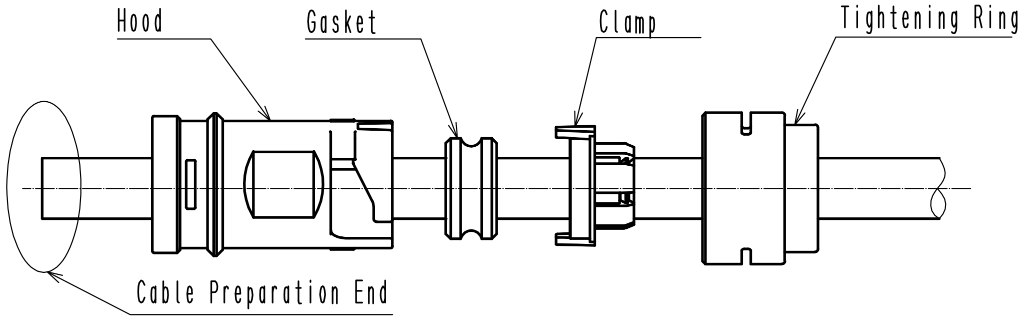
◈Plug Assembly Instructions

No.	Illustration (Operation)

1

■Assembly of components onto cable

Attention: When preparing for Cable Termination, be sure to remove any contaminants and/or obstructions from the cable sheath prior to assembly.

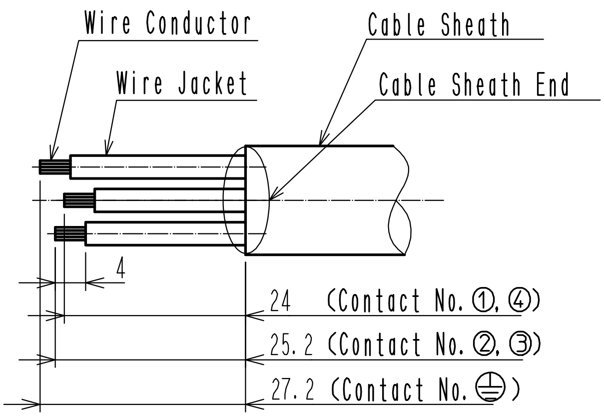


2

■Cable Sheath and Wire Jacket Strip

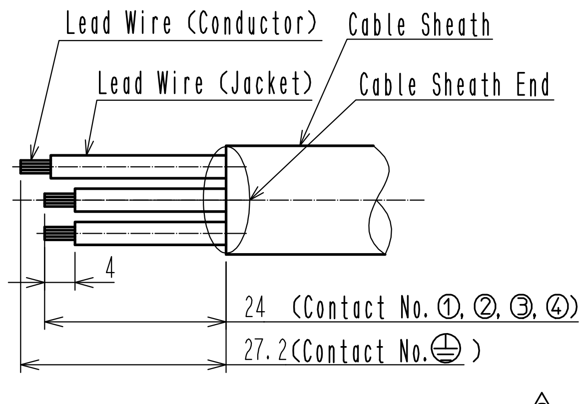
Attention: ・Do not damage jacket and/or conductor, otherwise it may cause insulation and/or conductivity failures and/or reduce the strength at the crimped portion.
・Cable property differs depending on cable specifications. Please evaluate under the actual conditions prior to use

Cable preparation for 3-step sequential plug
(Recommended)



Applicable connector：HR41A-17WBP*-5SC(81) △2

Cable preparation for 2-step sequential plug
(Recommended)



△2
Applicable connector：HR41A-17WBPA*-5SC(81)
2-step Sequential

* is given code. Code A is assigned to indicate 2-step sequential.

	COUNT	DESCRIPTION OF REVISIONS	DESIGNED	CHECKED	DATE
△2	3	DIS-C-00017710	TY.SUZUKI	KS.TAKAHASHI	20240603

名称 TITLE

HR41A Connector
assembly procedure

HRS ヒロセ電機株式会社
HIROSE ELECTRIC CO.,LTD.

APPROVED	EJ.KUNII	20140709
CHECKED	HY.KISHI	20140709
CHARGED	HN.TANAKA	20140124
WRITTEN	HN.TANAKA	20140124

技術指定書 TECHNICAL SPECIFICATION ETAD-C0312 △2

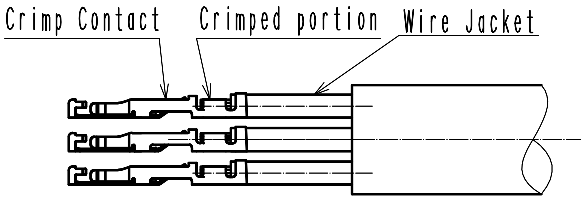
FORM 213-1

No. | Illustration (Operation)

3

■Crimp Termination(common to both Female contact , and Male contact to the wire)

Crimp the contact to the wire as shown in the diagram below.
Position the contacts so that all of the crimped portions face the same direction,
then crimp using the applicable tool.



△2

Wire size	Applicable connector HRS No.	Applicable connector Part No.	Applicable contact HRS No.	Applicable contact Part No.	Applicable crimping tool HRS No.	Applicable crimping tool Part No.
AWG#16	CL141-0200-3-81	HR41A-17WBP-5SC(81)	CL141-0213-5	HR41A-SC-111	CL150-0408-5	HT802/HR41A-11-16
		HR41A-17WBP※-5SC(81)				
	CL141-0203-1-81	HR41A-17WBPA-5SC(81)				
		HR41A-17WBPA※-5SC(81)				
	CL141-0202-9-81	HR41A-17WBJ-5PC(81)	CL141-0214-8	HR41A-PC-111		
		HR41A-17WBJ※-5PC(81)				
	CL141-0201-6-81	HR41A-17WBRA-5PC(81)				
	CL141-0222-6-81	HR41A-17WBRB-5PC(81)				
AWG#18	CL141-0200-3-81	HR41A-17WBP-5SC(81)	CL141-0213-5	HR41A-SC-111	CL150-0404-4	HT802/HR41A-11-18
		HR41A-17WBP※-5SC(81)				
	CL141-0203-1-81	HR41A-17WBPA-5SC(81)				
		HR41A-17WBPA※-5SC(81)				
	CL141-0202-9-81	HR41A-17WBJ-5PC(81)	CL141-0214-8	HR41A-PC-111		
		HR41A-17WBJ※-5PC(81)				
	CL141-0201-6-81	HR41A-17WBRA-5PC(81)				
	CL141-0222-6-81	HR41A-17WBP-5SC(81)				
AWG#20	CL141-0200-3-81	HR41A-17WBP-5SC(81)	CL141-0213-5	HR41A-SC-111	CL150-0407-2	HT802/HR41A-11-20
		HR41A-17WBP※-5SC(81)				
	CL141-0203-1-81	HR41A-17WBPA-5SC(81)				
		HR41A-17WBPA※-5SC(81)				
	CL141-0202-9-81	HR41A-17WBJ-5PC(81)	CL141-0214-8	HR41A-PC-111		
		HR41A-17WBJ※-5PC(81)				
	CL141-0201-6-81	HR41A-17WBRA-5PC(81)				
	CL141-0222-6-81	HR41A-17WBRB-5PC(81)				

