

Product Discontinuation Notices

April 1, 2009

Photoelectric Sensors

No.2009126E

Discontinuation Notice of Picking Sensor. Type F3W-B series

Product Discontinuation



- (1) Picking sensor
Type F3W-B035
Type F3W-B052
- (2) Accessory (Mounting bracket)
Type F39-L1
Type F39-L2



Recommended Replacement

- (1) Picking sensor
Type F3W-E032A6
Type F3W-D052A
- (2) Accessory (Mounting bracket)
Type F39-L10, F39-L11 (For type F3W-D)
Type F39-LE1, F39-LE2 (For type F3W-E)

Discontinuation date : The end of March, 2010

Caution on recommended replacement

About the change to Type F3W-E

- 1) Dimensions and mounting dimensions are different.
- 2) Body color and wire connection and characteristics, operation ratings are a similarity.

About the change to Type F3W-D

- 1) Dimensions is different.
- 2) Body color, wire connection, mounting dimensions, characteristics and operation ratings are a similarity.

Difference from discontinued product

Model	Body Color	Dimensions	Wire connection	Mounting Dimensions	Characteristics	Operation ratings	Operation methods
Type F3W-E	*	--	*	--	*	*	-
Type F3W-D	*	--	*	**	*	*	-

** : Fully compatible

* : The change is a little/Almost compatible

-- : Not compatible

- : No corresponding specification

Accessory mounting brackets are only for F3W-B. Production is ended according to the production end of F3W-B.



Product Discontinuation and recommended replacement



Product discontinuation	Recommended replacement
Type F3W-B035 3M	Type F3W-D052A 2M
	Type F3W-E032A6 2M
Type F3W-B035 7M	Type F3W-D052A 7M
	Type F3W-E032A6 5M
Type F3W-B052 3M	Type F3W-D052A 2M
	Type F3W-E032A6 2M
Type F3W-B052 7M	Type F3W-D052A 7M
	Type F3W-E032A6 5M
Type F3W-B035-D 3M	Type F3W-D052A 2M *1
	Type F3W-E032A6 2M *1
Type F3W-B035-L 3M	Type F3W-D052A 2M *1
	Type F3W-E032A6 2M *1
Type F3W-B052-D 3M	Type F3W-D052A 2M *1
	Type F3W-E032A6 2M *1
Type F3W-B052-L 3M	Type F3W-D052A 2M *1
	Type F3W-E032A6 2M *1
Type F39-L1	Type F39-LE2
	Type F39-L10
Type F39-L2	Type F39-LE1
	Type F39-L11

*1 Please use the following alternative type.

Ex.) F3W-B053-L or F3W-B053-D → F3W-D052A or F3W-E032A6

Body color

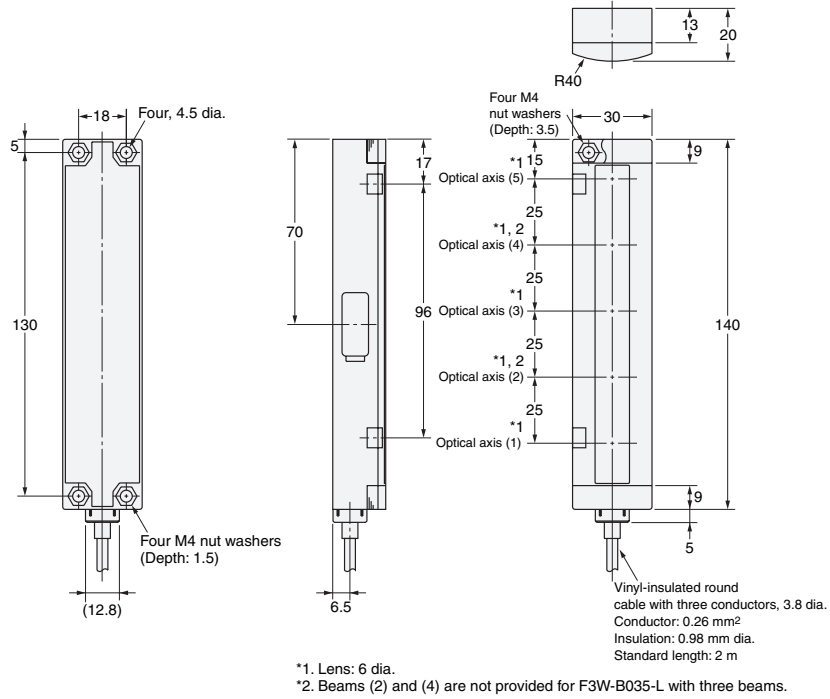
Product discontinuation Type F3W-B035, F3W-B052	Recommendable replacement Type F3W-E032A6
	

Product discontinuation Type F3W-B035, F3W-B052	Recommendable replacement Type F3W-D052A
	

