

Smart Muting Actuator

F3W-MA

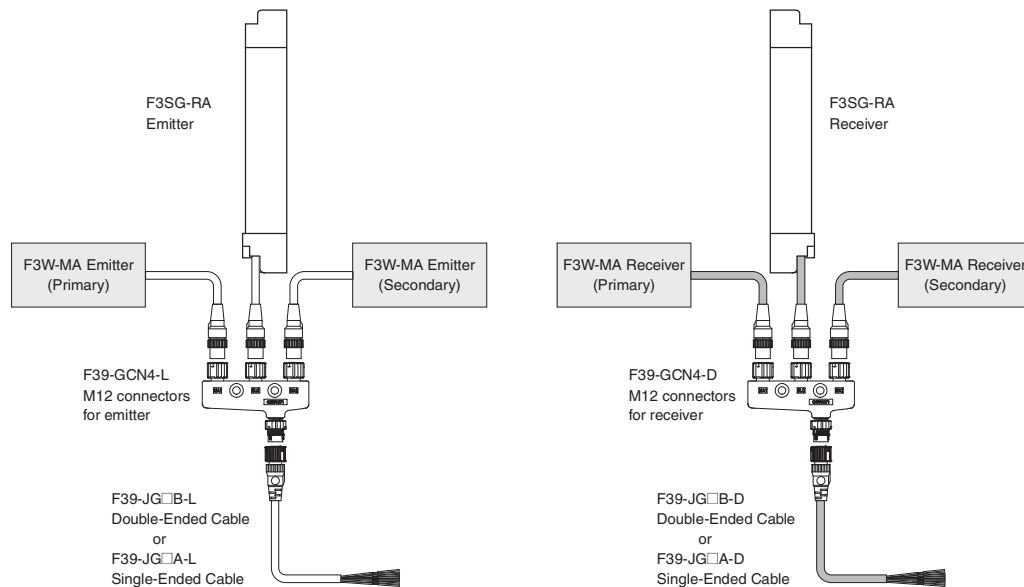
Integrated muting sensor based on multi-beam photoelectric sensor



- A muting system can be configured easily in combination with the safety light curtain.
- Muting functions can be stably performed even when workpieces with holes pass.




System Configuration



F3W-MA

Ordering Information




Smart Muting Actuator

Appearance	Beam Gap between Muting Trigger Beams	output	Number of Beams	Model
	100 mm	PNP output	8	F3W-MA0100P
	300 mm		20	F3W-MA0300P

Note: Use with the PNP output model safety light curtain.






Accessories (Sold separately)

Single-Ended Cable *

Appearance	Type	Cable length	Specifications	Model																							
	M12 connector (5-pin), 5 wires Color: Gray	3 m	Connected to Power Cable or Double-Ended Cable  Female <table border="1"> <tr><td>1</td><td>+24 VDC</td><td>Brown</td></tr> <tr><td>2</td><td>CFG In</td><td>Black</td></tr> <tr><td>3</td><td>0 VDC</td><td>Blue</td></tr> <tr><td>4</td><td>COM+</td><td>White</td></tr> <tr><td>5</td><td>COM-</td><td>Yellow</td></tr> </table>	1	+24 VDC	Brown	2	CFG In	Black	3	0 VDC	Blue	4	COM+	White	5	COM-	Yellow	F39-JG3A-L								
		1		+24 VDC	Brown																						
		2		CFG In	Black																						
		3		0 VDC	Blue																						
		4		COM+	White																						
	5	COM-	Yellow																								
	7 m	F39-JG7A-L																									
	10 m	F39-JG10A-L																									
	15 m	F39-JG15A-L																									
	20 m	F39-JG20A-L																									
For receiver M12 connector (8-pin), 8 wires Color: Black	3 m	Connected to Power Cable or Double-Ended Cable  Female <table border="1"> <tr><td>1</td><td>Mute Enable / CFG In / Reset</td><td>Yellow</td></tr> <tr><td>2</td><td>+24 VDC</td><td>Brown</td></tr> <tr><td>3</td><td>COM+</td><td>Gray</td></tr> <tr><td>4</td><td>COM-</td><td>Pink</td></tr> <tr><td>5</td><td>Muting Output A</td><td>Black</td></tr> <tr><td>6</td><td>Muting Output B</td><td>White</td></tr> <tr><td>7</td><td>0 VDC</td><td>Blue</td></tr> <tr><td>8</td><td>CFG Out</td><td>Red</td></tr> </table>	1	Mute Enable / CFG In / Reset	Yellow	2	+24 VDC	Brown	3	COM+	Gray	4	COM-	Pink	5	Muting Output A	Black	6	Muting Output B	White	7	0 VDC	Blue	8	CFG Out	Red	F39-JG3A-D
	1		Mute Enable / CFG In / Reset	Yellow																							
	2		+24 VDC	Brown																							
	3		COM+	Gray																							
	4		COM-	Pink																							
5	Muting Output A	Black																									
6	Muting Output B	White																									
7	0 VDC	Blue																									
8	CFG Out	Red																									
7 m	F39-JG7A-D																										
10 m	F39-JG10A-D																										
15 m	F39-JG15A-D																										
20 m	F39-JG20A-D																										

* A set of two Single-Ended Cables (one for emitter and one for receiver) is also available.
Model: Model number without the -L/-D at the end (F39-JG□A)


