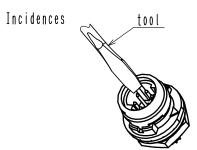
#### 1. Scope

This specification document described the harnessing procedure for the HR30 receptacle.

## A 2. / Caution

- (1) Do not scratch or deform the contact.
  - If scratches and deformations occur.
  - Contact resistance deteriorates
  - Engagement failure
  - In case of board mounting type, mounting failure on board may occur.



Inserting a tool into the connector engagement surface may bend or damage the terminals.

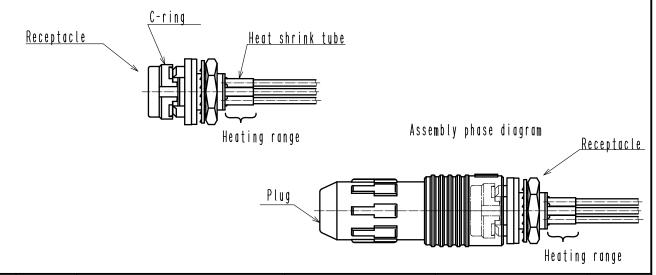
(2) Make sure to avoid creating cold solder joints or solder joints with air holes. Also check to make sure the solder joint is adequately fused between the lead wires and solder cup.

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.

a. The C-ring deforms and does not lock when mated.

b. The product melts.

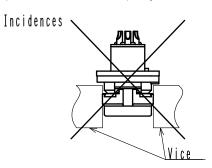
In order to prevent deformation of the C-ring as described in a, please heat after mating the compatible plug and receptacle.



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	HR30 Receptacle Connector Harness Assembly Instructions			Н	<b>R5</b> "	ROSE ELECTRI	с со	LTD.	
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ı				CHEC	KED	HY. KOBAYASHI	[	20210618	
ı				CHAR	GED	HT. ZENBA		20210617	
				WRIT	TEN	HT. ZENBA		20210617	
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③ Do not apply too much force to the receptacle engagement.

The receptacle engagement and the C-ring may deform and fail to engage.

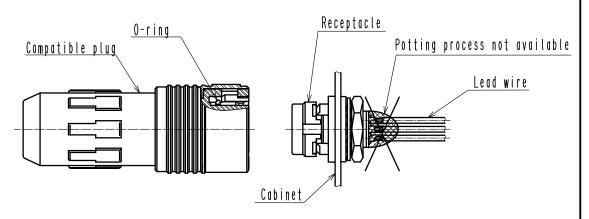


Do not secure the receptacle engagement during wiring.

② Do not potting receptacle connections.

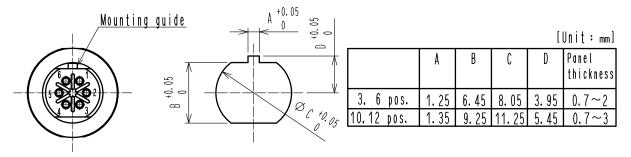
# Caution

Precautions after wiring (Solder type and Crimp type)
After wiring, do not seal the connected portion with potting, etc.
Potting may cause the O-ring to come off when the applicable plug is removed.
If the connector is used with the O-ring removed, the waterproof performance will not be satisfied.

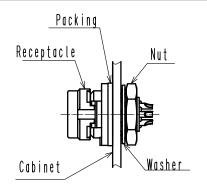


## ⚠ 3. Housing mounting method

Receptacle connection side



Install the receptacle so that its mounting guide fits into the A portion of the mounting hole.



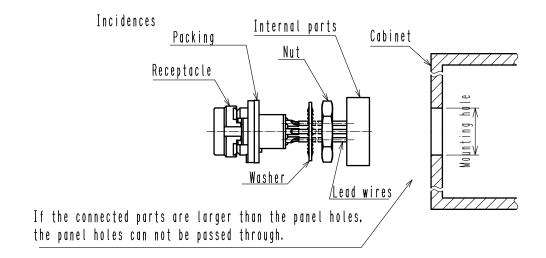
Recommended tightening torque

3, 6 pos.	0.5N·m
10,12 pos.	0.8N·m

Install the packing from the connection side of the receptacle, insert it into the housing mounting hole, install the washer, and tighten the nut. To prevent loosening, apply Loctite 263 and Locking Primer 7649 from Henkel Japan.

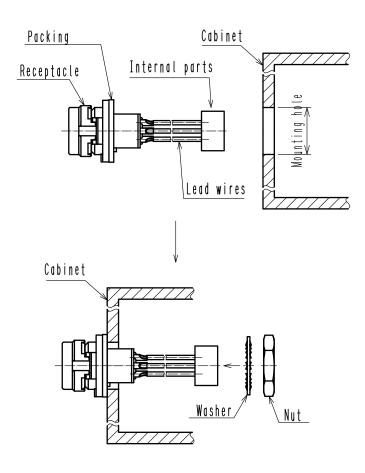
## Caution

This product is designed to attach the connector from the outside of the cabinet. Therefore, if you connect the connector to the internal parts first, the installation may not be possible.