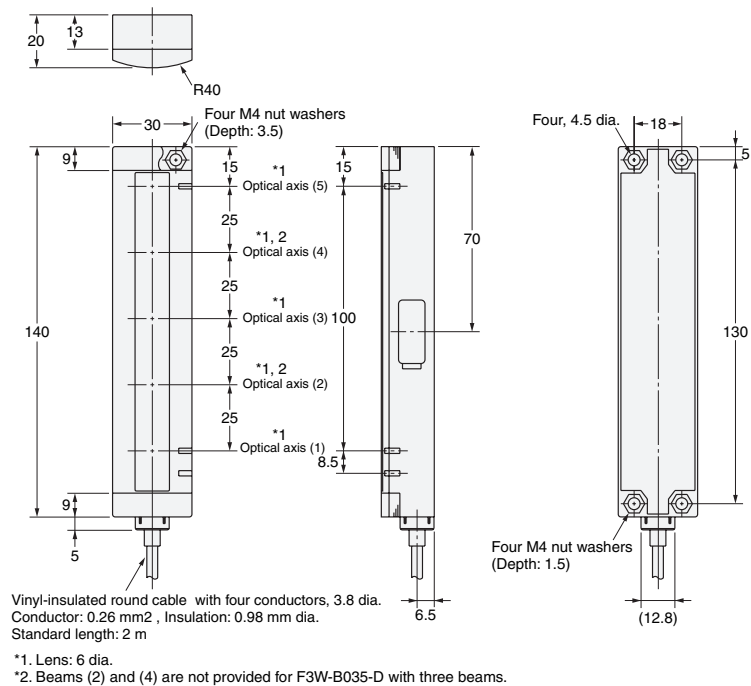
Dimensions

Product discontinuation Type F3W-B035, F3W-B052

Emitter



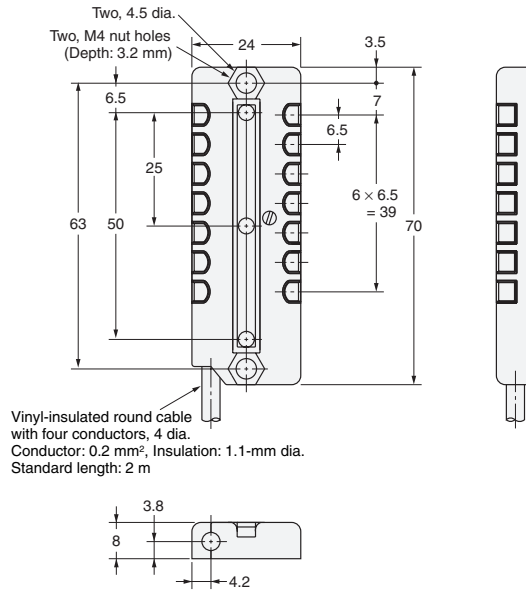
Receiver



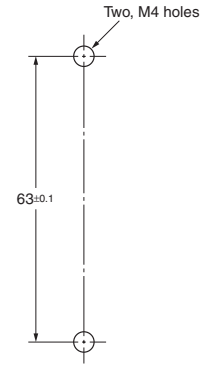
Dimensions

Recommendable replacement Type F3W-E032A6

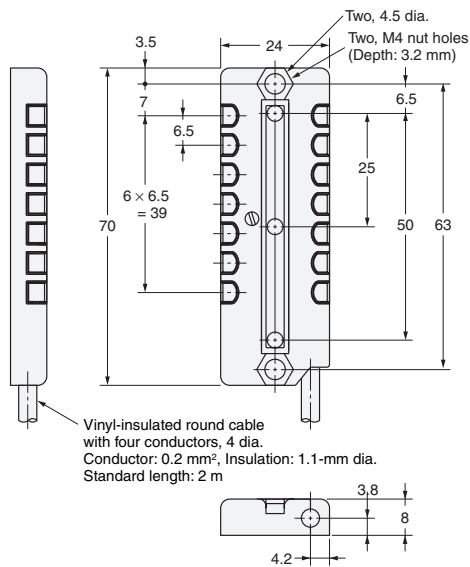
Emitter



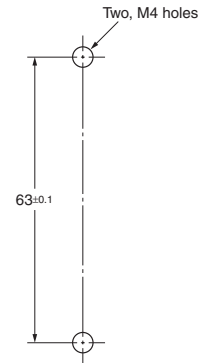
Mounting Hole Dimensions



Receiver



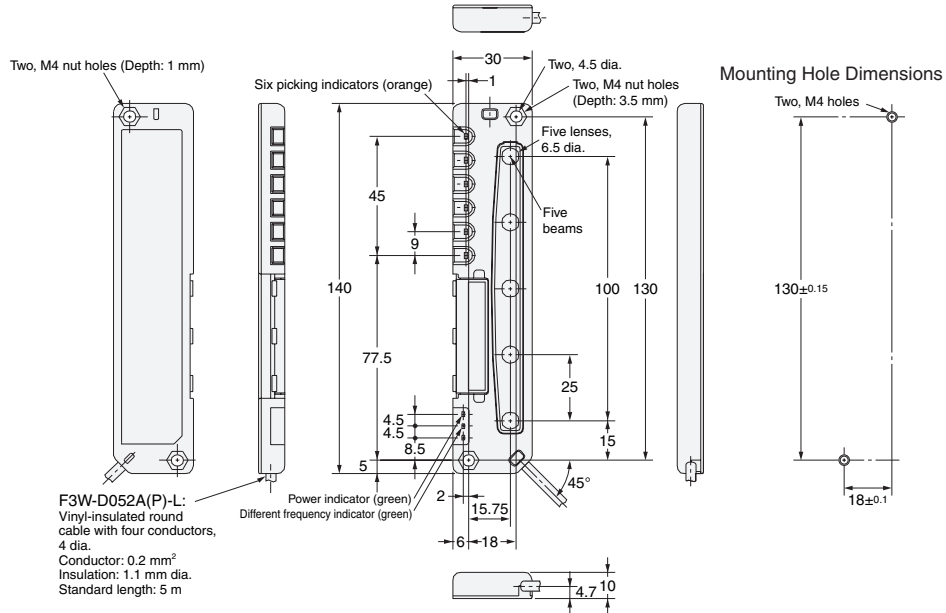
Mounting Hole Dimensions



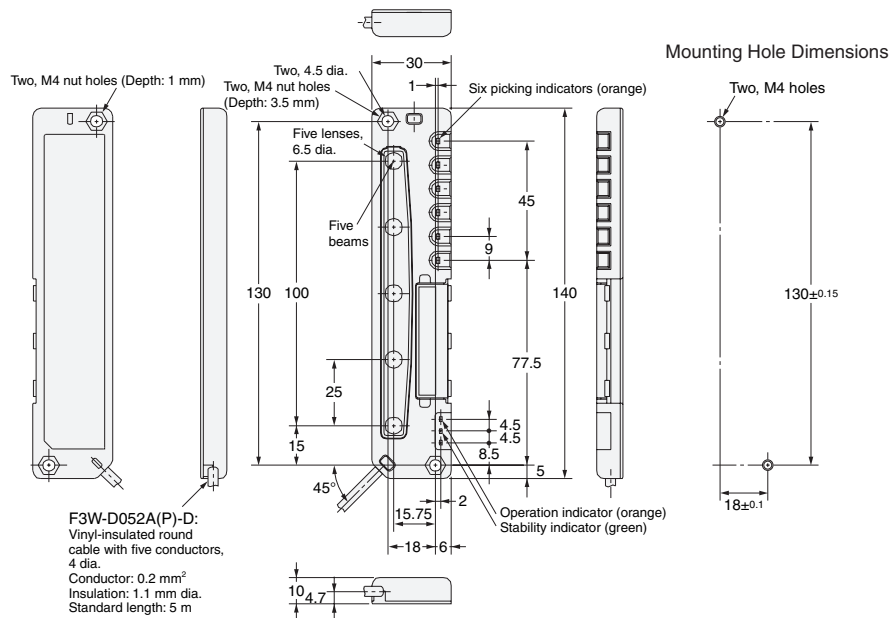
Dimensions

Recommendable replacement Type F3W-D052A

Emitter



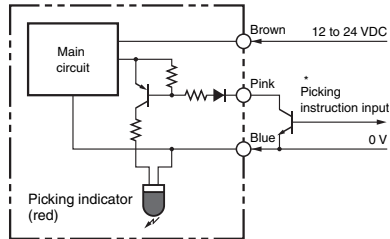
Receiver



Wire Connection

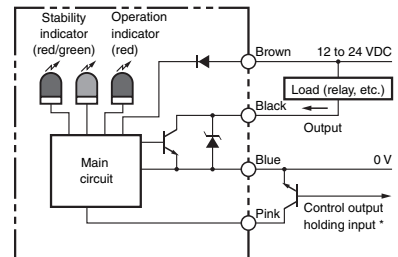
Product discontinuation Type F3W-B035, F3W-B052

Emitter
F3W-B□□□-L



Note : The picking indicator will be ON if the terminal is connected to 0 V.
If terminal is open, the picking indicator will be OFF.

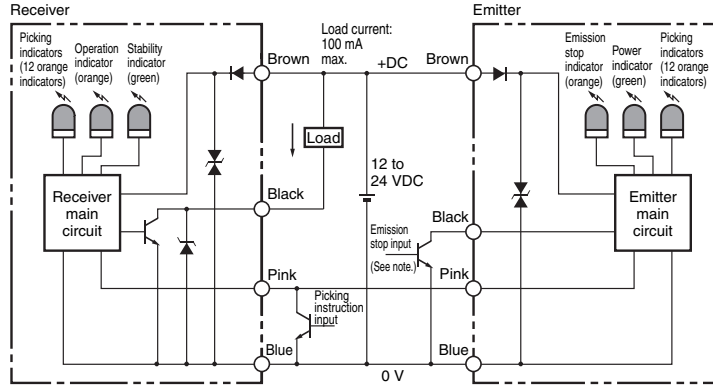
Receiver
F3W-B□□□-D



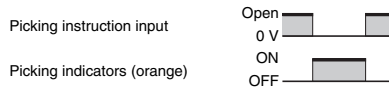
