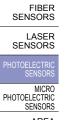
# Cylindrical Photoelectric Sensor Amplifier Built-in **SERIES**



#### AREA SENSORS SAFETY LIGHT CURTAINS / SAFETY COMPONENTS PRESSURE / FLOW SENSORS INDUCTIVE PROXIMITY SENSORS

PARTICULAR USE SENSORS

SENSOR OPTIONS SIMPLE WIRE-SAVING

UNITS WIRE-SAVING SYSTEMS

MEASUREMENT SENSORS

STATIC CONTROL DEVICES

LASER MARKERS

PLC

Standard

Side view

HUMAN MACHINE INTERFACES FNFRGY MANAGEMENT FA COMPONENTS MACHINE VISION SYSTEMS

UV CURING SYSTEMS



EX-Z
CX-400
CY-100
EX-10
EX-20
EX-30
EX-40
CX-440
EQ-30
EQ-500
MQ-W
RX-LS200
RX
RT-610

Related Information
Glossary of terms P.1549~
P

panasonic.net/id/pidsx/global

Selection guide	P.231~
General precautions	.P.1552~



## **FEATURES**

 Wide product range Shape: Standard type Side view type

Connector: 2 m (6.562 ft) cable length type M12 plug-in connector type

- Diffuse reflective type sensor with sensitivity adjuster is available.
- M18 thread size for convenient mounting
- Strong resistance IP67
- Convenient universal sensor mounting stand is available.

## **ORDER GUIDE**

#### cable length type 2 m

m	capie le	ngth type				
Туре		Annoarango	Consing range	Model No	Output	
		Appearance	Sensing range	NPN output	PNP output	operation
	Thru- beam		( 15 m	CY-111A	CY-111A-P	Light-ON
	be		) 49.213 ft	CY-111B	CY-111B-P	Dark-ON
	lective (Note 2,3)		4 m 13.123 ft	CY-192A-Y	CY-192A-P-Y	Light-ON
				CY-192B-Y	CY-192B-P-Y	Dark-ON
	Retrore With polarizing filters		( 2 m	CY-191A-Y	CY-191A-P-Y	Light-ON
	With polar filters		2 m 6.562 ft	CY-191B-Y	CY-191B-P-Y	Dark-ON
ĺ	tive		100 mm	CY-121A	CY-121A-P	Light-ON
	eflec		3.937 in	CY-121B	CY-121B-P	Dark-ON
	Diffuse reflective With sensitivity adjuster		(□ 600 mm	CY-122A	CY-122A-P	Light-ON
	With sensi adjus		)) 23.622 in	CY-122B	CY-122B-P	Dark-ON
			( 15 m	CY-111VA	CY-111VA-P	Light-ON
	Thru- beam		) 49.213 ft	CY-111VB	CY-111VB-P	Dark-ON
Ì	ve 2,3)		(4 m	CY-192VA-Y	CY-192VA-P-Y	Light-ON
		(Note 2.3)	4 m 13.123 ft	CY-192VB-Y	CY-192VB-P-Y	Dark-ON
	zing		( 2 m	CY-191VA-Y	CY-191VA-P-Y	Light-ON
	Retrorei With polarizing filters		2 m 6.562 ft	CY-191VB-Y	CY-191VB-P-Y	Dark-ON
Ì			100 mm	CY-121VA	CY-121VA-P	Light-ON
	Diffuse reflective With sensitivity adjuster		3.937 in	CY-121VB	CY-121VB-P	Dark-ON
	ivity ter		( 600 mm	CY-122VA	CY-122VA-P	Light-ON
	Diffuse r With sensitivity adjuster			CY-122VB	CY-122VB-P	Dark-ON

Notes: 1) The model No. with "E" shown on the label affixed to the thru-beam type sensor is the emitter, "D" shown on the label is the receiver. (e.g.) 2) The reflector is sold separately.

3) The sensing range of the retroreflective type sensor is specified for the RF-420 reflector (optional).