Notes 1 Please refer to operation manual ATAD-C0329 for the crimping conditions.
2 A given alphabet (e.g. B, D, E, F...) will be allocated to * of the part number, indicating design variation depending on such specifications as cable diameter.

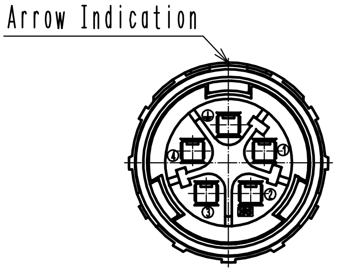
No.	Illustration (Operation)
4	

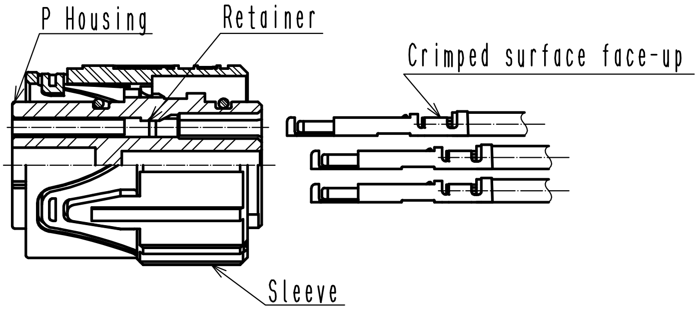
Contact Installation

Align crimped contact orientation to retainer on the P Housing as shown in the diagram below and insert the contacts into P Housing until an audible 'click' is heard. Following correct installation, check that the contact is fixed to the correct position by gently pulling the lead wire with approx. 2-3 N of force.

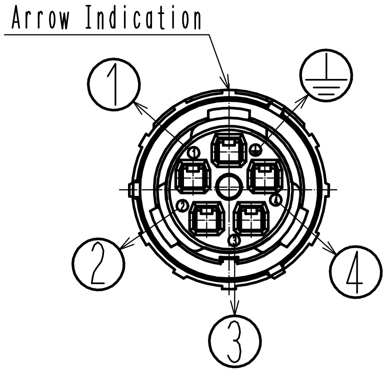
Check the arrangement after the contact insertion. In the case of mis-wiring, use the contactremoval tool (HR41A-TP) to pull out the contact to fix the problem. Refer to the manual (ETAD-C0314) for the operation of the contact removal tool (HR41A-TP).

Connector interface





Termination side



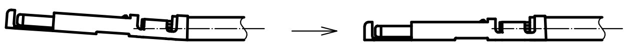
Attention:

- Insertion of the contacts without aligning the orientation of retainer and contact could damage the contact.
- Excessive contact insertion could damage the P Housing and the contacts could protrude from the mating face.
- Pulling the inserted wire with a force of 20 N or greater may damage the retainer on the P Housing.

Contact Installation Technic

Contact insertion becomes easier to adjust the contact in alignment with the wire when the contact leans upward.

Contact leans upward from the wire

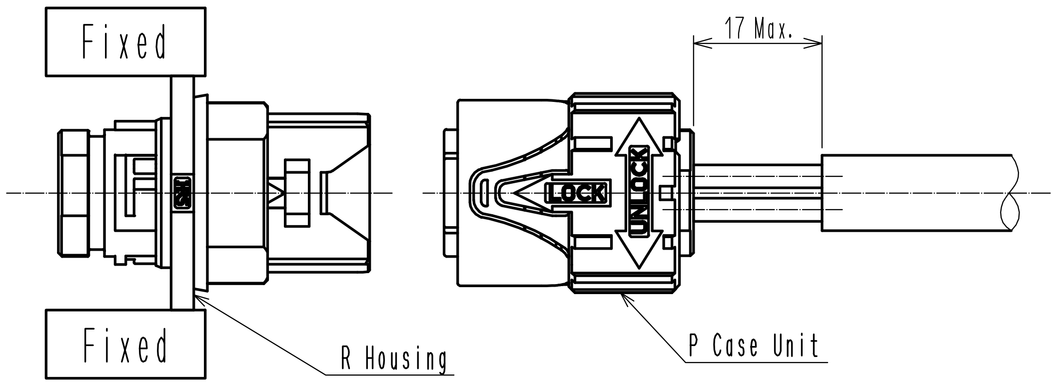


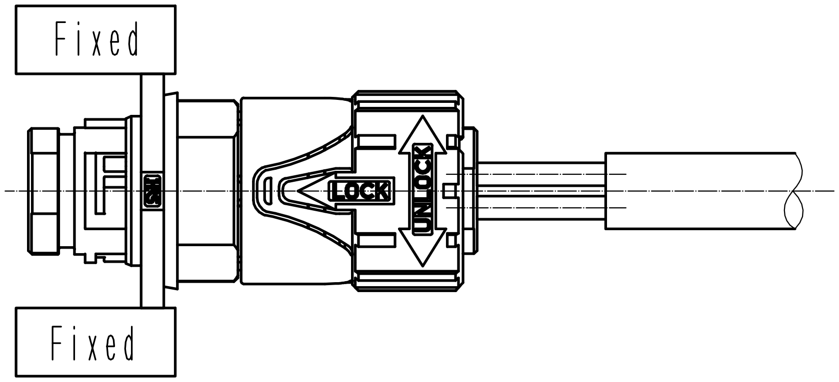
No.	Illustration (Operation)
5	

■Connector Assembly

(Simplified assembly tool is available. Refer to ETAD-P0226 for the handling instructions.)
Simplified assembly tool : HR41A-17WB/MD
HRS No. : CL0902-1518-0-00

