

# MHF<sup>®</sup> 4L Connector with Locking Function

Part No. Plug: 20632-001R-37, Receptacle: 20449-001E-\*\*, 20579-001E-\*\*

Locking Function: 3615-000\*

## Instruction Manual

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1	S19100	February 19, 2019	K.Motomura	K.Yufu	Y.Hashimoto
0	S19011	February 11, 2019	K.Motomura	K.Yufu	Y.Hashimoto
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This manual explains the insertion and withdrawal methods and provides cautions to handle our MHF 4L connector properly and safely.

## 【Connector parts No.】

MHF 4L PLUG: 20632-001R-37  
 MHF 4L LOCKING FUNCTION: 3615-000\*  
 MHF 4 RECEPTACLE: 20449-001E-\*\*  
 MHF 4L RECEPTACLE: 20579-001E-\*\*

## 【Pushing and Pulling JIG】

In unmating a plug, use the special jig shown in Fig. 1.

The operator can mate the plug and lock / unlock the locking function by hands, however using a special jig shown in Fig. 1 is recommended to avoid excessive stress to the cable connector.

JIG P/N: 91166-0001

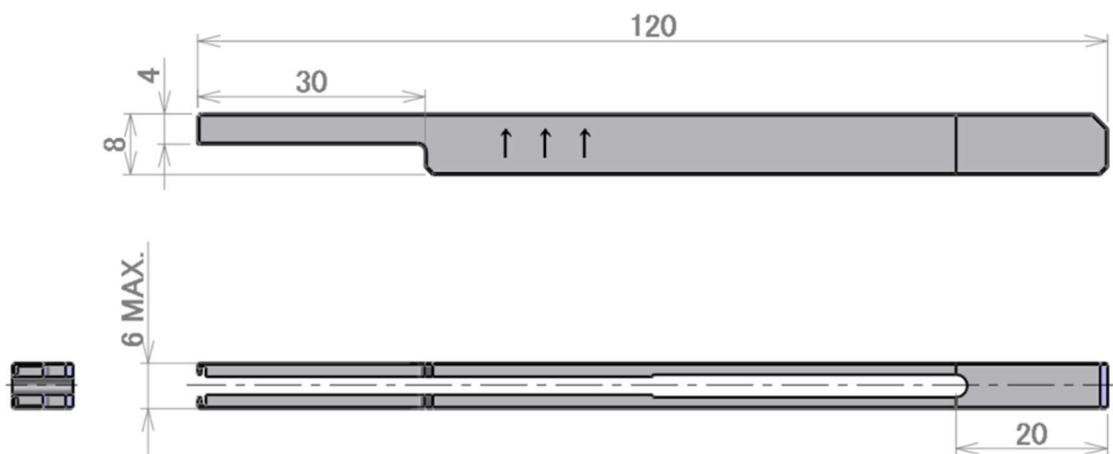
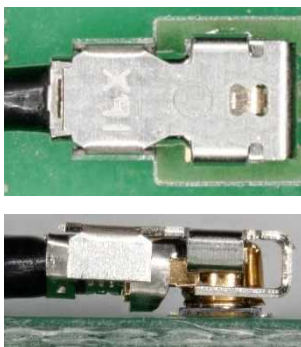


Fig. 1 Recommended JIG

## 【Lock and unlock of locking function】

[Lock mode]



[Unlock mode]

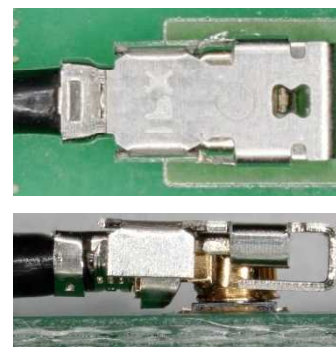


Photo.1 MHF 4L Connector with Locking function

## 【Connector operation means】

Table 1. Connector operation means

Operation	Hands	JIG (Part No : 91166-0001)
Mate	Available	Available (Recommended)
Lock	Available	Available (Recommended)
Unlock	Available	Available (Recommended)
Unmate	Unavailable	Available

## 【Connector insertion manual】

### 1. Procedures for mating by hands

#### ① How to hold a cable connector.

Hold a cable end of the cable connector as shown in Photo. 2.