### M12 plug-in connector type

M12 plug-in connector type is also available. When ordering this type, suffix "-Z" for the M12 plug-in connector type to the model No. (e.g.) M12 plug-in connector type of CY-111A-P is "CY-111A-P-Z". In case of the retroreflective type, M12 plug-in connector type of CY-19 -P-Y is "CY-19 -P-Z-Y"

Standard type

Side view type





Mating cable (2 cables are required for the thru-beam type.)							
٦	Гуре	Model No.	Description				
d-in	Ctroight	CN-24C-C2	Length: 2 m 6.562 ft	Clamping ring :			
For M12 plug-in connector type	Straight	CN-24C-C5	Length: 5 m 16.404 ft	ø14mm 0.551 in			
M12 nect	Elbow	CN-24CL-C2	Length: 2 m 6.562 ft	Cable outer : ø5.3mm 0.209 in			
For con	LIDOW	CN-24CL-C5	Length: 5 m 16.404 ft	05.3mm 0.209 m			

## **OPTIONS**

Designation	Model No.	Description
Sensor mounting	MS-CY1-1	Material: Stainless steel
bracket	MS-CY1-2	Material: Plastic, For beam axis alignment
Universal sensor mounting stand	MS-AJ3	It can adjust the height of the sensor and reflector <b>RF-420</b> . (The thru-beam type sensor needs two brackets.)
Deflecter	RF-420	50 × 50 mm 1.969 × 1.969 in
Reflector	RF-410	24 × 21 mm 0.945 × 0.827 in
Reflective tape	RF-40RL5	22 mm × 5 m 0.866 × 196.850 in, Thickness: 0.4 mm 0.016 in

#### **Universal sensor** mounting stand

• MS-AJ3



Wiring diagram

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**PNP** output type

WIRING DIAGRAMS

Emitter of thru-beam type



Reflector

• RF-420



12 to 24 V DC ±10 %

• RF-410

#### Sensor mounting bracket

Mating cable Straight type





• MS-CY1-2

• Elbow type

#### **Reflective tape**

• RF-40RL5



# HUMAN MACHINE INTERFACES ENERGY MANAGEMENT SOLUTIONS FA COMPONENTS MACHINE VISION SYSTEMS UV CURING SYSTEMS

Selection Guide

STATIC CONTROL DEVICES

LASER MARKERS

PLC



EQ-500 MQ-W

## EX-30 EX-40 CX-440 EQ-30

```
(Brown) +V
(Black) Output
                                           12 to 24 V DC ±10 %
                          4
                            Load
                          (Blue) 0 V
```

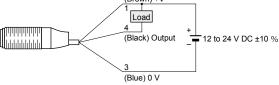
(Brown) +V

(Violet) Input

(Blue) 0 V

Receiver of thru-beam / Reflective type

#### Receiver of thru-beam / Reflective type NPN output type (Brown) +V



## **Connector pin position**

#### M12 connector

1:+V 2 : Input (Only emitter of thru-beam type) 3:0V

4 : Output (Only receiver of thru-beam type and reflective type)

LASER SENSORS

FIBER SENSORS



# RX

RX-LS200

RT-610

FIBER SENSORS

**SPECIFICATIONS** 

LASER SENSORS MICRO PHOTO-ELECTRIC SENSORS AREA SENSORS SAFETY LIGHT CURTAINS / SAFETY COMPONENTS PRESSURE / FLOW SENSORS INDUCTIVE PROXIMITY SENSORS PARTICULAR USE SENSORS SENSOR OPTIONS SIMPLE WIRE-SAVING UNITS WIRE-SAVING SYSTEMS MEASURE-MENT SENSORS STATIC CONTROL DEVICES LASER MARKERS PLC HUMAN MACHINE INTERFACES ENERGY MANAGEMENT SOLUTIONS FA COMPONENTS MACHINE VISION SYSTEMS UV CURING SYSTEMS