Note : Output will be kept on hold if the terminal is connected to 0 V.

Mode selector	State of output transistor	Timing chart
Dark-ON	ON: One optical axis or more is interrupted OFF: No optical axis is interrupted	<p>No optical axis is interrupted</p> <p>One optical axis or more is interrupted by sensing objects</p> <p>Control output on-hold input</p> <p>Shorted (connected to 0V)</p> <p>Open</p> <p>Operation indicator</p> <p>ON</p> <p>OFF</p> <p>Control output</p> <p>ON</p> <p>OFF</p>
Light-ON	ON: No optical axis is interrupted OFF: One optical axis or more is interrupted	<p>No optical axis is interrupted</p> <p>One optical axis or more is interrupted by sensing objects</p> <p>Control output on-hold input</p> <p>Shorted (connected to 0V)</p> <p>Open</p> <p>Operation indicator</p> <p>ON</p> <p>OFF</p> <p>Control output</p> <p>ON</p> <p>OFF</p>

Recommendable replacement
Type F3W-E032A6



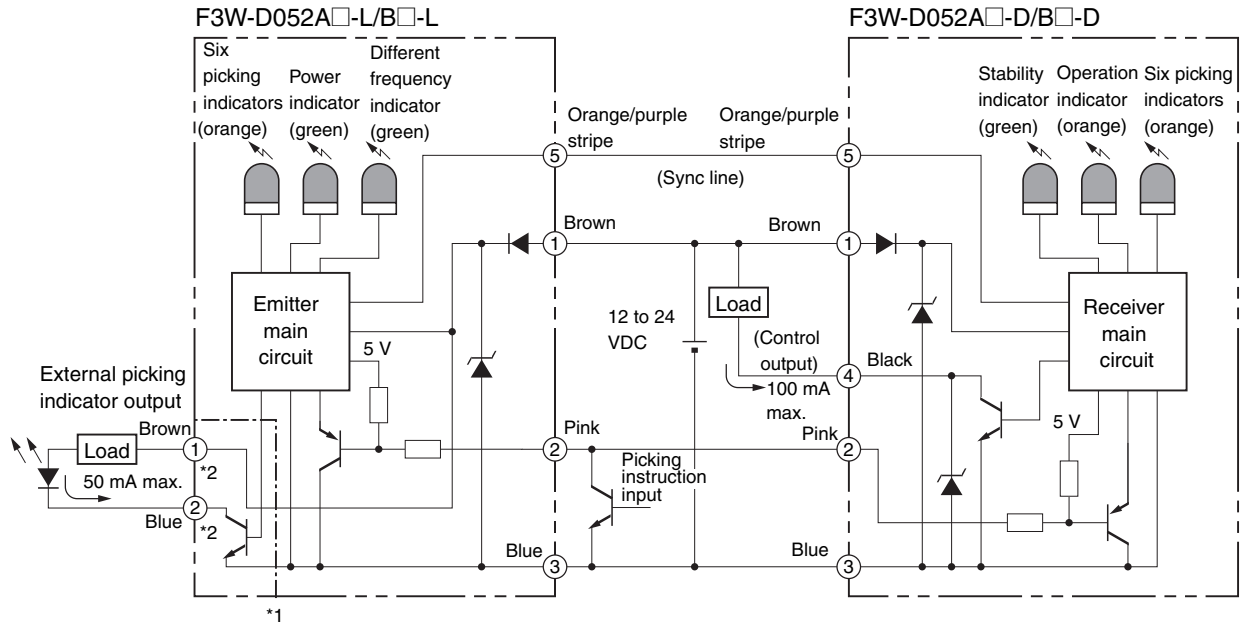
The following figure gives the relation between the picking instruction input and the picking indicators.