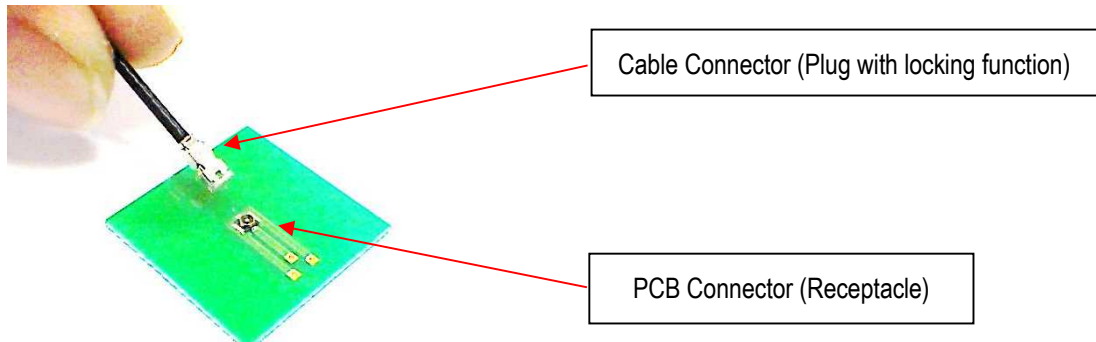


Photo.2

#### ② Cable connector setting

Place a cable connector on a PCB connector as shown in Photo. 3. Then, move connectors left and right and back and forth slightly to make sure the connectors are firmly set.

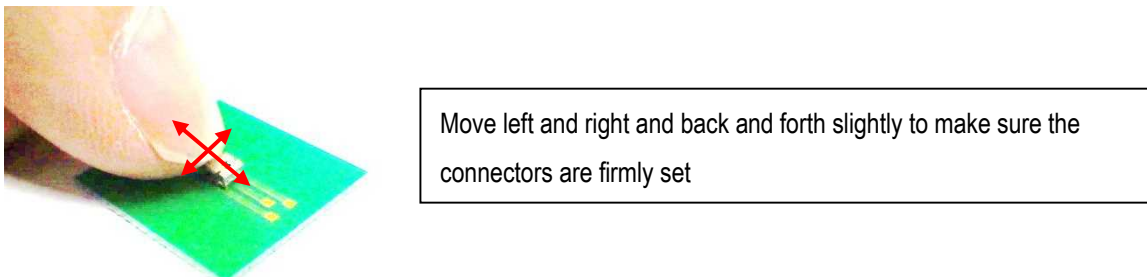


Photo.3

#### ③ How to mate

Push the center of a cable connector vertically as shown in Photo. 4. Connectors click when mating is completed.

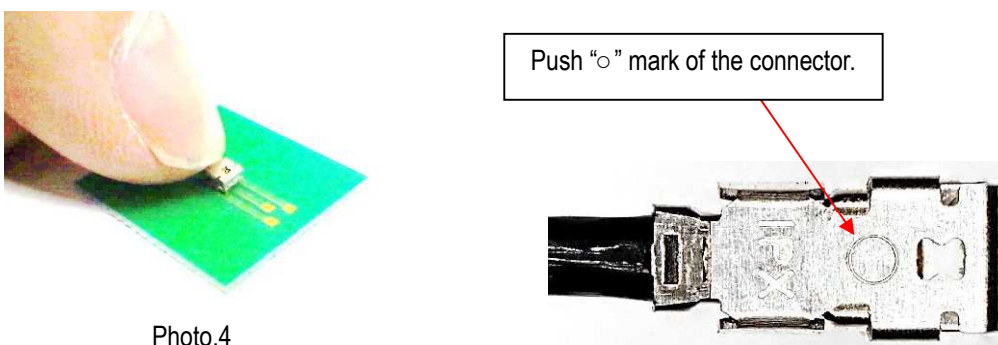


Photo.4

## 2. Procedures for mating by using pushing and pulling JIG

### ① How to hold a cable connector

Insert the jig opening toward the connector vertically and hold the plug stopper from the side as shown in Fig. 2-a.

