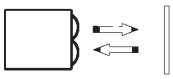
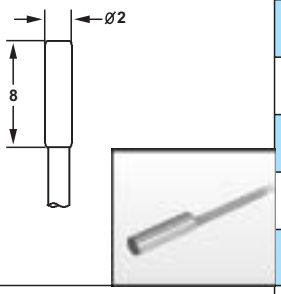
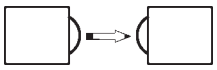
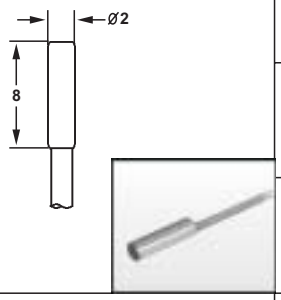
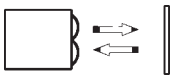
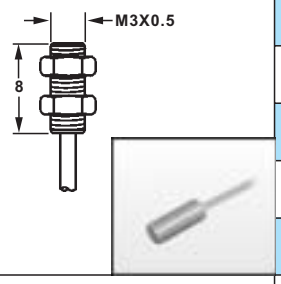
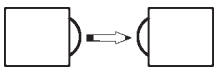
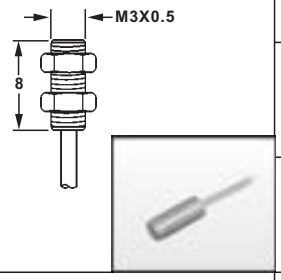
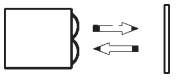
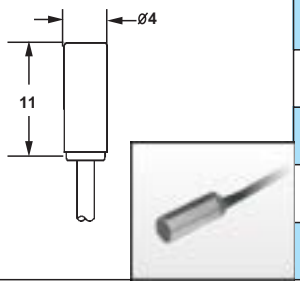
MINIATURE SEPARATE SENSORS HEAD SELECTION GUIDE

Sensing Mode	Dimensions	Sensing distance	Part Number	Light Source
Diffuse Mode  2mm Smooth Tubular	D02 	12mm	D02S-D0012D-CX9C4U1	Infrared 880nm
		12mm	D02S-D0012D-CX6C4U1	Visible red 660nm
		———	———	———
		———	———	———
		———	———	———
		———	———	———
Opposed Mode  2mm Smooth Tubular	D02 	200mm	Emitter : D02S-T0200D-EX9C4U1 Receiver : D02S-T0200D-CX9C4U1	Infrared 880nm
		200mm	Emitter : D02S-T0200D-EX6C4U1 Receiver : D02S-T0200D-CX6C4U1	Visible red 660nm
		———	——— ———	———
Diffuse Mode  3mm Threaded Tubular	M03 	12mm	M03S-D0012D-CX9C4U1	Infrared 880nm
		12mm	M03S-D0012D-CX6C4U1	Visible red 660nm
		———	———	———
		———	———	———
		———	———	———
		———	———	———
Opposed Mode  3mm Threaded Tubular	M03 	200mm	Emitter : M03S-T0200D-EX9C4U1 Receiver : M03S-T0200D-CX9C4U1	Infrared 880nm
		200mm	Emitter : M03S-T0200D-EX6C4U1 Receiver : M03S-T0200D-CX6C4U1	Visible red 660nm
		———	——— ———	———
Diffuse Mode  4mm Smooth Tubular	D04 	40mm	D04S-D0010D-CX9C4U1	Infrared 880nm
		40mm	D04S-D0010D-CX6C4U1	Visible red 660nm
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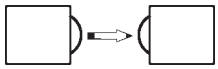
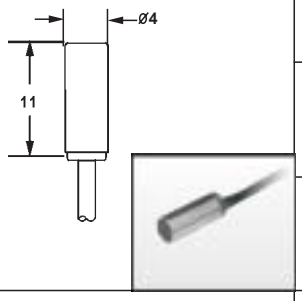
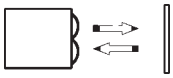
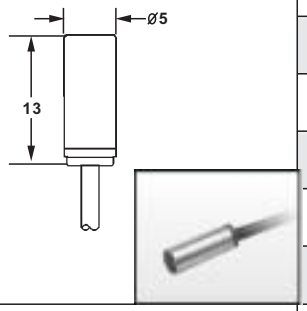
MINIATURE SEPARATE SENSORS HEAD SELECTION GUIDE

Sensing Mode	Dimensions	Sensing distance	Part Number	Light Source
Opposed Mode  4mm Smooth Tubular	D04 	800mm	Emitter : D04S-T0800D-EX9C4U1 Receiver : D04S-T0800D-CX9C4U1	Infrared 880nm
		800mm	Emitter : D04S-T0800D-EX6C4U1 Receiver : D04S-T0800D-CX6C4U1	Visible red 660nm
		———	——— ———	———
Diffuse Mode  5mm Smooth Tubular	D05 	63mm	D05S-D0063D-CX9C4U1	Infrared 880nm
		63mm	D05S-D0063D-CX6C4U1	Visible red 660nm
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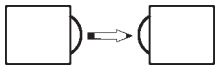
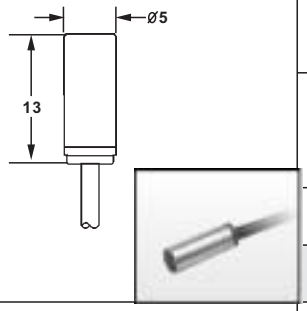
		———	———	———
		———	———	———
		———	———	———
Opposed Mode  5mm Smooth Tubular	D05 	800mm	Emitter : D05S-T0800D-EX9C4U1 Receiver : D05S-T0800D-CX9C4U1	Infrared 880nm
		800mm	Emitter : D05S-T0800D-EX6C4U1 Receiver : D05S-T0800D-CX6C4U1	Visible red 660nm
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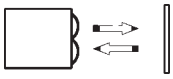
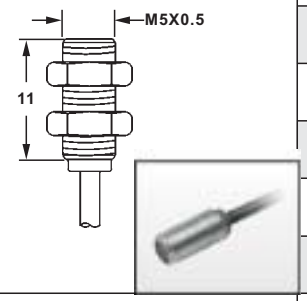
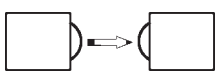
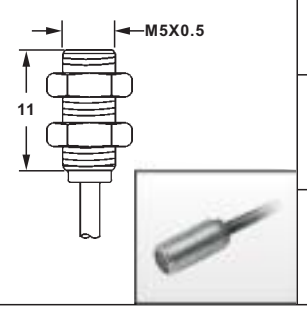
		———	———	———
Diffuse Mode  5mm Threaded Tubular	M05 	40mm	M05S-D0040D-CX9C4U1	Infrared 880nm
		40mm	M05S-D0040D-CX6C4U1	Visible red 660nm
		———	———	———
		———	———	———
		———	———	———
		———	———	———
Opposed Mode  5mm Threaded Tubular	M05 	800mm	Emitter : M05S-T0800D-EX9C4U1 Receiver : M05S-T0800D-CX9C4U1	Infrared 880nm
		800mm	Emitter : M05S-T0800D-EX6C4U1 Receiver : M05S-T0800D-CX6C4U1	Visible red 660nm
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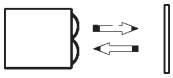
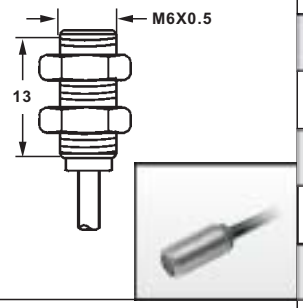
MINIATURE SEPARATE SENSORS HEAD SELECTION GUIDE