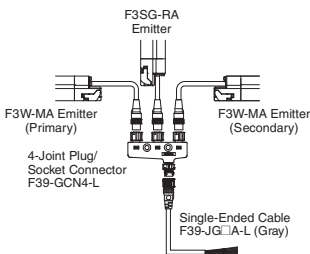

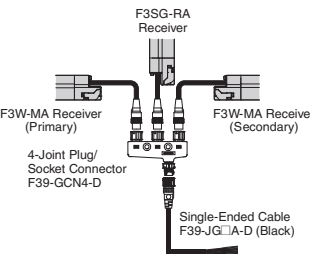

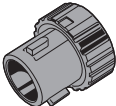


Double-Ended Cable *

Appearance	Type	Cable length	Specifications	Model																															
	M12 connector (5-pin) on both ends Color: Gray	0.5 m	Connected to Power Cable or Double-Ended Cable  Female <table border="1"> <tr><td>1</td><td>Brown</td></tr> <tr><td>3</td><td>Blue</td></tr> <tr><td>2</td><td>Black</td></tr> <tr><td>4</td><td>White</td></tr> <tr><td>5</td><td>Yellow</td></tr> </table> Connected to Single-Ended Cable, or Double-Ended Cable  Male <table border="1"> <tr><td>1</td><td>Brown</td></tr> <tr><td>3</td><td>Blue</td></tr> <tr><td>2</td><td>Black</td></tr> <tr><td>4</td><td>White</td></tr> <tr><td>5</td><td>Yellow</td></tr> </table>	1	Brown	3	Blue	2	Black	4	White	5	Yellow	1	Brown	3	Blue	2	Black	4	White	5	Yellow	F39-JGR5B-L											
		1		Brown																															
		3		Blue																															
		2		Black																															
		4		White																															
		5		Yellow																															
		1		Brown																															
		3		Blue																															
	2	Black																																	
	4	White																																	
	5	Yellow																																	
	1 m	F39-JG1B-L																																	
	3 m	F39-JG3B-L																																	
	5 m	F39-JG5B-L																																	
7 m	F39-JG7B-L																																		
10 m	F39-JG10B-L																																		
15 m	F39-JG15B-L																																		
20 m	F39-JG20B-L																																		
M12 connector (8-pin) on both ends Color: Black	0.5 m	Connected to Power Cable or Double-Ended Cable  Female <table border="1"> <tr><td>2</td><td>Brown</td></tr> <tr><td>7</td><td>Blue</td></tr> <tr><td>5</td><td>Black</td></tr> <tr><td>6</td><td>White</td></tr> <tr><td>1</td><td>Yellow</td></tr> <tr><td>8</td><td>Red</td></tr> <tr><td>3</td><td>Gray</td></tr> <tr><td>4</td><td>Pink</td></tr> </table> Connected to Single-Ended Cable, or Double-Ended Cable  Male <table border="1"> <tr><td>2</td><td>Brown</td></tr> <tr><td>7</td><td>Blue</td></tr> <tr><td>5</td><td>Black</td></tr> <tr><td>6</td><td>White</td></tr> <tr><td>1</td><td>Yellow</td></tr> <tr><td>8</td><td>Red</td></tr> <tr><td>3</td><td>Gray</td></tr> <tr><td>4</td><td>Pink</td></tr> </table>	2	Brown	7	Blue	5	Black	6	White	1	Yellow	8	Red	3	Gray	4	Pink	2	Brown	7	Blue	5	Black	6	White	1	Yellow	8	Red	3	Gray	4	Pink	F39-JGR5B-D
	2		Brown																																
	7		Blue																																
	5		Black																																
	6		White																																
	1		Yellow																																
8	Red																																		
3	Gray																																		
4	Pink																																		
2	Brown																																		
7	Blue																																		
5	Black																																		
6	White																																		
1	Yellow																																		
8	Red																																		
3	Gray																																		
4	Pink																																		
1 m	F39-JG1B-D																																		
3 m	F39-JG3B-D																																		
5 m	F39-JG5B-D																																		
7 m	F39-JG7B-D																																		
10 m	F39-JG10B-D																																		

* A set of two Double-Ended Cables (one for emitter and one for receiver) is also available.
Model: Model number without the -L/-D at the end (F39-JG□B)





4-Joint Plug/Socket Connector

Used for reduced wiring for connecting F3W-MA with F3SG-RA.

Appearance	Type	Specifications	Model
	For emitter M12 connectors. Used for reduced wiring.		F39-GCN4-L
	For receiver (PNP output) M12 connectors. Used for reduced wiring.		F39-GCN4-D
	Includes one each of F39-GCN4-L and F39-GCN4-D	—	F39-GCN4
	Water-resistive Cover for 4-Joint Plug/Socket Connector	One water-resistive cover for an F39-GCN4-L/-D 4-Joint Plug/Socket Connector. You can use this when the MA2 connector part is not used. Material: PBT. IP67 rated when attached. Smartclick mechanism.	XS5Z-11
	Dust Cover for 4-Joint Plug/Socket Connector	One dust cover for an F39-GCN4-L/-D 4-Joint Plug/Socket Connector. You can use this when the MA2 connector part is not used. Material: Rubber/black. This cover does not ensure IP67 degree of protection.	XS2Z-14
		XS2Z-14: Attach to a pin block inside the M12 female screw. XS2Z-15: Attach to a M12 female screw. When attaching the cover to the connector, press the cover onto the connector until the connector is fully inserted into the cover.	XS2Z-15

F3W-MA

Sensor Mounting Brackets

Appearance	Specification	Application	Remarks	Model
	Standard Fixed Bracket	Bracket to mount the F3W-MA. Side mounting and backside mounting possible.	Two brackets per set	F39-LGF
	Standard Adjustable Bracket	Bracket to mount the F3W-MA. Beam alignment after mounting possible. The angle adjustment range is $\pm 15^\circ$. Side mounting and backside mounting possible.	Two brackets per set	F39-LGA
	F3W-MA Bracket	Bracket to fix the F3W-MA to the F3SG-RA. F39-LGMAL: L-shaped configuration F39-LGMAT: T-shaped configuration Beam alignment after mounting possible. When using the F3W-MA Bracket, it is necessary to add an extra Standard Adjustable Bracket (F39-LGA) to the F3SG-RA. * Please also purchase Standard Adjustable Bracket (F39-LGA).	Two brackets per set	F39-LGMAL
				F39-LGMAT

Note: When mounting an F3W-MA0300P in the L-shaped configuration, the shock resistance becomes as follows.

Shock resistance: 50 m/s², 1000 shocks for all 3 axes

For mounting an F3W-MA0300P under a shock environment exceeding this, the F3W-MA Bracket cannot be used. Use a Standard Adjustable Bracket (F39-LGA).

* When using F39-LGMA□, there are some restrictions on the brackets to mount the F3SG-RA. This bracket is not usable together with F39-LGF. When using together with the F39-LGA, the protective height of the F3SG-RA must be 270 mm or longer. When using together with F39-LGTB, the protective height of the F3SG-RA must be 400 mm or longer. An extra F39-LGA is required for reinforcement, depending on the mounting position of the F39-LGMA□. Refer to "Dimensions" on page 159 for details.