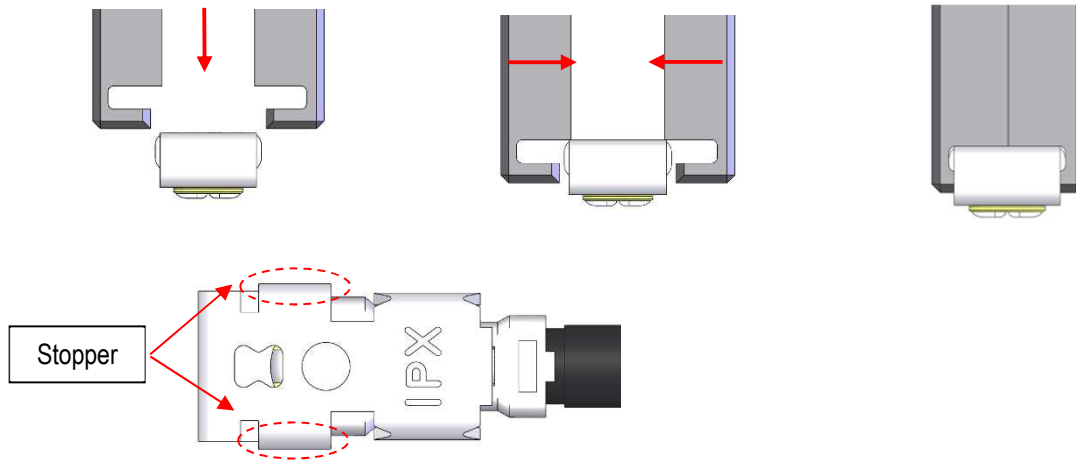


Fig. 2-a

### ② Cable connector setting

As shown in Fig. 2-b, place the plug above the receptacle and align mating direction.

When the connectors are aligned, move the connectors back and forth to make sure the connectors don't move. Refer to Fig. 2-c below.

### ③ How to mate

Push the center of a cable connector vertically as shown in Fig. 2-d. Connectors click when mating is completed.

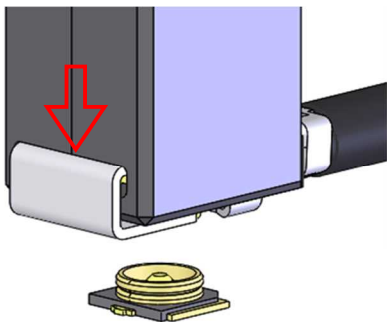


Fig. 2-b

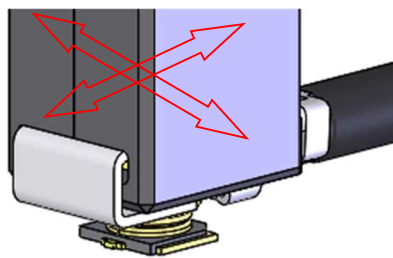


Fig. 2-c

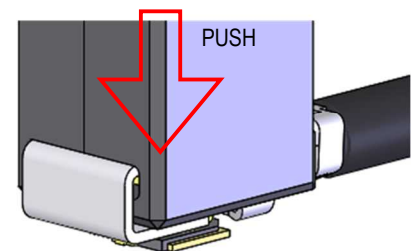


Fig. 2-d

**CAUTION**

In the mating alignment, contact the cable connector to the PCB connector lightly and do not apply the insertion load. The insertion load may damage the connectors if the connectors were misaligned as shown in Fig. 3-b.

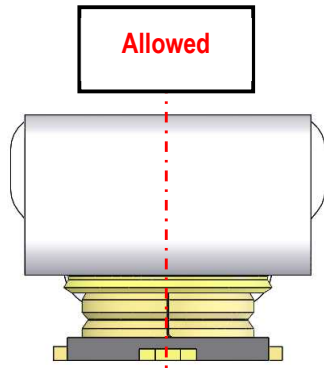


Fig. 3-a

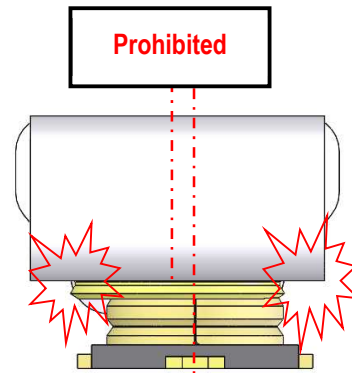


Fig. 3-b

**CAUTION**

Make sure to set the cable connector parallel to the board as shown in Fig. 4-a.

Non-parallel mating as shown in Fig 4-b may cause the connector breakage.

Correct connector position for mating: Parallel

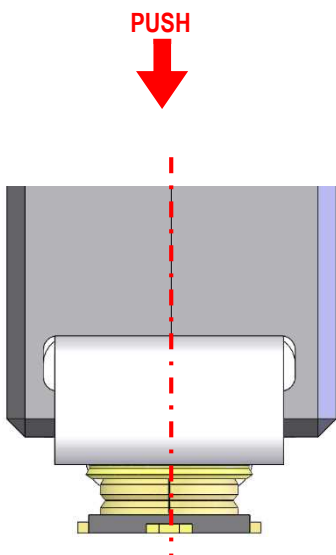


Fig. 4-a Plug parallels to test board (Allowed)

