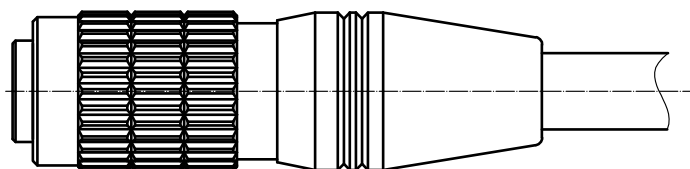




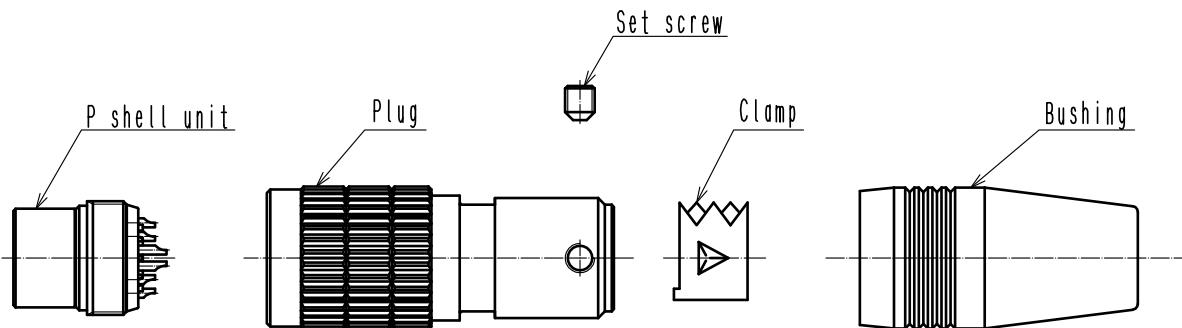
# Plug Assembly Instructions

## Illustration(Operation)

### ■Assembly product illustration



### ■Name of each part



	COUNT	DESCRIPTION OF REVISIONS	DESIGNED	CHECKED	DATE
△	2	DIS-C-00016067	DS. MATSUNE	EJ. KUNII	20230907
TITLE  HR25 Connector Assembly Procedure			<b>HRS</b> HIROSE ELECTRIC CO., LTD.		
			APPROVED	YH. YAMADA	20161128
			CHECKED	EJ. KUNII	20161128
			CHARGED	KN. IKEHARA	20161128
			WRITTEN	KN. IKEHARA	20161128
TECHNICAL SPECIFICATION			ETAD-C0361-00		△ 1 / 7

No.

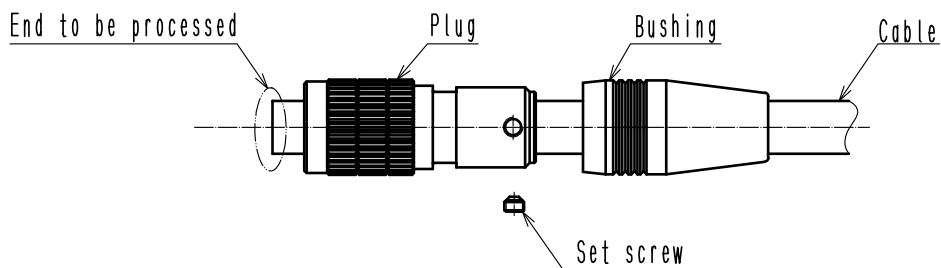
## Illustration&lt;Operation&gt;

## ■ Wire connection preparation

Before processing the end, pass the cable through the bushing, then through the plug.  
(The cable may not be able to pass through some parts after its end has been processed.)

## Note!

- The cable may not be able to pass through some parts after its end has been processed.  
The fixing screw is very small, therefore be careful not to lose it.



## ■ Cable end processing

Process the end to be processed as shown in the table.

Use a cable whose conductor's nominal cross sectional area is  $0.08 \text{ mm}^2$  (AWG #28) or less in the outer diameter applicable to each size.

## Notes!

- Do not damage jacket and/or conductor, otherwise it may cause insulation and/or conductivity failures and/or reduce the strength at the crimped portion.
- Cable property differs depending on cable specifications.  
Please evaluate under the actual conditions prior to use.