Ratings/Specifications

		F3W-MA0100P	F3W-MA0300P	
Performance	Beam Gap between Muting Trigger Beams	100 mm	300 mm	
	Number of Beams	8	20	
	Standard Detection Object	30 mm		
	Operating Range	Long	0.3 to 20.0 m (1 to 65 ft.)	
		Short	0.3 to 7.0 m (1 to 23 ft.)	
	Response Time	Operation	13 ms max.	
		Reset	26 ms max. (Synchronized) 78 ms max. (Not synchronized)	
	Effective Aperture Angle	±2.5° max., emitter and receiver at operating range of 3 m or greater		
Light Source	Infrared LEDs, Wavelength: 870 nm			
Startup Waiting Time	2 s max.			
Electrical	Power Supply Voltage (Vs)	SELV/PELV 24 VDC±20% (ripple p-p 10% max.)		
	Current Consumption	Emitter	35 mA	45 mA
		Receiver	75 mA	75 mA
	Muting Outputs	Two PNP transistor outputs. * Load current of 300 mA max., Residual voltage of 2 V max. (except for voltage drop due to cable extension) * This product is a PNP output model. Use with the PNP output model safety light curtain.		
	Output Operation Mode	Muting Output A	Dark-ON (Muting Output A is enabled when MuteA trigger beam is blocked.)	
		Muting Output B	Dark-ON (Muting Output B is enabled when MuteB trigger beam is blocked.)	
	Input Voltage	ON Voltage	[MuteEnable] Vs to Vs-3 V (sink current 5 mA max.) *	
		OFF Voltage	[Mute Enable] 0 to 1/2 Vs, or open *	
			* The Vs indicates a supply voltage value in your environment.	
	Indicators	Refer to page 152. LED Indicator Status		
Protective Circuit	Protective Circuit Output short protection, Power supply reverse polarity protection			
Insulation Resistance	20 MΩ or higher (500 VDC megger)			
Dielectric Strength	1,000 VAC, 50/60 Hz (1 min)			
Functional	Functions	<ul style="list-style-type: none"> - Scan Code Selection - Operation Mode Selection (Point to Point Detection/ Chattering and Void Space Prevention) - Off-Delay - Muting Enable - Muting Trigger Beam Allocation - Operating Range Selection 		
Environmental	Ambient Temperature	Operating	-10 to 55°C (13 to 131°F) (non-icing)	
		Storage	-25 to 70°C (-13 to 158°F)	
	Ambient Humidity	Operating	35% to 85% (non-condensing)	
		Storage	35% to 95%	
	Ambient Illuminance	Incandescent lamp: 3,000 lx max. on receiver surface Sunlight: 10,000 lx max. on receiver surface		
	Degree of Protection (IEC 60529)	IP65 and IP67		
	Vibration Resistance (IEC 61496-1)	10 to 55 Hz, Multiple amplitude of 0.7 mm, 20 sweeps for all 3 axes		
Shock Resistance (IEC 61496-1)	100 m/s ² , 1000 shocks for all 3 axes			
Pollution Degree (IEC 60664-1)	Pollution Degree 3			
Connections	Power Cable	Type of Connection	M12 connectors: 5-pin emitter, 8-pin receiver, IP67 rated when mated, Cables prewired to sensors	
		Number of Wires	Emitter: 5, Receiver: 8	
		Cable Length	0.3 m	
		Cable Diameter	6 mm	
		Minimum Bending Radius	R5 mm	
Extension of Power Cable	100 m max. Note: For T-Shaped configuration with COM lines, the length of cable extension is 30m max.			
Material	Housing: Aluminum alloy, Cap: PBT resin, Front window: Acrylic resin, Cable: Oil-resistant PVC resin, FE plate: Stainless steel			
Net Weight *1	0.7 kg	0.9 kg		
Gross Weight *2	1.3 kg	2.2 kg		
Included Accessories	Instruction Sheet			

*1. The net weight is the weight of an emitter and a receiver.

*2. The gross weight is the weight of an emitter, a receiver, included accessories and a package.

F3W-MA

LED Indicator Status

Shown below are indication statuses of F3W-MA LED indicators when you purchased.

Emitter

Name of Indicator		Color	Illuminated	Blinking
Operating range	LONG	Green	Long Range mode is selected by DIP Switch.	-
Running	RUN	Green	Power is ON.	-
Error	ERR	Red	-	Error in emitter. Generic error happens.

Receiver

Name of Indicator		Color	Illuminated	Blinking
Top-beam-state	TOP	Blue	The top beam is unblocked.	-
Muting output A	MUTE A	Green	Muting Output A is activated.	-
Muting output B	MUTE B	Green	Muting Output B is activated.	-
Off-Delay	DELAY	Yellow	Off-Delay function is enabled by DIP Switch.	-
Chattering/ Void space	CHAT	Green	Chattering and Void Space Prevention mode is selected by DIP Switch.	-
Muting Enable	MUTE DISABLE	Red	The Muting Enable function is enabled and Muting Enable input is turned OFF by DIP Switch.	-
Error	ERR	Red	-	Error in receiver. Generic error happens.
Stable-state	STB	Green	Incident light level is 170% or higher of ON-threshold	-
Running	RUN	Green	Power is ON.	-
Communication	COM	Green	Synchronization between emitter and receiver is maintained.	[Primary sensor] - Start-up (for approx. 3 s) - Synchronization between emitter and receiver is lost
Bottom-beamstate	BTM	Blue	The bottom beam is unblocked.	-

Wiring Examples

Standard Muting Mode with F3SG-R (T-Shaped Configuration with COM lines)

The following is the example of F3W-MA with Scan Code B, Chattering and Void Space Prevention 1, Off-Delay 100 ms and Muting Enable 1, Off-Delay 100 ms and Muting Enable Disabled (factory default setting).

DIP Switch settings *1

		Function	DIP-SW1	DIP-SW2 *2
F3W-MA Primary	Receiver	Scan Code B (factory default setting)	1 <input checked="" type="checkbox"/> ON	1 <input checked="" type="checkbox"/> ON
		Chattering and Void Space Prevention 1	2 <input checked="" type="checkbox"/> ON 3 <input checked="" type="checkbox"/> ON	2 <input checked="" type="checkbox"/> ON 3 <input checked="" type="checkbox"/> ON
		Off-Delay 100 ms	4 <input checked="" type="checkbox"/> ON 5 <input checked="" type="checkbox"/> ON	4 <input checked="" type="checkbox"/> ON 5 <input checked="" type="checkbox"/> ON
		Muting Enable Disabled (factory default setting)	6 <input checked="" type="checkbox"/> ON	6 <input checked="" type="checkbox"/> ON
	Emitter	Scan Code B (factory default setting)	1 <input checked="" type="checkbox"/> ON	-
F3W-MA Secondary	Receiver Emitter	-	No setting required	No setting required

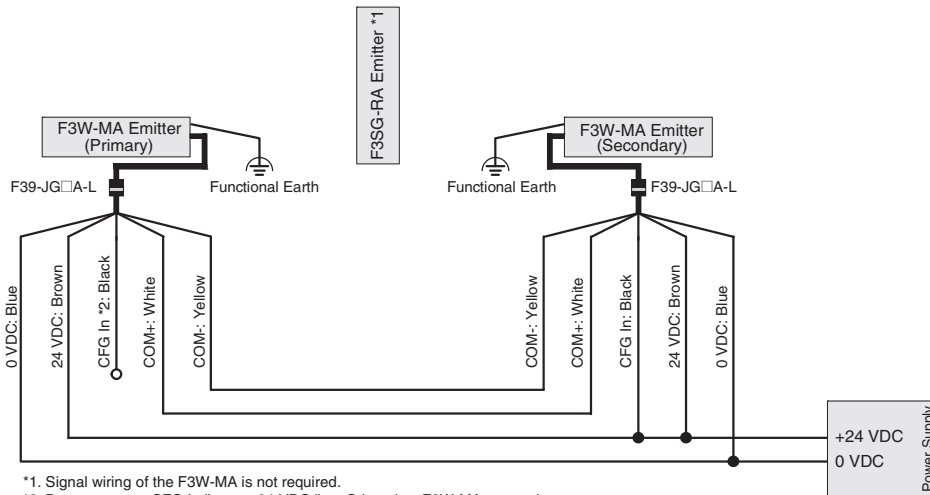
: Indicates a switch position.

*1. Configure functions with the DIP Switches before wiring. Refer to *Smart Muting Actuator F3W-MA Series User's Manual* for more information.

*2. DIP Switch Bank 2 is not used.

