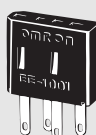
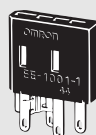


Ratings and Specifications

Product		Connector *1 *4	Connector with Cable *1	Connector with Robot Cable *1	Connector *4	Connector (short-circuited between positive (+) and L terminals) *2 *4	Connector with Cable
Model		EE-1009	EE-1010	EE-1010-R	EE-1001	EE-1001-1	EE-1006
Appearance							
Item							
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 *3		50 times min.			---		
Insertion strength		No. of poles × 6 N max.			68.6 N max.		50 N max.
Surplus strength (housing holding strength)		No. of poles × 0.4 N max.			---		20 N max.
Standard cable length		---		1 m, 2 m	---		1 m, 2 m
Lock strength *3		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					
Applicable Photomicrosensors		EE-SX67□ (A,P,R) (Connector Models only), EE-SX47□, EE-SY67□, EE-SPY31□/41□, EE-SPX303N/403N, EE-SPW311/411					

Product Model		Connector *4	Connector with Cable	Connector with Cable	Connector with Robot Cable	Connector with Cable	Connector with Robot Cable
Appearance							
Item							
Contact resistance		10 mΩ max. (at 10 mADC and 1 ADC)	20 mΩ max. (at minute current of 1 kHz and 500 VDC)		25 mΩ max. (at 10 mA DC and 20 mV max.)		
Insertion strength		20 N max.	23.5 N max.	40 N max.	20 N max.		
Surplus strength (housing holding strength)		15 N min. (initial) 10 N min. (ten times)	3.5 N min.	10 N min.	15 N min.	1.5 N min.	
Cable length		---	1 m		2 m	1 m, 3 m	
Ambient humidity		−10 to +75°C	−10 to +60°C	−10 to +55°C	−25 to +85°C	−10 to +60°C	
Material	Housing	Nylon					
	Contact	Phosphor bronze					
Applicable Photomicrosensors		EE-SPX301/401, EE-SPY30□/40□, EE-SPZ301-A/401-A		EE-SPX74□/84□	EE-SX95□-C1J-R	EE-SX97□C1, EE-SX97□P-C1	

*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.

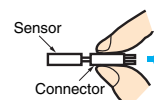
*2. EE-SX67□ and EE-SY67□ are the best used in the light-ON state.

*3. The insertion/removal durability and lock strength apply only to the lock mechanism.

They do not apply to the EE-1001, EE-1001-1, and EE-1006, which do not have lock mechanisms.

*4. Do not store the type EE-1009, EE-1001, EE-1001-1 and EE-1002 under the following conditions since their terminals may discolor.

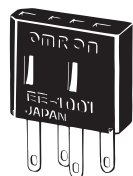
(1) In the place exposed to the direct sunlight, the high temperature or high humidity.



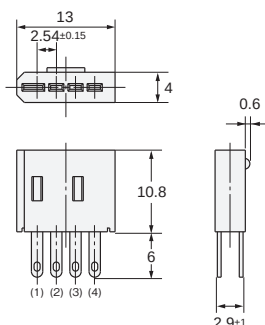
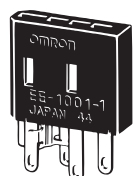
(Unit: mm)

Dimensions

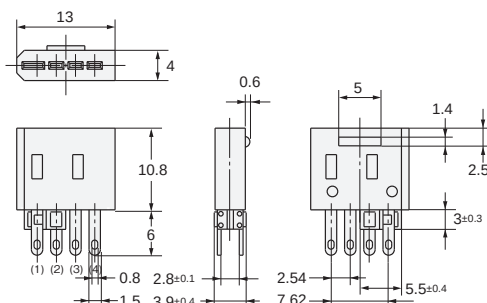
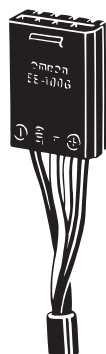
Tolerance class IT16 applies to dimensions in this datasheet unless otherwise specified.