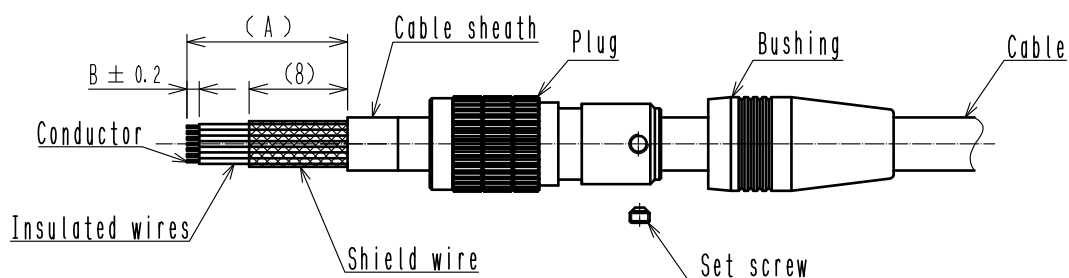


Table 1. Cable end processing dimensions

Type	Dimension A	Dimension B
HR25-7TP-※※(※※): Soldering type	10	1.5
HR25-9TP-※※(※※): Soldering type	19	

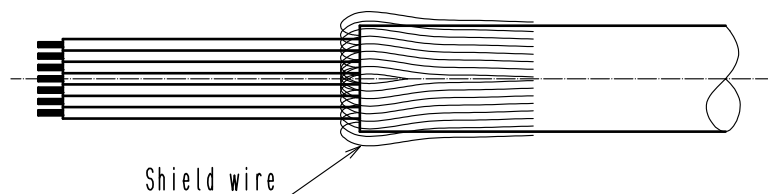
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## Illustration(Operation)

- ◆Fold back the shield wires.

## Note:

If a woven shield is used, unravel the weave and fold the shield wires straight to the back.  
If the shield is folded back with its weaving intact, you may break it when you crimp the clamp.

