

1. Scope

This specification document describes the harness procedure of HR30 jack connector.

2. Product

Product

1

6 Position

J case block

Lead wire

A

B

Gasket

Cable clamp

Hood

Cable

Thread the cable through the hood, cable clamp, and gasket in that order as shown in the above figure. Strip the lead wire based on the dimensions shown in table 1.
Note: When processing the end, be careful not to damage the lead wire coating or core wire.

10 & 12 Position

R case block

Lead wire

A

B

Spacer

Gasket

Cable clamp

Hood

Cable

Thread the cable through the hood, cable clamp, and gasket in that order as shown in the above figure. Strip the lead wire based on the dimensions shown in table 1.
Note: When processing the end, be careful not to damage the lead wire coating or core wire.

Table 1.

	A	B
6 position solder type	2 ^{+0.5} ₋₀ mm	5.5mm Max
12 position solder type		10mm Max
10 & 12 position crimp type		15~20mm

COUNT	DESCRIPTION OF REVISIONS	DESIGNED	CHECKED	DATE
△0				
名称 TITLE			HRS ヒロセ電機株式会社 HIROSE ELECTRIC CO., LTD.	
HR30 Jack Connector			APPROVED	TP. KOMATSU 20210323
Harness Assembly			CHECKED	HY. KOBAYASHI 20210323
Instructions			CHARGED	HT. ZENBA 20210323
			WRITTEN	KR. SUZUKI 20210323
技術指定書 TECHNICAL SPECIFICATION			ETAD-C0476-00	△0 1/6

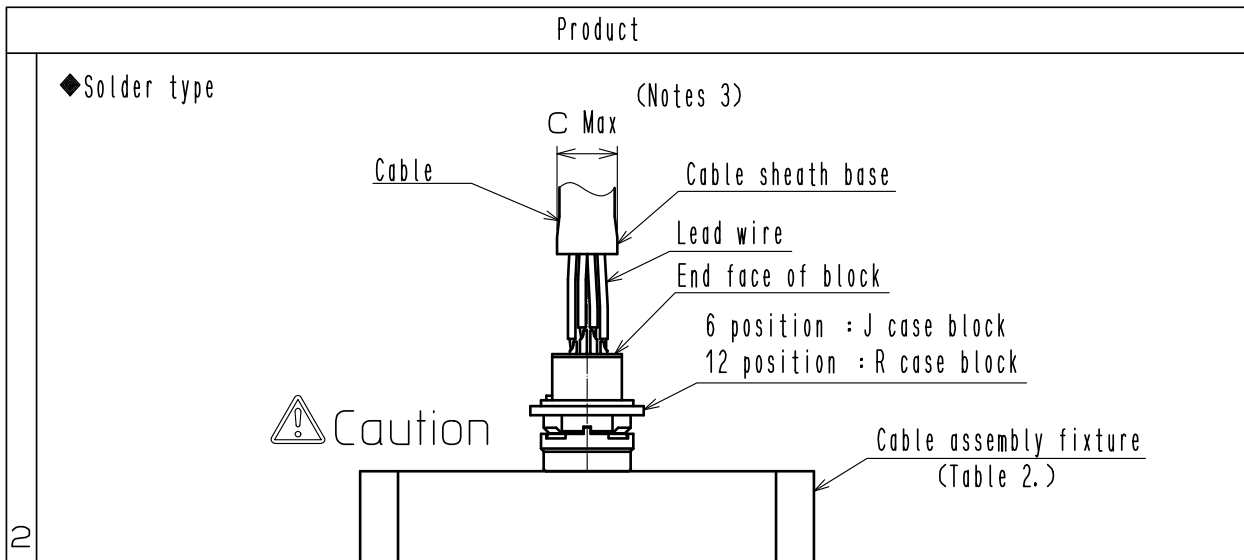


Table 2.

	Product name	Cable assembly fixture
6 position solder type	HR30-6J-6P(31) HR30-6JA-6P(71)	HR30-6R-6P-T01
12 position solder type	HR30-7J-12P(71) HR30-8J-12S(71)	HR30-7J-12PC-T01 HR30-8J-12SC-T01

Table 3.

	C
6 position solder type	φ5
12 position solder type	φ7

After attaching the J case block or R case block to the cable assembly fixture, perform soldering for 3 to 4 seconds with the soldering iron tip at a temperature of $350\pm 10^{\circ}\text{C}$.

Notes 1 Solder should be done without cold solder joint or air bubbles in the solder.

2 The end faces of the J case block and R case block are waterproof.

Please note that if the waterproof surface is damaged by a soldering iron during soldering, the waterproof property may be impaired.

