













## Thru-beam Mode / Retroreflective Mode

Sensing Mode	Appearance	Supply Voltage	Output Mode	Part Number
<b>Thru-beam Mode</b> Sensing Distance: 20m Infrared: 950nm	<b>2m Cable</b> 	10-30V DC	Emitter	<u>Q25-T020MD-EY9G2L2</u>
			NPN	<u>Q25-T020MN-CY9C4U2</u>
			PNP	<u>Q25-T020MP-CY9C4U2</u>
			NPN/PNP	<u>Q25-T020MD-CY9C4U2</u>
	<b>Quick Disconnect</b> 	10-30V DC (Euro Style)	Emitter	<u>Q25-T020MD-EY9Q4LE</u>
			NPN	<u>Q25-T020MN-CY9Q4UE</u>
			PNP	<u>Q25-T020MP-CY9Q4UE</u>
			NPN/PNP	<u>Q25-T020MD-CY9Q4UE</u>
	<b>6" Pig tail</b> 	10-30V DC (Euro Style)	Emitter	<u>Q25-T020MD-EY9P4LE</u>
			NPN	<u>Q25-T020MN-CY9P4UE</u>
			PNP	<u>Q25-T020MP-CY9P4UE</u>
			NPN/PNP	<u>Q25-T020MD-CY9P4UE</u>
<b>Retroreflective Mode</b> Sensing Distance: 2 m (Note) Infrared: 950nm	<b>2m Cable</b> 	10-30V DC	NPN	<u>Q25-L2000N-CY9C4U2</u>
			PNP	<u>Q25-L2000P-CY9C4U2</u>
			NPN/PNP	<u>Q25-L2000D-CY9C4U2</u>
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	<b>Quick Disconnect</b> 	10-30V DC (Euro Style)	NPN	<u>Q25-L2000N-CY9Q4UE</u>
			PNP	<u>Q25-L2000P-CY9Q4UE</u>
			NPN/PNP	<u>Q25-L2000D-CY9Q4UE</u>
			---	---
	<b>6" Pig tail</b> 	10-30V DC (Euro Style)	NPN	<u>Q25-L2000N-CY9P4UE</u>
			PNP	<u>Q25-L2000P-CY9P4UE</u>
			NPN/PNP	<u>Q25-L2000D-CY9P4UE</u>
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**Note:** Used with RE-6152 (supplied with sensor) reflector.  
 Coming Soon : Part numbers with underline  
 In Preparation: Part numbers with a line through the middle

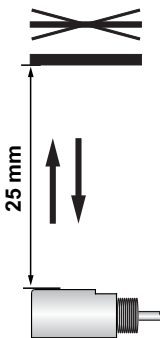


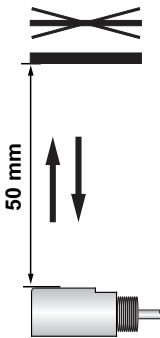




## Polarized Retroreflective Mode / Diffuse Mode

Sensing Mode	Appearance	Supply Voltage	Output Mode	Part Number
<b>Retroreflective Mode</b> (with polarizing filter) Sensing Distance: 2 m (Note) LED Red: 680nm	<b>2m Cable</b> 	10-30V DC	NPN	<u>Q25-L2000N-CY6C4U2-PF</u>
			PNP	<u>Q25-L2000P-CY6C4U2-PF</u>
			NPN/PNP	<u>Q25-L2000D-CY6C4U2-PF</u>
			—	—
	<b>Quick Disconnect</b> 	10-30V DC (Euro Style)	NPN	<u>Q25-L2000N-CY6Q4UE-PF</u>
			PNP	<u>Q25-L2000P-CY6Q4UE-PF</u>
			NPN/PNP	<u>Q25-L2000D-CY6Q4UE-PF</u>
			—	—
	<b>6" Pig tail</b> 	10-30V DC (Euro Style)	NPN	<u>Q25-L2000N-CY6P4UE-PF</u>
			PNP	<u>Q25-L2000P-CY6P4UE-PF</u>
			NPN/PNP	<u>Q25-L2000D-CY6P4UE-PF</u>
			—	—
<b>Diffuse Mode</b> Sensing Distance: 500mm Infrared: 880nm	<b>2m Cable</b> 	10-30V DC	NPN	<u>Q25-D0500N-CY9C4U2</u>
			PNP	<u>Q25-D0500P-CY9C4U2</u>
			NPN/PNP	<u>Q25-D0500D-CY9C4U2</u>
			—	—
	<b>Quick Disconnect</b> 	10-30V DC (Euro Style)	NPN	<u>Q25-D0500N-CY9Q4UE</u>
			PNP	<u>Q25-D0500P-CY9Q4UE</u>
			NPN/PNP	<u>Q25-D0500D-CY9Q4UE</u>
			—	—
	<b>6" Pig tail</b> 	10-30V DC (Euro Style)	NPN	<u>Q25-D0500N-CY9P4UE</u>
			PNP	<u>Q25-D0500P-CY9P4UE</u>
			NPN/PNP	<u>Q25-D0500D-CY9P4UE</u>
			—	—