1. Mate P Case unit to R Housing using a vice, etc. for stabilization.

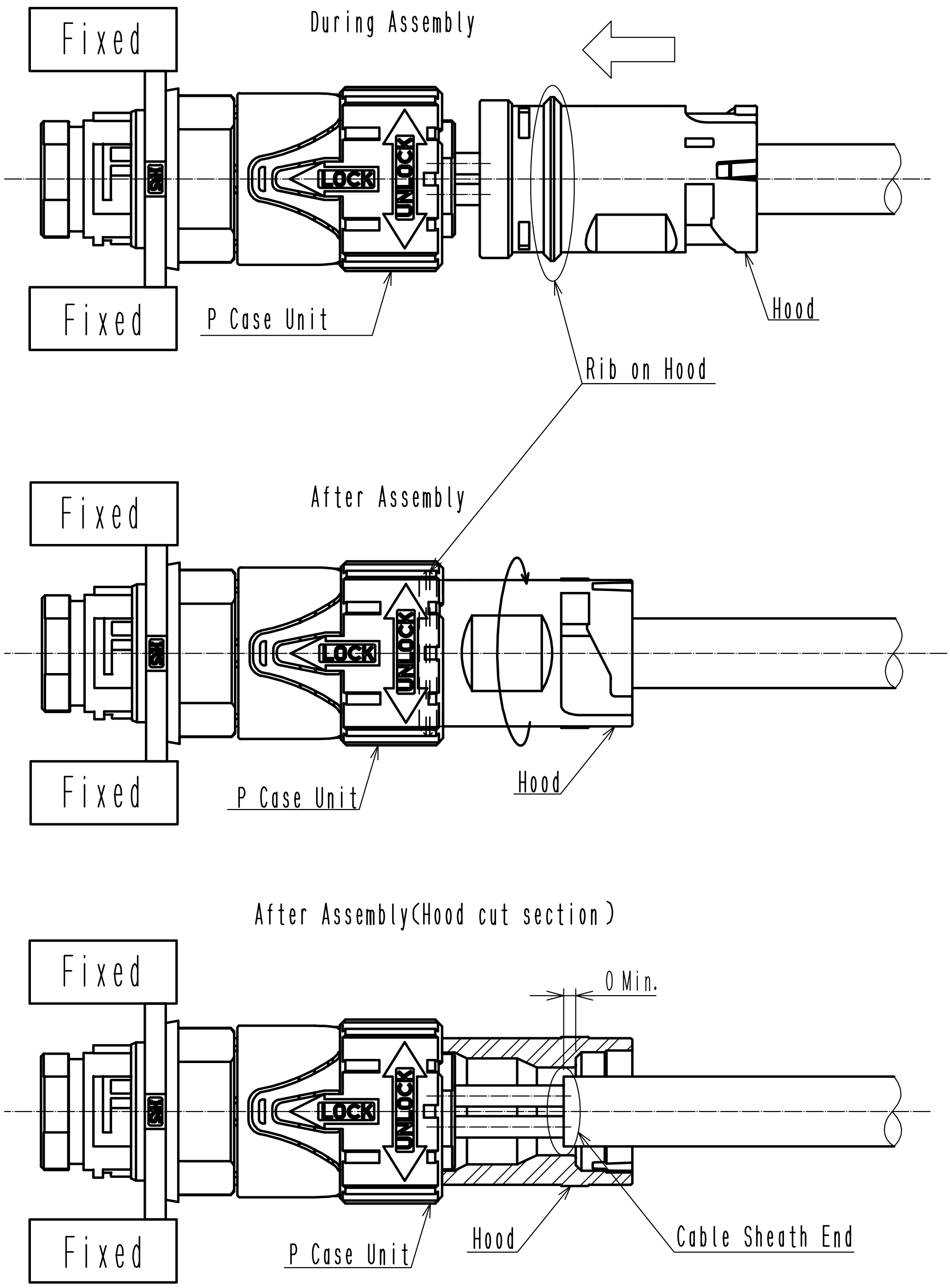




No.	Illustration (Operation)
5	

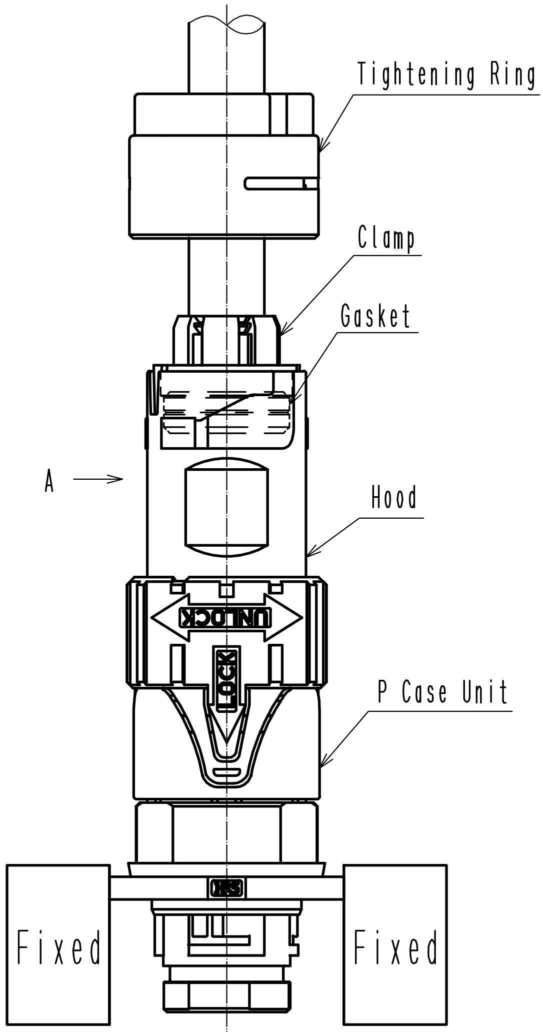
■Connector Assembly

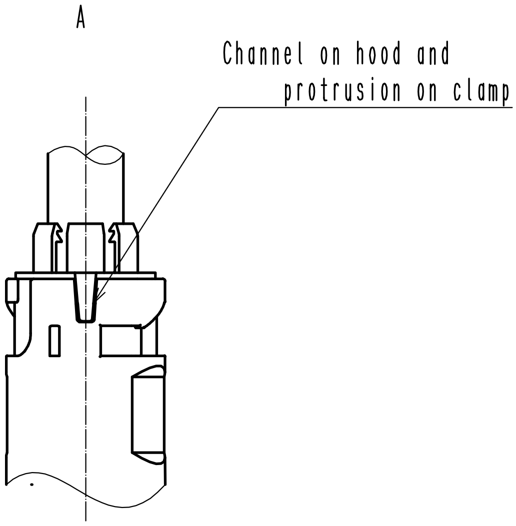
2. Tighten hood to the P Case until the rib on the hood is no longer visible, and an audible 'click' is heard.
(Below image is an recommended orientation of the hood.)
Avoid possible angled assembly of the hood to the P Case Unit.
Hood must not be assembled aslant to the P Case unit.
Do not apply more than 3 N·m of tightening torque.
Once assembled it is generally not advised to reassemble and/or reuse components.



