

# Universal Sensor Mounting Stand

MS-AJ SERIES



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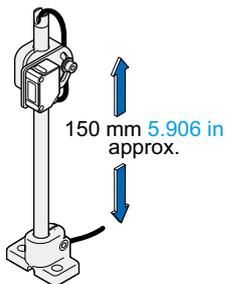


**Eight types of mounting stand enable installation of sensors, fibers, and reflectors at any desired position**

### Easy adjustment of sensing position

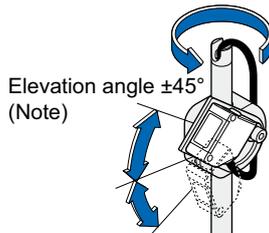
Even after mounting a sensor, you can adjust the sensor easily.

#### Flexible height adjustment



#### Flexible angle adjustment

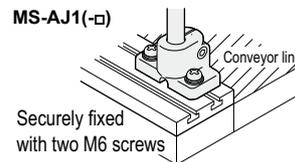
Swivel: 360° revolution



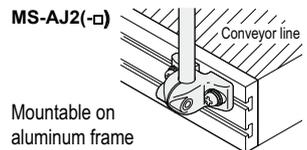
Note: The elevation angle is  $\pm 20^\circ$  for MS-AJ□-F (assembly for fiber).

### Mountable on vertical or horizontal plane

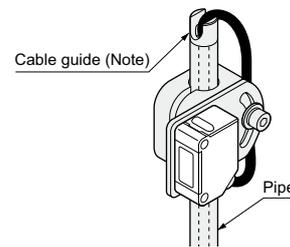
#### Mounting on horizontal plane



#### Mounting on vertical plane



### Cable can be neatly threaded into pipe



Note: Do not thread the fiber cable into the pipe in case of MS-AJ□-F (assembly for fiber).

### Eight models

#### MS-AJ□ (Basic assembly)

It is used to mount CX-400/440, LS-400, EX-40 and EZ-10 series sensors, and the RF-210 reflector.



#### MS-AJ□-A (Lateral arm assembly)

A lateral arm is added to the MS-AJ□ basic assembly. Sensing is possible from above an assembly line.



#### MS-AJ□-M (Assembly for reflector)

The MS-AJ□ basic assembly is modified to mount a reflector. It can be used for RF-220 and RF-230 reflector.



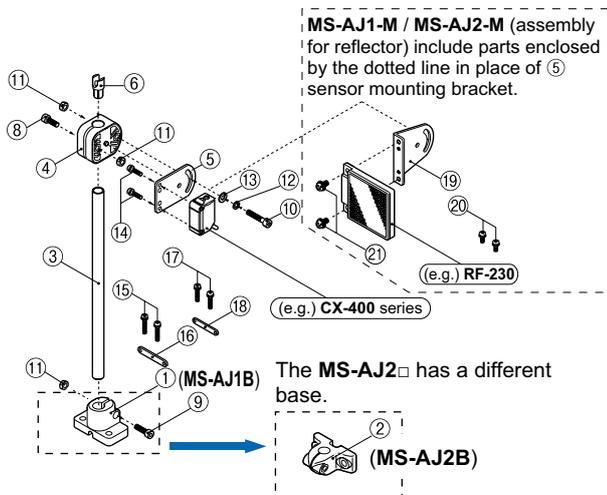
#### MS-AJ□-F (Assembly for fiber)

The sensor mounting bracket of MS-AJ□-A is replaced with a fiber mounting bracket. It can be used with FD-L51, FD-L52, FD-L53, FD-L54 and M3, M4 or M6 threaded head fiber.



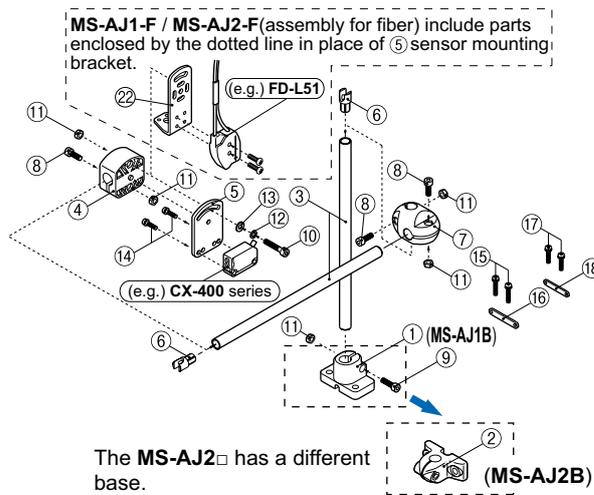
**STRUCTURE**

**MS-AJ1, MS-AJ2, MS-AJ1-M, MS-AJ2-M**



Note: The cable guide (6) in the figure) is not included in the assembly for reflector (MS-AJ-M).