Wrong connector position for mating: Not parallel

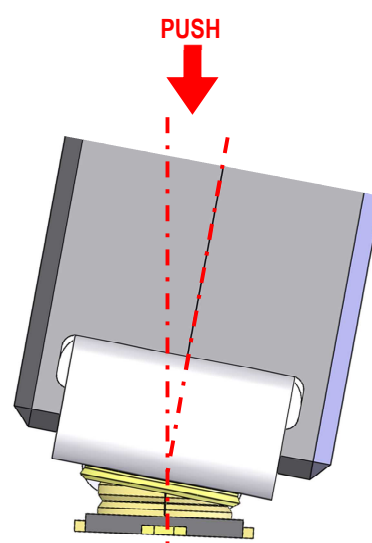


Fig. 4-b Plug does not parallel to test board (Prohibited)

## 【How to lock the locking function】

### 1. Procedures for locking by hands

- ① Set a finger on the surface indicated in a red box in fig. 5 and push the locking function to the direction indicated in red arrow.  
\* Locking function clicks when completely locked.

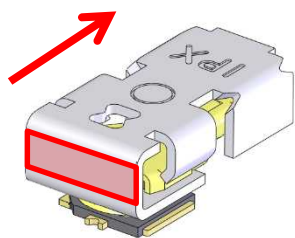


Fig. 5

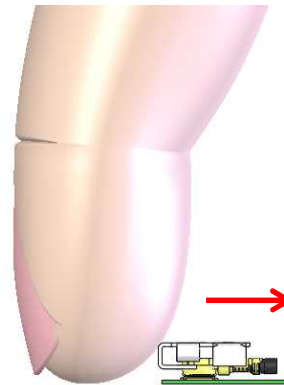


Fig. 6

### 2. Procedures for locking with JIG

- ① Set the jig above the connectors. (Fig. 7-a).
- ② Close the jig until catch the stopper and hold the cable connector. (Fig. 7-b)
- ③ Slide the jig to the cable side. \* Locking function clicks when completely locked.

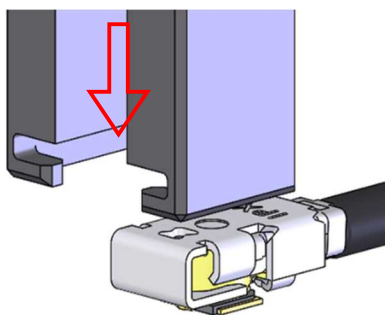


Fig. 7-a

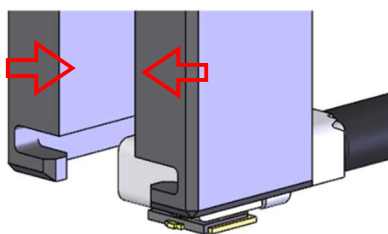


Fig. 7-b

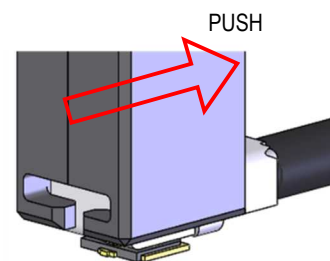


Fig. 7-c

## 【How to unlock the locking function】

### 1. Procedures for unlocking by hands

- ① Set a finger on the surface indicated in a red box in fig. 8 and slide the locking function to the direction indicated in red arrow.

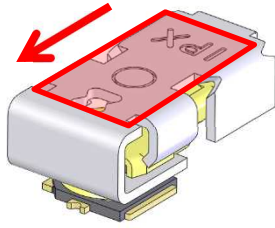


Fig. 8

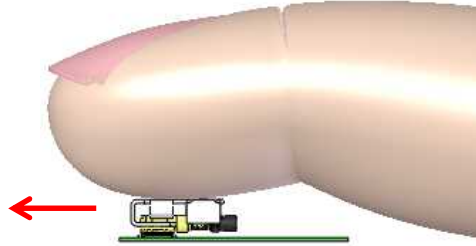


Fig. 9

### 2. Procedures for unlocking with JIG

- ① Set the jig above the connectors. (Fig. 10-a).
- ② Insert the jig tips between the plug and locking function, and close the jig until catch the stopper. (Fig. 10-b)
- ③ Slide the jig to the no-cable side. \* Locking function clicks when completely unlocked.

