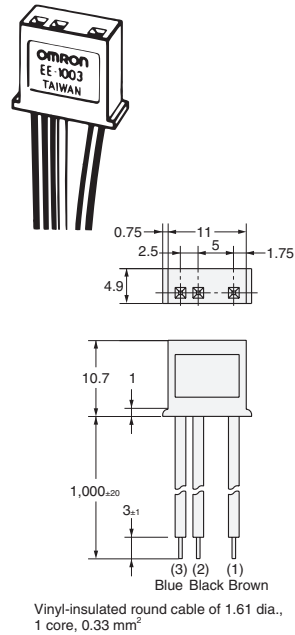
Applicable Photomicrosensors	EE-SX67□(A,P,R), EE-SX47□, EE-SY67□, EE-SPY31□/41□ EE-SPX303/403, EE-SPW311/411
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Photomicrosensor Connectors and Connector Hold-down Clips

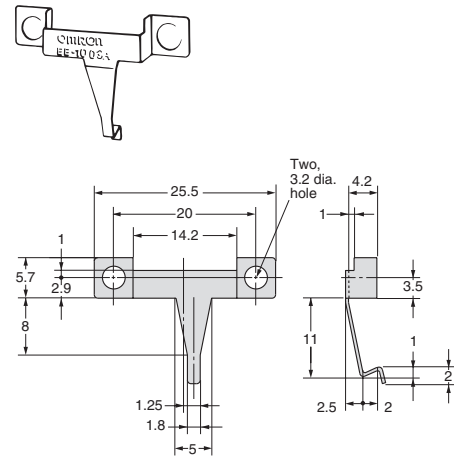
**Connector**  
EE-1002



**Connector with Cable**  
EE-1003



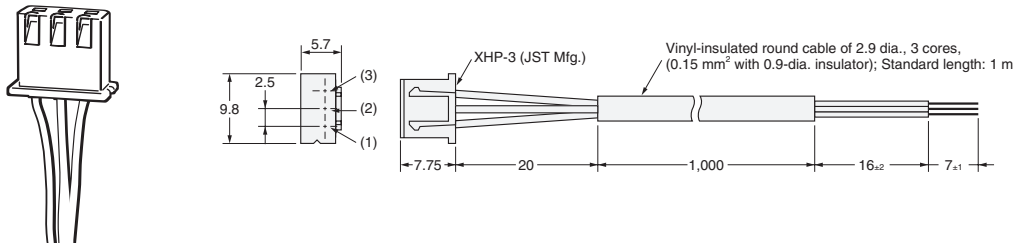
**Connector Hold-down Clips**  
(For EE-1003 only)  
EE-1003A



Applicable Photomicrosensors

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

**Connector with Cable**  
EE-1013



Applicable Photomicrosensors

EE-SPX74□/84□

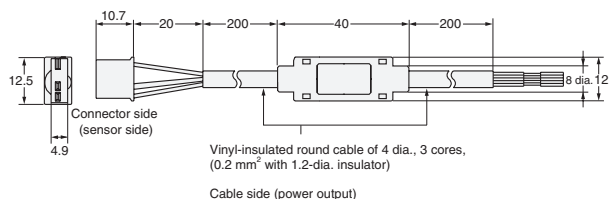
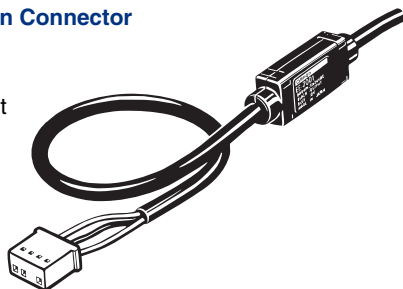
NPN to PNP Transistor Output Conversion Connectors

**NPN/PNP Conversion Connector**

EE-2001

Terminal Arrangement

(1)	⊕	Brown
(2)	OUT	Black
(3)	⊖	Blue

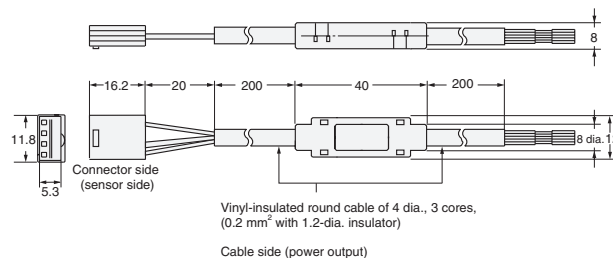
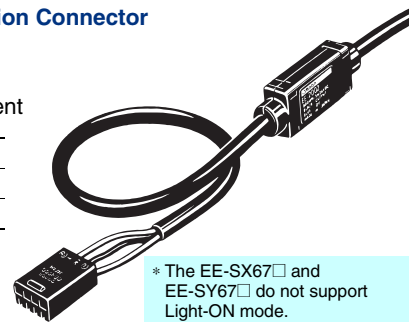


**NPN/PNP Conversion Connector**

EE-2002 \*

Terminal Arrangement

(1)	⊖	Brown
(2)	OUT	Black
(3)	⊖	Blue



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

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