**MS-AJ1-A, MS-AJ2-A, MS-AJ1-F, MS-AJ2-F**



Note: Adjust the arm joint (7) in the figure) by loosening the M4 (length 12 mm 0.472 in) hexagon-socket-head bolts (8) in the figure) in two places. This way you can adjust the arm joint more smoothly.

No.	Designation	Type	Assembly sets					Components						
			MS-AJ1 MS-AJ2 (Basic assembly)	MS-AJ1-A MS-AJ2-A (Lateral arm assembly)	MS-AJ1-M MS-AJ2-M (Assembly for reflector)	MS-AJ1-F MS-AJ2-F (Assembly for fiber)	MS-AJS (Sensor mounting unit)	MS-AJR (Reflector mounting unit)	MS-AJ-R1 (Reflector mounting bracket)	MS-AJD (Fiber mounting unit)	MS-FD-1 (Fiber mounting bracket)	MS-AJL (Arm joint unit)	MS-AJ1B MS-AJ2B (Base unit)	MS-AJG (Cable guide)
1	Base for horizontal mounting (Accessory for MS-AJ1)		1	1	1	1	-	-	-	-	-	1	-	-
2	Base for vertical mounting (Accessory for MS-AJ2)		1	1	1	1	-	-	-	-	-	1	-	-
3	Arm (Pipe)		1	2	1	2	-	-	-	-	-	-	-	1
4	Attachment		1	1	1	1	1	1	1	-	-	-	-	-
5	Sensor mounting bracket		1	1	-	-	1	-	-	-	-	-	-	-
6	Cable guide		1	2	-	2	-	-	-	-	-	-	1	-
7	Arm joint		-	1	-	1	-	-	-	-	1	-	-	-
8	M4 (length 12 mm 0.472 in) hexagon-socket-head bolt (DriLube applied product)		1	3	1	3	1	1	-	1	-	2	-	-
9	M4 (length 15 mm 0.591 in) hexagon-socket-head bolt (DriLube applied product)		1	1	1	1	-	-	-	-	-	1	-	-
10	M4 (length 22 mm 0.866 in) hexagon-socket-head bolt		1	1	1	1	1	1	-	1	-	-	-	-
11	M4 nut		3	5	3	5	2	2	-	2	-	2	1	-
12	M4 spring washer		1	1	1	1	1	1	-	1	-	-	-	-
13	M4 plain washer		1	1	1	1	1	1	-	1	-	-	-	-
14	M3 (length 14 mm 0.551 in) screw with washers for CX-400/440, LS-400 and EZ-10 series		2	2	-	-	2	-	-	-	-	-	-	-
15	M3 (length 18 mm 0.709 in) screw with washers for EQ-20 series (Note 2)		2	2	-	-	2	-	-	-	-	-	-	-
16	Auxiliary mounting plate for EQ-20 series (Note 2)		1	1	-	-	1	-	-	-	-	-	-	-
17	M3 (length 16 mm 0.630 in) screw with washers for EX-40 series		2	2	-	-	2	-	-	-	-	-	-	-
18	Auxiliary mounting plate for EX-40 series		1	1	-	-	1	-	-	-	-	-	-	-
19	Reflector mounting bracket		-	-	1	-	-	1	-	-	-	-	-	-
20	M3 (length 8 mm 0.315 in) screw with washers for RF-220		-	-	2	-	-	2	2	-	-	-	-	-
21	M4 (length 8 mm 0.315 in) screw with washers for RF-230		-	-	2	-	-	2	2	-	-	-	-	-
22	Fiber mounting bracket		-	-	-	1	-	-	-	1	1	-	-	-

Notes: 1) The numbers shown in the table above indicate the quantities of the respective parts. 2) The EQ-20 series were discontinued in December 2005.