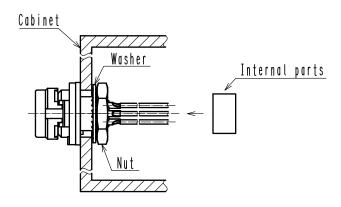


If the connected internal components are larger than the panel holes, they will not pass through the panel holes and can not be mounted on the cabinet. When mounting a double-ended harness to the cabinet, use internal parts that are sized to pass through the mounting holes and washer and nut. (Figure-a) Alternatively, solder only the wires and make connections with internal parts after the connectors are installed in the cabinet. (Figure-b)

(Figure-a)



(Figure-b)



#### 4. Assembly procedure

#### Procedure

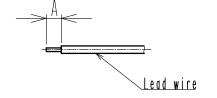


Table 1.	
	Д
3 pos. solder type	3.5 <sub>-0.5</sub> mm
6 pos. solder type	
12 pos. solder type	2 ° mm
10 & 12 pos. crimp type	

Strip the lead wire based on the dimensions shown in table 1.

Note: When processing the end, be careful not to damage the insulation or conductor.

#### (Solder type)



1

## 🕰 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.

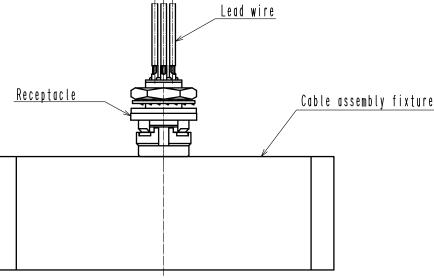


Table-2

	Part No.	Cable assembly tools
For 3 pos. soldering	HR30-6P-3P(71)	HR30-6R-3P-T01
For 6 pos. soldering	HR30-6R-6P(71)	HR30-6R-6P-T01
TOTO POS. SULUCTING	HR30-6R-6S(71)	HR30-6R-6S-T01
For 12 man coldering	HR30-7R-12P(31)	HR30-7J-12PC-T01
For 12 pos. soldering	HR30-8R-12S(31)	HR30-8J-12SC-T01

After attaching the receptacle to the cable assembly fixture, perform soldering for 3 to 4 seconds with the soldering iron tip at a temperature of  $350\pm10^{\circ}$ C.

(Note 1) When soldering wires, make sure that there is cold solder joint, over heat solder, etc. Also, make sure that the solder is fully fused at the solder joint between the wire and the contact.



Please strictly observe the soldering conditions.

Otherwise, the insulator may melt or the contacts may come off.

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#### Procedure $\Lambda$

#### (Crimp type)

Crimp the crimping terminal to the lead wire.

Table-3 Applicabel tools

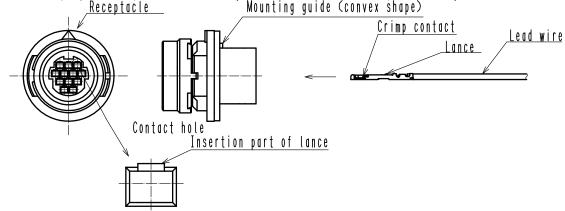
The crimping quality standard such as C/H depends on the crimping condition. For C/H. please refer to Table-4.

Type	Description	Part No.
Manual	manual crimping tools	HT-102/HR30-1
Automatic	Automatic crimping machine	CM-105C
	Applicator	AP105-HR30-1

## Caution

2

When crimping with a manual tool, the caulking may be hard or difficult to perform. If crimping is not performed reliably, electrical connection problems may occur.



After crimping the lead wire with a tool crimped contacts. insert the crimped contacts into the contact hole of the receptacle in the position.

Use the mounting quide (convex shape) as a quide to align the lance and insert the crimped contact.

After insertion, gently pull the lead wire (2 $\sim$ 3 N) to make sure the contact is secured.



## Caution

- Be careful not to deform the contacts when inserting. If the contacts are deformed, poor contact or disconnection of the contacts may occur.
- During insertion, if the housing contact hole is not oriented with the contact, the contact will be destroyed.
- When inserting, if the contact is pushed too far, the housing will be destroyed and the contact may jump out to the engaged surface. Therefore, please be careful.
- If the cable is soft, the contact may be difficult to insert. In this case, hold the cable close to the contact when inserting the contact.
- · If you pull the lead wire hard after insertion, it will damage the contact and housing. Please be careful.

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Wire	For wire core	For insulation
AWG SIZE	C/H(mm)	C/H(mm)
UL1571 stranded wire	0. 52~0. 58	0.85~1.00
AWG 26		
UL1571 stranded wire	0.48~0.54	0.85~1.00
AWG 28		
UL1571 stranded wire	0.46~0.52	0.80~0.95
AWG 30		



#### Procedure 🔨 Table-5 Appricable tools (Crimp type) Contact Applicable How to use the contact extraction tool extraction | contact If you have inserted a crimped contact into the wrong contact hole, use the contact extraction tool to remove the contact from the connector. Itool HR30-TP HR30-SC-111 How to use HR30-SC-211 (1) Insert the tip of the contact extraction tool 2 HR30-PC-111 into the contact insertion point of the contact hole. HR30-PC-211 · HR30-PC-111+HR30-TP Tool insertion HR30-PC-211 point Contact extracton tool JAPAN H75 • HR30-SC-111+HR30-TP Tool insertion HR30-SC-211 HR30-TP point (2) Insert the tool and push down the lance. Tip of the contact extraction tool If the contact is pulled toward the cable side, Lance the lance may not be pushed down. If the lance is difficult to push down, push the extraction tool while the contact is pushed toward the connector side. Caution If the lance is not lowered and you try to remove the contact, the lance may deform. (3) While pressing down on the lance, pull out the contacts. Tip of the contact extraction tool Contact pull direction Caution Reinsert the contact and housing only once. When reinserting the contact removed from the housing, correct the height of the lance as shown below. 0.2 00 HR30-PC-111 HR30-SC-111 HR30-PC-211 HR30-SC-211

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