**Note:** Used with RE-6152 (supplied with sensor) reflector.  
 Coming Soon : Part numbers with underline  
 In Preparation: Part numbers with a line through the middle

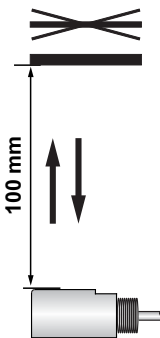



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## Diffuse Mode with Background Suppression

Sensing Mode	Appearance	Supply Voltage	Output Mode	Part Number	
<p>Diffuse Mode with Background Suppression</p> <p>Sensing Distance: 25mm</p> <p>Infrared: 880nm</p> 	<p>2m Cable</p> 	10-30V DC	NPN	<u>Q25-D0025N-CY9C4U2-BS</u>	
			PNP	<u>Q25-D0025P-CY9C4U2-BS</u>	
			NPN/PNP	<u>Q25-D0025D-CY9C4U2-BS</u>	
			—	—	
	<p>Quick Disconnect</p> 	10-30V DC (Euro Style)	NPN	<u>Q25-D0025N-CY9Q4UE-BS</u>	
			PNP	<u>Q25-D0025P-CY9Q4UE-BS</u>	
			NPN/PNP	<u>Q25-D0025D-CY9Q4UE-BS</u>	
			—	—	
	<p>Diffuse Mode with Background Suppression</p> <p>Sensing Distance: 50mm</p> <p>Infrared: 880nm</p> 	<p>2m Cable</p> 	10-30V DC	NPN	<u>Q25-D0050N-CY9C4U2-BS</u>
				PNP	<u>Q25-D0050P-CY9C4U2-BS</u>
				NPN/PNP	<u>Q25-D0050D-CY9C4U2-BS</u>
				—	—
<p>Quick Disconnect</p> 		10-30V DC (Euro Style)	NPN	<u>Q25-D0050N-CY9Q4UE-BS</u>	
			PNP	<u>Q25-D0050P-CY9Q4UE-BS</u>	
			NPN/PNP	<u>Q25-D0050D-CY9Q4UE-BS</u>	
			—	—	
<p>Diffuse Mode with Background Suppression</p> <p>Sensing Distance: 50mm</p> <p>Infrared: 880nm</p> 		<p>6" Pig tail</p> 	10-30V DC (Euro Style)	NPN	<u>Q25-D0050N-CY9P4UE-BS</u>
				PNP	<u>Q25-D0050P-CY9P4UE-BS</u>
				NPN/PNP	<u>Q25-D0050D-CY9P4UE-BS</u>
				—	—

**Note:**  
 Coming Soon : Part numbers with underline  
 In Preparation: Part numbers with a line through the middle

## Diffuse Mode with Background Suppression

Sensing Mode	Appearance	Supply Voltage	Output Mode	Part Number
 <p>Diffuse Mode with Background Suppression Sensing Distance: 100 mm Infrared: 880nm</p>	<b>2m Cable</b> 	10-30V DC	NPN	<u>Q25-D0100N-CY9C4U2-BS</u>
			PNP	<u>Q25-D0100P-CY9C4U2-BS</u>
			NPN/PNP	<u>Q25-D0100D-CY9C4U2-BS</u>
			—	—
	<b>Quick Disconnect</b> 	10-30V DC (Euro Style)	NPN	<u>Q25-D0100N-CY9Q4UE-BS</u>
			PNP	<u>Q25-D0100P-CY9Q4UE-BS</u>
			NPN/PNP	<u>Q25-D0100D-CY9Q4UE-BS</u>
			—	—
	<b>6" Pig tail</b> 	10-30V DC (Euro Style)	NPN	<u>Q25-D0100N-CY9P4UE-BS</u>
			PNP	<u>Q25-D0100P-CY9P4UE-BS</u>
			NPN/PNP	<u>Q25-D0100D-CY9P4UE-BS</u>
			—	—