Be sure that the cable sheath is enclosed within the hood as shown in the diagram above.

No.	Illustration (Operation)
5	■Connector Assembly 3. Assemble the clamp and the gasket. Align the orientation of hood and clamp as shown in the diagram below.

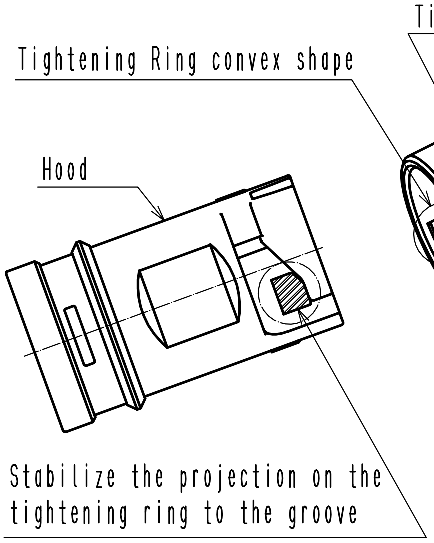


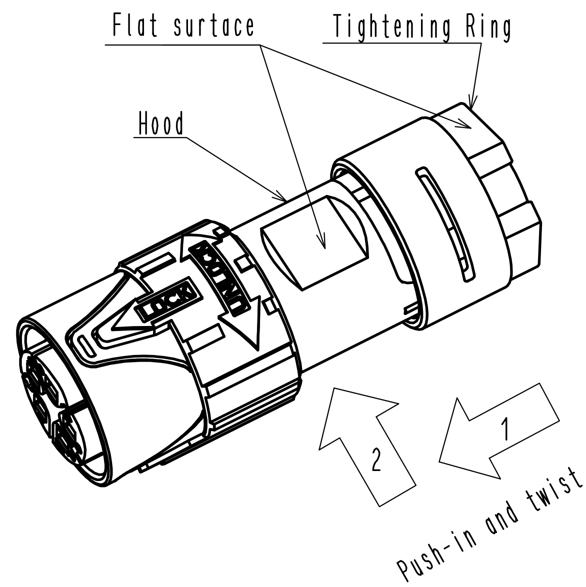


5

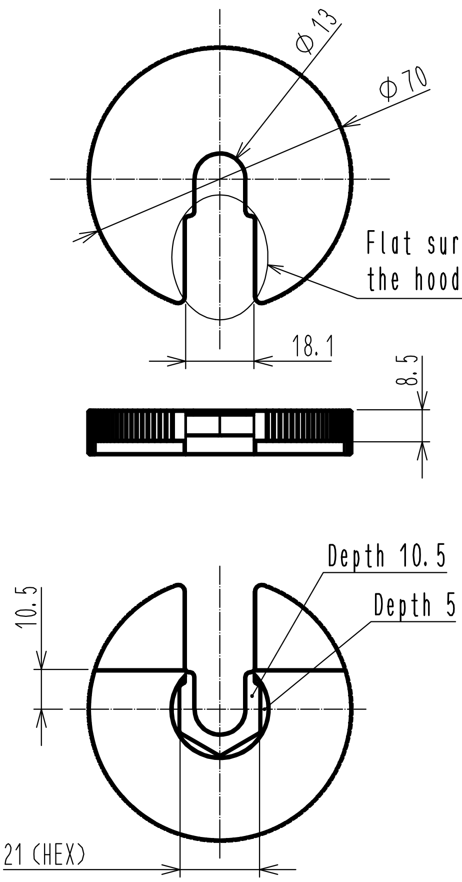
■ Connector Assembly

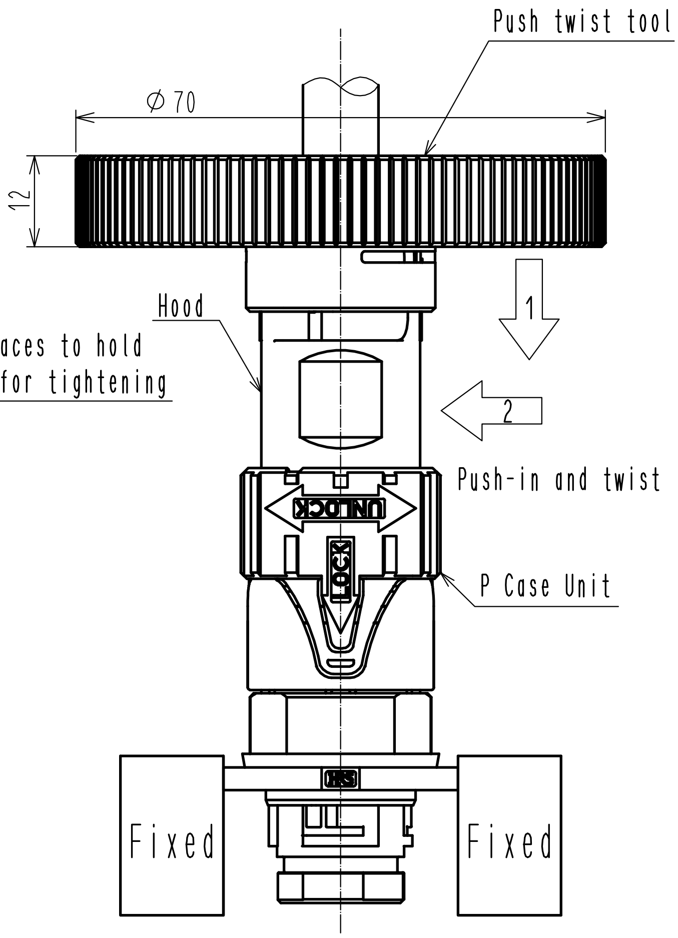
4. Hook the projection on the tightening ring to the groove on the hood as shown in Fig-1.
Push the tightening ring into the hood while twisting it until the assembly resembles that shown below in Fig-2.
Use of a supportive tool facilitates this assembly process.