**ORDER GUIDE**

Type	Appearance	Model No.	Applicable sensor, reflector and fiber
Basic assembly	Horizontal mounting type	MS-AJ1	CX-400/440 series LS series EQ-20 series (Note) EX-40 series EZ-10 series RF-210 (Reflector)
	Vertical mounting type	MS-AJ1 MS-AJ2	
Lateral arm assembly	Horizontal mounting type	MS-AJ1-A	CX-400/440 series LS series EQ-20 series (Note) EX-40 series EZ-10 series RF-210 (Reflector)
	Vertical mounting type	MS-AJ1-A MS-AJ2-A	
Assembly for reflector	Horizontal mounting type	MS-AJ1-M	RF-220 (Reflector) RF-230 (Reflector)
	Vertical mounting type	MS-AJ1-M MS-AJ2-M	
Assembly for fiber	Horizontal mounting type	MS-AJ1-F	FD-L51 (Fiber) FD-L52 (Fiber) FD-L53 (Fiber) FD-L54 (Fiber) M3, M4 and M6 threaded head fibers
	Vertical mounting type	MS-AJ1-F MS-AJ2-F	

Note: The EQ-20 series were discontinued in December 2005.

Individual components are also available as follows

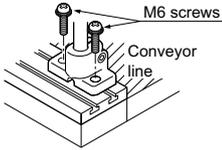
Designation	Appearance	Model No.
Sensor mounting unit		MS-AJS
Reflector mounting unit		MS-AJR
Reflector mounting bracket		MS-AJ-R1
Fiber mounting unit		MS-AJD
Fiber mounting bracket		MS-FD-1
Arm joint unit		MS-AJL
Base unit (Horizontal mounting type)		MS-AJ1B
Base unit (Vertical mounting type)		MS-AJ2B
Cable guide		MS-AJG
Arm (Pipe)		MS-AJP

## PRECAUTIONS FOR PROPER USE

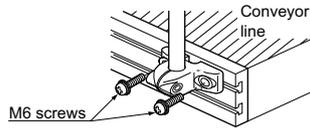
### Mounting

- To mount the universal sensor mounting stand on your equipment, use M6 screws. The tightening torque should be 2.0 Nm or less.

#### Mounting on horizontal plane

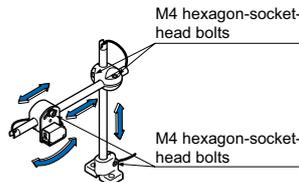


#### Mounting on vertical plane



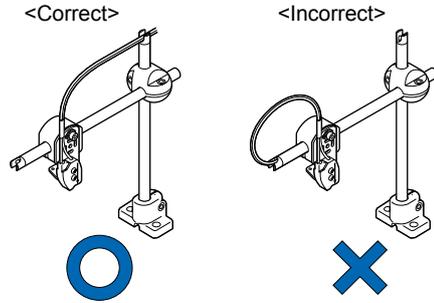
### Adjustment

- Arm, attachment, base and arm joint can be adjusted as shown by the arrows in the right figure by loosening the M4 hexagon-socket-head bolts.
- After the adjustment, the tightening torque of the M4 hexagon-socket-head bolts should be 1.2 Nm or less.



### Threading cable into pipe

- When the sensor is mounted on **MS-AJ** (basic assembly) or on **MS-AJ-A** (lateral arm assembly), the sensor cable can be threaded through the pipe. However, do not thread the fiber cable through the pipe when a fiber head is mounted on **MS-AJ-F** (assembly for fiber).



