

MELFA Technical News

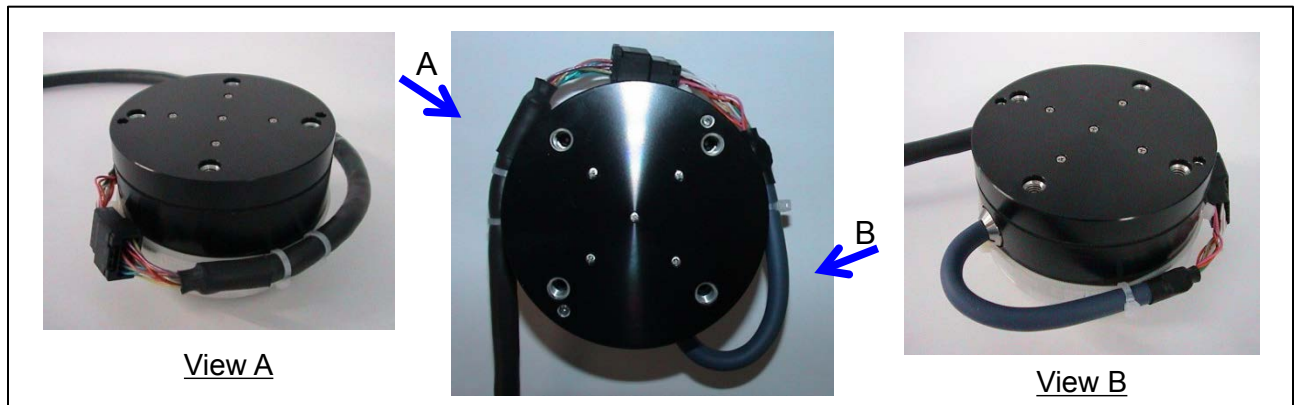
Subject: Precautions in the usage of the force sensor for F series robot.

Applicable to: Force sensor set (4F-FS001-W200) for F series robot

Thank you for your continued support of Mitsubishi industrial robot MELFA series.

This newsletter presents the information about the arrangement of a cable when using the force sensor set. A repeated bending load may cause damage to signal lines inside a serial cable from the force sensor.

Please arrange the serial cable as shown below.



An arrangement example of the force sensor cable. (Completed)

1. Customer prepared products

- Cable tie 5 (about 2.5mm in width and 200mm in length)
- Nipper 1 (cutting cable ties)

2. How to arrange the cable

Attach the force sensor before you arrange the cable. The work procedure is shown below.

- (1) Bundle the adapter cable and one cable tie (cable tie <1>) together using two cable ties at two positions as shown in Fig. 1.

The one position is 70 mm distance from the end surface of the controller side sensor cable connector, and the other position is 80mm distance.

(The head of the cable tie <1> should be located in the opposite side of the connector.)

- (2) Bundle the force sensor cable and one cable tie (cable tie <2>) together using one cable tie at one position as shown in Fig. 2.

The position is 80 mm distance from the end surface of the sensor side sensor cable connector.

(The head of the cable tie <2> should be located in the same side of the connector.)