Push twist tool reference dimension





FORM 213-2

No.	Illustration (Operation)
5	See below
6	See below

No. 5

■Connector Assembly

5. After the previous preparation process in No.4, tighten the tightening ring using a wrench until and audible 'click' is heard.
Once the process is complete, the color of the clamp will become visible through the slit in the tightening ring.

Make sure that the end of the cable sheath is positioned beyond the gasket end to the mating face direction.

Cable pull force, twisting strength, water tightness and other characteristics may differ depending on cable specifications and structure.
Please evaluate under the actual conditions prior to use.

Once assembled it is generally not advised to reassemble and/or reuse components.

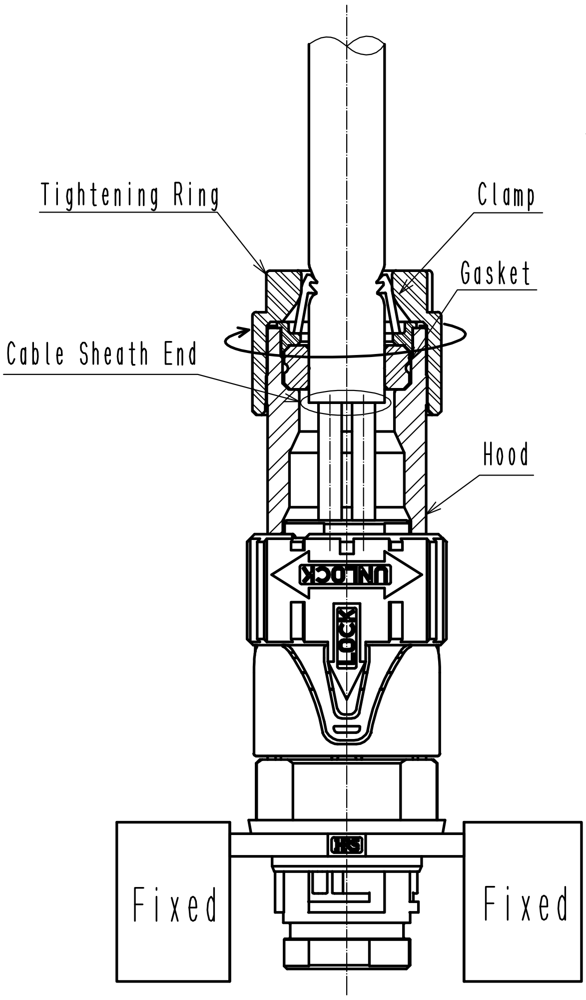
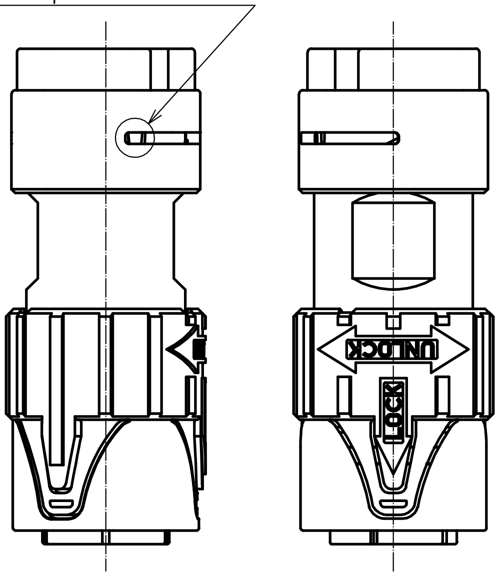


Fig. Assembly finish

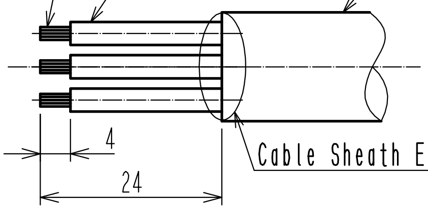
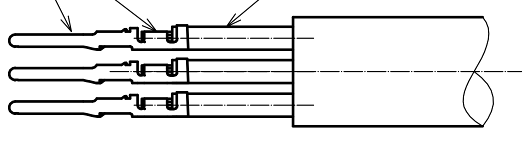


Assembly completes when the tightening ring is tightened until the color of clamp becomes visible through the slit on the tightening ring.

No. 6

Assembly process complete.
It is recommended to proceed with waterproof and electrical performance testing using any method under the individual conditions.

◈ Jack Assembly Instructions

No.	Illustration (Operation)
1	Insert the components according to No.1. (component insertion to the cable in the plug assembly instructions). ▣Cable Jacket and Wire Jacket Strip Attention: ・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 
2	▣Crimp Termination common to both male and female contacts Crimp lead wire to the crimp contact as shown in the diagram below. Position the contact so that all of the crimped portions face the same direction, then crimp with applicable tool.  Please refer to No.3 'Crimp Termination' in the Plug Assembly Instructions for the applicable contact crimp and the crimping tool.

FORM 213-2

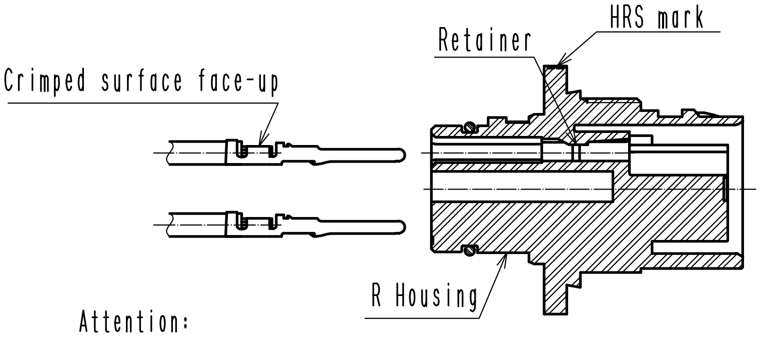
No.	Illustration (Operation)

3

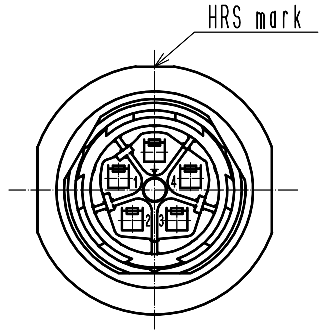
■Contact Installation

Align crimped contact orientation to retainer on the R Housing as shown in the diagram below and insert the contacts into R Housing until an audible 'click' is heard.
Following correct installation, check that the contact is fixed to the correct position within the R Housing by lightly pulling the lead wire with approx. 2-3 N of force.