Sensing Mode	Dimensions	Sensing distance	Part Number	Light Source
Diffuse Mode  6mm Threaded Tubular	M06 	63mm	M06S-D0063D-CX9C4U1	Infrared 880nm
		63mm	M06S-D0063D-CX6C4U1	Visible red 660nm
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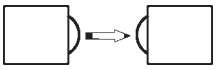
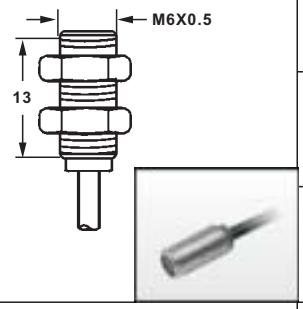
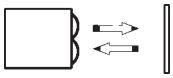
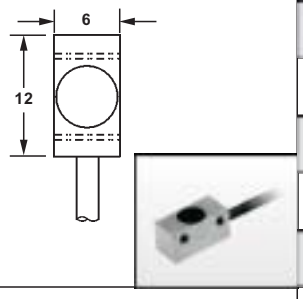
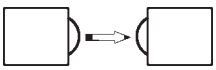
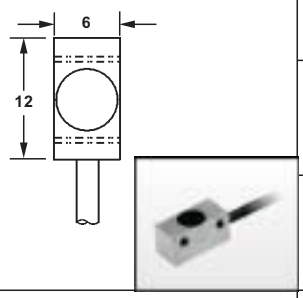
		——	——	——
Opposed Mode  6mm Threaded Tubular	M06 	800mm	Emitter : M06S-T0800D-EX9C4U1 Receiver : M06S-T0800D-CX9C4U1	Infrared 880nm
		800mm	Emitter : M06S-T0800D-EX6C4U1 Receiver : M06S-T0800D-CX6C4U1	Visible red 660nm
		——	——	——
			——	
Diffuse Mode  Q6X6mm Block	Q6X6 	63mm	Q06S-D0063D-CX9C4U1	Infrared 880nm
		63mm	Q06S-D0063D-CX6C4U1	Visible red 660nm
		——	——	——
		——	——	——
		——	——	——
		——	——	——
Opposed Mode  Q6X6mm Block	Q6X6 	800mm	Emitter : Q06S-T0800D-EX9C4U1 Receiver : Q06S-T0800D-CX9C4U1	Infrared 880nm
		800mm	Emitter : Q06S-T0800D-EX6C4U1 Receiver : Q06S-T0800D-CX6C4U1	Visible red 660nm
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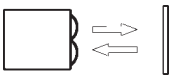
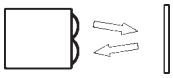
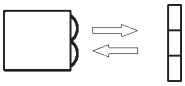
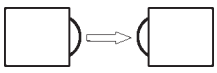
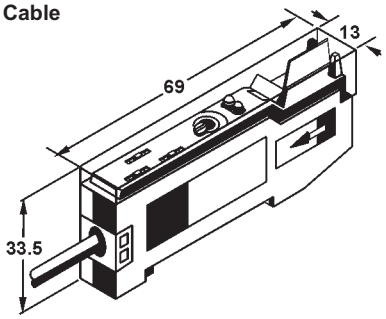
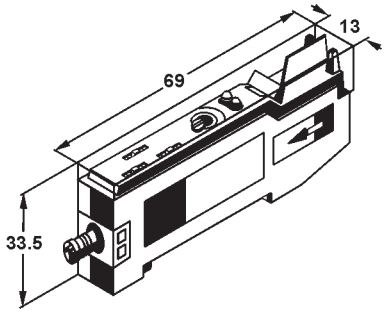
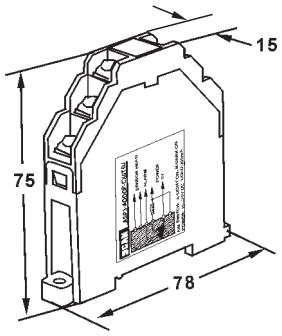
MINIATURE SEPARATE SENSOR HEAD SELECTION GUIDE

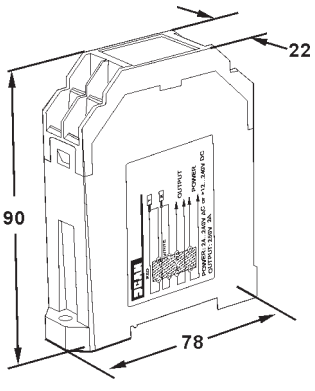
Sensing Mode	Dimensions	Sensing Distance	Part Number	Light Spot Size
Diffuse Mode 		200mm	ASP1-D0200D-CY6C4U2	13 x 13 mm @ 150 mm
		——	——	——
		——	——	——
		——	——	——
		60mm	ASP1-D0060D-CY6C4U2-FL	35 mm @ 150 mm
		——	——	——
		——	——	——
		——	——	——
Convergent Mode 		6...35mm (White 90%) 12...19 mm (Black 6%)	ASP1-C0035D-CY6C4U2-4 ASP1-C0035D-CY5C4U2-4	1 x 4 mm @ 16 mm
		3...30mm (White 90%) 13...22 mm (Black 6%)	ASP1-C0030D-CY6C4U2-1 ASP1-C0030D-CY5C4U2-1	1 x 1 mm @ 16 mm
Mark Sensor 		16mm	ASP1-M0016D-CY6C4U2-4	1 x 4 mm @ 16 mm
		16mm	ASP1-M0016D-CY5C4U2-4	1 x 4 mm @ 16 mm
		16mm	ASP1-M0016D-CY6C4U2-1	1 x 1 mm @ 16 mm
		16mm	ASP1-M0016D-CY5C4U2-1	1 x 1 mm @ 16 mm
Opposed Mode 		350mm	Receiver : ASP1-T0350D-CY6C2U2-FL	200 mm @ 300 mm
			Emitter : ASP1-T0350D-EY6C2L2-FL	200 mm @ 300 mm
		2m	Receiver : ASP1-T2000D-CY6C2U2	180 mm @ 1.5 m
			Emitter : ASP1-T2000D-EY6C2L2	180 mm @ 1.5 m

SEPARATE AMPLIFIER SELECTION GUIDE

<table>
<tr><th>Product Highlights</th><th>Connection</th><th>Part Number</th></tr>
<tr><td rowspan="2">► Ruggred plastic housing
► Compatible with all miniature Series remote sensing heads
► Supports contrast sensing with red or green light sources
► Signal strength indicator
► Sensitivity adjustment
► Outputs short circuit and over current protected
► Power supply reverse polarity protected
► Selectable off delay
► Cable or M8 quick disconnect versions
► Easy DIN rail mounting</td><td>ASP2 Cable
 
</td><td>NPN:
ASP2-A0000N-CX0C3U2

PNP:
ASP2-A0000P-CX0C3U2</td></tr>
<tr><td>ASP2 Quick Disconnect(Pico style)
 
</td><td>NPN:
ASP2-A0000N-CX0Q4UP

PNP:
ASP2-A0000P-CX0Q4UP</td></tr>
<tr><td rowspan="2">► Ruggred plastic housing
► Compatible with all miniature Series remote sensing heads
► Signal strength indicator
► Sensitivity adjustment
► Outputs short circuit and over current protected
► Power supply reverse polarity protected
► Easy DIN rail mounting
► Warning Output
► Light-on, dark-on Selected mode.</td><td>ASP3
 
</td><td>NPN:
ASP3-A0000N-CX0T6U

ASP3-A0000P-CX0T6U</td></tr>
<tr><td>ASP4
 
</td><td>Relay SPST:
ASP4-A0000U-CX0T8U</td></tr>
</table>

MINIATURE SEPARATE SENSOR HEAD SPECIFICATIONS

Item \ Type	Diffuse							Thru-beam						
Series	D02	M03	D04	D05	M05	M06	Q6X6	D02	M03	D04	D05	M05	M06	Q6X6
Sensing Distauce	12mm	12mm	40mm	63mm	40mm	63mm	63mm	200mm	200mm	800mm	800mm	800mm	800mm	800mm
Light source	Infrared 880nm or Visible red 660nm													
Ambient Operating Temperature	-10°C~+55°C													
Storage Temperature	-30°C~+70°C													
Environmental rating	IP65													
Relative humidity	90% at 20°C													
Connection	1m cable with amplifier connector													
Housing material	Stainless Steel	Nickel-plated Brass	Stainless Steel	Stainless Steel	Nickel-plated Brass	Nickel-plated Brass	Nickel-plated Brass	Stainless Steel	Nickel-plated Brass	Stainless Steel	Stainless Steel	Nickel-plated Brass	Nickel-plated Brass	Nickel-plated Brass
Sensing face material	PMMA													
EMC	IEC 60947-5-2, Parts 7.2.6.1. 2. 3 or RFI>3V/m(in 30-1000MHZ), EFT>1KV, ESD>4KV(contact)													
Voltage Withstand Ability	IEC 60947-5-2, Part 8.3.3.4 or 1500VAC for one min, between all supply terminals connected together and enclosure													
Insulation Resistance	>20MΩ, with 1500V AC megger between all supply terminals connected together and enclosure													
Vibration Resistance	IEC 60947-5-2, Part 7.4.2 or 10-55HZ, 1.0mm amplitude in x , y and z directions for 30 min													
Shock Resistance	IEC 60947-5-2, Part 7.4.1 or 30g, 11ms in x , y and z directions for six time each													
Weight(approx)	3.2g	3.4g	4.0g	7.5g	8.0g	9.5g	6.6g	5.5g	5.9g	9.0g	10.0g	12g	12.5g	13.2g