Selection Guide Amplifier Built-in Power Supply Built-in Amplifier-separated

EX-Z

11	Туре		Thru-beam Retroreflective					Diffuse reflective				
					With polarizing filters					With sensitivity adjuster		
			Standard	Side view	Standard	Side view	Standard	Side view	Standard	Side view	Standard	Side view
		<u>Ž</u> Light-ON	CY-111A	CY-111VA	CY-192A□	CY-192VA	CY-191A	CY-191VA	CY-121A□	CY-121VA	CY-122A□	CY-122VA
Iten	n 🔪	Light-ON Dark-ON	CY-111B	CY-111VB	CY-192B	CY-192VB	CY-191B	CY-191VB	CY-121B	CY-121VB	CY-122B	CY-122VB
CE	marking d	directive compliance				EN	IC Directive,	RoHS Direct	ive			
Sensing range			15 m 4	9.213 ft	4 m 13.12	3 ft (Note 2)	2 m 6.562	ft (Note 2)		3.937 in te 3)		23.622 in te 3)
Sensing object		ø18 mm ø0 more opaqu (Setting dis between en receiver: 15	ue object tance	ø50 mm ø1.969 in or more opaque, translucent or transparent object (Note 2, 4)		ø50 mm ø1.969 in or more opaque, translu- cent, transparent or specular object (Note 2, 4)		Opaque, translucent or transparent object (Note 4)				
Hys	teresis								3 to 15	% of operatior	n distance (N	lote 3)
Sup	ply voltag	ge				12 to 24 V	DC ±10 %	Ripple P-P 10	) % or less			
Curi	rent cons	sumption	Emitter: 35 n Receiver: 35					35 mA	or less			
Out	Dutput		NPN oper • Maxir • Appli	<ul> <li>PN output type&gt;</li> <li>PN open-collector transistor</li> <li>Maximum sink current: 100 mA</li> <li>Applied voltage: 24 V DC or less (between output and 0 V)</li> <li>Residual voltage: 1.5 V or less</li> </ul>						tput and +V;		
	Utilizati	ion category					DC-12 c	or DC-13				
	Short-c	ircuit protection					Incorp	orated				
Res	ponse tin	ne					1 ms	or less				
Test	input (em	ission halt) function	Incorporated									
_												
Ope	eration inc	dicator		Yellow L	ED (lights up	when the ou	tput is ON) (i	ncorporated	on the receiv	er for thru-be	am type)	
	eration inc		Green LED when the po (incorporate emitter)	(lights up ower is ON)	ED (lights up	when the ou	tput is ON) (i	ncorporated	on the receiv	er for thru-be	am type)	
	ver indica		when the po (incorporate	(lights up ower is ON)	ED (lights up			ncorporated		er for thru-be	am type)	
Pow	ver indica	itor on degree	when the po (incorporate	(lights up ower is ON)	ED (lights up		3 (Industrial	· .		er for thru-be	am type)	
Pow	ver indica Pollutio Protecti	itor on degree	when the po (incorporate emitter)	(lights up ower is ON) ed on the			3 (Industrial IP67	environment) (IEC)		er for thru-be		8 °F
Pow	ver indica Pollutio Protecti Ambien	itor on degree	when the po (incorporate emitter)	(lights up ower is ON) ed on the		F (No dew co	3 (Industrial IP67 ndensation o	environment) (IEC)	d), Storage:			8 °F
Pow	Pollutio Protecti Ambien	tor on degree ion tt temperature	when the po (incorporate emitter)	(lights up ower is ON) ed on the	13 to +131 °I	F (No dew co	3 (Industrial IP67 ndensation o 0 % RH (at +	environment) (IEC) r icing allowe 70 °C +158 °	d), Storage: -	-40 to +70 °C		8 °F
ronmental resistance	Pollutio Protecti Ambien Ambien	itor on degree ion nt temperature nt humidity	when the po (incorporate emitter)	(lights up ower is ON) ed on the	13 to +131 °l	F (No dew co 51 indescent ligh	3 (Industrial IP67 ndensation o 0 % RH (at + tt: 5,000 {x or	environment) (IEC) r icing allowe 70 °C +158 ° less at the li	d), Storage: F) ght-receiving	-40 to +70 °C	> −22 to +15	8 °F