Check the arrangement after the contact insertion. In case of mis-wiring, pullout the contact with contact remoral tool(HR41A-TP) to fix.
Refer to the manual (ETAD-C0314) for the operation of the contact remoral tool(HR41A-TP).

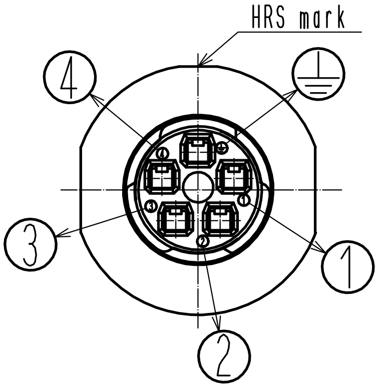


Connctor interface



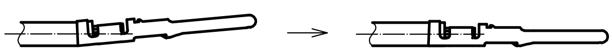
Attention:
- Insertion of the contacts without aligning the orientation of retainer and contact could damage the contact.
- Excessive contact insertion could damage the R Housing and the contacts could protrude from the mating face.
- Pulling the inserted wire with a force of 20 N or greater may damage the retainer on the R Housing.

Termination side



Contact Installation Technic
Contact insertion becomes easier to adjust the contact in alignment with the wire when the contact leans upward.

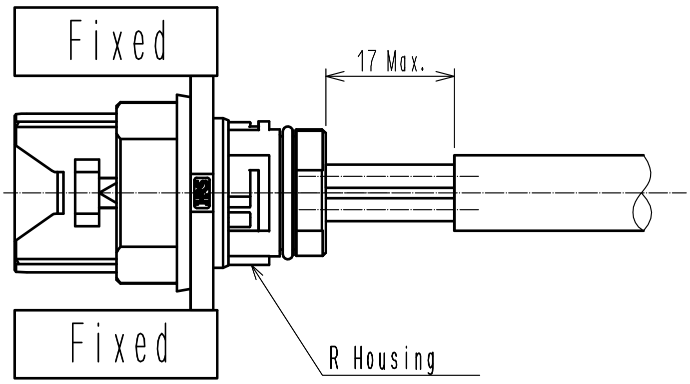
Contact leans upward from the wire



4

■Connector Assembly

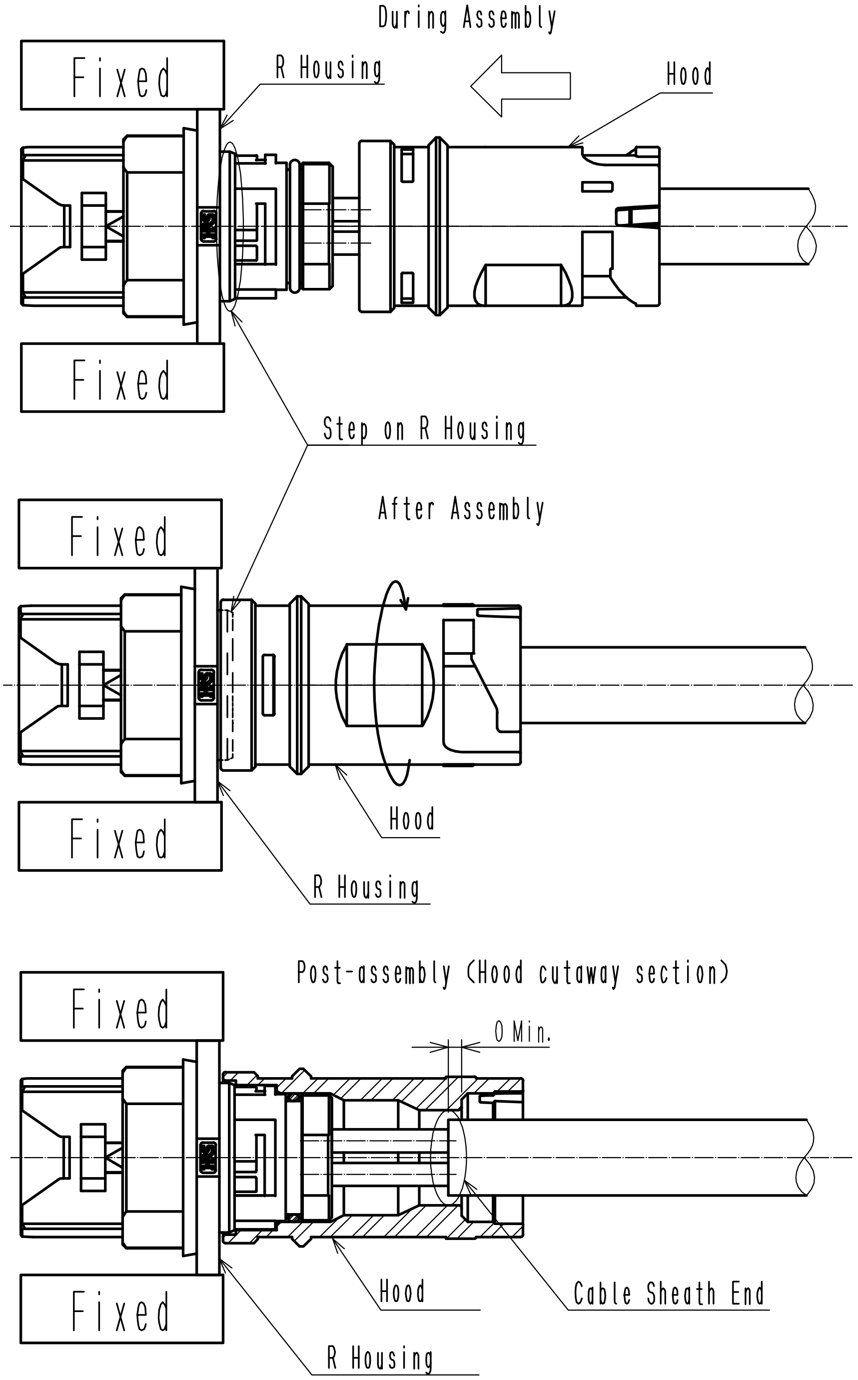
1. R Housing stabilized by vice, etc.