MINIATURE SEPARATE SENSOR HEAD SPECIFICATIONS

Part Number	ASP1-C0035D-CY6C4U2-4	ASP1-C0035D-CY6C4U2-4	ASP1-C0030D-CY6C4U2-1	ASP1-C0035D-CY5C4U2-1
Focus	16 mm (0.63 in)			
Light spot size	1x4 mm @ 16 mm (0.04 x 0.16 in @ 0.63 in)		1x1 mm @ 16 mm (0.04 x 0.04 in @ 0.63 in)	
Sensing Range, White (90%)	6...35 mm (0.24...1.4 in)		3...30 mm (0.12...1.2 in)	
Sensing Range, Black (6%)	12...19 mm (0.47...0.75 in)		13...22 mm (0.51...0.87 in)	
Light Source	LED Red	LED green	LED Red	LED green
Connecting Cable	PVC, 2m, pre-stripped, can be shortened to desired length			
Housing	Glass fiber reinforced plastic			
Circuit Protection	Reverse polarity protected			
Ambient Operating Temperature	-25…55°C (-13…131°F)			
Storage Temperature	-40…70°C (-40…158°F)			
Enclosure Rating	IP 66 / NEMA 4			
Mounting Bracket	Included			
EMC	IEC 60947-5-2, Parts 7.2.6.1.2.3 or RFI>3V/m(in 30-1000MHZ), EFT>1KV, ESD>4KV(contact)			
Voltage With Stand Ability	IEC 60947-5-2, Part 8.3.3.4 or 500VDC for one min, between all supply terminals connected together and enclosure			
Insulation Resistance	>20MΩ, with 500V DC megger between all supply terminals connected together and enclosure			
Vibration Resistance	IEC 60947-5-2, Part 7.4.2 or 10-55HZ, 1.0mm amplitude in x , y and z directions for 30min			
Shock Resistance	IEC 60947-5-2, Part 7.4.1 or 30g, 11ms in x , y and z directions for six time each			
Weight	approx. 20g			

MINIATURE SEPARATE SENSOR HEAD SPECIFICATIONS

Part Number	ASP1-M0016D -CY6C4U2-4	ASP1-M0016D -CY5C4U2-4	ASP1-M0016D -CY6C4U2-1	ASP1-M0016D -CY5C4U2-1
Focus	16 mm (0.63 in)			
Light spot size	1 x4 mm @ 16 mm(0.04 x 0.16 in @ 0.63 in)		1 x1 mm @ 16 mm(0.04 x 0.16 in @ 0.63 in)	
Sensing Range	16mm ±2mm(0.63in ±0.08in)			
Light Source	LED Red	LED Green	LED Red	LED Green
Connecting Cable	PVC, 2m, pre-stripped, can be shortened to desired length			
Housing	Glass fiber reinforced plastic			
Enclosure Rating	IP 66 / NEMA 4			
Ambient Operating Temperature	Reverse polarity protected			
Circuit Protection	-25…55° C(-13…131° F)			
Storage Temperature	-40…70° C(-40…158° F)			
Mounting Bracket	Included			
EMC	IEC 60947-5-2, Parts 7.2.6.1. 2.3 or RFI>3V/m(in 30-1000MHZ), EFT>1KV, ESD>4KV(contact)			
Voltage With Stand Ability	IEC 60947-5-2, Part 8.3.3.4 or 500VDC for one min, between all supply terminals connected together and enclosure			
Insulation Resistance	>20MΩ, with 500V DC megger between all supply terminals connected together and enclosure			
Vibration Resistance	IEC 60947-5-2, Part 7.4.2 or 10-55HZ, 1.0mm amplitude in x , y and z directions for 30 min			
Shock Resistance	IEC 60947-5-2, Part 7.4.1 or 30g, 11ms in x , y and z directions for six time each			
Weight	approx. 20g			

SEPARATE AMPLIFIER AND SENSOR HEAD SPECIFICATIONS

Part Number	ASP1-T0350D-CY6C4U2-FL ASP1-T0350D-EY6C2L2-FL	ASP1-T2000D-CY6C4U2 ASP1-T2000D-EY6C2L2
Max. Range @ Excess Gain 1	350mm	2m
Typical Range @ Excess Gain 3	200mm	1.1m
Angle of Divergence	Approx. 36° (SS)20° (SE)	Approx. 7° (SS) 18° (SE)
Light spot size	Approx. 200 mm @ 300mm(7.9 in @ 11.8 in)	Approx. 180 mm @ 1.5m(7.1 in @ 4.9 in)
Light Source	LED Red	
Connecting Cable	PVC, 2m, pre-stripped, can be shortened to desired length	
Housing	Glass fiber reinforced plastic	
Enclosure Rating	IP 66 / NEMA 4	
Ambient Operating Temperature	Reverse polarity protected	
Circuit Protection	-25…55° C(-13…131° F)	
Storage Temperature	-40…70° C(-40…158° F)	
EMC	IEC 60947-5-2, Parts 7.2.6.1. 2.3 or RFI>3V/m(in 30-1000MHZ), EFT>1KV, ESD>4KV(contact)	
Voltage With Stand Ability	IEC 60947-5-2, Part 8.3.3.4 or 500VDC for one min, between all supply terminals connected together and enclosure	
Insulation Resistance	>20MΩ, with 500V DC megger between all supply terminals connected together and enclosure	
Vibration Resistance	IEC 60947-5-2, Part 7.4.2 or 10-55HZ, 1.0mm amplitude in x , y and z directions for 30 min	
Shock Resistance	IEC 60947-5-2, Part 7.4.1 or 30g, 11ms in x , y and z directions for six time each	
Weight	approx. 20g (0.71 oz)	

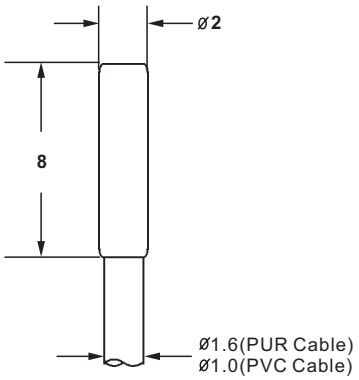
TYPE	DC	AC or DC
Model	ASP3-A0000N-CX0T6U / ASP3-A0000P-CX0T6U	ASP4-A0000U-CX0T8U
Power supply	10 to 30VDC	DC: 12 to 240VDC AC: 24 to 240VDC
Current/Power consumption	45mA max	1.5VA max
Response time	1 ms	12ms
Sensitivity adjustment	By 1-turn trimmer(240°)	
Operation mode	LIGHT-ON/DARK-ON (switch selectable)	
Indicator	Output: Red LED, Stable operation: Green LED	
Control output	NPN open-collector:200mA(40V)max Residual voltage:1V max.	SPST-NO Relay contact 250 VAC 2A (1a;resistive load)
Stability/disconnection alarm output	NPN open-collector:200 mA(40V)max Residual voltage:1V max	———
Operating temperature	-10 ~ +50℃(no freezing)	
Operating humidity	35 ~ 85% RH	
Weight(approx)	50g	120g