<p>Dark-ON mode</p> <p>ON: One beam or more is interrupted</p> <p>OFF: No beam is interrupted</p>	<p>Light incident</p> <p>No beam is interrupted</p> <p>One beam or more is interrupted</p>		<p>D-ON (DARK ON)</p>
	<p>Operation indicator (orange)</p> <p>ON</p> <p>OFF</p> <p>Control output</p> <p>ON</p> <p>OFF</p> <p>Load (e.g., relay)</p> <p>Operate</p> <p>Reset</p> <p>Note: The control output will turn ON if the emission stop input is received.</p>		
<p>Light-ON mode</p> <p>ON: No beam is interrupted</p> <p>OFF: One beam or more is interrupted</p>	<p>Light incident</p> <p>No beam is interrupted</p> <p>One beam or more is interrupted</p>		<p>L-ON (LIGHT ON)</p>
	<p>Operation indicator (orange)</p> <p>ON</p> <p>OFF</p> <p>Control output</p> <p>ON</p> <p>OFF</p> <p>Load (e.g., relay)</p> <p>Operate</p> <p>Reset</p> <p>Note: The control output will turn OFF if the emission stop input is received.</p>		

Wire Connection

Recommendable replacement Type F3W-D052A



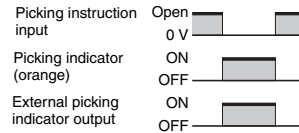
Note: The circled numbers represent the pin numbers for Pre-wired Connector Models.

*1. The sections surrounded by single-dashed lines are applicable to the F3W-D052AP-L/BP-L only.

*2. The circled numbers represent external picking indicator output pin numbers.

<p>Dark-ON mode</p> <p>ON: One beam or more is interrupted</p> <p>OFF: No beam is interrupted</p>	<p>Light incident</p> <p>No beam is interrupted</p> <p>One beam or more is interrupted</p> <p>Operation indicator (orange)</p> <p>ON</p> <p>OFF</p> <p>Control output</p> <p>ON</p> <p>OFF</p> <p>Load (relay, etc.)</p> <p>Operate</p> <p>Reset</p>	<p>D-ON (DARK ON)</p>
<p>Light-ON mode</p> <p>ON: No beam is interrupted</p> <p>OFF: One beam or more is interrupted</p>	<p>Light incident</p> <p>No beam is interrupted</p> <p>One beam or more is interrupted</p> <p>Operation indicator (orange)</p> <p>ON</p> <p>OFF</p> <p>Control output</p> <p>ON</p> <p>OFF</p> <p>Load (relay, etc.)</p> <p>Operate</p> <p>Reset</p>	<p>L-ON (LIGHT ON)</p>

The following diagram shows the relationship between the picking instruction input, picking indicator status, and external picking indicator output. DIP switch 1 is used to switch the picking display mode between all lighting, all flashing, elevator-like lighting, and accordion-like lighting. It is also possible to switch the external picking indicator display mode between lighting and flashing.