Wiring example

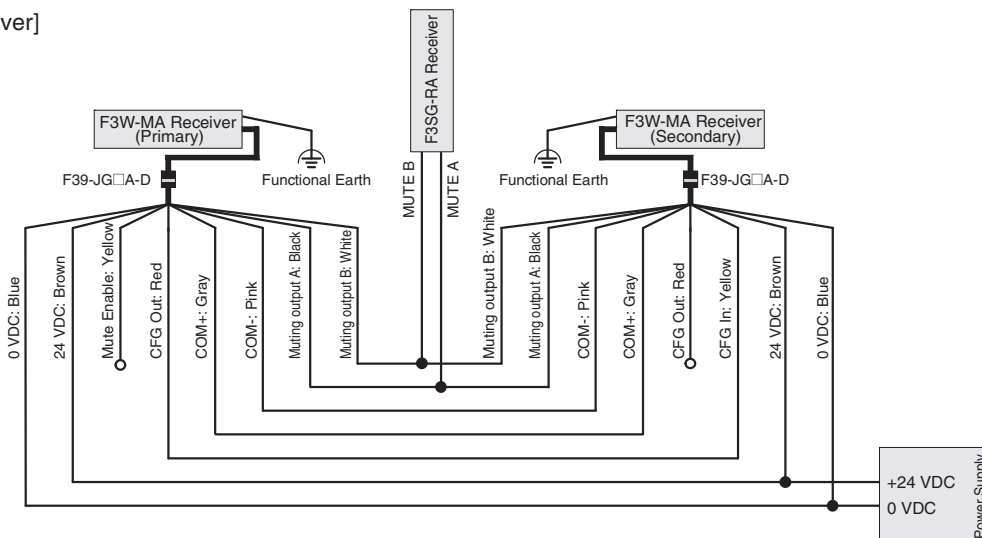
[Emitter]



*1. Signal wiring of the F3W-MA is not required.

*2. Do not connect CFG In line to +24 VDC line. Otherwise, F3W-MA enters the error state.

[Receiver]

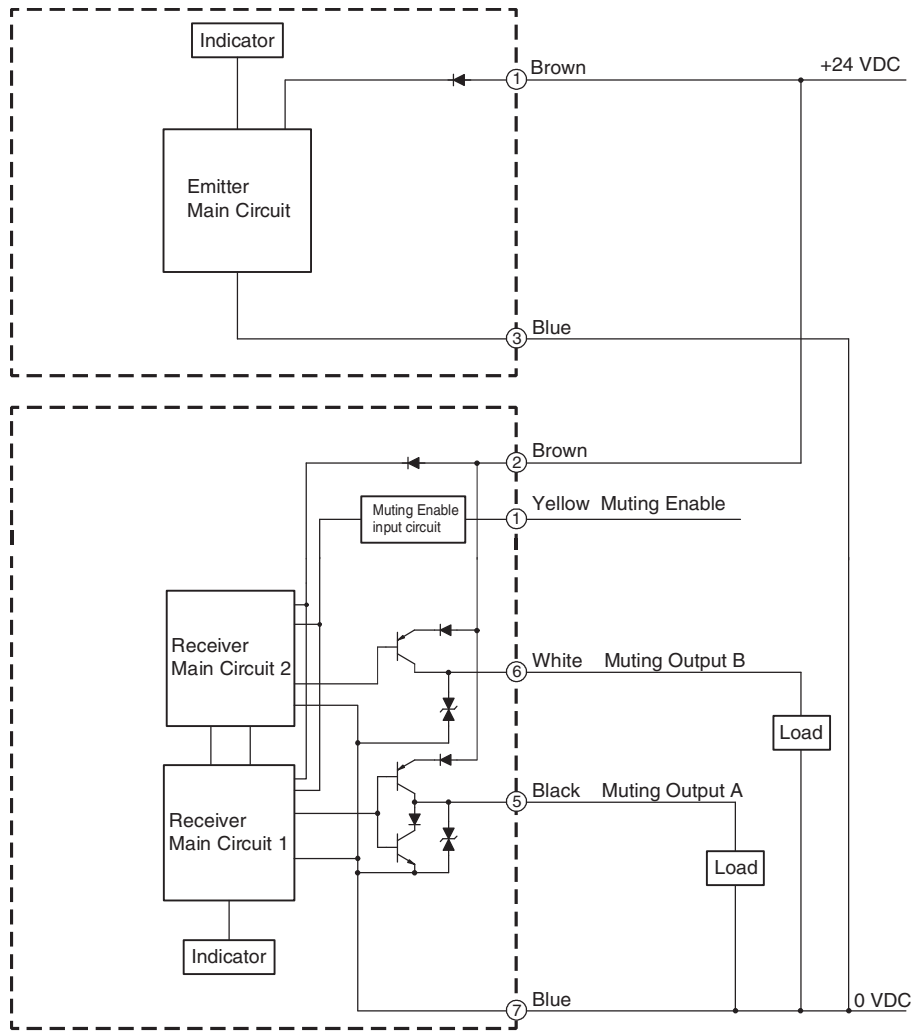


Note: The wiring examples in later pages do not indicate functional earth. To use functional earth, wire an earth cable according to the example above. Refer to *Smart Muting Actuator F3W-MA Series User's Manual* for more information.

F3W-MA

Input/Output Circuit

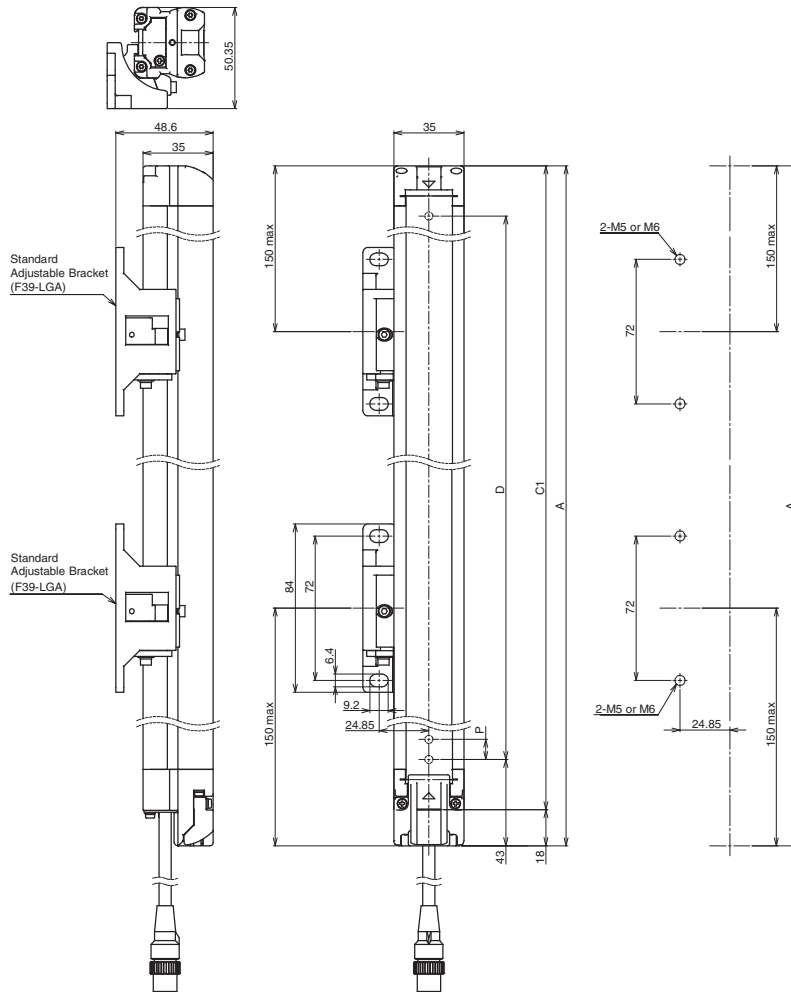
The entire circuit diagram of the F3W-MA is shown below.
The numbers in the circles indicate the connector's pin numbers.