Pow	Pollutio Protecti Ambien Ambien Voltage	tor on degree ion ht temperature ht humidity ht illuminance	when the po (incorporate emitter)	(lights up ower is ON) d on the 5 to +55 °C 500 °	13 to +131 °I Inca	F (No dew co 50 Indescent ligh e min. betwee	3 (Industrial IP67 ndensation o 0 % RH (at + t: 5,000 tx or n all supply t	environment) (IEC) r icing allowe 70 °C +158 ° less at the li erminals con	d), Storage: F) ght-receiving nected togeti	-40 to +70 °C	2 -22 to +15	8°F
ronmental resistance	Pollutio Protecti Ambien Ambien Voltage Vibratio	tor on degree ion nt temperature nt humidity nt illuminance e withstandability	when the po (incorporate emitter)	(lights up ower is ON) ed on the 5 to +55 °C 500 ° 10 to 55 Hz	13 to +131 °l Inca V AC for one frequency, (	F (No dew co 50 Indescent ligh e min. betwee 0.5 mm 0.020	3 (Industrial IP67 Indensation o 0 % RH (at + it: 5,000 tx or n all supply t in double an	environment) (IEC) r icing allowe 70 °C +158 ° less at the li erminals con nplitude in X,	d), Storage: F) ght-receiving nected togett Y and Z dire	-40 to +70 °C face ner and enclo	S -22 to +15 sure hours each	8 °F
Environmental resistance	Pollutio Protecti Ambien Ambien Voltage Vibratio Shock r	tor on degree ion t temperature thumidity tilluminance withstandability on resistance resistance	when the pc (incorporate emitter) 25	(lights up ower is ON) ed on the 5 to +55 °C 500 ° 10 to 55 Hz	13 to +131 °l Inca V AC for one frequency, ( 294 m/s <sup>2</sup> acc	F (No dew co 50 Indescent ligh e min. betwee 0.5 mm 0.020 Ieleration (30	3 (Industrial IP67 Indensation o 0 % RH (at + It: 5,000 {x or n all supply t in double an G approx.) ir	environment) (IEC) r icing allowe 70 °C +158 ° less at the li erminals con nplitude in X,	d), Storage: F) ght-receiving nected togett Y and Z dire	-40 to +70 °C face her and enclo ctions for 1.5	S –22 to +15 sure hours each	8 °F
Environmental resistance	Pollutio Protecti Ambien Ambien Voltage Vibratio Shock r tting elem	tor on degree ion it temperature nt temperature nt humidity nt illuminance e withstandability on resistance resistance nent	when the pc (incorporate emitter)	(lights up ower is ON) ad on the 5 to +55 °C – 500 ° 10 to 55 Hz 2 Infrared LED	13 to +131 °I Inca V AC for one frequency, ( 294 m/s <sup>2</sup> acc (modulated	F (No dew co 50 Indescent ligh e min. betwee 0.5 mm 0.020 weleration (30	3 (Industrial IP67 Indensation o 0 % RH (at + tt: 5,000 kx or n all supply t in double an G approx.) ir Red LED (	environment) (IEC) r icing allowe 70 °C +158 ° less at the li erminals con nplitude in X, n X, Y and Z c modulated)	d), Storage: F) ght-receiving nected togett Y and Z dire	-40 to +70 °C face her and enclo ctions for 1.5 ee times each Infrared LED	D –22 to +15 sure hours each (modulated)	8 °F