SEPARATE AMPLIFIER SPECIFICATIONS

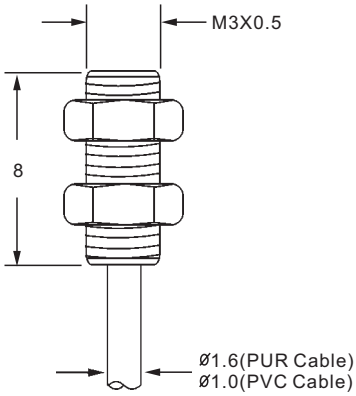
Part Number	ASP2-A0000P-C X0C3U2	ASP2-A0000P-C X0Q4UP	ASP2-A0000N-C X0C3U2	ASP2-A0000N-C X0Q4UP
Response Time/Frequency	<= 500 us / 1.0 kHz (standard mode); 200 us / 2.5 kHz (mark mode)			
Supply Voltage	10...30V DC (limit values)			
Current Consumption(no load)	<=35 mA			
Ripple (within Vs tolerance)	<=10%			
Output Type	PNP		NPN	
Output Voltage High	Vs - (<=1.5V)		approx. Vs.	
Output Voltage Low	approx. 0V		<=1.5V.	
Output Current Max.	100 mA			
Operation Mode	Light or dark switching delectable via switch			
Connection	Cable	M8 4-pin plug	Cable	M8 4-pin plug
Connecting Cable	PVC,2m,3 x 24AWG	see accessories	PVC,2m,3 x 24AWG	see accessories
Housing	Glass fiber reinforced plastic			
Enclosure Rating	IP 50			
EMC	IEC 801			
Circuit Protection	Outputs short circuit and over current protected, inputs, outputs, and Vs reverse polarity protected			
Shock/Vibration	IEC 68-2-27 / IEC 68-2-6			
Timing Options	No timing or Off delay			
Time Settings	40 ms, fixed			
Ambient Operating Temperature	-25…55 C(-13…131 F)			
Storage Temperature	-40…70 C(-40…158 F)			
EMC	IEC 60947-5-2, Parts 7.2.6.1., 2.3 or RFI>3V/m(in 30-1000MHZ), EFT>1KV, ESD>4KV(contact)			
Voltage With Stand Ability	IEC 60947-5-2, Part 8.3.3.4 or 500VDC for one min, between all supply terminals connected together and enclosure			
Insulation Resistance	>20MΩ , with 500V DC megger between all supply terminals connected together and enclosure			
Vibration Resistance	IEC 60947-5-2, Part 7.4.2 or 10-55HZ, 1.0mm amplitude in x , y and z directions for 30 min			
Shock Resistance	IEC 60947-5-2, Part 7.4.1 or 30g, 11ms in x , y and z directions for six time each			
Mounting Bracket	RP32-A1 (see page U-03)			
Weight	approx. 25g connector versions; 66g cable versions			
Pigtail type	See page Q-01 for cable and connect at pigtail			
Mounting Bracket	included			
Weight	approx. 30 g (1.1 oz) plug versions, 70 g (2.5 oz) cable versions			
cable	2M or 9m 3.5ϕ PVC.			

MINIATURE SENSOR HEAD DIMENSIONS

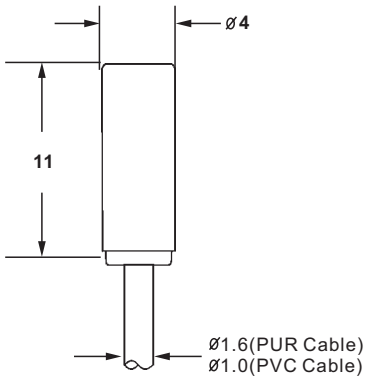
D02 Sensor



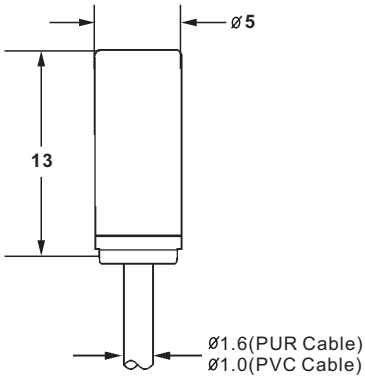
M03 Sensor



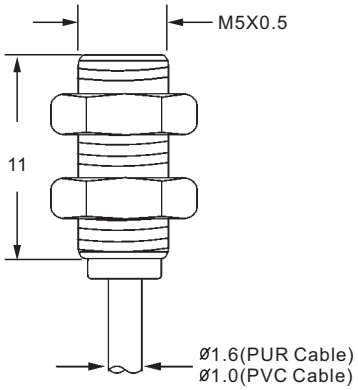
D04 Sensor



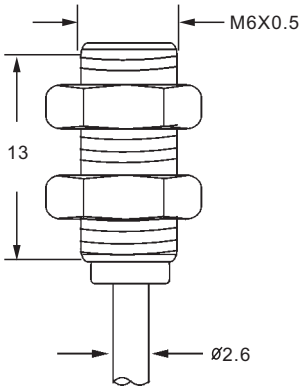
D05 Sensor



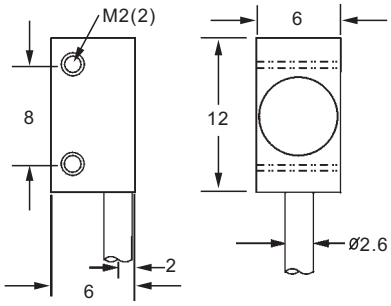
M05 Sensor



M06 Sensor

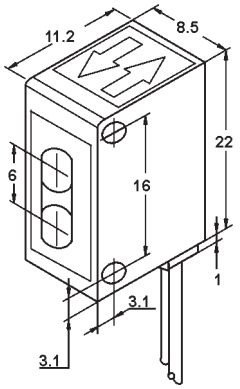


Q6X6 Sensor



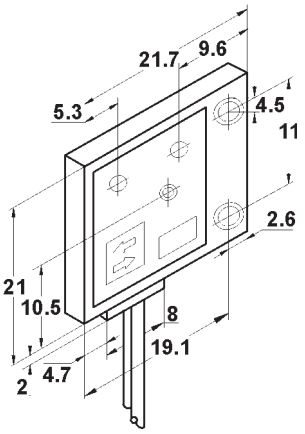
MINIATURE SENSOR HEAD DIMENSIONS

Diffuse mode



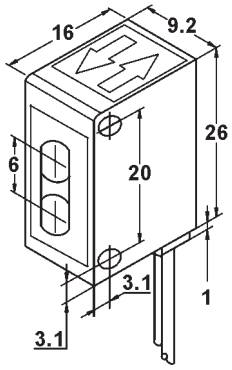
ASP1-D0200D-CY6C4U2

Diffuse mode



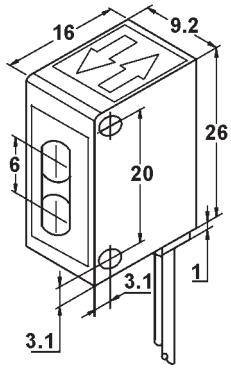
ASP1-D0060D-CY6C4U2-FL

Convergent mode



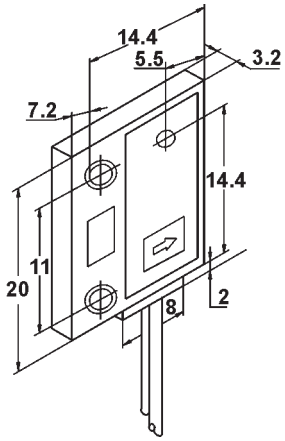
ASP1-C0035D-CY6C4U2-4
ASP1-C0035D-CY5C4U2-4
ASP1-C0030D-CY6C4U2-1
ASP1-C0030D-CY5C4U2-1

Mark sensor



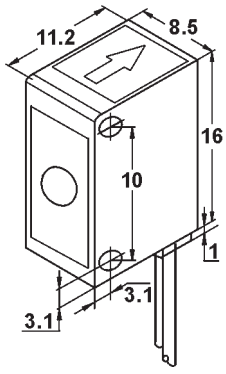
ASP1-M0016D-CY6C4U2-4
ASP1-M0016D-CY5C4U2-4
ASP1-M0016D-CY6C4U2-1
ASP1-M0016D-CY5C4U2-1