Dimensions

Mounted with Standard Adjustable Brackets (F39-LGA)

Backside Mounting

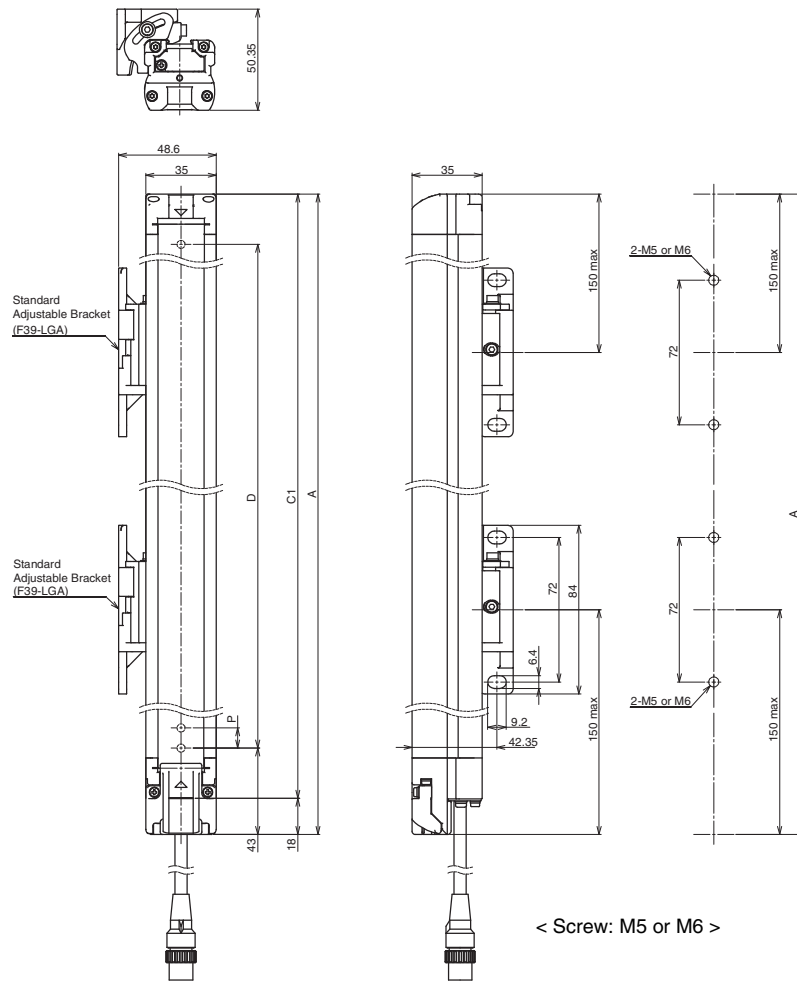


< Screw: M5 or M6 >

Model	F3W-MA0100P	F3W-MA0300P
Dimension A	208	448
Dimension C1	190	430
Dimension D	140	380
Dimension P	20	20
Number of Standard Adjustable Brackets *1	2 *2	2

*1. The number of brackets required to mount either one of emitter and receiver.
 *2. Mounting an emitter or receiver with one bracket is possible. In this case, locate this bracket at half the Dimension A (or at the center of the sensor length).

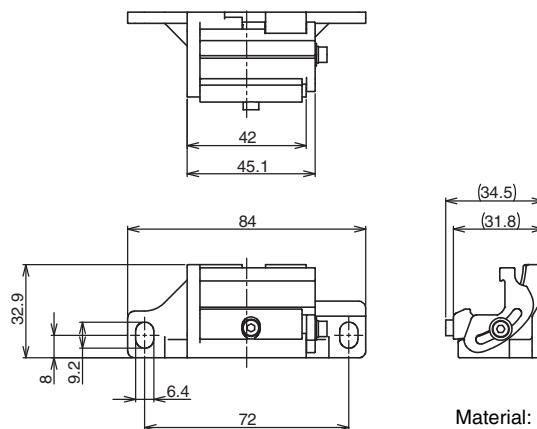
Side Mounting



Model	F3W-MA0100P	F3W-MA0300P
Dimension A	208	448
Dimension C1	190	430
Dimension D	140	380
Dimension P	20	20
Number of Standard Adjustable Brackets *1	2 *2	2

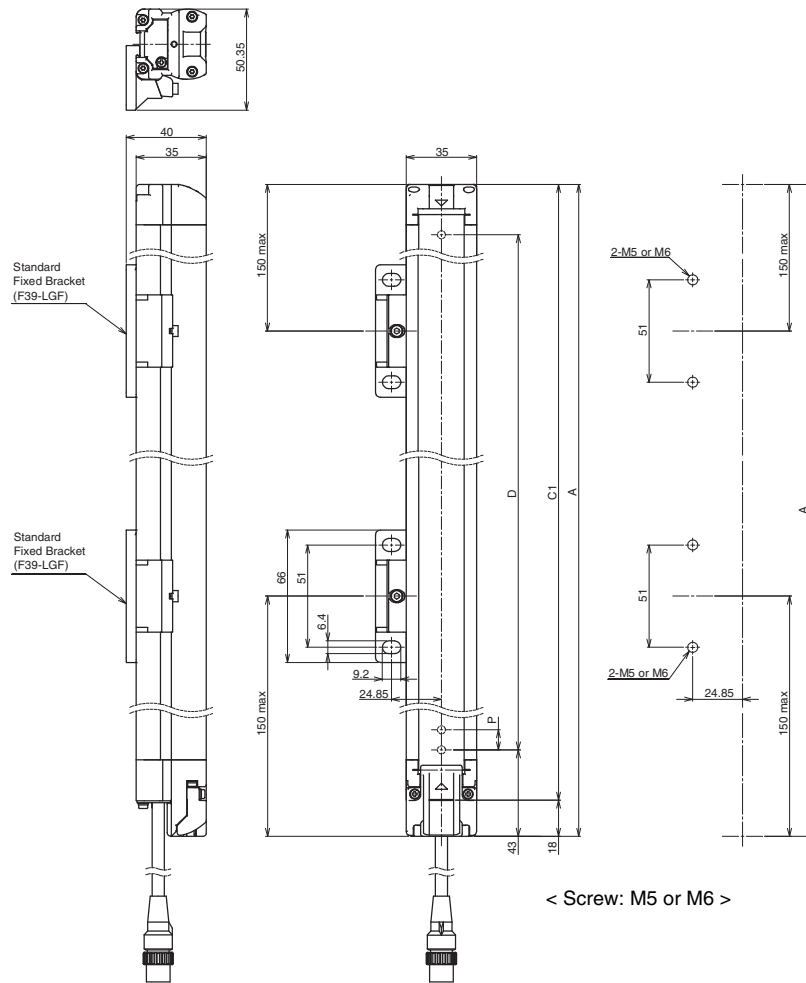
- *1. The number of brackets required to mount either one of emitter and receiver.
- *2. Mounting an emitter or receiver with one bracket is possible. In this case, locate this bracket at half the Dimension A (or at the center of the sensor length).