Environmental resistance wod	Pollutio Protecti Ambien Ambien Voltage Vibratic Shock r tting elem Peak en	tor on degree ion t temperature thumidity tilluminance withstandability on resistance resistance	when the pc (incorporate emitter)	(lights up ower is ON) ad on the 5 to +55 °C 500 ° 10 to 55 Hz	13 to +131 °I Inca V AC for one frequency, ( 294 m/s <sup>2</sup> acc (modulated	F (No dew co 50 Indescent ligh e min. betwee 0.5 mm 0.020 eleration (30 ) 0.034 mil	3 (Industrial IP67 Indensation o 0 % RH (at + t: 5,000 tx or n all supply t in double an G approx.) ir Red LED ( 665 nm	environment) (IEC) r icing allowe 70 °C +158 ° less at the li erminals con nplitude in X, n X, Y and Z o modulated) 0.026 mil	d), Storage: F) ght-receiving nected togett Y and Z dire directions thre	-40 to +70 °C face ner and enclo ctions for 1.5 ee times each	D –22 to +15 sure hours each (modulated)	8 °F
Environmental resistance	Pollutio Protecti Ambien Ambien Voltage Vibratio Shock r tting elem Peak en erial	tor on degree ion temperature thumidity tilluminance withstandability on resistance resistance nent nission wavelength	when the pc (incorporate emitter)	(lights up ower is ON) ad on the 5 to +55 °C – 500 ° 10 to 55 Hz 2 Infrared LED	13 to +131 °I Inca V AC for one frequency, ( 294 m/s <sup>2</sup> acc (modulated	F (No dew co 50 indescent ligh e min. betwee 0.5 mm 0.020 ieleration (30 ) 0.034 mil Er	3 (Industrial IP67 Indensation o D % RH (at + t: 5,000 & or n all supply t in double an G approx.) ir Red LED ( 665 nm nclosure: PB	environment) (IEC) r icing allowe 70 °C +158 ° less at the li erminals con nplitude in X, n X, Y and Z o modulated) 0.026 mil T, Lens: PMN	d), Storage: F) ght-receiving nected toget Y and Z dire lirections thre Inections thre IA	-40 to +70 °C face her and enclo ctions for 1.5 ee times each Infrared LED	D –22 to +15 sure hours each (modulated)	8 °F
Part Environmental resistance wo da and a stance	Pollutio Protecti Ambien Ambien Voltage Vibratio Shock r tting elem Peak en erial	tor on degree ion nt temperature nt humidity nt illuminance e withstandability on resistance resistance nent nission wavelength ot for M12 plug-in	when the pc (incorporate emitter)	(lights up ower is ON) ad on the 5 to +55 °C – 500 ° 10 to 55 Hz 2 Infrared LED	13 to +131 °I Inca V AC for one frequency, ( 294 m/s <sup>2</sup> acc (modulated	F (No dew co 50 indescent ligh e min. betwee 0.5 mm 0.020 ieleration (30 ) 0.034 mil Er	3 (Industrial IP67 Indensation o D % RH (at + t: 5,000 & or n all supply t in double an G approx.) ir Red LED ( 665 nm nclosure: PB	environment) (IEC) r icing allowe 70 °C +158 ° less at the li erminals con nplitude in X, n X, Y and Z o modulated) 0.026 mil	d), Storage: F) ght-receiving nected toget Y and Z dire lirections thre Inections thre IA	-40 to +70 °C face her and enclo ctions for 1.5 ee times each Infrared LED	D –22 to +15 sure hours each (modulated)	8 °F