Photomicrosensor Connectors and Connector Hold-down Clips**Connector****EE-1001****Terminal Arrangement**

(1)	⊕
(2)	L
(3)	OUT
(4)	⊖

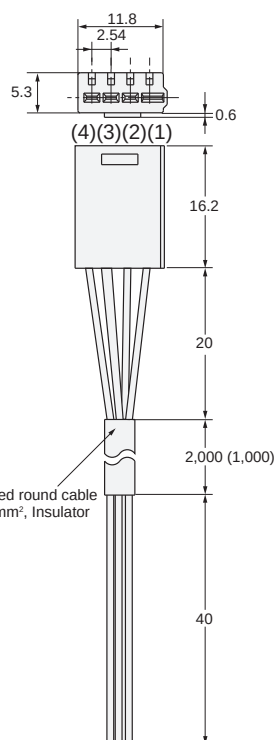
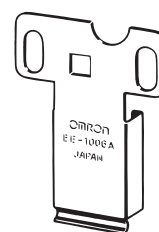
**Connector (short-circuited between positive (+) and L terminals)****EE-1001-1****Terminal Arrangement**

(1)	⊕
(2)	L
(3)	OUT
(4)	⊖

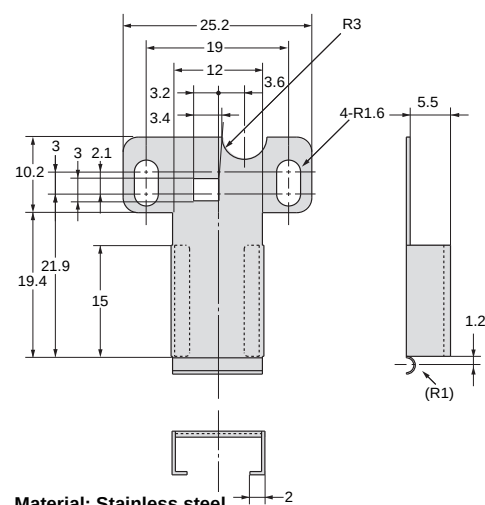
**Connector with Cable****EE-1006 2M (EE-1006 1M)****Terminal Arrangement**

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

Cable:
4-dia. 4-conductor vinyl-insulated round cable
(Conductor cross section: 0.2 mm², Insulator
diameter: 1.1 mm).

**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-SPX303N/403N, EE-SPW311/411

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

Photomicrosensor Connectors

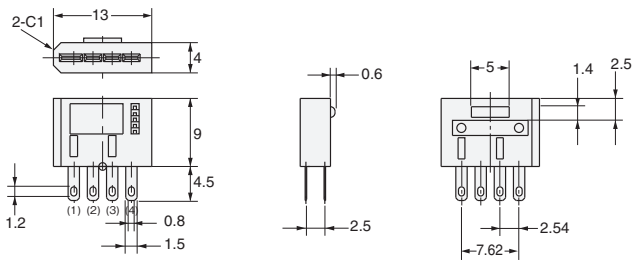
Connectors

EE-1009



Terminal Arrangement

(1)	⊕
(2)	L
(3)	OUT
(4)	⊖

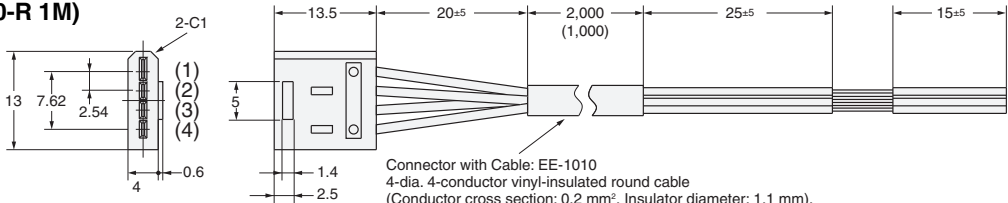


Connector with Cable

EE-1010 2M (EE-1010 1M)