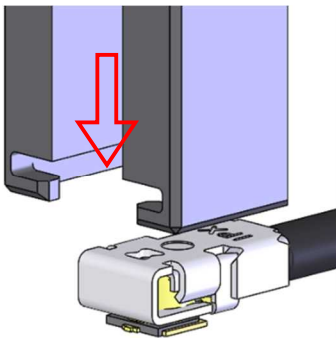


Fig. 10-a

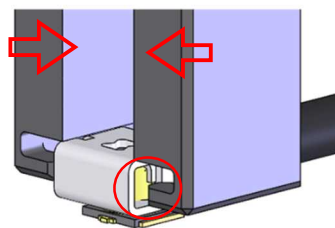


Fig. 10-b

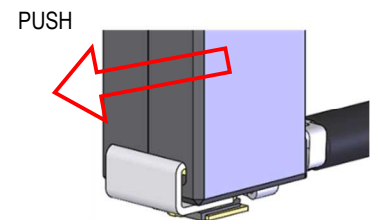


Fig. 10-c

## 【How to withdraw cable connector】

- ① Keep the locking function unlocked. (Fig. 11-a)
- ② Pull the jig up and unmate the connector. (Fig. 11-b)  
Do not pull the jig with excess force.

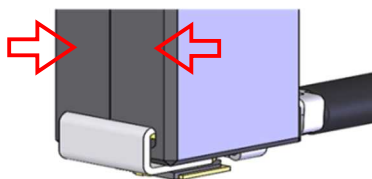


Fig. 11-a

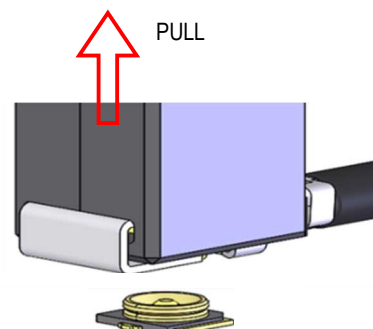


Fig. 11-b

**CAUTION**

Jig must be raised vertically from the PCB surface. (Fig. 12)

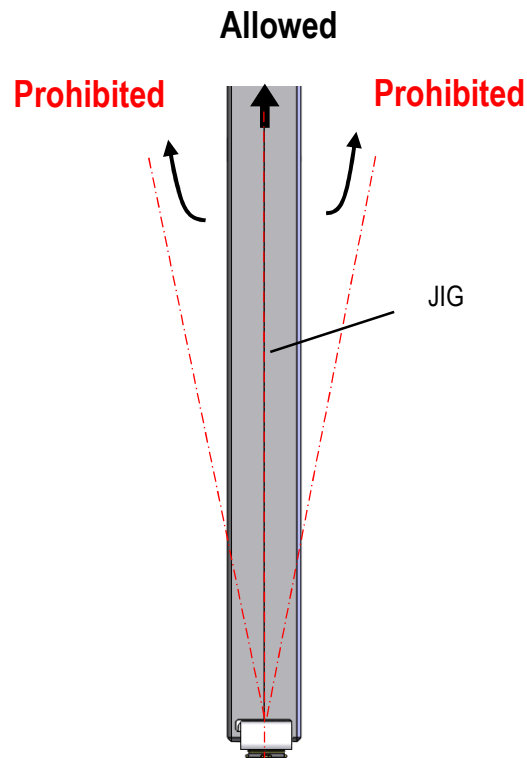


Fig. 12

**[CAUTION IN CABLE CONNECTOR HANDLING]**

In the case of Fig. 13, it has possibility to damage to the connector and come off from receptacle connector. Especially when operator gives continuous force to the direction (red arrow), the tendency becomes higher. So please take care of handling of harness.

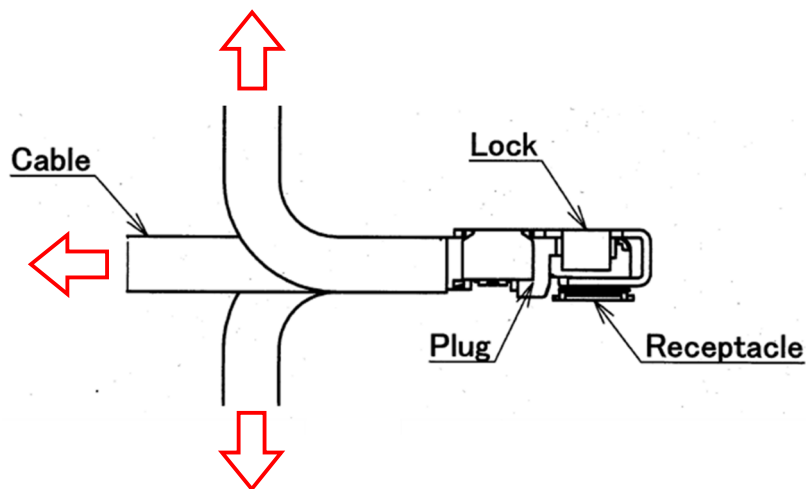


Fig. 13