Euvironmental resistance	Pollutio Protecti Ambien Ambien Voltage Vibratic Shock r tting elem Peak en erial	tor an degree ion at temperature at humidity at illuminance a withstandability bon resistance resistance nent nission wavelength bot for M12 plug-in ype)	when the pc (incorporate emitter) 	(lights up ower is ON) ed on the 5 to +55 °C – 500 ° 10 to 55 Hz 2 Infrared LED 0.035 mil	13 to +131 °I Inca V AC for one frequency, ( 294 m/s <sup>2</sup> acc (modulated 875 nm	F (No dew co 50 Indescent ligh a min. betwee 0.5 mm 0.020 weleration (30 ) 0.034 mil Er 0.44 mm <sup>2</sup> 3	3 (Industrial IP67 Indensation o 0 % RH (at + t: 5,000 & or n all supply t in double an G approx.) ir Red LED ( 665 nm nclosure: PB -core cabtyre	environment) (IEC) r icing allowe 70 °C +158 ° less at the li erminals con nplitude in X, a X, Y and Z d modulated) 0.026 mil T, Lens: PMM e cable, 2 m 6	d), Storage: F) ght-receiving nected togett Y and Z dire tirections thre lirections thre 1A 6.562 ft long	-40 to +70 °C face her and enclo ctions for 1.5 ee times each Infrared LED	D-22 to +15 sure hours each (modulated) 0.034 mil	
Environmental resistance	ver indica Pollutio Protecti Ambien Ambien Ambien Voltage Vibratio Shock r tting elem Peak en erial le (excep nection ty le extens	tor an degree ion at temperature at humidity at illuminance a withstandability bon resistance resistance nent nission wavelength bot for M12 plug-in ype)	when the pc (incorporate emitter) 	(lights up ower is ON) ed on the 5 to +55 °C – 500 ° 10 to 55 Hz 2 Infrared LED 0.035 mil	13 to +131 °I Inca V AC for one frequency, ( 294 m/s <sup>2</sup> acc (modulated 875 nm	F (No dew co 50 Indescent ligh a min. betwee 0.5 mm 0.020 weleration (30 ) 0.034 mil Er 0.44 mm <sup>2</sup> 3	3 (Industrial IP67 Indensation o 0 % RH (at + t: 5,000 & or n all supply t in double an G approx.) ir Red LED ( 665 nm nclosure: PB -core cabtyre	environment) (IEC) r icing allowe 70 °C +158 ° less at the li erminals con nplitude in X, a X, Y and Z d modulated) 0.026 mil T, Lens: PMM e cable, 2 m 6	d), Storage: F) ght-receiving nected togett Y and Z dire tirections thre lirections thre 1A 6.562 ft long	-40 to +70 °C face ner and enclo ctions for 1.5 ee times each Infrared LED 875 nm (	C –22 to +15 sure hours each (modulated) 0.034 mil	
Environmental resistance	ver indica Pollutio Protecti Ambien Ambien Ambien Voltage Vibratio Shock r tting elem Peak en erial le (excep nection ty le extens weight e 5)	tor an degree ion at temperature at humidity at illuminance e withstandability on resistance resistance nent nission wavelength ot for M12 plug-in ype) sion	when the pc (incorporate emitter) 	(lights up ower is ON) ed on the 5 to +55 °C	13 to +131 °l Inca V AC for one frequency, ( 294 m/s <sup>2</sup> acc (modulated 875 nm 0 m 32.808 f 65 g	F (No dew co 50 Indescent ligh e min. betwee 0.5 mm 0.020 eleration (30 ) 0.034 mil Er 0.44 mm <sup>2</sup> 3 it is possible v 70 g	3 (Industrial IP67 Indensation o 0 % RH (at + t: 5,000 tx or n all supply t in double an G approx.) ir Red LED ( 665 nm inclosure: PB -core cabtyre vith 0.34 mm 65 g	environment) (IEC) r icing allowe 70 °C +158 ° less at the li erminals con nplitude in X, a X, Y and Z o modulated) 0.026 mil T, Lens: PMM e cable, 2 m ( n², or more, c 70 g	d), Storage: F) ght-receiving nected togeth Y and Z dire directions thre lirections thre 1A 8.562 ft long able (thru-be 65 g	-40 to +70 °C face her and enclo ctions for 1.5 ee times each Infrared LED 875 nm ( am type: both 70	2 –22 to +15 sure hours each (modulated) 0.034 mil n emitter and grox.	I receiver).