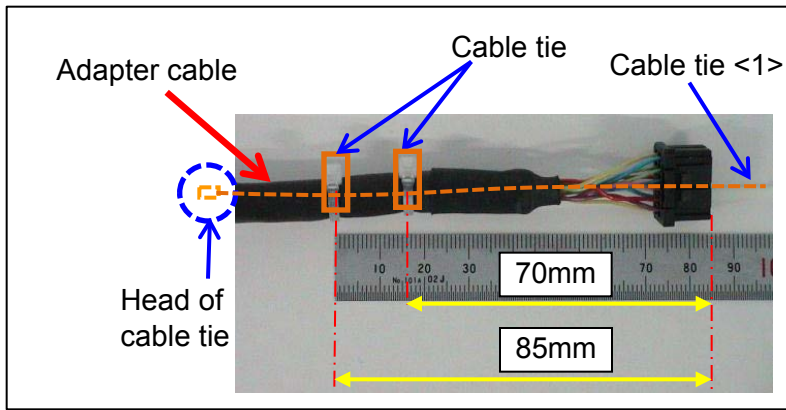


Fig. 1: Details of the bundling on the controller side sensor cable

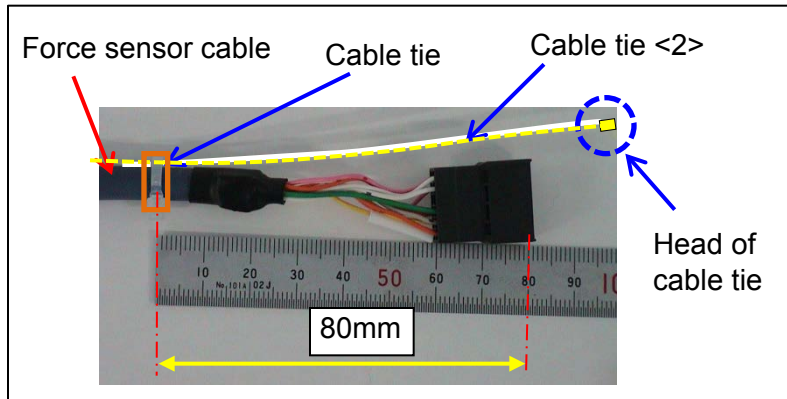


Fig. 2: Details of the bundling on the force sensor side sensor cable

(3) Connect the connectors first. Then temporarily connect the cable tie <1> and <2>, and arrange the cables and the cable ties around the attachment adapter for the force sensor as shown in Fig. 3.

At this time, the cable tie is passed under the mouthpiece of the cable drawing as shown in Fig. 4.

(4) Keep 25mm or more bend radius of the force sensor cable, pull the strap of the cable ties and securely hold the cables. (Shown in Fig. 5.)

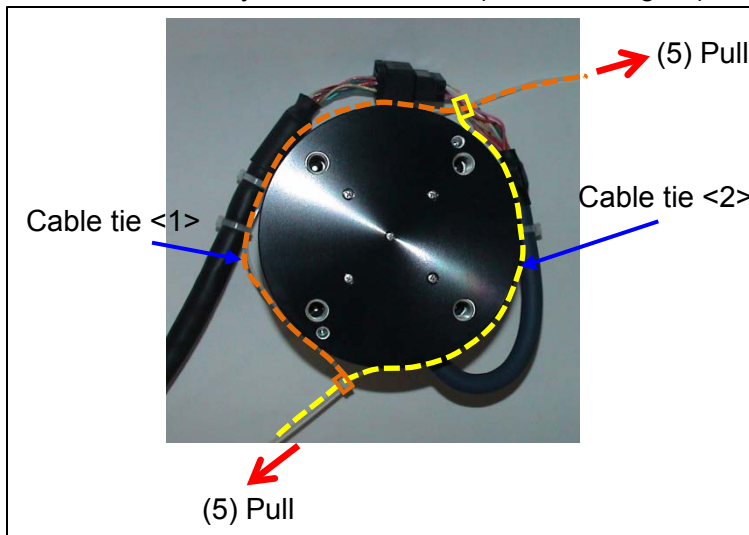


Fig. 3: How to hold the cable

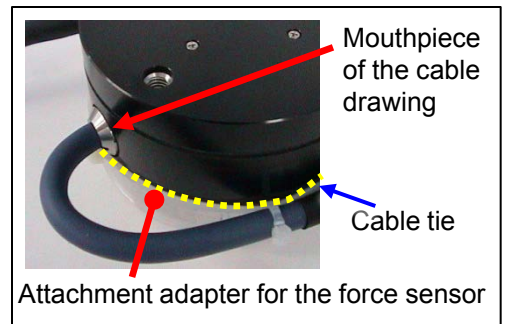


Fig. 4: Arrangement of the cable tie

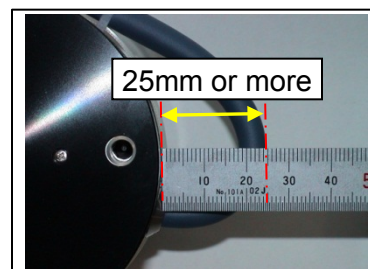


Fig. 5: Cable bend radius