### Others

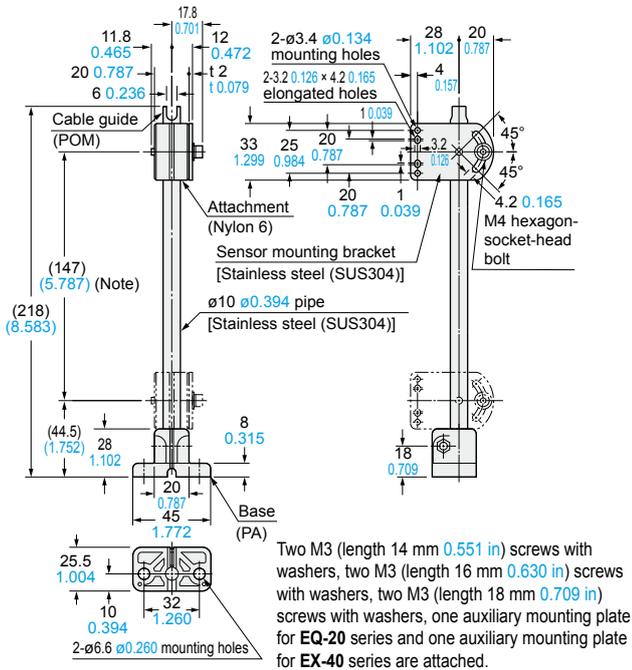
- Do not apply excessive force on any part of the universal sensor mounting stand.
- When using this stand, take care that excessive vibration is not applied to the sensor.

## DIMENSIONS (Unit: mm in)

The CAD data can be downloaded from our website.

### MS-AJ1

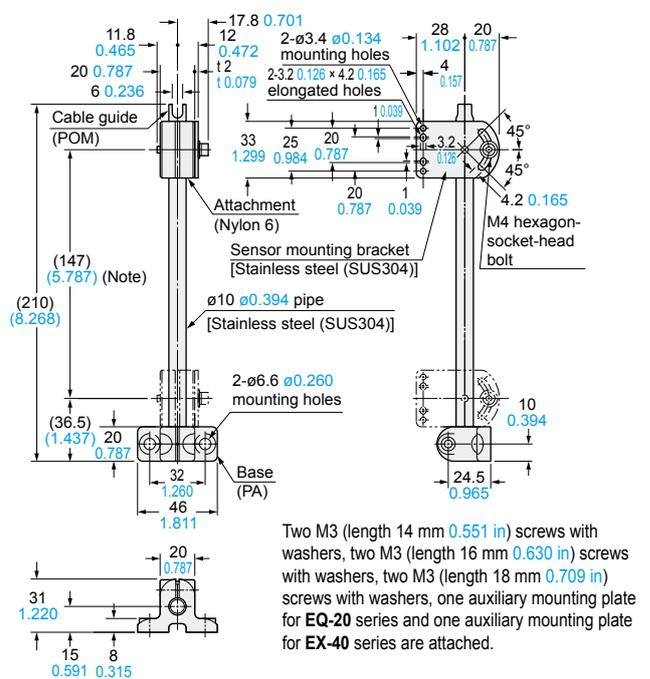
#### Basic assembly



Note: The dimensions in the brackets indicate the adjustable range of the movable part.

### MS-AJ2

#### Basic assembly



Note: The dimensions in the brackets indicate the adjustable range of the movable part.

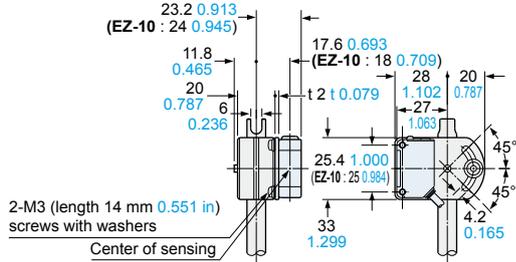
**DIMENSIONS (Unit: mm in)**

The CAD data can be downloaded from our website.

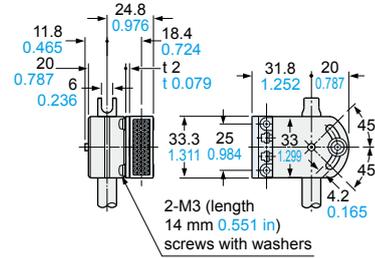
**MS-AJ1 MS-AJ2**

Basic assembly

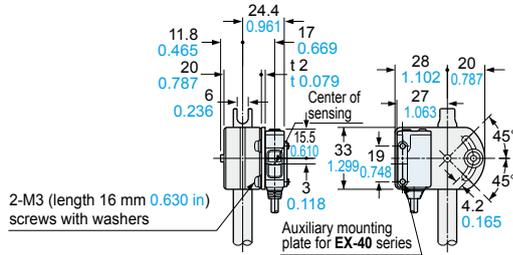
**Assembly dimensions with CX-400/440 series, LS-400 series, EZ-10 series (Mounting part only)**