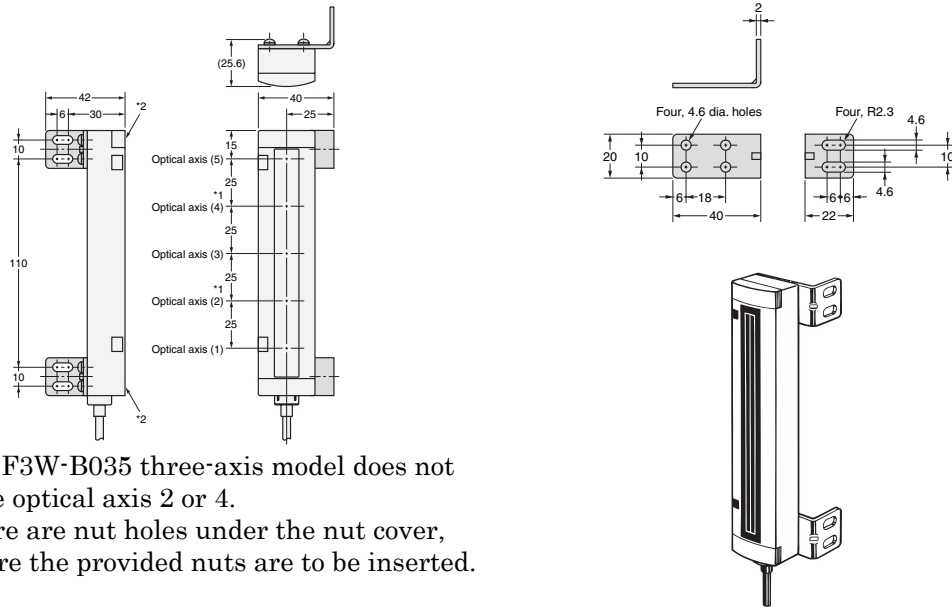


Mounting dimensions

Product discontinuation Type F3W-B035, F3W-B052

Type F39-L1

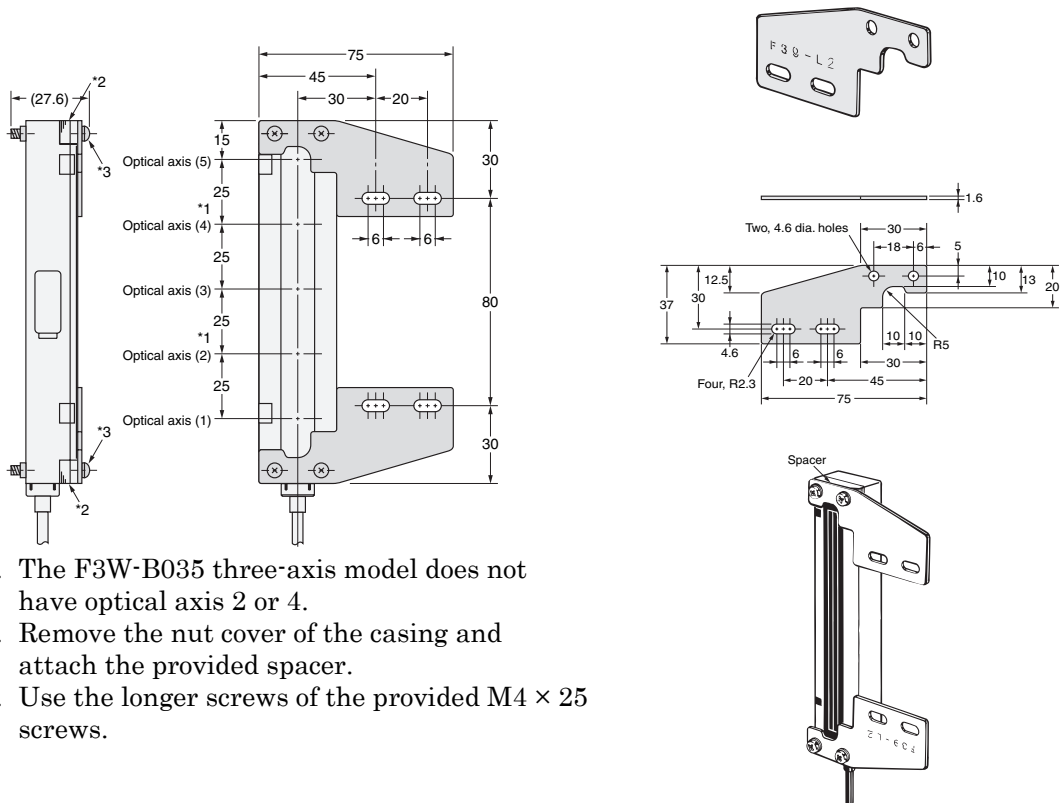
With Mounting Bracket



1. The F3W-B035 three-axis model does not have optical axis 2 or 4.
2. There are nut holes under the nut cover, where the provided nuts are to be inserted.

Type F39-L2 Mounted to detection side

With Mounting Bracket

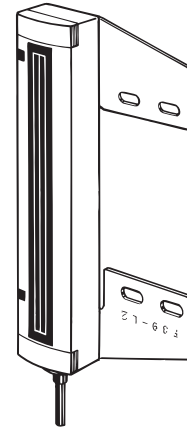
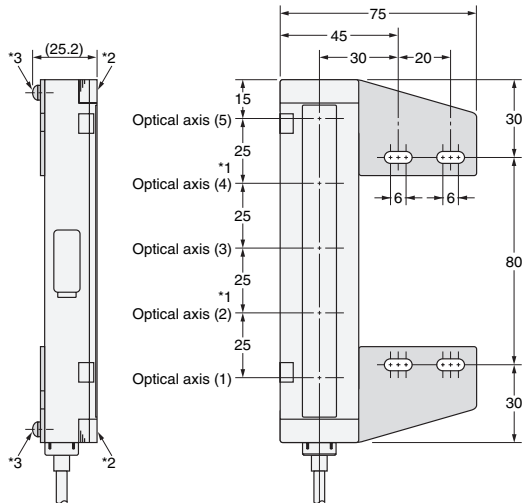


1. The F3W-B035 three-axis model does not have optical axis 2 or 4.
2. Remove the nut cover of the casing and attach the provided spacer.
3. Use the longer screws of the provided $M4 \times 25$ screws.

Mounting dimensions

Product discontinuation Type F3W-B035, F3W-B052

Type F39-L2 Mounted to rear side

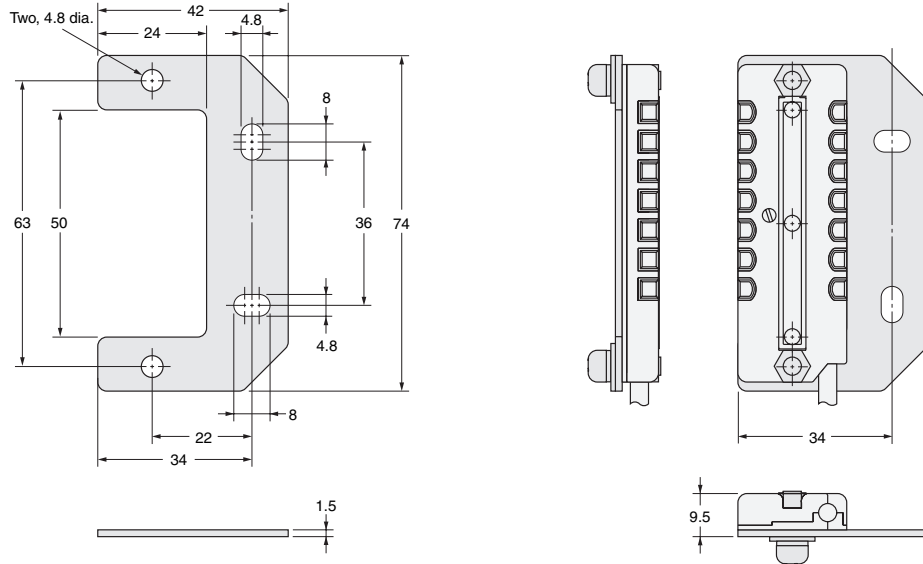


1. The F3W-B035 three-axis model does not have optical axis 2 or 4.
2. There are nut holes under the nut cover, where the provided nuts are inserted.
3. Use the shorter screws of the provided $M4 \times 20$ screws.