3 When soldering, make sure that the based of the outer jacket of the sheath is within the dimensions shown in Table 3.

Please note that if the gasket is tightened when inflated, friction with the hood will increase and the hood will not be tightened to the proper position, which may impair waterproofing performance.

⚠ Caution

Make sure to secure the cable assembly fixture so that it will not move even due to the torque for assembling the connector. If not properly secured, the connector may tilt during assembly, resulting in damage to the connector or inability to tighten with the specified torque.

⚠ Caution

Please strictly observe the soldering conditions.
Otherwise, the insulator may melt or the contacts may come off.

Product

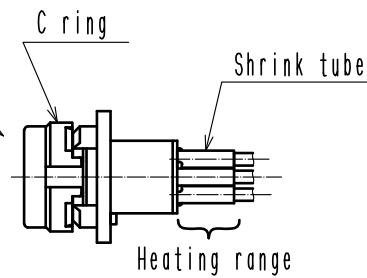
◆Solder type

Notes 4 The heating range when processing the shrink tube at the connection portion after soldering is shown in the figure. Please note that the following may occur if the product is heated beyond the heating range.

- ①The C ring is deformed and does not lock when mated.
- ②The product melts.

In order to prevent deformation of the C ring as described in ①, please heat after mating the compatible plug and receptacle.

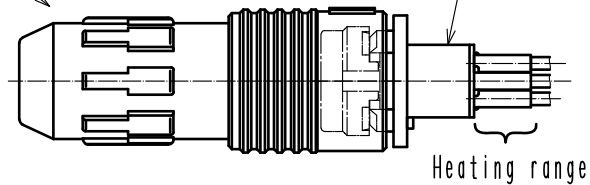
6 position : J case block
12 position : R case block



Assembly phase diagram

Compatible plug

6 position : J case block
12 position : R case block



Product

◆Crimp type

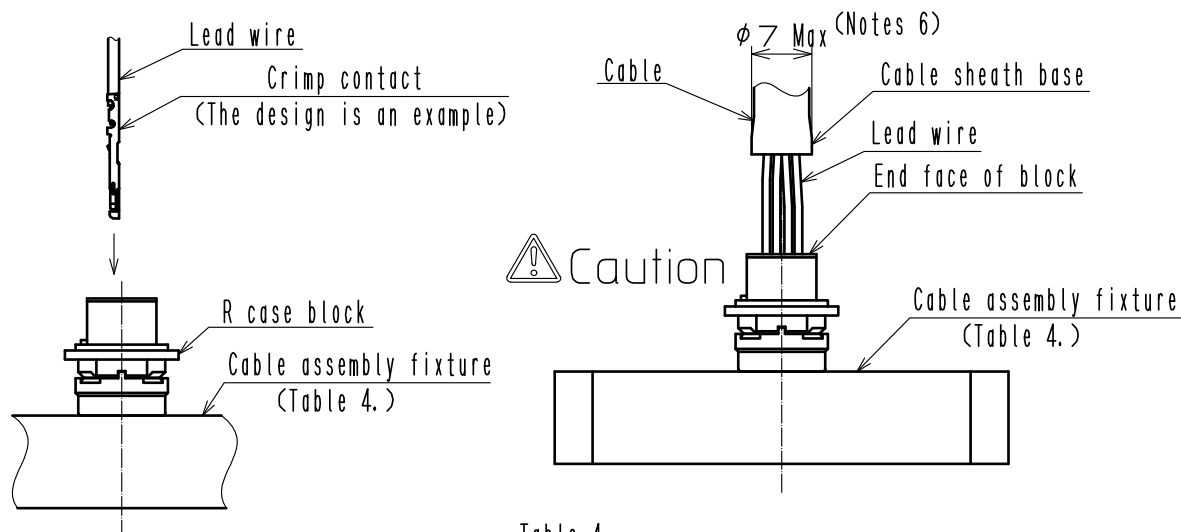


Table 4.

	Product name	Cable assembly fixture
10 position crimp type	HR30-7J-10PC(71)	HR30-7J-10PC-T01
12 position crimp type	HR30-7J-12PC(71)	HR30-7J-12PC-T01
	HR30-8J-12SC(71)	HR30-8J-12SC-T01

Table 5.

Wire name AWG SIZE	Core wire side Crimp height(mm)	Cover side Crimp height(mm)
UL1571 Stranded wire AWG 26	0.52 ~ 0.58	0.85 ~ 1.00
UL1571 Stranded wire AWG 28	0.48 ~ 0.54	0.85 ~ 1.00
UL1571 Stranded wire AWG 30	0.46 ~ 0.52	0.80 ~ 0.95

After crimping with a tool that applies to compatible terminal of the electric wire, insert the crimp terminal into the terminal hole of the R case block.