**Assembly dimensions with RF-210 (Reflector) (Mounting part only)**

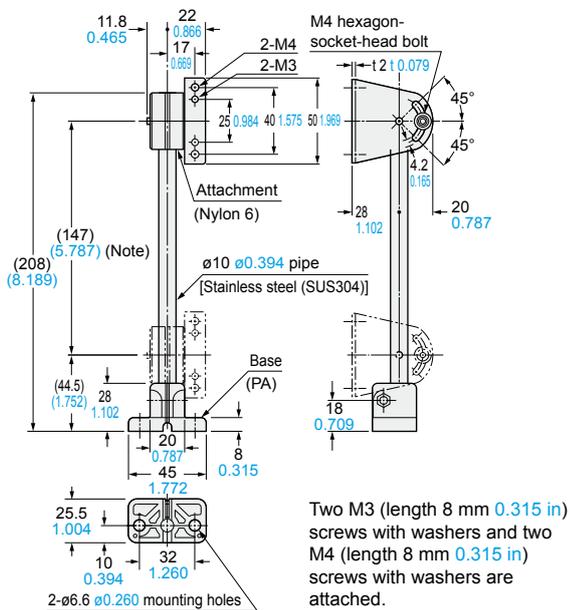


**Assembly dimensions with EX-40 series (Mounting part only)**



**MS-AJ1-M**

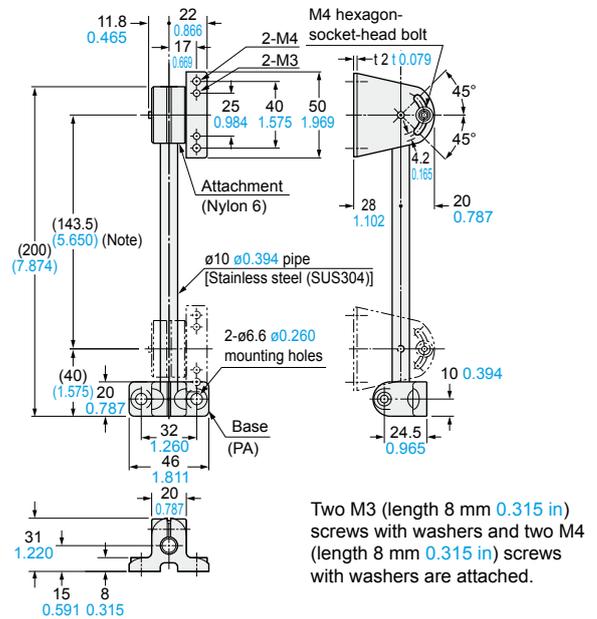
Assembly for reflector



Note: The dimensions in the brackets indicate the adjustable range of the movable part.

**MS-AJ2-M**

Assembly for reflector



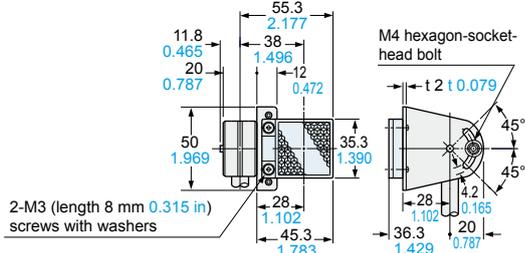
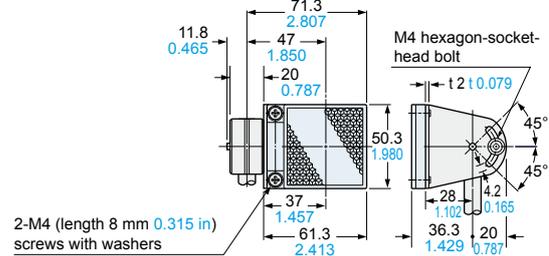
Note: The dimensions in the brackets indicate the adjustable range of the movable part.