Standard Adjustable Bracket (F39-LGA, sold separately)



Material: Zinc alloy, Fluorine-containing

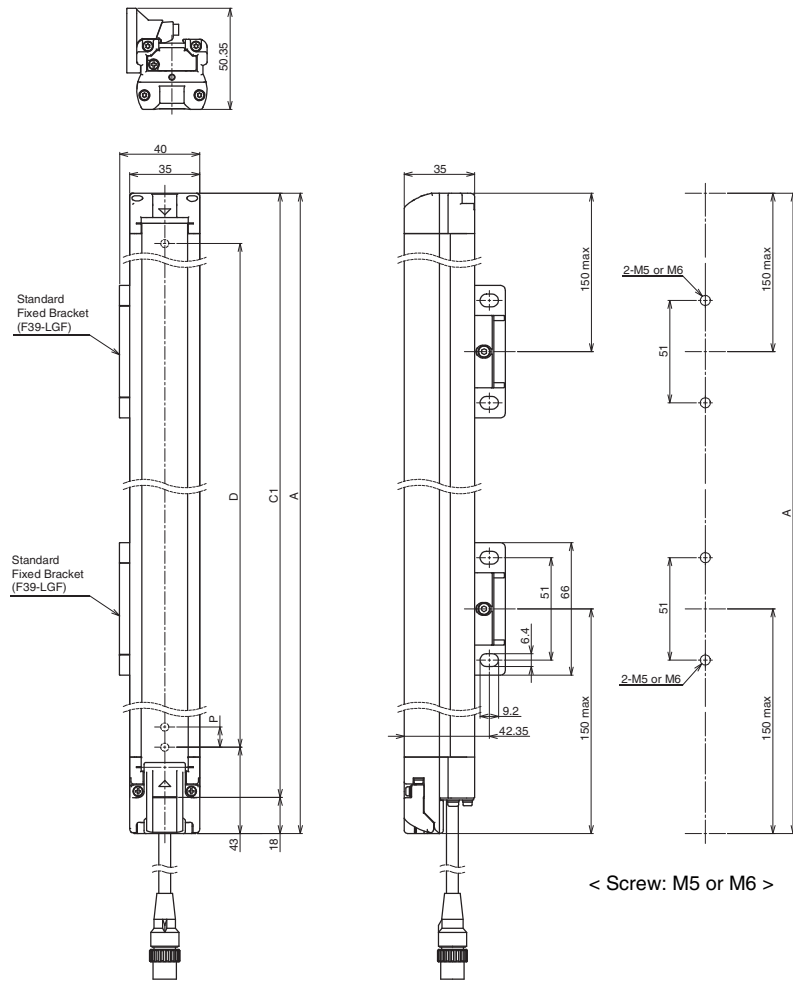
Mounted with Standard Fixed Brackets (F39-LGF)
Backside Mounting



Model	F3W-MA0100P	F3W-MA0300P
Dimension A	208	448
Dimension C1	190	430
Dimension D	140	380
Dimension P	20	20
Number of Standard Fixed Brackets *1	2 *2	2

*1. The number of brackets required to mount either one of emitter and receiver.
 *2. Mounting an emitter or receiver with one bracket is possible. In this case, locate this bracket at half the Dimension A (or at the center of the sensor length).

Side Mounting

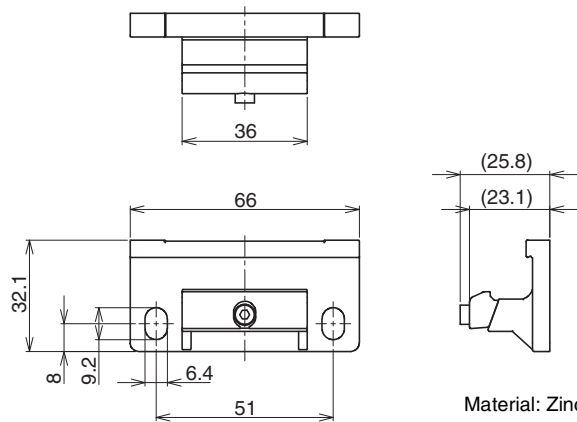


Model	F3W-MA0100P	F3W-MA0300P
Dimension A	208	448
Dimension C1	190	430
Dimension D	140	380
Dimension P	20	20
Number of Standard Fixed Brackets *1	2 *2	2

*1. The number of brackets required to mount either one of emitter and receiver.

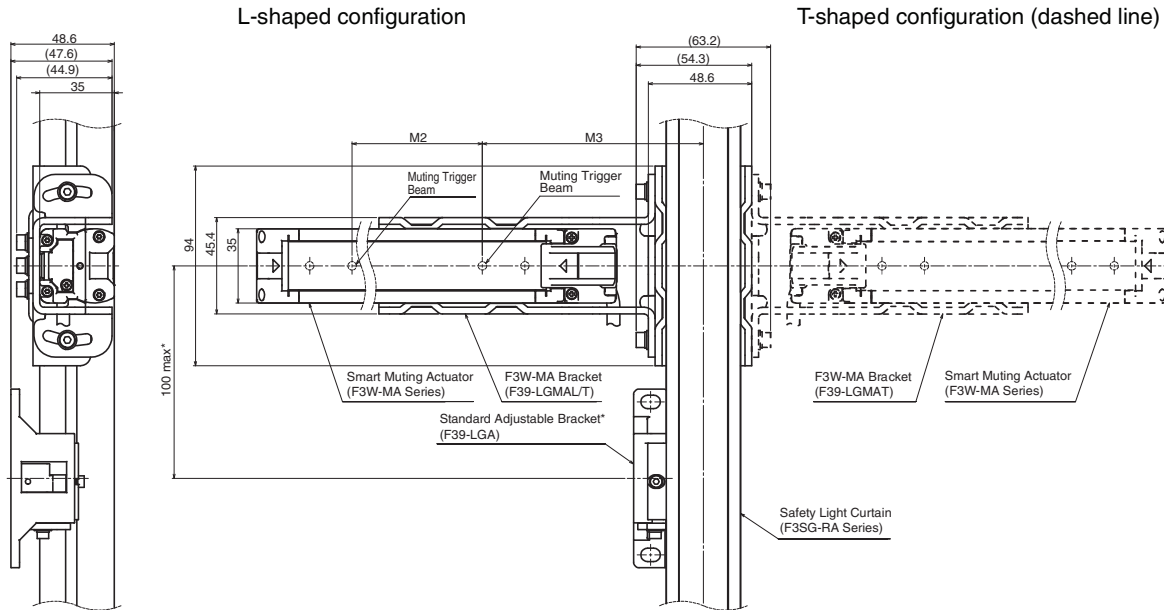
*2. Mounting an emitter or receiver with one bracket is possible. In this case, locate this bracket at half the Dimension A (or at the center of the sensor length).