Notes 1 Please refer to Table 5. for C / H.

- After inserting the crimp terminal, lightly pull the lead wire to check that the crimp terminal is securely connected to the terminal hole of the receptacle.
- The orientation of the terminals is an example.
- If the cable is soft, it may be difficult to insert the terminals.
In this case, insert the terminal by holding the cable near the terminals.
- The end face of the R case block is waterproof.
Please note that if the waterproof surface is damaged during cable assembly, the waterproof property may be impaired.
- When crimping, make sure that base of the outer jacket of the sheath is $\phi 7$ or less.
Please note that if the gasket is tightened when inflated, friction with the hood will increase and the hood will not be tightened to the proper position, which may impair waterproofing performance.

Caution Make sure to secure the cable assembly fixture so that it will not move even due to the torque for assembling the connector. If not properly secured, the connector may tilt during assembly, resulting in damage to the connector or inability to tighten with the specified torque.

Caution When inserting the terminals make sure not to deform them.
Deformed terminals may cause poor contact or disconnection.

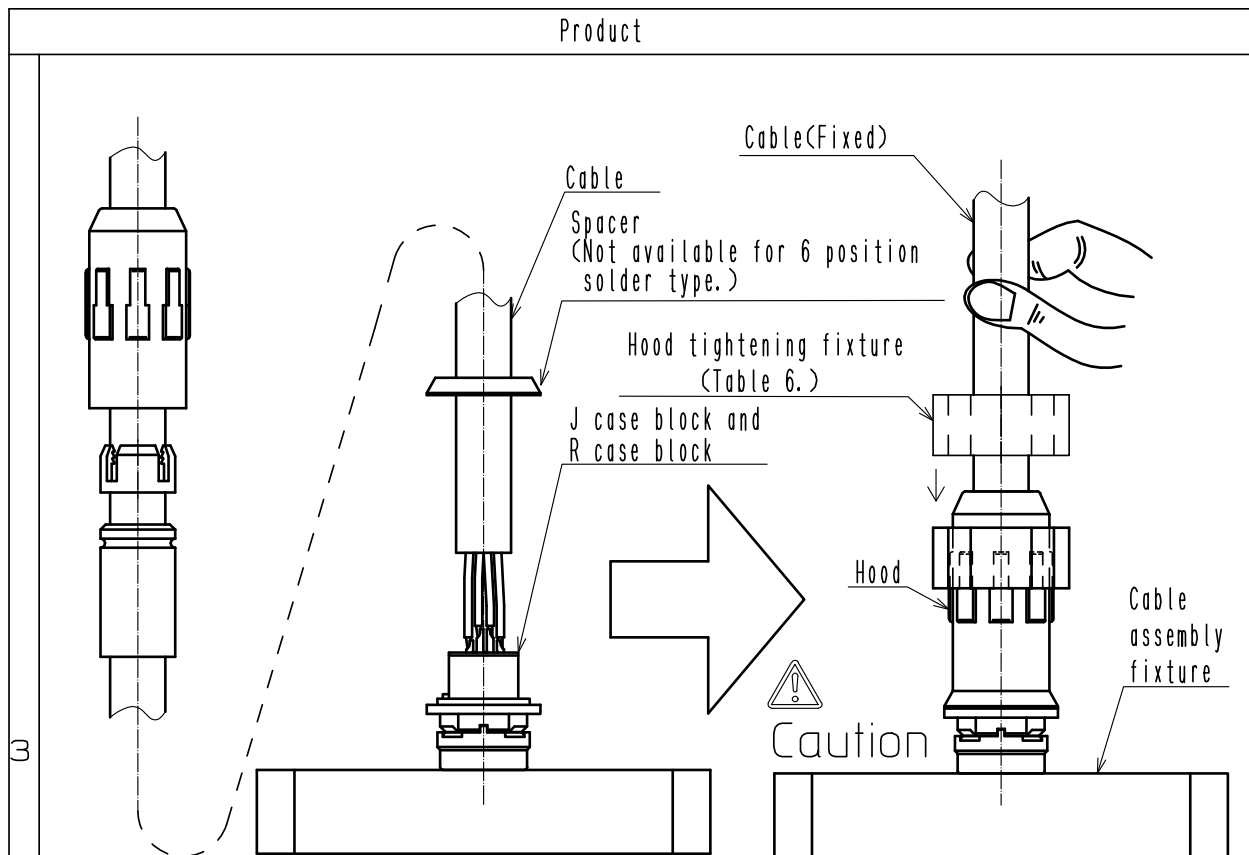


Table 6.