No.	Illustration (Operation)
4	

▣Connector Assembly
(Simplified assembly tool is available. Refer to ETAD-P0226 for the handling instructions.)
Simplified assembly tool : HR41A-17WB/MD
HRS No. : CL0902-1518-0-00

2. Tighten hood of the P Case until the rib on the hood is no longer visible, and an audible 'click' is heard.
(Below image is an recommended orientation of the hood.)
Avoid possible angled assembly of the hood to the P case Unit.
Hood must not be assembled aslant to the P case unit.
Do not apply more than 3 N·m of tightening torque.
Once assembled it is generally not advised to reassemble and/or reuse components.

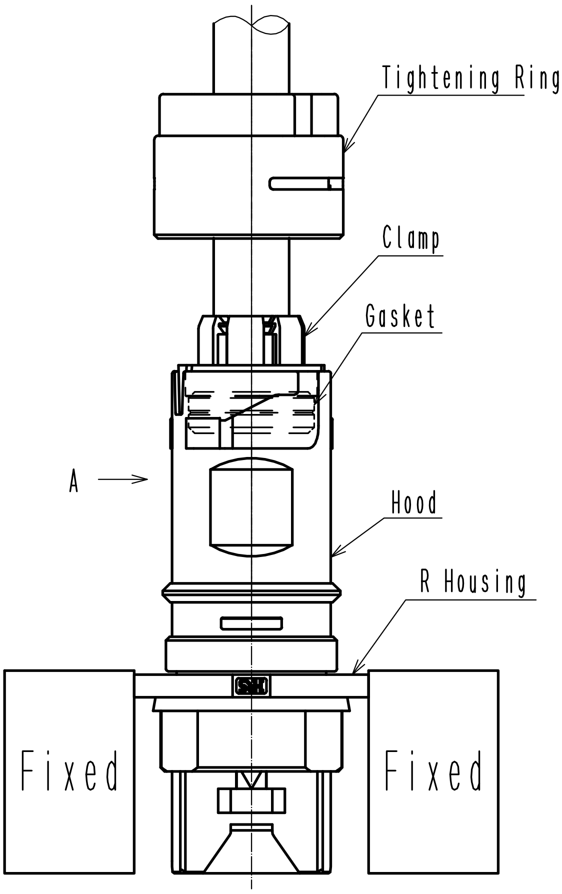


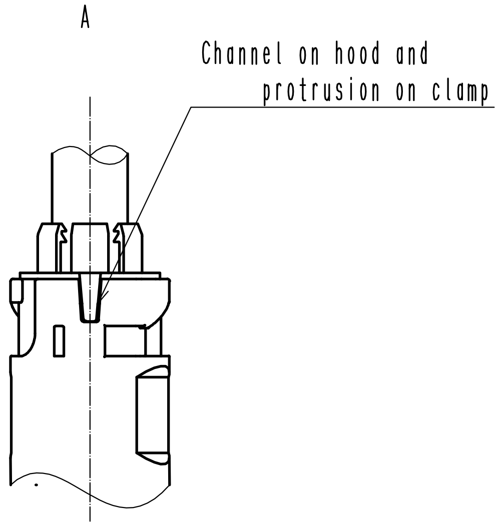
Besure that the cable sheath end is enclosed into the hood as shown.