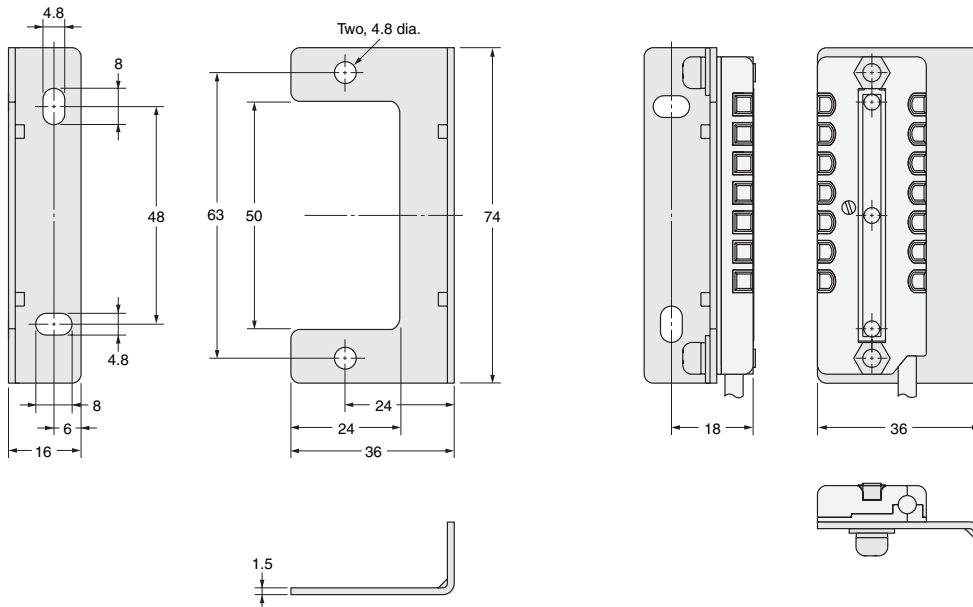
Mounting dimensions

Recommendable replacement Type F3W-E032A6

Type F39-LE1



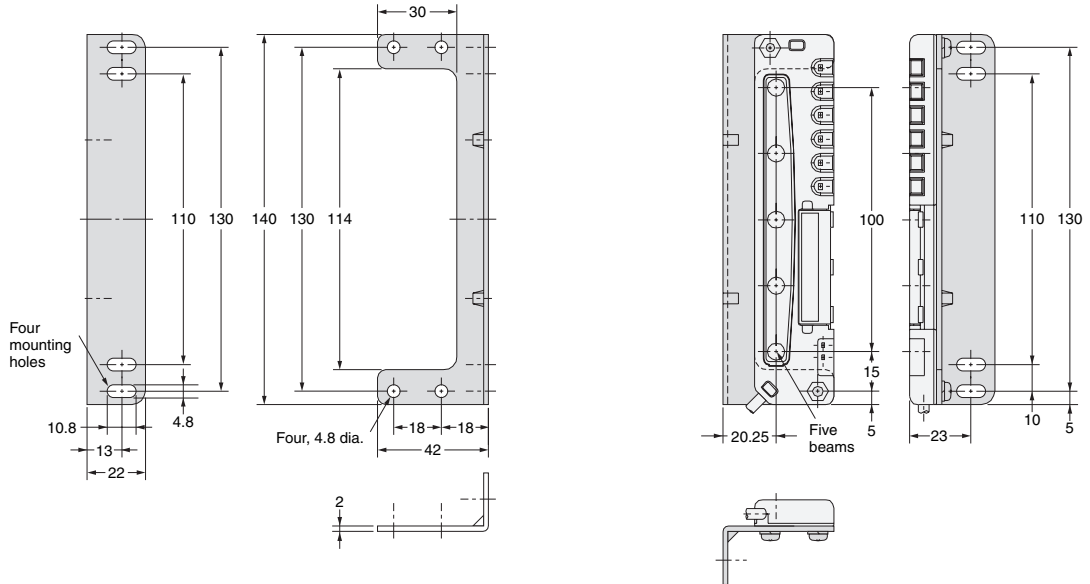
Type F39-LE2



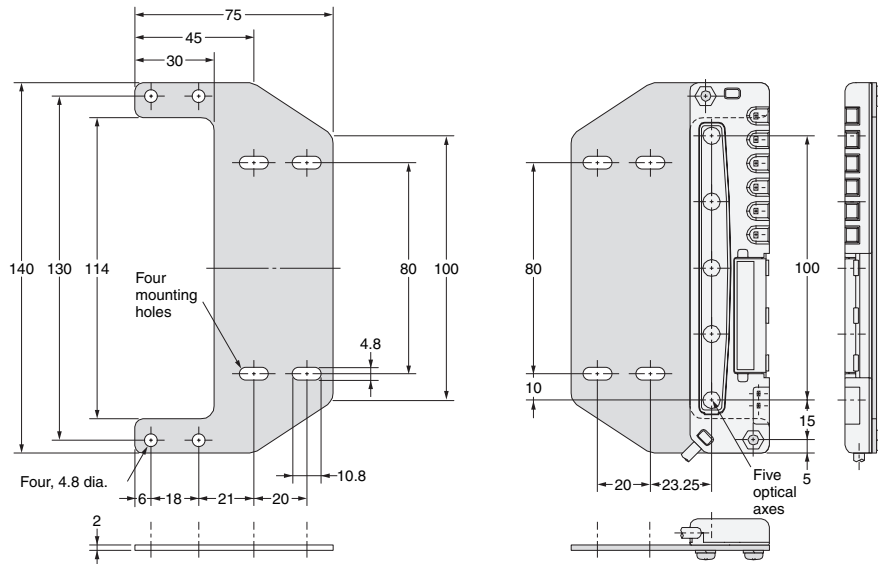
Mounting dimensions

Recommendable replacement Type F3W-D052A

Type F39-L10



Type F39-L11



Characteristics

	Product discontinuation Type F3W-B035	Recommendable replacement Type F3W-E032A6
Operating range	2 m	30 to 300 mm
Beam gap	50 mm	25 mm
Protective height	100 mm	50 mm
Detection capability	Diameter 35 mm opaque object	Diameter 28 mm opaque object
Light source	Infrared LED 950 nm	Infrared LED 860 nm
Power supply voltage	DC 12 to 24 V±10 %	DC 12 to 24 V± 10%
Current consumption	100 mA max.	Emitter 40 mA max.
		Receiver 40 mA max.
Outputs	Load power supply voltage DC 30 V max. Load current 100 mA max. Open collector output Light ON or Dark ON (selectable)	NPN open collector output Load power supply voltage DC 30 V max. Load current 100 mA max. Light-ON or Dark-ON (selectable)
Picking instruction indicator input	Open collector with relay or transistor input Indicator ON : Input voltage of 0 to 3 V Indicator OFF : Input voltage of 9 to 30 V or open (with leakage current of 3 mA max.)	Relay or open collector input NPN input Indicator ON : Input voltage of 0 to 2 V Indicator OFF : Open (with leakage current of 0.1 mA max.)
Control output on-hold input	Open collector with relay or transistor input Output on-hold input voltage : 0 to 3 V Output on-hold release (normal operation) voltage : 9 to 30 V or open (with leakage current of 3 mA max.)	-
External check input (Emitter)	-	Emission stop input voltage : 0 to 2 V Emission input voltage : Open (with leakage current of 0.1 mA max.)
Protection circuit	Output short-circuit protection, power supply reverse polarity protection, Interference light avoidance algorithm (set with frequency selector switch)	Output short-circuit protection, power supply reverse polarity protection, Interference light avoidance algorithm (set with frequency selector switch)
Response time	12 ms max.	100 ms max.
Ambient temperature	Incandescent lamp : receiving surface light intensity of 3,000 lx max., Sunlight : receiving surface light intensity of 10,000 lx max.	Incandescent lamp : receiving-surface light intensity of 3,000 lx max., Sunlight : receiving surface light intensity of 10,000 lx max.
Ambient temperature	During operation : -10 to +55 °C During storage : -40 to +70 °C	During operation : -10 to +55 °C During storage : -25 to +70 °C
Ambient humidity	During operation : 35 to 85 %RH During storage : 35 to 95 %RH	During operation, During storage : 35 to 85 %RH
Insulation resistance	20 MΩ or higher (500 VDC)	20 MΩ or higher (500 VDC)
Dielectric strength voltage	AC 1,000 V 50 / 60Hz, 1 min	AC 1,000V 50 / 60Hz, 1 min
Vibration resistance	Malfunction 10 to 55 Hz, Multiple amplitude of 1.5 mm, 20 sweeps each in X,Y,Z directions	Malfunction 10 to 50 Hz, Multiple amplitude of 1.5 mm, each in X,Y,Z directions