	Hood tightening fixture	HEX	Tightening torque
6 Position	HR30-6P-T02	16mm	0.5N·m
10 & 12 Position	HR30-8P-T02	18mm	

6 Position : Assemble the gasket, cable clamp, and hood in this order to the connected J case block.

10 & 12 Position : Align the spacer with the connected R case block and install it.
After that, assemble the gasket, cable clamp, and hood in this order.

Maintain the positional relationship shown between the cable sheath end face and gasket recess as shown in Fig. D and assemble in the order of cable clamp followed by hood.

If the end face of the cable sheath is above the gasket recess, the waterproof performance will not be satisfied. (Fig. E)

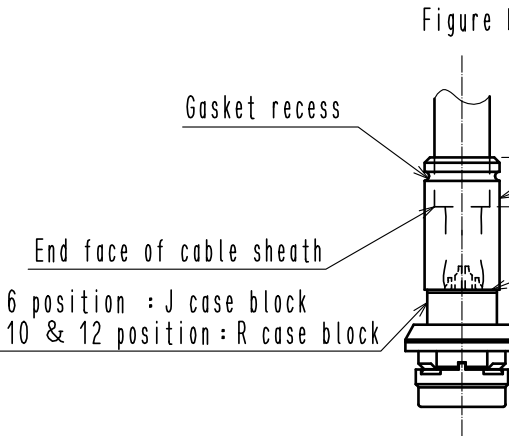
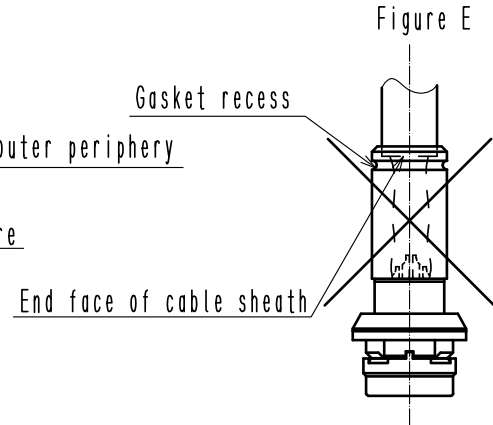
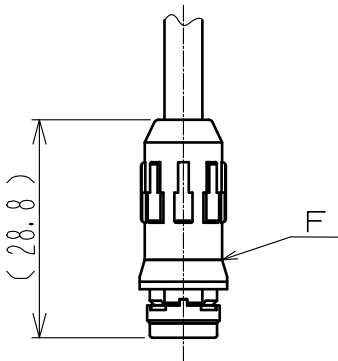
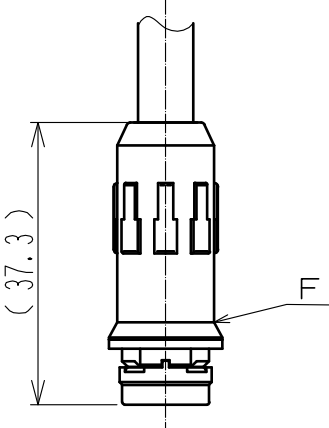

Note Apply a lubricant (dry) to the outer periphery of the gasket to reduce friction during tightening. Tighten the hood with the specified tightening torque using the hood tightening fixture shown in Table 6.

To prevent loosening, please apply Loctite 263 and Lock Primer 7649 manufactured by Henkel Japan Ltd.

Also, when screwing in the cord tube, secure the cable by hand so it does not rotate together with the cord tube and apply stress to the soldered area.

Caution

Make sure to secure the cable assembly fixture so that it will not move even due to the torque for assembling the connector. If not properly secured, the connector may tilt during assembly, resulting in damage to the connector or inability to tighten with the specified torque.

3	Product	
	<p data-bbox="707 271 807 304">Figure D</p> 	<p data-bbox="1299 282 1399 315">Figure E</p> 
	Completed state	
	<p data-bbox="571 862 695 896">6 Position</p> 	<p data-bbox="962 862 1169 896">10 & 12 Position</p> 
<p data-bbox="323 1467 547 1523"> Caution</p> <p data-bbox="403 1545 1401 1691">Depending on the hardness of the cable a gap may be visible in the the F portion (For 6 position the space between the J case and the hood, for 10 and 12 position the space between the spacer and the hood), but be careful not to tighten further. Tightening until there is no gap may cause damage or performance deterioration.</p>		