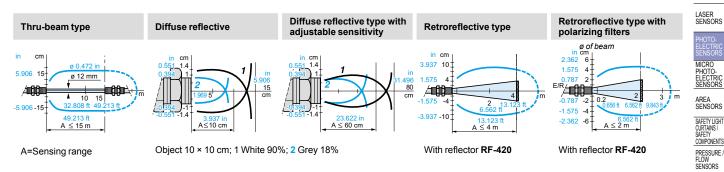
3) The sensing range and the hysteresis of the diffuse reflective type sensor are specified for white non-glossy paper (200 × 200 mm 7.874 × 7.874 in) as

the object.

4) Make sure to confirm detection with an actual sensor before use for detection of the transparent object and the translucent object. 5) The weight includes the weight of nuts.

RT-610





## PRECAUTIONS FOR PROPER USE



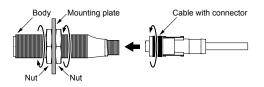
• Never use this product as a sensing device for personnel protection.

 In case of using sensing devices for personnel protection, use products which meet laws and standards, such as OSHA, ANSI or IEC etc., for personnel protection applicable in each region or country.

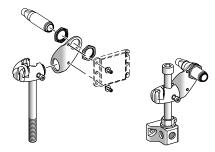
#### Mounting

- The tightening torque should be 3 N·m or less.
- Use a cable with connector **CN-24C**(L)-**C**□ (optional) for M12 connector type.

Tightening torque for connector part is 2 N  $\,$  m or less.



#### Mounting drawing with sensor or reflector RF-420



#### Wiring

- Make sure that the power supply is off while wiring.
- Verify that the supply voltage variation is within the rating.

Refer to p.1552~ for general precautions.

- If power is supplied from a commercial switching regulator, ensure that the frame ground (F.G.) terminal of the power supply is connected to an actual ground.
- Ensure that an isolation transformer is utilized for the DC power supply. If an autotransformer is utilized, the main body or power supply may be damaged.
- If the used power supply generates a surge, connect a surge absorber to the power supply to absorb the surge.
- Do not use during the initial transient time (0.5 sec) after the power supply is switched on.
- In case noise generating equipment (switching regulator, inverter motor, etc.) is used in the vicinity of this product, connect the frame ground (F.G.) terminal of the equipment to an actual ground.
- Do not run the wires together with high-voltage lines or power lines or put them in the same raceway. This can cause malfunction due to induction.
- Damage or burnout may result in case of short circuit of load or miswiring.
- Make a cable length as short as possible to lessen noise pickup.

#### Others

- This device has been developed / produced for industrial use only.
- Take care that the sensor is not directly exposed to fluorescent lamp from a rapid-starter lamp or a high frequency lighting device, as it may affect the sensing performance.
- Avoid using a product where there is excessive vapor, dust or corrosive gas, or in a place where it could be exposed directly to water or chemicals.
- Take care that the sensor does not come in direct contact with water, oil, grease or organic solvents, such as, thinner, etc.
- Do not use in an environment containing infammable or explosive gases.
- Never disassemble or modify the product.

EV 7

EX-Z
CX-400
CY-100
EX-10
EX-20
EX-30
EX-40
CX-440
EQ-30
EQ-500
MQ-W
RX-LS200
RX
RT-610

FIBER SENSORS

INDUCTIVE PROXIMITY SENSORS

PARTICULAR USE SENSORS

SENSOR OPTIONS

SIMPLE WIRE-SAVING UNITS

WIRE-SAVING SYSTEMS

MEASURE

MENT SENSORS

STATIC

CONTROL

LASER MARKERS

HUMAN MACHINE INTERFACES

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MACHINE

VISION SYSTEMS

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MICRO PHOTO-ELECTRIC SENSORS

AREA SENSORS

SAFETY LIGHT CURTAINS SAFETY

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MACHINE ENERGY MANAGEMENT SOLUTIONS