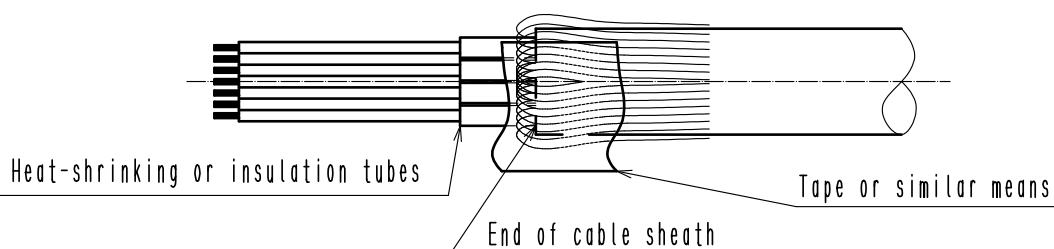


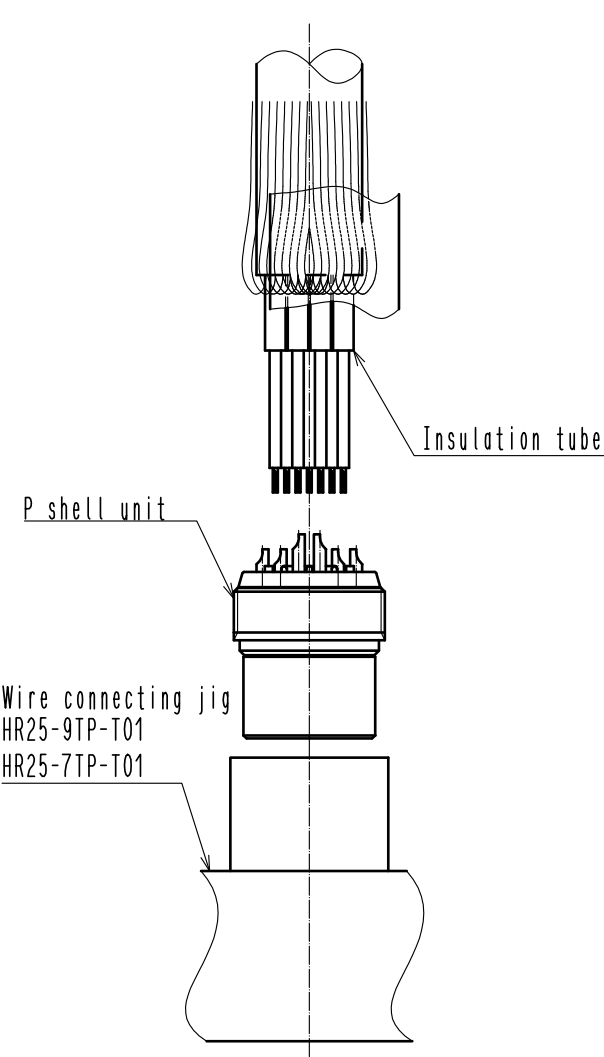
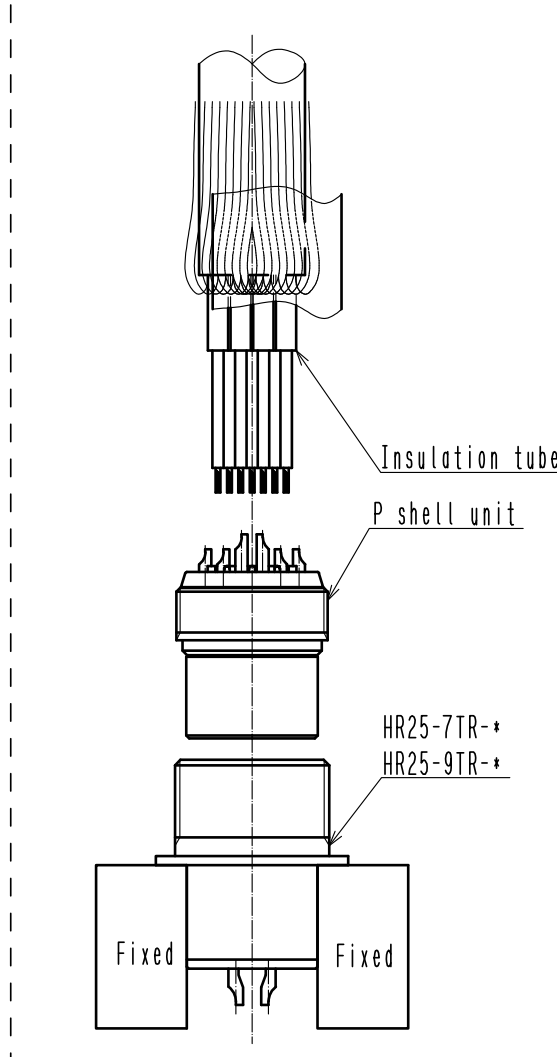
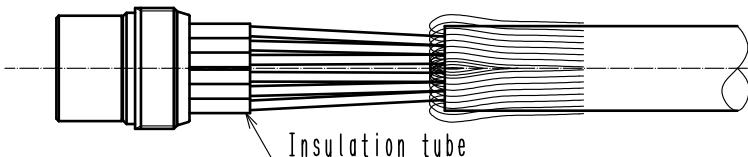
- ◆Insert heat-shrinking or insulation tubes over the insulated wires.

We recommend that the soldered portion of the contact be covered with insulation tubes or the like to avoid pressure failures.  
Incidentally, pass the lead through the tube before soldering.

## Notes:

- Heat-shrinking or insulation tubes should ideally be inserted over each of the insulated wires. If this is difficult to do, insert them over every other insulated wire, making sure that at least one of the wires adjacent to each other on the contact is covered.
- Because heat-shrinking or insulation tubes get in the way of performing connecting work, temporarily fix them to the end of the cable sheath using a tape or by similar means.