Opposed mode



ASP1-T0350D-CY6C2U2-FL
ASP1-T0350D-EY6C2L2-FL

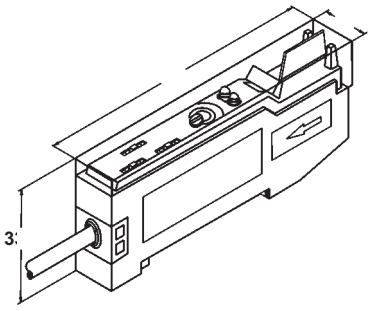
Opposed mode



ASP1-T2000D-CY6C2U2
ASP1-T2000D-EY6C2L2

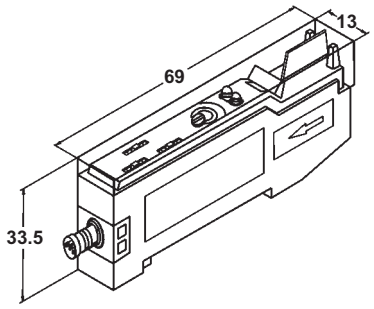
SEPARATE AMPLIFIER DIMENSIONS

ASP2 Cable



ASP2-A0000N-CX0C3U2
ASP2-A0000P-CX0C3U2

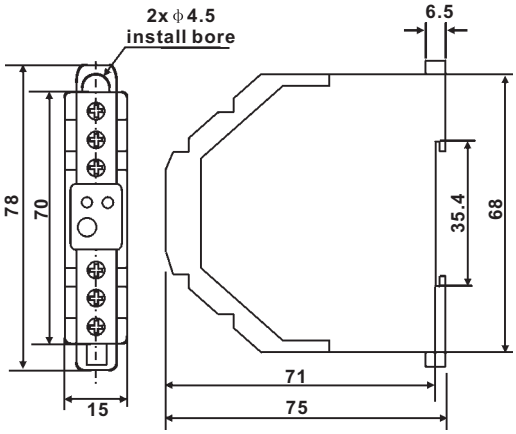
ASP2 Quick Disconnect(Pico style)