Standard Fixed Bracket (F39-LGF, sold separately)



Material: Zinc alloy

Mounted with F3W-MA Bracket (F39-LGMA□) and Standard Adjustable Bracket (F39-LGA) on F3SG-RA



Note: When mounting an F3W-MA0300P in the L-shaped configuration, the shock resistance becomes as follows.

Shock resistance: 50 m/s², 1000 shocks for all 3 axes

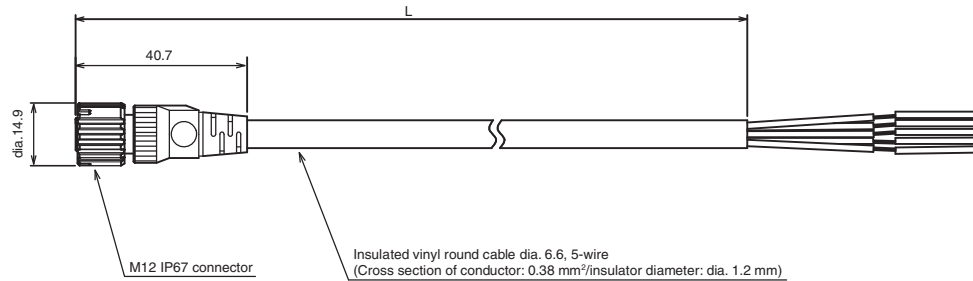
For mounting an F3W-MA0300P under a shock environment exceeding this, the F3W-MA Bracket cannot be used. Use a Standard Adjustable Bracket (F39-LGA).

* The distance between the centers of the F3W-MA and the Standard Adjustable Bracket (F39-LGA) must be 100 mm or less. When the distance is longer than 100 mm, add an extra Standard Adjustable Bracket for reinforcement.

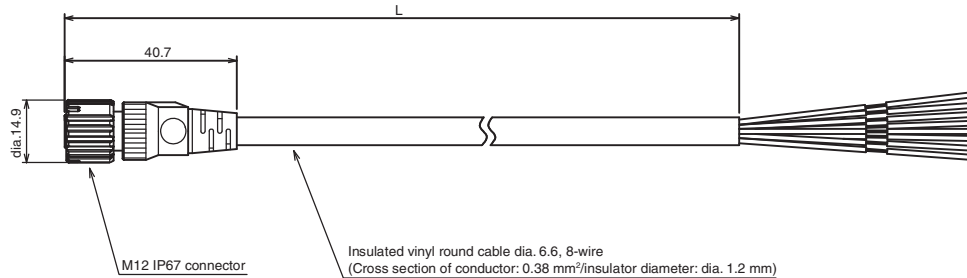
Model	F3W-MA0100P	F3W-MA0300P
Dimension M2	100	300
Dimension M3	104	124

Accessories

Single-Ended Cable for Emitter (F39-JG□A-L, sold separately)



Single-Ended Cable for Receiver (F39-JG□A-D, sold separately)

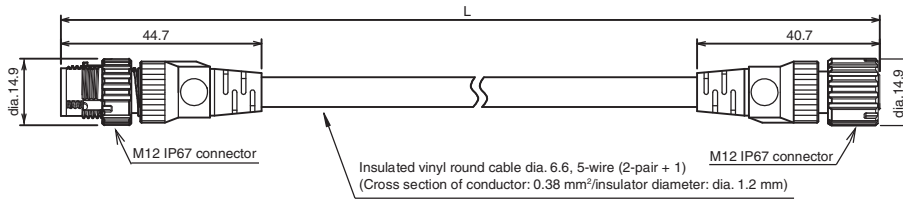


Emitter cable (Gray)	Receiver cable (Black)	L (m)
F39-JG3A-L	F39-JG3A-D	3
F39-JG7A-L	F39-JG7A-D	7
F39-JG10A-L	F39-JG10A-D	10
F39-JG15A-L	F39-JG15A-D	15
F39-JG20A-L	F39-JG20A-D	20

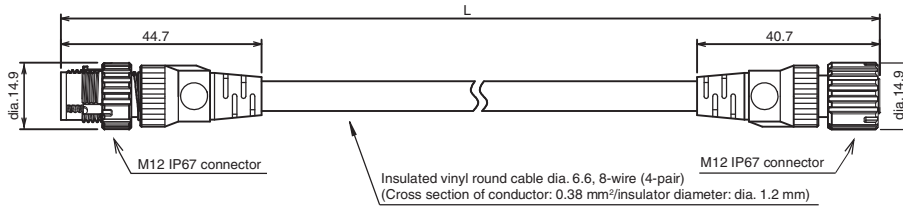
F3W-MA

F3W-MA

Double-Ended Cable for Emitter: Cable for extension (F39-JG□B-L, sold separately)

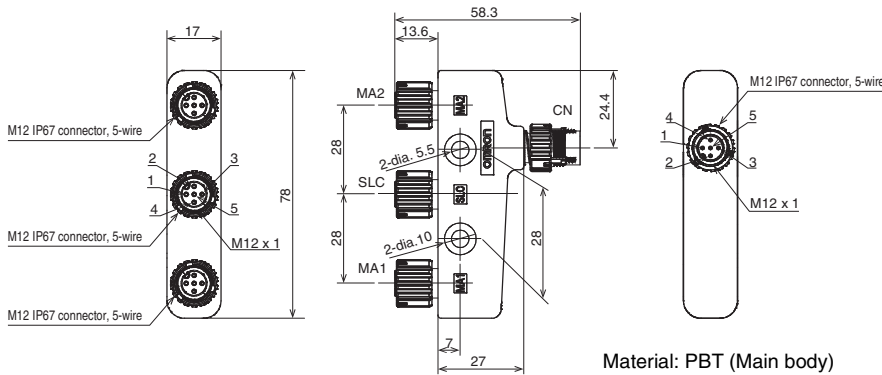


Double-Ended Cable for Receiver: Cable for extension (F39-JG□B-D, sold separately)