**DIMENSIONS (Unit: mm in)**

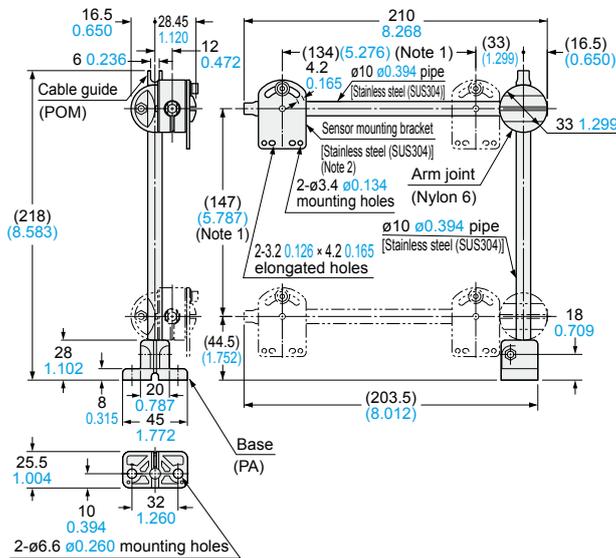
The CAD data can be downloaded from our website.

**MS-AJ1-M MS-AJ2-M**

Assembly for reflector

**Assembly dimensions with RF-220 (Reflector)  
(Mounting part only)****Assembly dimensions with RF-230 (Reflector)  
(Mounting part only)****MS-AJ1-A**

Lateral arm assembly



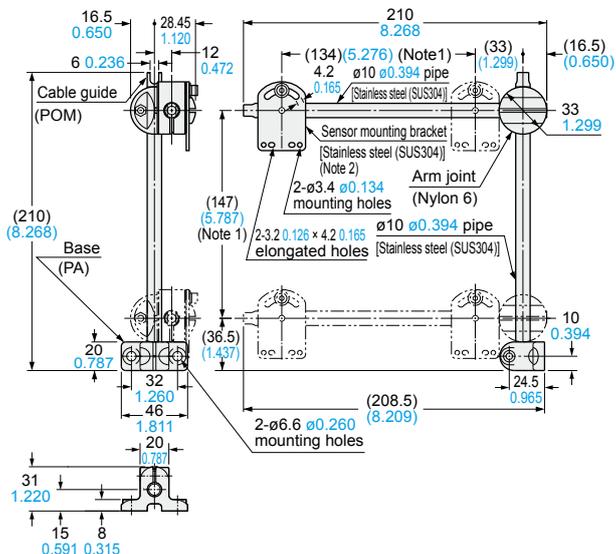
Two M3 (length 14 mm 0.551 in) screws with washers, two M3 (length 16 mm 0.630 in) screws with washers, two M3 (length 18 mm 0.709 in) screws with washers, one auxiliary mounting plate for EQ-20 series and one auxiliary mounting plate for EX-40 series are attached.

Notes: 1) The dimensions in the brackets indicate the adjustable range of the movable part.

2) Refer to MS-AJ1 / MS-AJ2 (basic assembly) for the assembly diagram with the sensor mounting bracket, sensor or reflector.

**MS-AJ2-A**

Lateral arm assembly



Two M3 (length 14 mm 0.551 in) screws with washers, two M3 (length 16 mm 0.630 in) screws with washers, two M3 (length 18 mm 0.709 in) screws with washers, one auxiliary mounting plate for EQ-20 series and one auxiliary mounting plate for EX-40 series are attached.

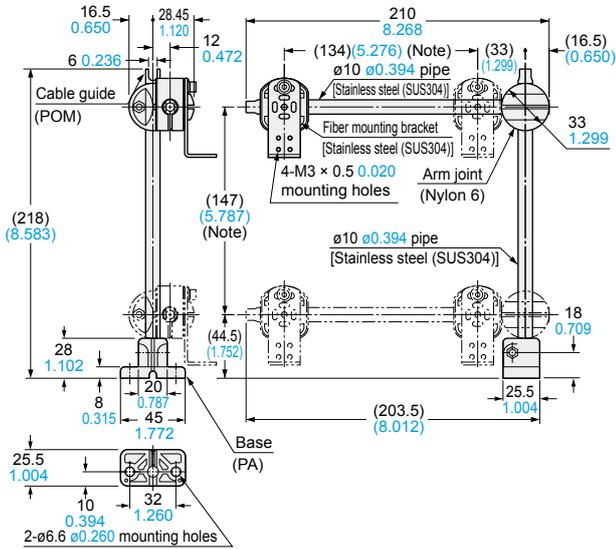
Notes: 1) The dimensions in the brackets indicate the adjustable range of the movable part.