Characteristics

		Product discontinuation Type F3W-B035	Recommendable replacement Type F3W-E032A6
Shock resistance		Malfunction 500 m/s ² , 3 times each in X,Y,Z directions	Malfunction 500 m/s ² , 3 times each in X,Y,Z directions
Degree of protection		IEC60529 : IP62	IEC60529 : IP62
Connection method		Pre-wired	Pre-wired
Materials	case	ABS resin	ABS resin
	Lens	Acrylic	Acrylic
Accessories		Protection seal, Instruction sheet	Instruction sheet

		Product discontinuation Type F3W-B035	Recommended replacement Type F3W-D052A
Operating range		2 m	1 to 3 m (Long mode) 0.05 to 1 m (Short mode)
Beam gap		50 mm	25 mm
Protective height		100 mm	100 mm
Detection capability		Diameter 35 mm opaque object	Diameter 35 mm opaque object
Light source		Infrared LED 950 nm	Infrared LED 860 nm
Power supply voltage		DC 12 to 24 V±10 %	DC 12 to 24 V±10 %
Current consumption		100 mA max.	Emitter 0.6 W max.
			Receiver 0.7 W max.
Outputs		Load power supply voltage DC 30V max. Load current 100 mA max. Open collector output Light ON or Dark ON (selectable)	Load power supply voltage DC 30V max. Load current 100mA max. Open collector output Light ON or Dark ON (selectable)
Picking instruction indicator input		Open collector with relay or transistor input Indicator ON : Input voltage of 0 to 3 V Indicator OFF : Input voltage of 9 to 30 V or open (with leakage current of 3 mA max.)	Open collector with relay or transistor input Indicator ON : Input voltage of 0 to 2 V Indicator OFF : Open (with leakage current of 0.1 mA max.)
Control output on-hold input		Open collector with relay or transistor input Output on-hold input voltage : 0 to 3 V Output on-hold release (normal operation) voltage : 9 to 30 V or open (with leakage current of 3 mA max.)	-
External check input (Emitter)		-	-
Protection circuit		Output short-circuit protection, power supply reverse polarity protection, Interference light avoidance algorithm (set with frequency selector switch)	Output short-circuit protection, power supply reverse polarity protection, Interference light avoidance algorithm (set with frequency selector switch)
Response time		12 ms max.	10 ms max.
Ambient temperature		Incandescent lamp : receiving-surface light intensity of 3,000 lx max., Sunlight : receiving surface light intensity of 10,000 lx max.	Incandescent lamp : receiving-surface light intensity of 3,000 lx max., Sunlight : receiving surface light intensity of 10,000 lx max.
Ambient temperature		During operation : -10 to +55 °C During storage : -40 to +70 °C	During operation : -10 to +55 °C During storage : -25 to +70 °C

Characteristics

		Product discontinuation Type F3W-B035	Recommended replacement Type F3W-D052A
Ambient humidity		During operation : 35 to 85 %RH During storage : 35 to 95 %RH	During operation, During storage:35 to 85 %RH
Insulation resistance		20 MΩ or higher (500 VDC)	20 MΩ or higher (500 VDC)
Dielectric strength voltage		AC 1,000 V 50 / 60 Hz, 1 min	AC 1,000 V 50 / 60 Hz, 1 min
Vibration resistance		Malfunction 10 to 55 Hz, Multiple amplitude of 1.5 mm, 20 sweeps each in X,Y,Z directions	Malfunction 10 to 50 Hz, Multiple amplitude of 1.5 mm, 20 sweeps each in X,Y,Z directions
Shock resistance		Malfunction 500 m/s ² , 3 times each in X,Y,Z directions	Malfunction 500 m/s ² , 3 times each in X,Y,Z directions
Degree of protection		IEC60529 : IP62	IEC60529 : IP62 (with the operation cover closed)
Connection method		Pre-wired	Pre-wired
Materials	case	ABS resin	ABS resin
	Lens	Acrylic	Acrylic
Accessories		Protection seal, Instruction sheet	Instruction sheet

		Product discontinuation Type F3W-B052	Recommended replacement Type F3W-E032A6
Operating range		2 m	30 to 300 mm
Beam gap		25 mm (F3W-B052)	25 mm
Protective height		100 mm	50 mm
Detection capability		Diameter 35 mm opaque object	Diameter 28 mm opaque object
Light source		Infrared LED 950 nm	Infrared LED 860 nm
Power supply voltage		DC 12 to 24 V±10 %	DC 12 to 24 V±10 %
Current consumption		100 mA max.	Emitter 40 mA max. Receiver 40 mA max.
Outputs		Load power supply voltage DC 30V max. Load current 100 mA max. Open collector output Light ON or Dark ON (selectable)	NPN open collector output Load power supply voltage DC 30 V max. Load current 100 mA max. Light-ON or Dark-ON (selectable)
Picking instruction indicator input		Open collector with relay or transistor input Indicator ON : Input voltage of 0 to 3 V Indicator OFF : Input voltage of 9 to 30 V or open (with leakage current of 3 mA max.)	Relay or open collector input NPN input Indicator ON : Input voltage of 0 to 2 V Indicator OFF : Open (with leakage current of 0.1 mA max.)
Control output on-hold input		Open collector with relay or transistor input Output on-hold input voltage : 0 to 3 V Output on-hold release (normal operation) voltage : 9 to 30 V or open (with leakage current of 3 mA max.)	-
External check input (Emitter)		-	Emission stop input voltage : 0 to 2 V Emission input voltage : Open (with leakage current of 0.1 mA max.)