**Note:**  
 Coming Soon : Part numbers with underline  
 In Preparation: Part numbers with a line through the middle

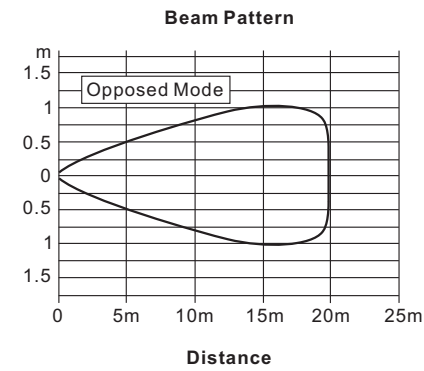
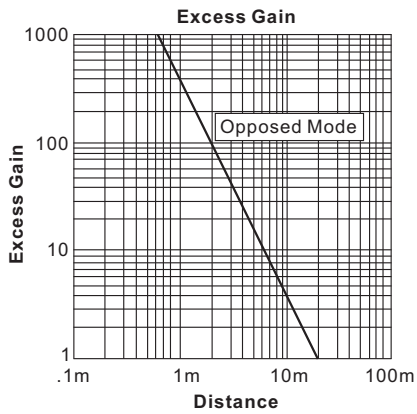
## Specifications

Item	Type Model No.	Thru-beam	Diffuse reflective			Retroreflective		
			(with background suppression)			with polarizing filters		
		Q25-T020Mx-xX9xxxx	Q25-D0500x-xX9xxxx	Q25-D0025x-xX9xxxx-BS	T18-D0050x-xX9xxxx-BS	T18-D0100x-xX9xxxx-BS	Q25-L2000x-xX9xxxx	Q25-L2000x-xX6xxxx-PF
Sensing Range		20m	500mm	25mm	50mm	100mm	2m (Note)	
Sensing Object		Opaque object of $\phi$ 8mm or more	White paper			3-way mirror		
Hysteresis		—	20% or less of operation distance			—		
Supply Voltage		10 to 30V DC, Ripple P-P 10% or less						
Current Consumption		30mA or less						
Output		<b>&lt;NPN&gt; output type</b> NPN open-collector transistor • Applied voltage: 30V DC or less • Maximum sink current: 150mA • Voltage drop: 2.5V or less			<b>&lt;PNP&gt; output type</b> PNP open-collector transistor • Applied voltage: 30V DC or less • Maximum sourcing current: 150mA • Voltage drop: 2.5V or less			
Output Operation		Selectable either Light-ON Dark-ON by the control input wire						
Short-circuit Protection		Yes						
Reverse Polarity Protection		Yes						
Overload Current Protection		Yes						
Response Time		1.5ms						
Operation Indicator		Red LED (light up when the output is activated), Thru-beam sensor is provided it on the receiver						
Pollution Degree		3(Industrial environment)						
Protection		IP67 (IEC)						
Ambient Temperature		-25°C to +55°C						
Ambient Humidity		35 to 85% RH, Storage: 35 to 85% RH						
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 1500V AC for one min, between all supply terminals connected together and enclosure						
Insulation Resistance		>20M $\Omega$ , 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						
Emitting Element		Infrared LED (modulated)					Red LED (modulated)	
Housing Material		Plastic housing: PBT						
Cable		Standard length 2m, other length based on request.						
Connector		Euro-style connector(M12x1 thread)						
Pigtail Type		See Pigtail Series or our Cables & Connectors catalogue.						