No.	Illustration(Operation)
3	<p>■ Wire connection by solder</p> <p>Notes:</p> <ul style="list-style-type: none"> <li>• Make sure not to make solder balls, lumps or whiskers as these can weaken solder strength or cause insulation failure.</li> <li>• When soldering, make sure not to heat the insulated wires or housing to the point that they begin to melt. Melting can result in insulation failure or weaken the contact fixation strength.</li> <li>• Make sure to prevent deformation of the contact using tools such as a wire connection jig. Deformed contacts can cause engagement failures.</li> <li>• Recommended solder iron is with function for temperature adjustment on the sold iron head, and 50 watts minimum power.</li> </ul> <div style="display: flex; justify-content: space-around;"> <div style="width: 45%;"> <p>• When using a wire connection jig</p>  <p>Insulation tube</p> <p>P shell unit</p> <p>Wire connecting jig HR25-9TP-T01 HR25-7TP-T01</p> </div> <div style="width: 45%;"> <p>• When using a receptacle</p>  <p>Insulation tube</p> <p>P shell unit</p> <p>HR25-7TR-* HR25-9TR-*</p> <p>Fixed</p> </div> </div>
4	<p>◆ Cover the wire connection area with heat-shrinking or insulation tubes.</p> <p>Note:</p> <p>When shrinking the heat-shrinking tubes with a heat gun or similar tool, make sure not to heat the insulated wires or housing to the point that they begin to melt. Melting can result in insulation failure or weaken the contact fixation strength.</p>  <p>Insulation tube</p>

No.

## Illustration(Operation)

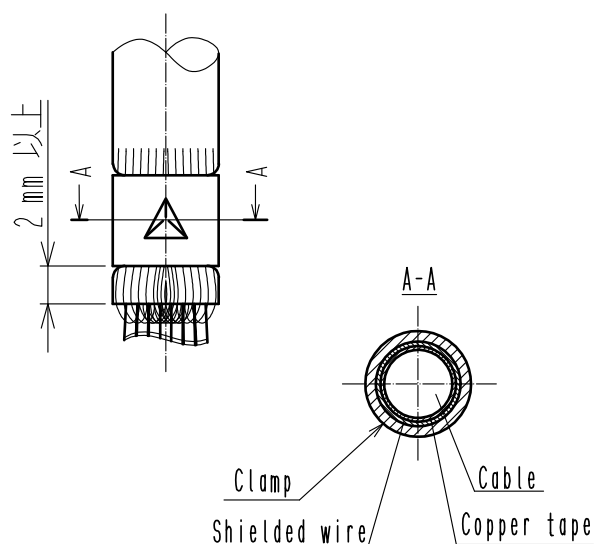
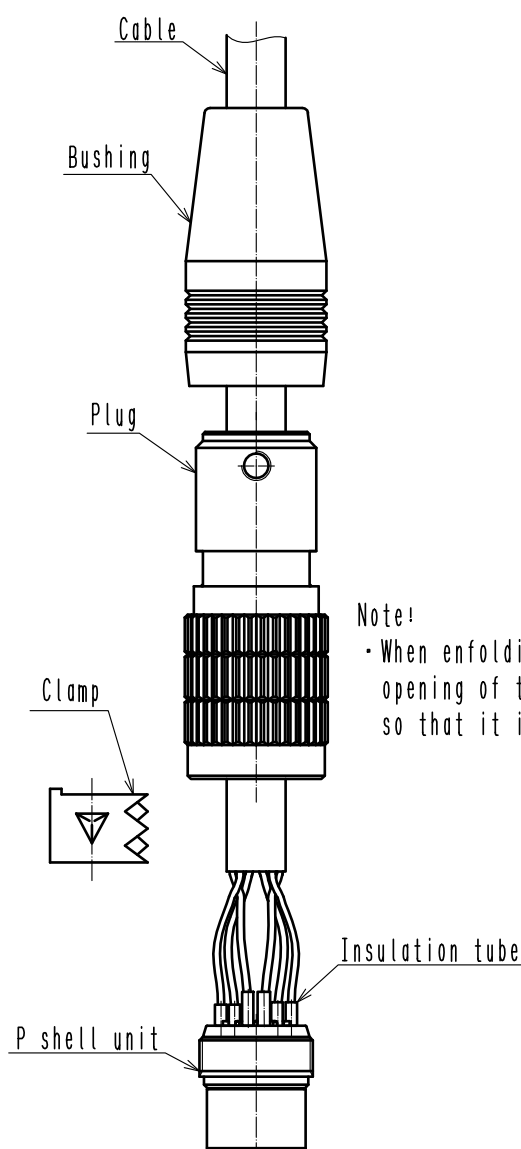
## ■ Clamp crimping

Crimp the clamp to the location shown in the following illustration using the cable crimping tool.