Characteristics

	Product discontinuation Type F3W-B052	Recommended replacement Type F3W-E032A6
Protection circuit	Output short-circuit protection, power supply reverse polarity protection, Interference light avoidance algorithm (set with frequency selector switch)	Output short-circuit protection, power supply reverse polarity protection, Interference light avoidance algorithm (set with frequency selector switch)
Response time	12 ms max.	100 ms max.
Ambient temperature	Incandescent lamp : receiving-surface light intensity of 3,000 lx max., Sunlight : receiving surface light intensity of 10,000 lx max.	Incandescent lamp : receiving-surface light intensity of 3,000 lx max., Sunlight : receiving surface light intensity of 10,000 lx max.
Ambient temperature	During operation : -10 to +55 °C During storage : -40 to +70 °C	During operation : -10 to +55 °C During storage : -25 to +70 °C
Ambient humidity	During operation : 35 to 85 %RH During storage : 35 to 95 %RH	During operation, During storage : 35 to 85 %RH
Insulation resistance	20 MΩ or higher (500 VDC)	20 MΩ or higher (500 VDC)
Dielectric strength voltage	AC 1,000V 50 / 60Hz, 1 min	AC 1,000V 50 / 60Hz, 1 min
Vibration resistance	Malfunction 10 to 55 Hz, Multiple amplitude of 1.5 mm, 20 sweeps each in X,Y,Z directions	Malfunction 10 to 50 Hz, Multiple amplitude of 1.5 mm, each in X,Y,Z directions
Shock resistance	Malfunction 500 m/s ² , 3 times each in X, Y, Z directions	Malfunction 500 m/s ² , 3 times each in X, Y, Z directions
Degree of protection	IEC60529 : IP62	IEC60529 : IP62
Connection method	Pre-wired	Pre-wired
Materials	case	ABS resin
	Lens	Acrylic
Accessories	Protection seal, Instruction sheet	Instruction sheet

	Product discontinuation Type F3W-B052	Recommended replacement Type F3W-D052A
Operating range	2 m	1 to 3 m (Long mode) 0.05 to 1 m (Short mode)
Beam gap	25 mm (F3W-B052)	25 mm
Protective height	100 mm	100 mm
Detection capability	Diameter 35 mm opaque object	Diameter 35 mm opaque object
Light source	Infrared LED 950 nm	Infrared LED 860 nm
Power supply voltage	DC 12 to 24 V± 10 %	DC 12 to 24 V±10 %
Current consumption	100 mA max.	Emitter 0.6 W max.
		Receiver 0.7 W max.
Outputs	Load power supply voltage DC 30 V max. Load current 100 mA max. Open collector output Light ON or Dark ON (selectable)	Load power supply voltage DC 30 V max. Load current 100 mA max. Open collector output Light ON or Dark ON (selectable)

Characteristics

	Product discontinuation Type F3W-B052	Recommended replacement Type F3W-D052A
Picking instruction indicator input	Open collector with relay or transistor input Indicator ON : Input voltage of 0 to 3 V Indicator OFF : Input voltage of 9 to 30 V or open (with leakage current of 3 mA max.)	Open collector with relay or transistor input Indicator ON : Input voltage of 0 to 2 V Indicator OFF : Open (with leakage current of 0.1 mA max.)
Control output on-hold input	Open collector with relay or transistor input Output on-hold input voltage : 0 to 3 V Output on-hold release (normal operation) voltage : 9 to 30 V or open (with leakage current of 3 mA max.)	-
External check input (Emitter)	-	-
Protection circuit	Output short-circuit protection, power supply reverse polarity protection, Interference light avoidance algorithm (set with frequency selector switch)	Output short-circuit protection, power supply reverse polarity protection, Interference light avoidance algorithm (set with frequency selector switch)
Response time	12 ms max.	10 ms max.
Ambient temperature	Incandescent lamp : receiving-surface light intensity of 3,000 lx max., Sunlight : receiving surface light intensity of 10,000 lx max.	Incandescent lamp : receiving-surface light intensity of 3,000 lx max., Sunlight : receiving surface light intensity of 10,000 lx max.
Ambient temperature	During operation : -10 to +55 °C During storage : -40 to +70 °C	During operation : -10 to +55 °C During storage : -25 to +70 °C
Ambient humidity	During operation : 35 to 85 %RH During storage : 35 to 95 %RH	During operation, During storage : 35 to 85 %RH
Insulation resistance	20 MΩ or higher (500 VDC)	20 MΩ or higher (500 VDC)
Dielectric strength voltage	AC 1,000 V 50 / 60Hz, 1 min	AC 1,000 V 50 / 60Hz, 1 min
Vibration resistance	Malfunction 10 to 55 Hz, Multiple amplitude of 1.5 mm, 20 sweeps each in X,Y,Z directions	Malfunction 10 to 50 Hz, Multiple amplitude of 1.5 mm, 20 sweeps each in X,Y,Z directions
Shock resistance	Malfunction 500 m/s ² , 3 times each in X,Y,Z directions	Malfunction 500 m/s ² , 3 times each in X,Y,Z directions
Degree of protection	IEC60529 : IP62	IEC60529 : IP62 (with the operation cover closed)
Connection method	Pre-wired	Pre-wired
Materials	case	ABS resin
	Lens	Acrylic
Accessories	Protection seal, Instruction sheet	Instruction sheet

Operation ratings

Product discontinuation Type F3W-B035, F3W-B052	Recommended replacement Type F3W-E032A6
Refer to wire connection and characteristics	Refer to wire connection and characteristics

Product discontinuation Type F3W-B035, F3W-B052	Recommended replacement Type F3W-D052A
Refer to wire connection and characteristics	Refer to wire connection and characteristics