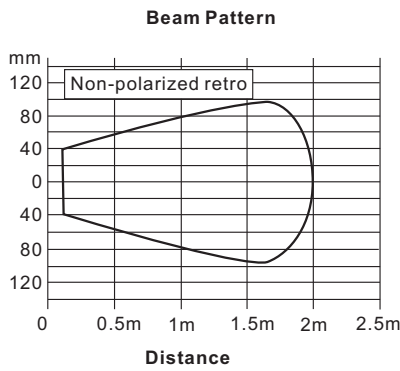
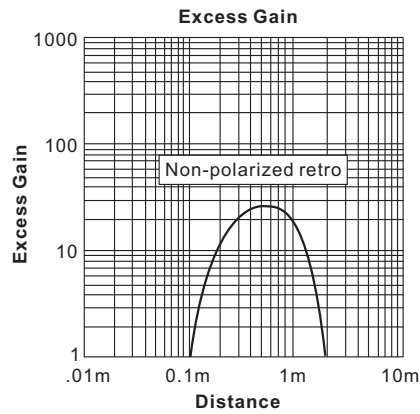
Note: Used with RE-6152 (supplied with sensor) reflector.

## Sensing Characteristics (Typical)

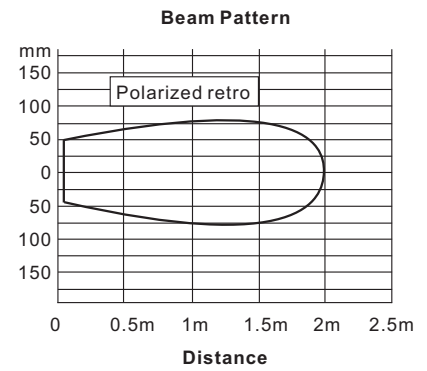
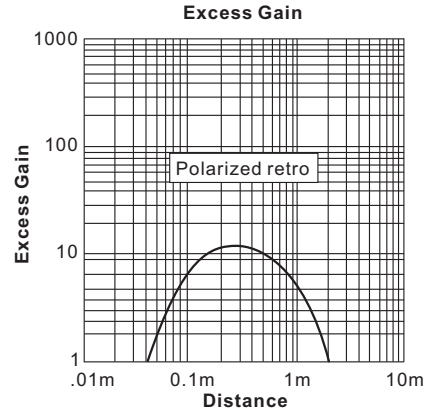
### Opposed Mode (Sn=20m)



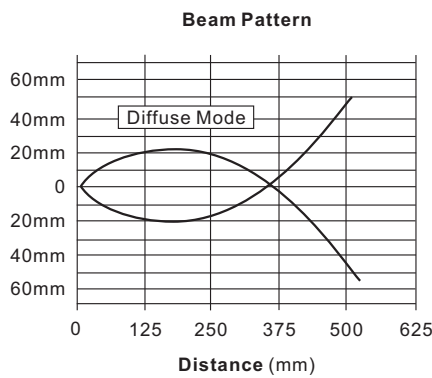
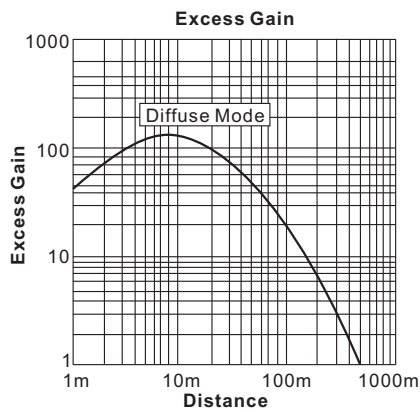
### Retroreflective Mode (Sn=2m)



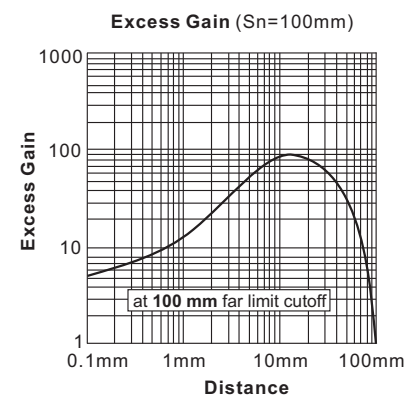
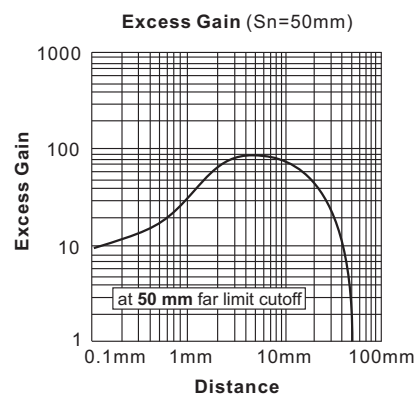
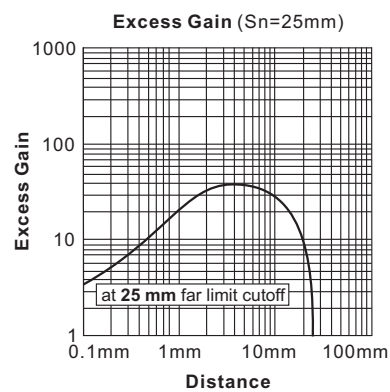
### Polarized Retroreflective (Sn=2m)