Applicable cable crimping tool: HR10A-TC-02 (CL150-0041-2)

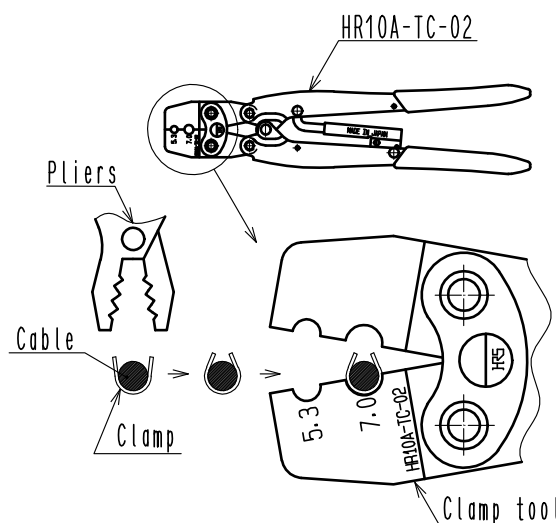
## Notes:

- A copper tape or similar material to have stable condition once around the cable wrap jacket and then folding the shield wires back before crimping the clamp.
- Always make sure to maintain a length of at least 2 mm for the area shown in the drawing below. Lengths shorter than this can result in insufficient cable pulling strength.
- Make sure not to damage the cable sheath when crimping the clamp.
- When using a copper tape, do not place the ends of the copper tape at the opening of the clamp. Otherwise, the clamp may not cover the ends of the copper tape after crimping the clamp.



## Note:

- When enfolding the cable with the clamp, squeeze the barrel opening of the clamp with a pair of pliers or similar tool so that it is bent to conform to the groove on the crimping tool.



Size	Applicable cable	Applicable crimping orifice size
7 Size	φ5	5.3
9 Size	φ7	7

- The applicable cable/applicable crimping orifice size for each size are examples. For details, refer to the specification sheet and reference chart.

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No.

Illustration(Operation)

Connector assembly

After soldering and crimping are complete, insert the P shell unit into a wire connection jig or receptacle, then tighten the plug with the stipulated torque (shown in table 2).

Notes!

Tighten the plug at the specified torque. Torque greater than specification will break the screw and torque weaker than specification will result in looseness. In either case, the plug will rotate and lead to wire breakage in the connection area.

⚠

While the threaded area on the P shell unit is treated with an anti-loosening treatment (MEC treatment), its adhesive strength will decrease when reused. To prevent loosening, apply LOCTITE 263 manufactured by HENKEL JAPAN Co.,Ltd. according to the Loctite applying procedure manual(ETAD-C0520-00).

When using a wire connection jig

Cable

Bushing

Plug

Slacken to avoid stress on the connected portion.

Soldered portion and Insulation tube

P shell unit

Wire connecting jig  
HR25-9TP-T01  
HR25-7TP-T01

When using a receptacle

Cable

Bushing

Plug

Slacken to avoid stress on the connected portion.

Soldered portion and Insulation tube

P shell unit

HR25-7TR-+  
HR25-9TR-+

Fixed

Fixed

Table 2. Plug tightening torque

Size	Tightening torque
7size	1N・m
9size	

6

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No.