2) Refer to MS-AJ1 / MS-AJ2 (basic assembly) for the assembly diagram with the sensor mounting bracket, sensor or reflector.

**DIMENSIONS (Unit: mm in)**

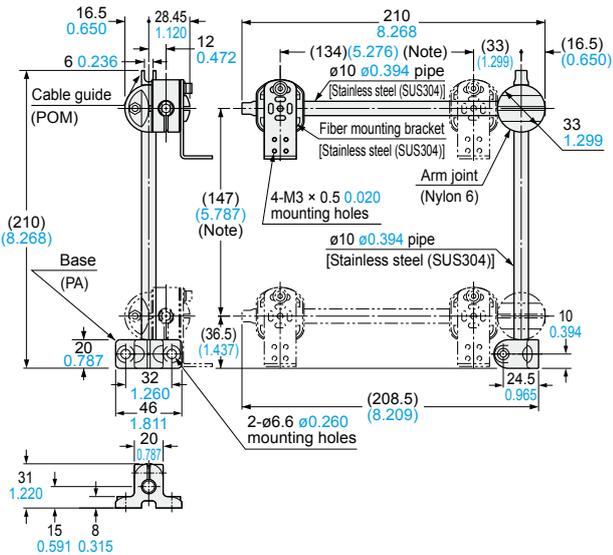
The CAD data can be downloaded from our website.

**MS-AJ1-F** Assembly for fiber



Note: The dimensions in the brackets indicate the adjustable range of the movable part.

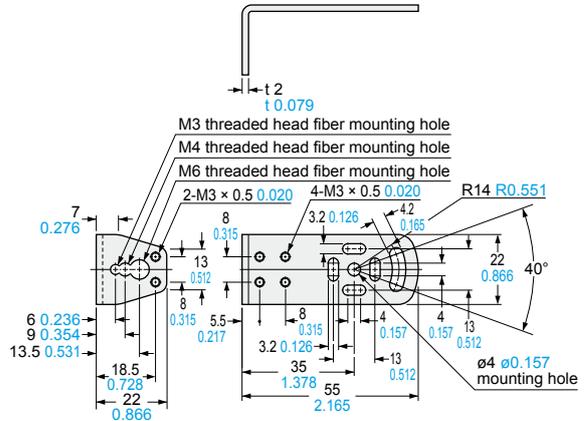
**MS-AJ2-F** Assembly for fiber



Note: The dimensions in the brackets indicate the adjustable range of the movable part.

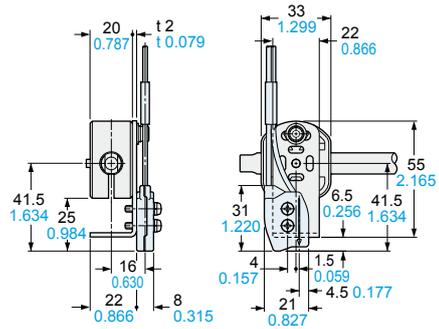
**MS-AJ1-F MS-AJ2-F** Assembly for fiber

**Fiber mounting bracket / MS-FD-1**

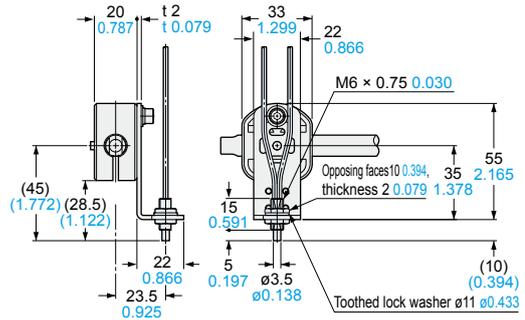


Material: Stainless steel (SUS304)

**Assembly dimensions with FD-L51 (Mounting part only)**



**Assembly dimensions with FD-FM2 (Mounting part only)**



Note: The above diagram is in case of M6 threaded head fiber.

## Disclaimer

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