Connector with Robot Cable

EE-1010-R 2M (EE-1010-R 1M)



Connector with Cable: EE-1010
4-dia. 4-conductor vinyl-insulated round cable
(Conductor cross section: 0.2 mm², Insulator diameter: 1.1 mm).
Connector with Robot Cable: EE-1010-R
4-dia. 4-conductor robot instrumentation cable
(Conductor cross section: 0.2 mm², Insulator diameter: 1.1 mm).

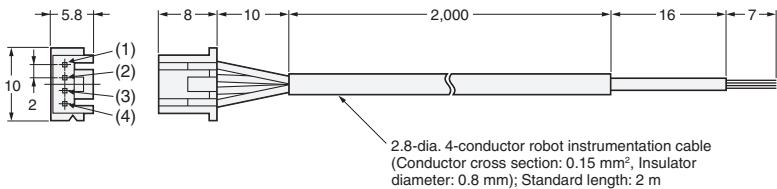
Terminal Arrangement

(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-SPX303N/403N, EE-SPW311/411
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Connector with Robot Cable

EE-1016-R



2.8-dia. 4-conductor robot instrumentation cable
(Conductor cross section: 0.15 mm², Insulator diameter: 0.8 mm); Standard length: 2 m

Terminal Arrangement

(1)	⊕	Brown
(2)	OUT2	White
(3)	⊖	Blue
(4)	OUT1	Black

Applicable Photomicrosensors	EE-SX95□-C1J-R
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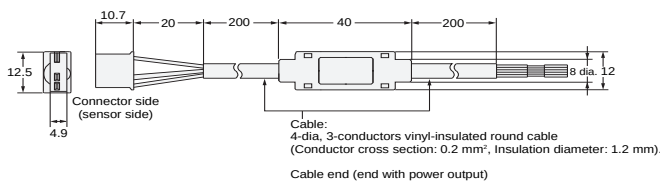
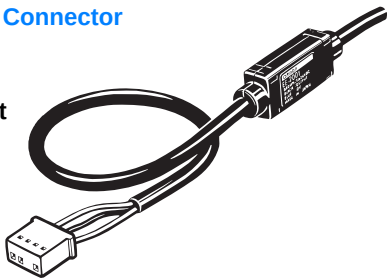
NPN to PNP Transistor Output Conversion Connectors

NPN/PNP Conversion Connector

EE-2001

Terminal Arrangement

(1)	⊕	Brown
(2)	OUT	Black
(3)	⊖	Blue

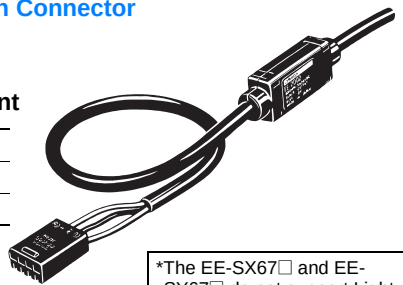


NPN/PNP Conversion Connector

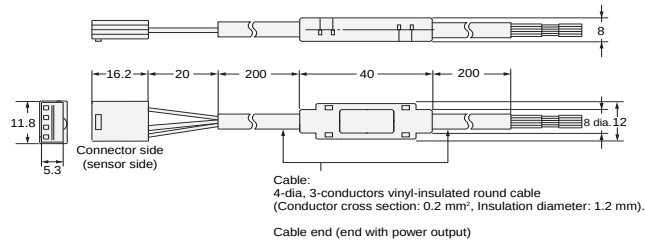
EE-2002 *

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-A/401-A	EE-SX67□/□A (Connector Models only), EE-SX47□, EE-SY67□, EE-SPY31□/41□, EE-SPX303N/403N, EE-SPW311/411
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