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MACHINE

VISION SYSTEMS ΠV

CURING

Selection Guide

Amplifie Built-ir

Power Supply Built-in

Amplifier-separated

EX-Z

EX-10

EX-20

EX-30

EX-40

CX-440

EQ-30

EQ-500

MQ-W

RX-LS200

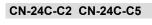
L = 2 or 5 m

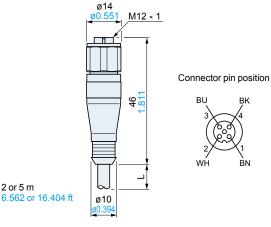
ະ

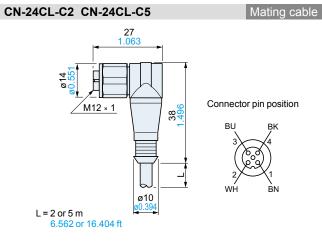
#### DIMENSIONS (Unit: mm in) CY-1□ Sensor M18 2 m cable length type (mm in) M12 plug-in connector type (mm in) а b а b Standard type CY-111 /121 /192 46 1.811 28 1.102 60 2.362 28 1.102 b а Standard type CY-191 48 1.890 28 1.102 62 2.441 28 1.102 Side view type CY-111V /121V /191V /192V 76 2.992 62 2.441 28 1.102 28 1.102 Standard type CY-122 622.441 44 1.732 76 2.992 44 1.732 Side view type CY-122V 78 3.071 44 1.732 92 3.622 44 1.732

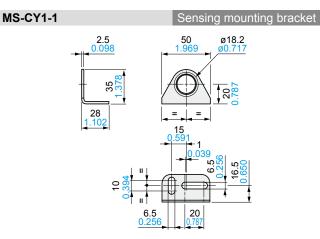
Mating cable

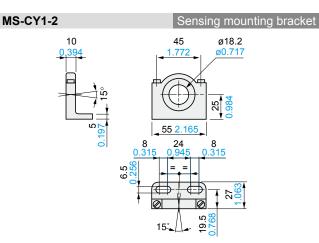
BK





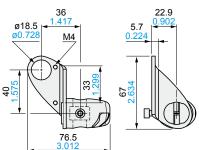


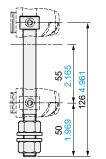




#### CX-400 MS-AJ3

1. Ball-joint mounted fixing bracket CY-100 series or RF-420 2. M12 rod

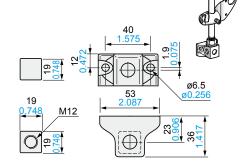




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6

Universal sensor mounting stand 3. Support for M12 rod



RX RT-610

# 278

#### FIBER SENSORS LASER SENSORS **RF-420** Reflector RF-410 Reflector PHOTO-ELECTRIC SENSORS 4 - R5 <u>R0.197</u> 9 0.354 35 1.378 ø7.5 ø0.295 2 - ø5.5 ø0.217 MICRO PHOTO-ELECTRIC SENSORS 2 - ø4.5 <u>ø0.177</u> $\Theta$ ð æ ÷ AREA SENSORS 21 0.827 33 45 SAFETY LIGHT CURTAINS / SAFETY COMPONENTS 51 2.008 47 1.850 2.717 2.362 60 69 $\odot$ PRESSURE / FLOW SENSORS t F ø4.5 ø<mark>0.177</mark> 4 INDUCTIVE PROXIMITY SENSORS 24 0.945 0 Þ, 0.157 ø4.5 ø0.177 8 0.31 = = 3.5 7.5 8 0.138 PARTICULAR USE SENSORS 29 1.142 51.5 2.028 0.295 0.315 SENSOR OPTIONS SIMPLE WIRE-SAVING UNITS WIRE-SAVING SYSTEMS MEASURE-MENT SENSORS STATIC CONTROL DEVICES LASER MARKERS PLC HUMAN MACHINE INTERFACES ENERGY MANAGEMENT SOLUTIONS FA COMPONENTS MACHINE VISION SYSTEMS UV CURING SYSTEMS Selection Guide Amplifie Built-in Power Supply Built-in Amplifier-separated EX-Z CX-400 CY-100 EX-10 EX-20 EX-30 EX-40 CX-440 EQ-30 EQ-500 MQ-W RX-LS200 RX RT-610

## DIMENSIONS (Unit: mm in)