ASP2-A0000N-CX0Q4UP
ASP2-A0000P-CX0Q4UP

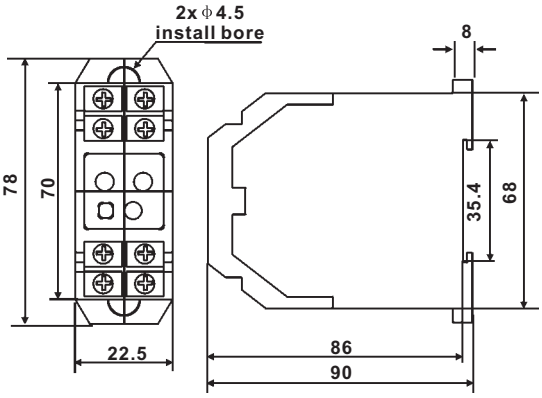
ASP3 Sensor

ASP3-A0000N-CX0T6U
ASP3-A0000P-CX0T6U



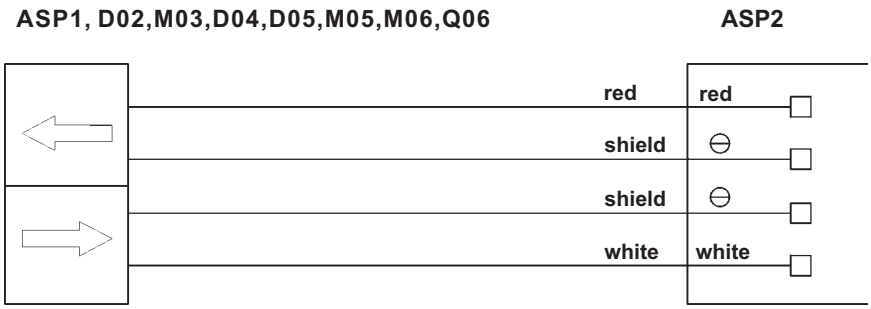
ASP4 Sensor

ASP4-A0000U-CX0T6U

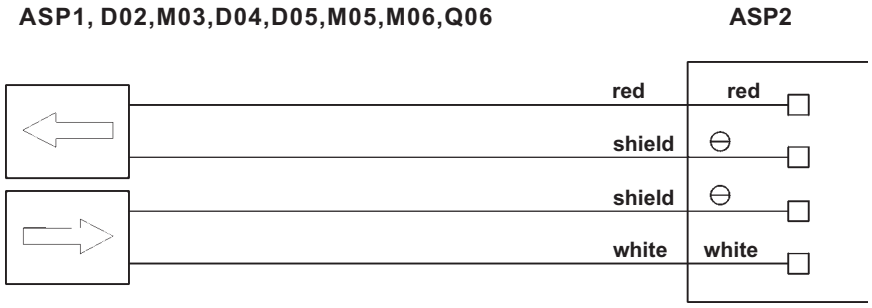


MINIATURE SENSOR HEAD TO AMPLIFIER CONNECTION DIAGRAM

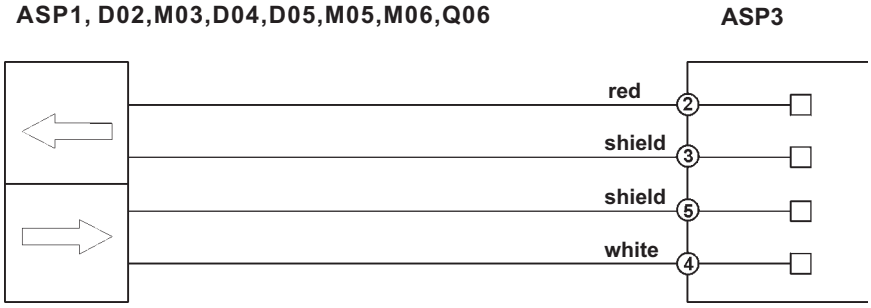
Diffuse mode for ASP2



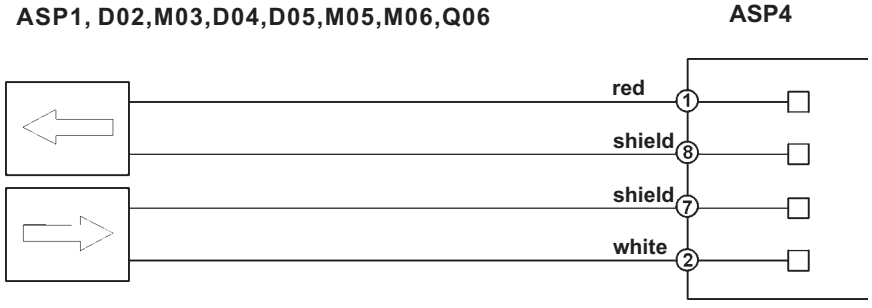
Opposed mode for ASP2



Diffuse mode for ASP3



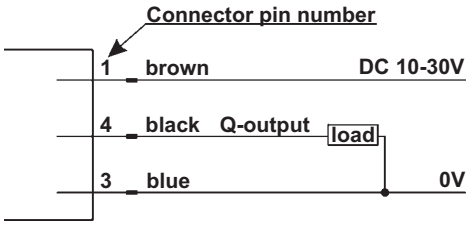
Opposed mode for ASP4



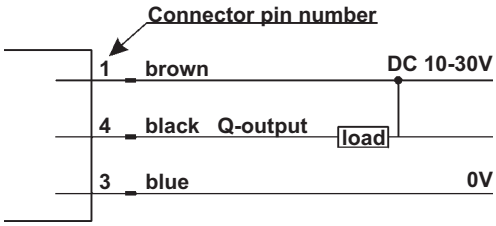
AMPLIFIER OUTPUT CONNECTION DIAGRAM

ASP2 Connection diagram

PNP Models



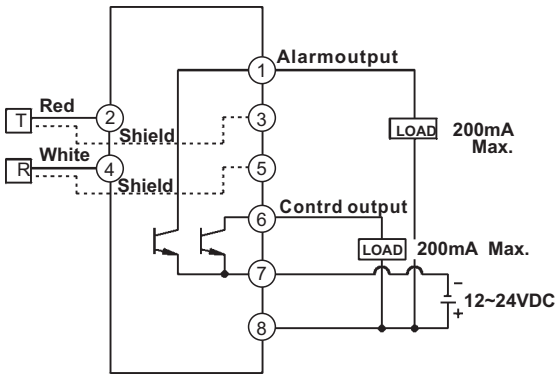
NPN Models



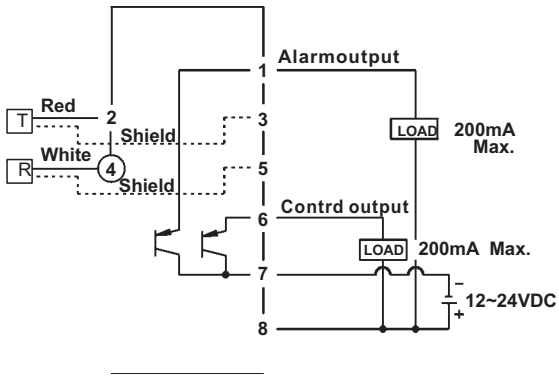
M8 Connector

ASP3,ASP4 Connection diagram

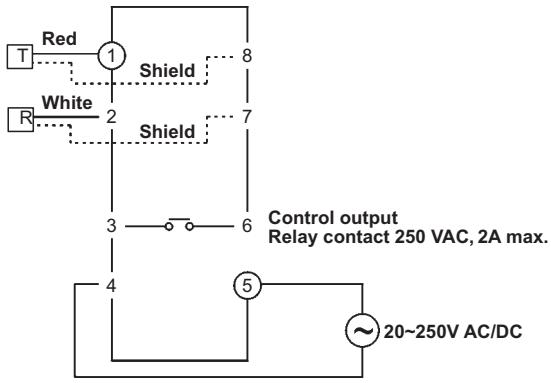
ASP3-A0000N-CX0T6U



ASP3-A0000P-CX0T6U

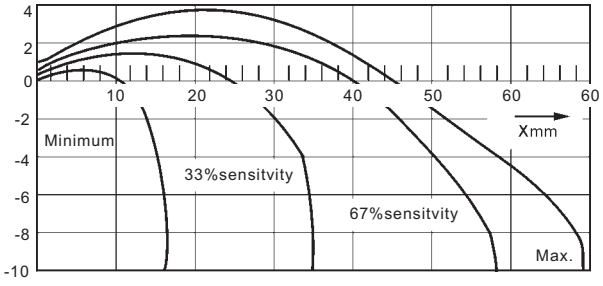


ASP4-A0000U-CX0T8U

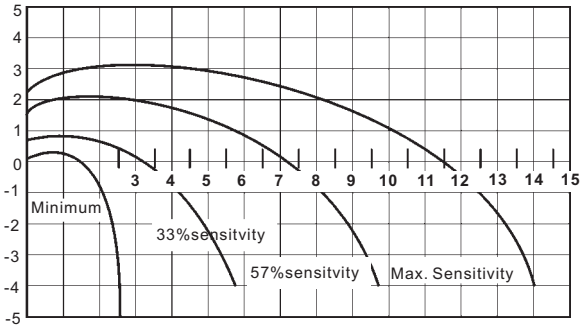


MINIATURE SENSOR HEAD SENSING CHARACTERISTICS

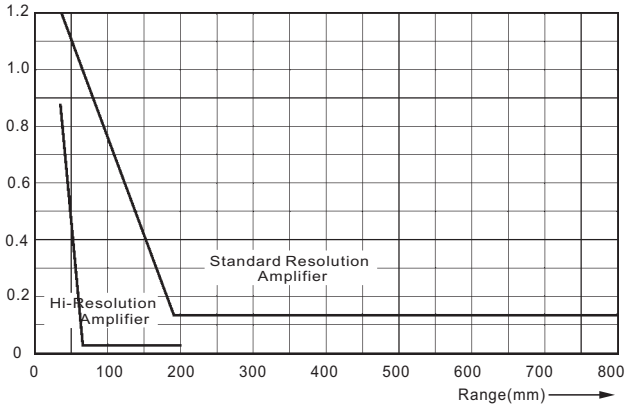
Diffuse Sensors(D05, M06, Q06)



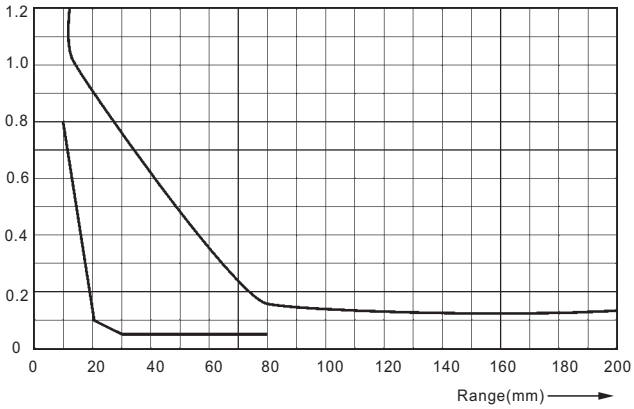
Diffuse Sensors(D02, M03)



Opposed Sensors(D04, M05, Q06)

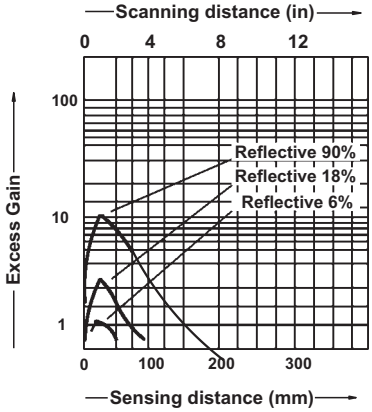


Opposed Sensors(D02, M03)

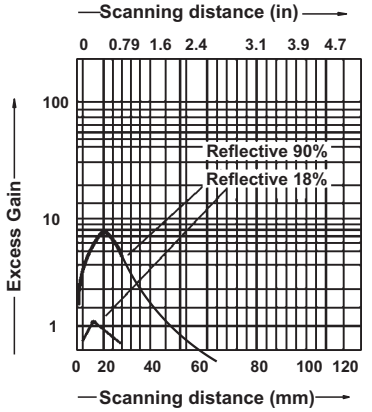


MINIATURE SENSOR HEAD SENSING CHARACTERISTICS

Diffuse mode

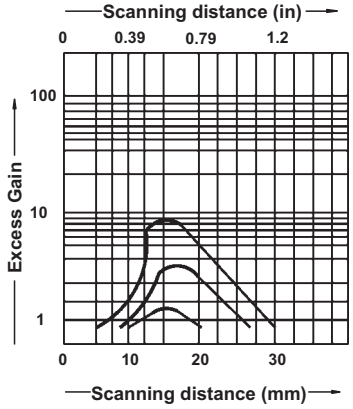


ASP1-D0200D-CY6C4U2

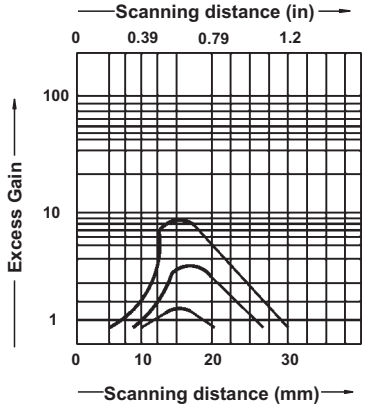


ASP1-D0060D-CY6C4U2-FL

Convergent mode

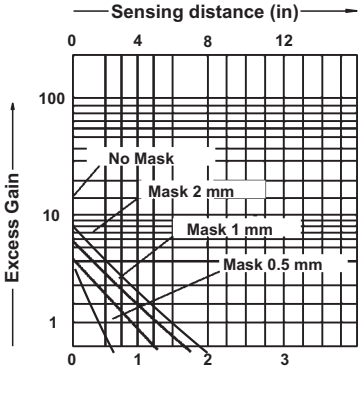


ASP1-C0030D-CY6C4U2-1
ASP1-C0030D-CY5C4U2-1

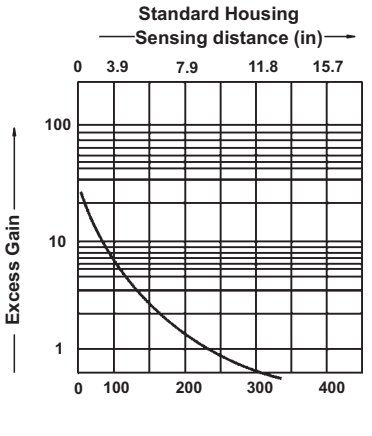


ASP1-C0035D-CY6C4U2-4
ASP1-C0035D-CY5C4U2-4

Opposed mode



ASP1-T2000D-CY6C2U2
ASP1-T2000D-EY6C2L2



ASP1-T0350D-CY6C2U2-FL
ASP1-T0350D-EY6C2L2-FL

SEPARATE AMPLIFIER

This Unit is designed to provide a stabilized DC-Power and output signal control for the Amplifier Built-in type photoelectric sensor.