### Diffuse Mode (Sn=500mm)



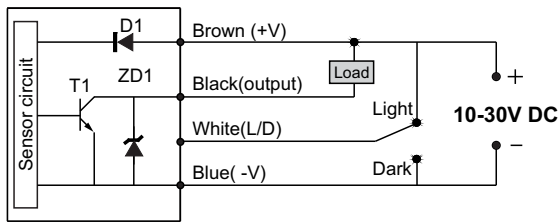
### Diffuse Mode with Background Suppression (Sn=25/50/100mm)



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## Connection Diagrams

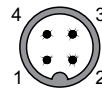
### NPN output type



Symbol D1: Reverse polarity protection diode  
ZD1: Surge absorption zener diode  
T1: NPN output transistor

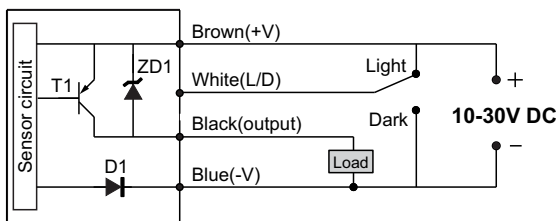
### Connector pin position

#### Euro-style



1. Brown (+)  
2. White (Light/Dark control)  
3. Blue (-)  
4. Black (Output)

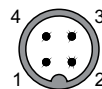
### PNP output type



Symbol D1: Reverse polarity protection diode  
ZD1: Surge absorption zener diode  
T1: PNP output transistor

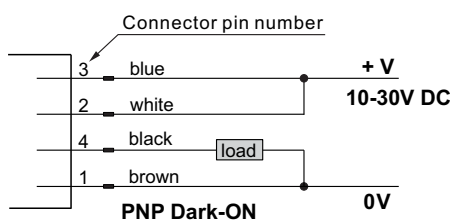
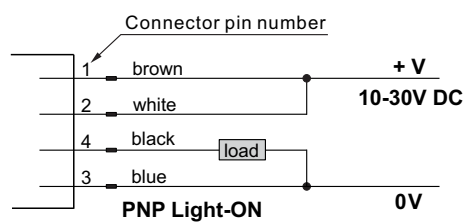
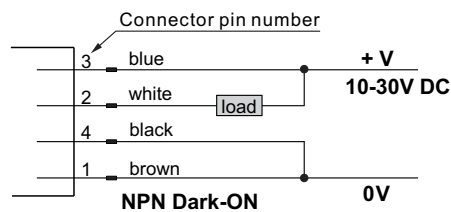
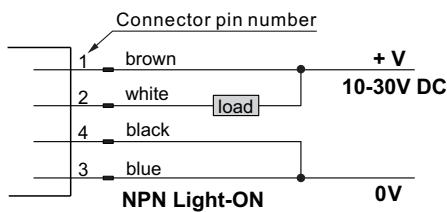
### Connector pin position

#### Euro-style



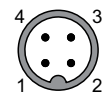
1. Brown (+)  
2. White (Light/Dark control)  
3. Blue (-)  
4. Black (Output)

### NPN/PNP output type

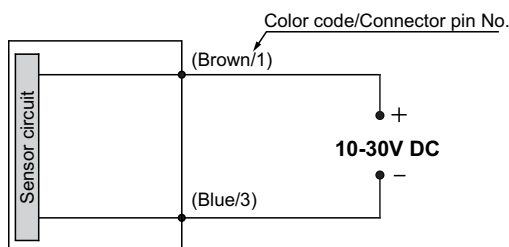


### Connector pin position

#### Euro-style

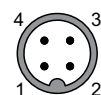


### Emitter of Thru-beam Mode



### Connector pin position

#### Euro-style

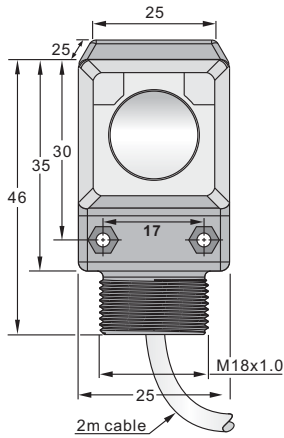


1.+V  
2.not used  
3.0V  
4.not used

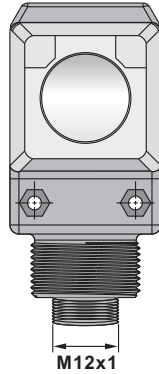
## Dimensions (Unit: mm)