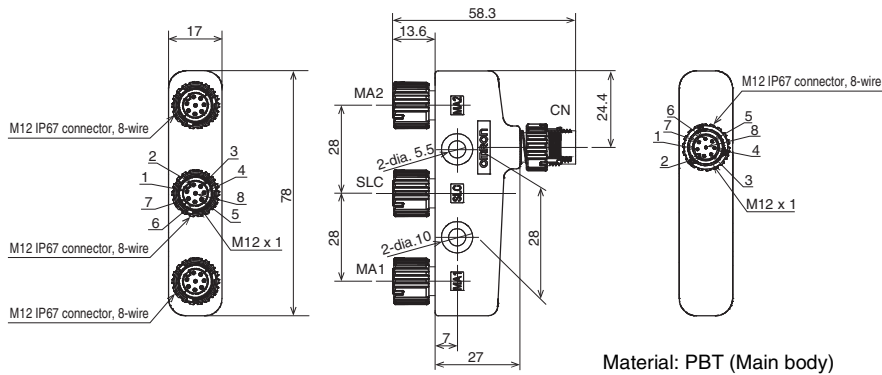


Emitter cable (Gray)	Receiver cable (Black)	L (m)
F39-JGR5B-L	F39-JGR15B-D	0.5
F39-JG1B-L	F39-JG1B-D	1
F39-JG3B-L	F39-JG3B-D	3
F39-JG5B-L	F39-JG5B-D	5
F39-JG7B-L	F39-JG7B-D	7
F39-JG10B-L	F39-JG10B-D	10
F39-JG15B-L	F39-JG15B-D	15
F39-JG20B-L	F39-JG20B-D	20

4-Joint Plug/Socket Connector for Emitter (F39-GCN4-L, sold separately)



4-Joint Plug/Socket Connector for Receiver (F39-GCN4-D, sold separately)



Related Manuals

ManNo.	Model	Manual name
Z355	F3W-MA	Smart Muting Actuator F3W-MA Series User's Manual

Terms and Conditions Agreement

Read and understand this catalog.

Please read and understand this catalog before purchasing the products. Please consult your OMRON representative if you have any questions or comments.

Warranties.

- (a) Exclusive Warranty. Omron's exclusive warranty is that the Products will be free from defects in materials and workmanship for a period of twelve months from the date of sale by Omron (or such other period expressed in writing by Omron). Omron disclaims all other warranties, express or implied.
- (b) Limitations. OMRON MAKES NO WARRANTY OR REPRESENTATION, EXPRESS OR IMPLIED, ABOUT NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OF THE PRODUCTS. BUYER ACKNOWLEDGES THAT IT ALONE HAS DETERMINED THAT THE PRODUCTS WILL SUITABLY MEET THE REQUIREMENTS OF THEIR INTENDED USE.

Omron further disclaims all warranties and responsibility of any type for claims or expenses based on infringement by the Products or otherwise of any intellectual property right. (c) Buyer Remedy. Omron's sole obligation hereunder shall be, at Omron's election, to (i) replace (in the form originally shipped with Buyer responsible for labor charges for removal or replacement thereof) the non-complying Product, (ii) repair the non-complying Product, or (iii) repay or credit Buyer an amount equal to the purchase price of the non-complying Product; provided that in no event shall Omron be responsible for warranty, repair, indemnity or any other claims or expenses regarding the Products unless Omron's analysis confirms that the Products were properly handled, stored, installed and maintained and not subject to contamination, abuse, misuse or inappropriate modification. Return of any Products by Buyer must be approved in writing by Omron before shipment. Omron Companies shall not be liable for the suitability or unsuitability or the results from the use of Products in combination with any electrical or electronic components, circuits, system assemblies or any other materials or substances or environments. Any advice, recommendations or information given orally or in writing, are not to be construed as an amendment or addition to the above warranty.

See <http://www.omron.com/global/> or contact your Omron representative for published information.

Limitation on Liability; Etc.

OMRON COMPANIES SHALL NOT BE LIABLE FOR SPECIAL, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, LOSS OF PROFITS OR PRODUCTION OR COMMERCIAL LOSS IN ANY WAY CONNECTED WITH THE PRODUCTS, WHETHER SUCH CLAIM IS BASED IN CONTRACT, WARRANTY, NEGLIGENCE OR STRICT LIABILITY.

Further, in no event shall liability of Omron Companies exceed the individual price of the Product on which liability is asserted.

Suitability of Use.

Omron Companies shall not be responsible for conformity with any standards, codes or regulations which apply to the combination of the Product in the Buyer's application or use of the Product. At Buyer's request, Omron will provide applicable third party certification documents identifying ratings and limitations of use which apply to the Product. This information by itself is not sufficient for a complete determination of the suitability of the Product in combination with the end product, machine, system, or other application or use. Buyer shall be solely responsible for determining appropriateness of the particular Product with respect to Buyer's application, product or system. Buyer shall take application responsibility in all cases.

NEVER USE THE PRODUCT FOR AN APPLICATION INVOLVING SERIOUS RISK TO LIFE OR PROPERTY OR IN LARGE QUANTITIES WITHOUT ENSURING THAT THE SYSTEM AS A WHOLE HAS BEEN DESIGNED TO ADDRESS THE RISKS, AND THAT THE OMRON PRODUCT(S) IS PROPERLY RATED AND INSTALLED FOR THE INTENDED USE WITHIN THE OVERALL EQUIPMENT OR SYSTEM.

Programmable Products.

Omron Companies shall not be responsible for the user's programming of a programmable Product, or any consequence thereof.

Performance Data.

Data presented in Omron Company websites, catalogs and other materials is provided as a guide for the user in determining suitability and does not constitute a warranty. It may represent the result of Omron's test conditions, and the user must correlate it to actual application requirements. Actual performance is subject to the Omron's Warranty and Limitations of Liability.

Change in Specifications.

Product specifications and accessories may be changed at any time based on improvements and other reasons. It is our practice to change part numbers when published ratings or features are changed, or when significant construction changes are made. However, some specifications of the Product may be changed without any notice. When in doubt, special part numbers may be assigned to fix or establish key specifications for your application. Please consult with your Omron's representative at any time to confirm actual specifications of purchased Product.

Errors and Omissions.

Information presented by Omron Companies has been checked and is believed to be accurate; however, no responsibility is assumed for clerical, typographical or proofreading errors or omissions.

Note: Do not use this document to operate the Unit.

OMRON Corporation Industrial Automation Company
Kyoto, JAPAN

Contact: www.ia.omron.com

Regional Headquarters

OMRON EUROPE B.V.

Wegalaan 67-69, 2132 JD Hoofddorp
The Netherlands
Tel: (31)2356-81-300/Fax: (31)2356-81-388

OMRON ELECTRONICS LLC

2895 Greenspoint Parkway, Suite 200
Hoffman Estates, IL 60169 U.S.A.
Tel: (1) 847-843-7900/Fax: (1) 847-843-7787

OMRON ASIA PACIFIC PTE. LTD.

No. 438A Alexandra Road # 05-05/08 (Lobby 2),
Alexandra Technopark,
Singapore 119967
Tel: (65) 6835-3011/Fax: (65) 6835-2711

OMRON (CHINA) CO., LTD.

Room 2211, Bank of China Tower,
200 Yin Cheng Zhong Road,
PuDong New Area, Shanghai, 200120, China
Tel: (86) 21-5037-2222/Fax: (86) 21-5037-2200

Authorized Distributor:

© OMRON Corporation 2014-2018 All Rights Reserved.
In the interest of product improvement,
specifications are subject to change without notice.

CSM_12_4_1018

Cat. No. F094-E1-10

0118(1214)