FEATURES

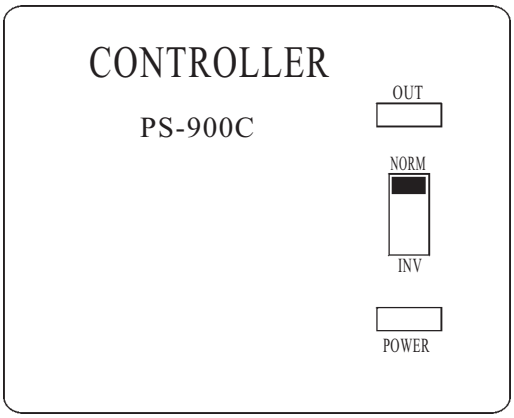
- Converting or inverting sensor output signal (relay contact output)
- Two basic models available: PS-900C and PS-900C-D the latter has time delay functions (ON - DELAY, OFF - DELAY and ONE - SHOT).
- Wide power input voltage: 110 - 120V and 220 - 240VAC.
- Easy - to - handle plug - in type.
- External synchronizing input signal.

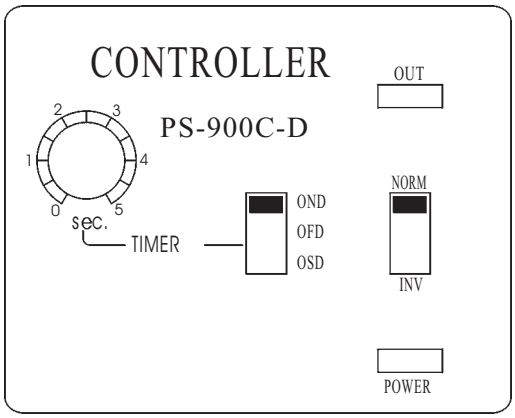
Technical Data

Items \ Models	PS-900C	PS-900C-D
Supply voltage	110V to 120V/ 220V to 240V ±10% AC	
Power consumption	8 VA	
DC power output	12V± 10% DC, 100mA max.	
Output control	Relay contact SPDT 3A resistive at 250 VAC	
External synchronization	Yes	
Response time	<20ms	
Output mode	Normal or invert (NORM / INV.)	
Delay timer	NO	Yes (0 to 5 sec)
Power indicator	Green LED	
Output indicator	Red LED, turns on when output relay is energized (NORM mode)	
Enclosure	Blue resin	
Ambient temperature/ humidity	-10 to +50°C / less than 85%RH	
Insulating resistance	More than 10 MΩ with 500VDC megger between AC - input and DC-output terminals	
Dielectric resistance	1,500V AC for one minute between AC - input and DC - output terminals	
Net weight / Accessories	Approx. 430g /A piece of socket with terminals and a pair of fixing clamps	

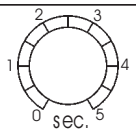
SEPARATE AMPLIFIER

Panel face





Function Instruction and Adjustment

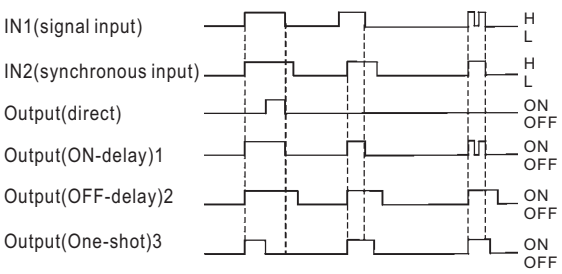
Front Diagram	Condition	Functional Instruction and Adjustment
	—	Set as required. NORM means normal Mode and INV means inverse mode.
	—	The red LED indicates the status of output.
	—	The green LED indicates the status of power on.
	—	The functions of OND, OFD, OSD depend upon the requirement, the slide switch is set at the position required.
	Complete the selection of the OND, OFD, OSD.	This is a time setting trimmer, the time range is 0 to 5 sec.

Delay Instruction

ON-Delay Outputs for T seconds after the rising edge of the AND (IN1 and IN2) output, and turns off at the falling edge of the AND output.

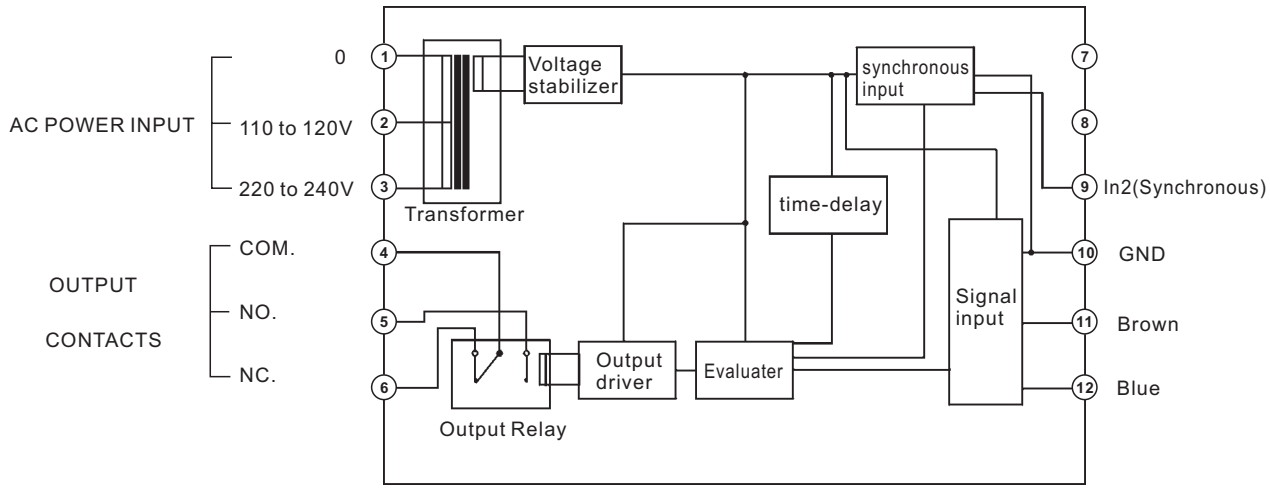
OFF-Delay Continues output for T seconds after the the AND (IN1 and IN2) output turns off

One-shot Outputs for T seconds after the rising edge of the AND(IN1 and IN2)output.