### Sensor Type

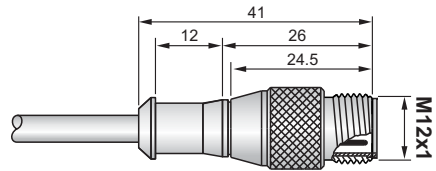
**Cable Type**



**Connector Type**



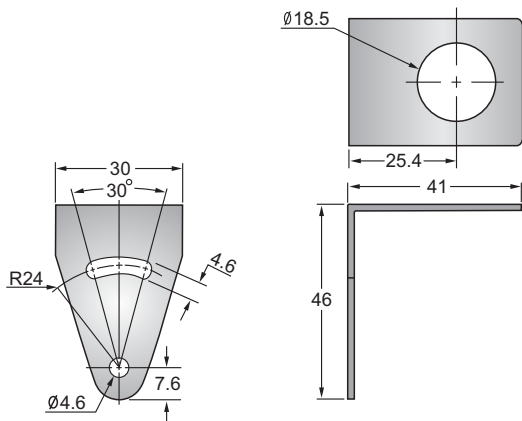
**Pigtail\* Type**



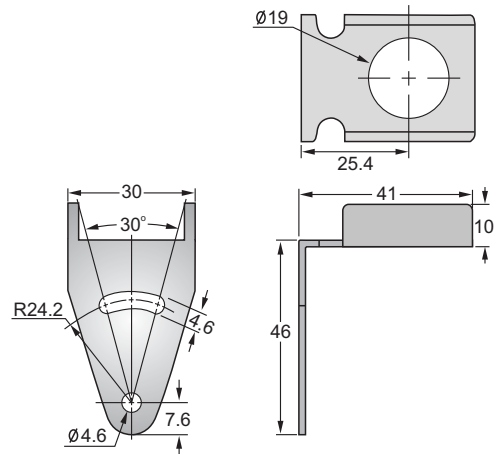
\*: Please see **Pigtail Series** or our **Cables & Connectors** catalogue for more information.

### Mounting Brackets \*

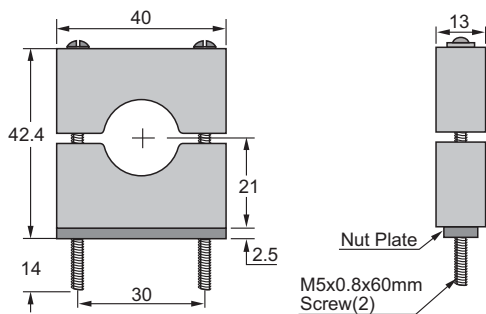
**MB-4630A (optional)**



**MB-4630B (optional)**

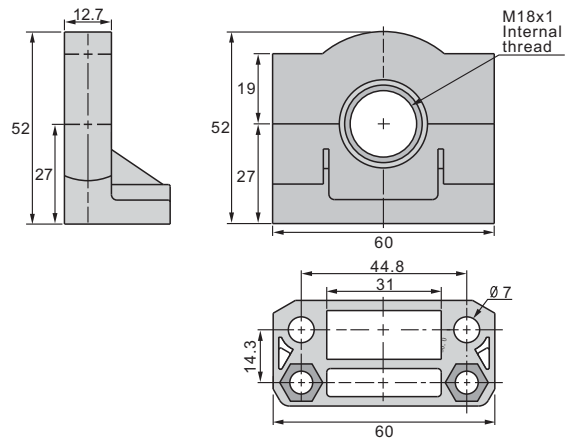


**MB-4240 (optional)**



18mm split clamp bracket

**MB-6052 (optional)**



Mounting Bracket to Provide 360° Rotation

\*: Please see **Accessories** (Universal Mounting Brackets Series).

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