## Illustration(Operation)

## ■Connector assembly

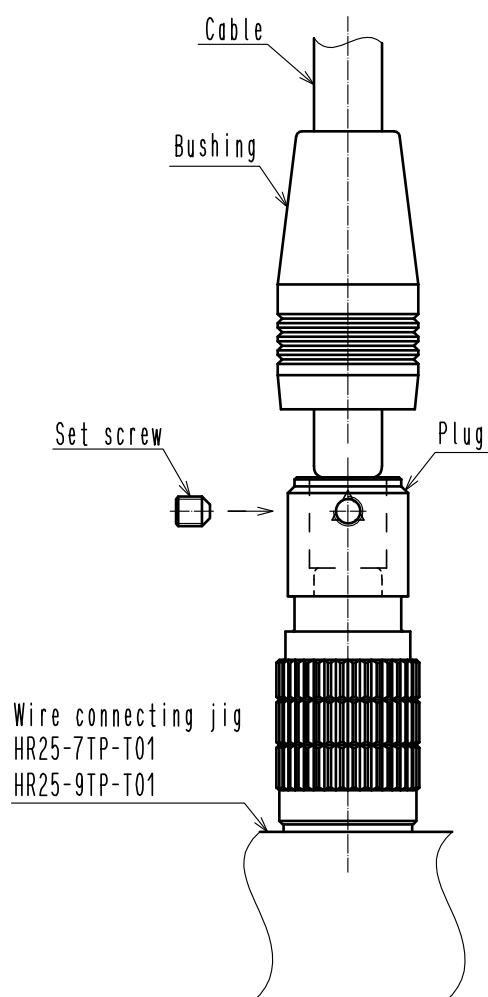
After tightening the P shell unit to the plug, adjust the clamp's triangular concave portion with the set screw hole as shown in the illustration below, then tighten the set screw with a tightening torque of 0.3 to 0.4 N·m.

⚠ To prevent loosening, apply LOCTITE 263 manufactured by HENKEL JAPAN Co., Ltd.

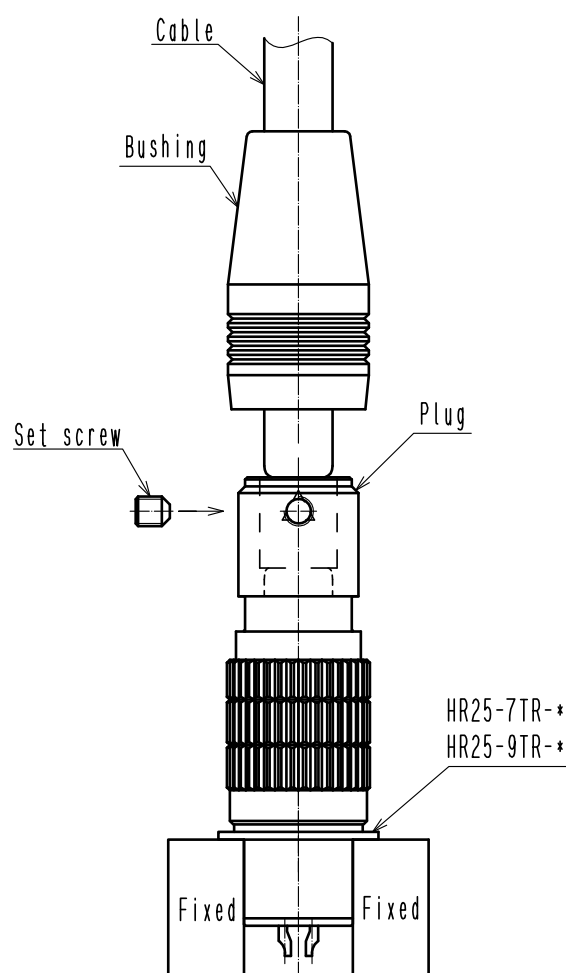
## Note:

- When Tighten the fixing screw to the plug, look through the fixing screw hole on the hood and find the concave boss on the clamp, make sure that the end of the fixing screw goes into this concave boss and then tighten the screw.  
If the fixing screw does not go into this concave boss, the fixing screw will protrude from the plug, causing damage to the bushing or prevent the clamp from fixing onto the plug. Either of these situations will result in loads being applied to the connection area and can cause wire breakage.

• When using a wire connection jig



• When using a receptacle



After tightening the fixing screw, cover with the bushing.  
Assembly is now complete.