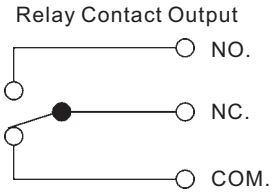
SEPARATE AMPLIFIER

Functional Diagram



Output circuit

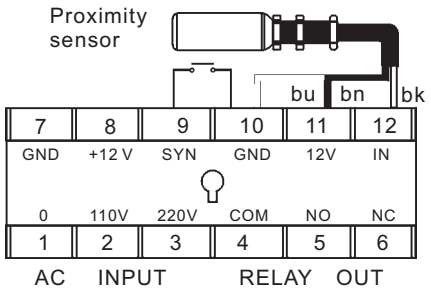
PS-900C, PS-900C-D



Contact capacity: 3A resistive at 250VAC

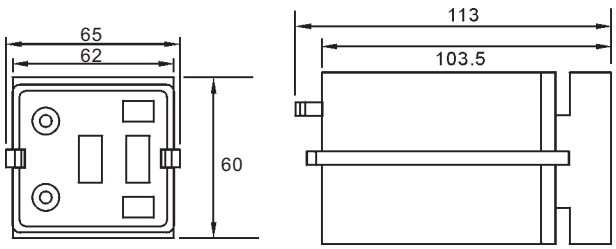
Wiring

PS-900C, PS-900C-D

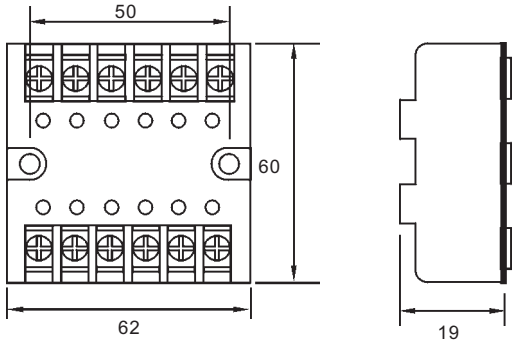


Dimensions

Control Unit PS-900C-D



Socket with terminals



SEPARATE AMPLIFIER

The Unit is designed to work with photoelectric sensor heads.
The amplifier generates the transmitter pulses for the connected photoelectric sensors and amplifies their signals. The electric output of the amplifier drives relay directly.

FEATURES

- Two basic models available: PS-900A and PS-900A-D the latter has time delay functions (on - delay, off - delay and one shot).
- Light-on and Dark-on changeable.
- Wide power input voltage: from 110 to 120V and 220 to 240VAC.
- Easy - to - handle plug - in method.
- External synchronizing input signal acceptable.
- Operating indicator and sensitivity adjust-ment.

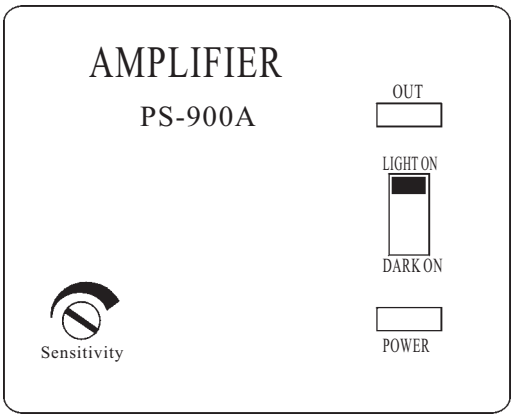
■ Special sensor head on requst.

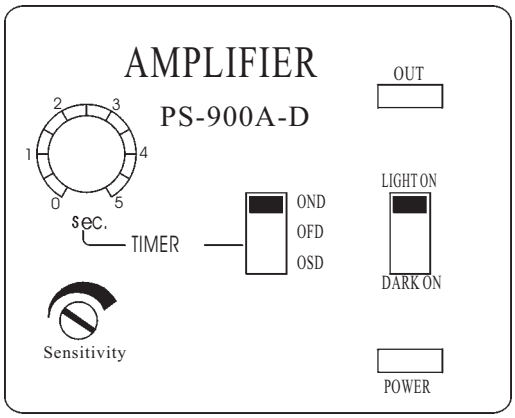
Technical Data

Items \ Models	PS-900A	PS-900A-D
Supply voltage	110V to 120V 220V to 240V ±10% AC	
Power consumption	8 VA	
Control output	Relay contact SPDT 3A resistive at 250 VAC	
Output operation	Light-on and Dark-on changeable.	
External synchronization	Yes	
Response time	<20ms	
Delay time	NO	Yes (0 to 5 s ec.)
Power indicator	Green LED	
Output indicator	Red LED, turns on when output relay is energized(Light-on mode)	
Enclosure	Blue colored resin	
Ambient temperature/ humidity	-10 to +50°C / less than 85%RH	
Insulating resistance	More than 10 MΩ with 500VDC megger between AC - input, DC-output terminals	
Dielectric resistance	1,500V AC for one minute between AC - input and DC - output terminals	
Net weight	Approx. 430g	
Accessories	socket with terminals and fixing clamps	

SEPARATE AMPLIFIER

Panel Diagram





Function Instruction and Adjustment

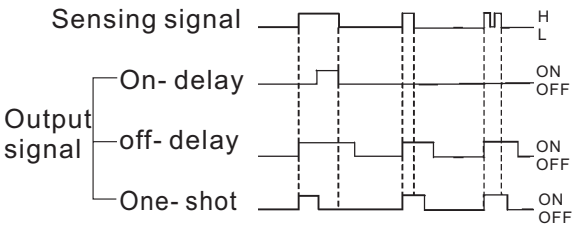
Items	Condition	Functional Instruction and Adjustment
LIGHT ON / DARK ON	—	Depending upon the requirement. LIGHT-ON means the relay is energized when light strikes the receiver. And DARK-ON is inverted to LIGHT -ON mode.
OUT	—	The red LED indicates the status of output.
POWER	—	The green LED indicates the status of power on.
OND / OFD / OSD	—	The functions with OND, OFD, OSD is the following in details. Depending upon the requirement, the slide switch is set at the position required.
2 3 1 4 0 5 sec.	Finish the selection of the OND, OFD, OSD.	This is a time setting trimmer, the time range is from 0 to 5 seconds.
Sensitivity	LIGHT-ON mode The red LED is on	Turn counterclockwise(reduces sensitivity)until the LED turns off, then turn the potentiometer clockwise until the LED turns on, turn another half turn clockwise.
	DARK-ON mode The red LED is 0ff	Turn clockwise (increases sensitivity) until the LED turns on, turn the potentiometer counterclockwise until the LED turns off, turn another half turn counterclockwise.

SEPARATE AMPLIFIER

Additional Functions

• Delay Timer

You may chose the delay function according to your purpose of controlling the output signal of the beam sensors. This function is incorporated in the PS-900A-D model.



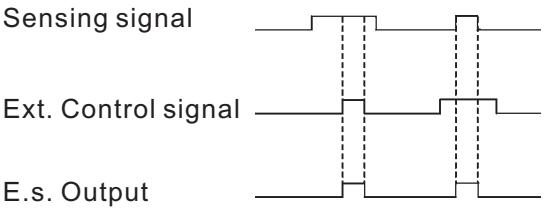
ON-Delay The output signal rises after a preset time, and drops immediately when the input signal is removed.

OFF-Delay The output signal rises immediately upon the receipt of sensing signal and is kept by the preset time after the input sensing signal was removed.

One-Shot The output signal rises immediately upon the receipt of sensing signal and is kept by the preset time independent of the input signal.

• External Synchronizing

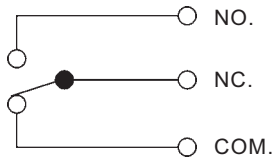
The terminal of the Ext. Sync. Function is provided on PS-900A and PS-900A-D.



The Ext. Sync. Signal interlocks the sensor output signal; the control unit develops the output when the input signal from the sensor and the Ext. Sync. Input signals are fed into the unit at the same time.

Relay Contact Output

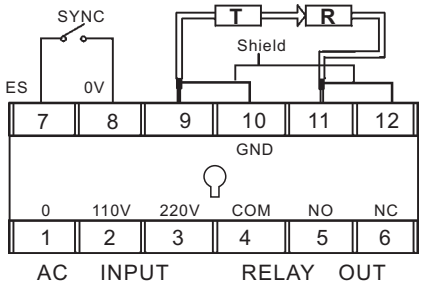
PS-900A, PS-900A-D



Contact capacity: 3A resistive at 250VAC

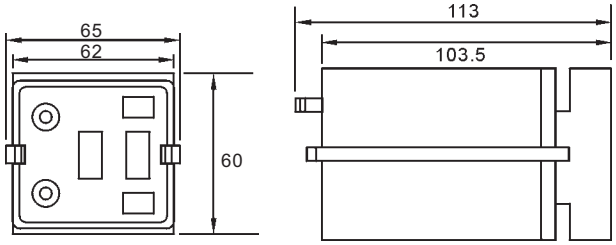
Wiring

PS-900A, PS-900A-D



Dimensions(in millimeter)

Control unit PS-900A/PS-900A-D



Socket with terminals
PS-900A, PS-900A-D