4

■Connector Assembly

3. Assemble the clamp and the gasket.
Align the orientation of hood and clamp as shown in the diagram below.

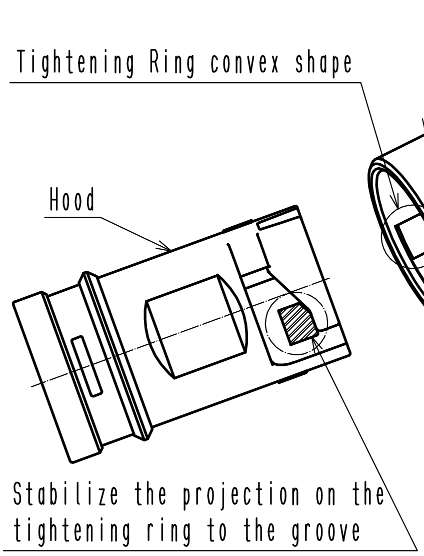


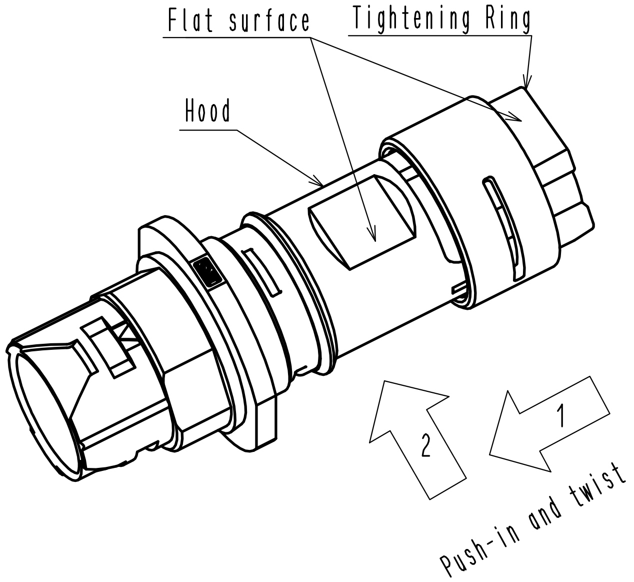


No.	Illustration (Operation)
4	

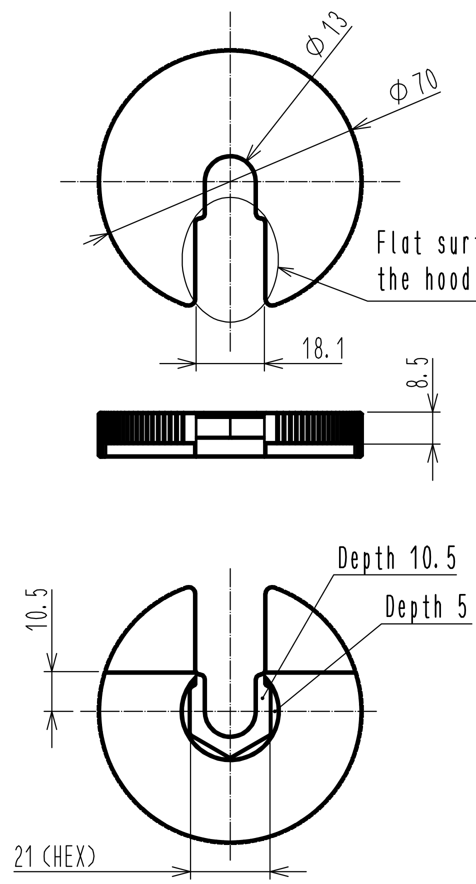
■Connector Assembly

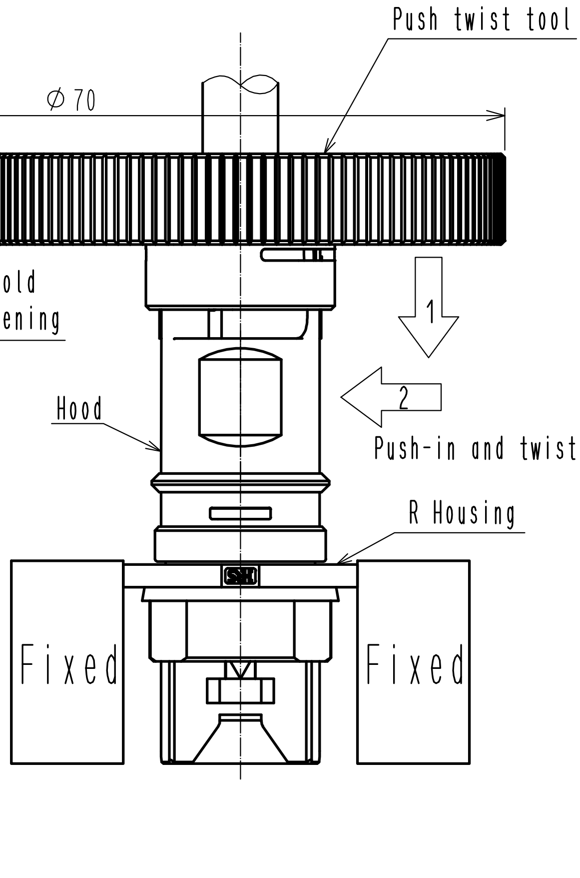
4. Hook the projection on the tightening ring to the groove on the hood as shown in Fig-1.
Push the tightening ring into the hood while twisting it until the assembly resembles that shown below in Fig-2.
Use of a supportive tool facilitates this assembly process.





Push twist tool reference dimension





FORM 213-2

No.	Illustration (Operation)

4

■Connector Assembly

5. After the previous preparation process in No.4, tighten the tightening ring using a wrench until and audible 'click' is heard.
Once the process is complete, the color of the clamp will become visible through the slit in the tightening ring.

Make sure that the end of the cable sheath is positioned beyond the gasket end to the mating face direction.

Cable pull force, twisting strength, water tightness and other characteristics may differ depending on cable specifications and structure.
Please evaluate under the actual conditions prior to use.

Once assembled it is generally not advised to reassemble and/or reuse components.

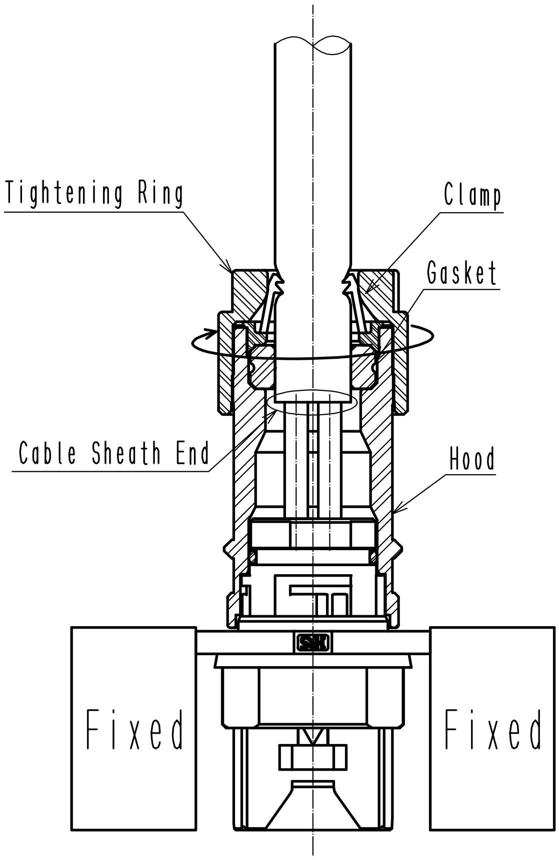
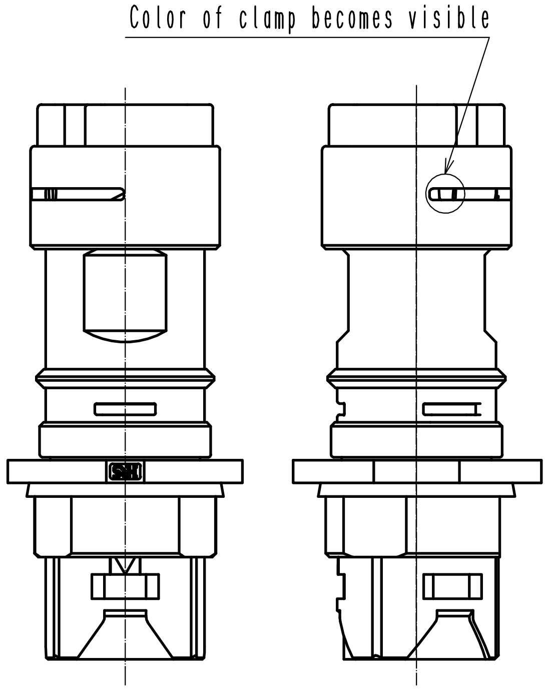


Fig. Assembly finish



Assembly completes when the tightening ring is tightened until the color of clamp becomes visible through the slit on the tightening ring.

5

Assembly process complete.
It is recommended to proceed with waterproof and electrical performance testing using any method under the individual conditions.

◈Receptacle Assembly Instructions

No.	Illustration (Operation)

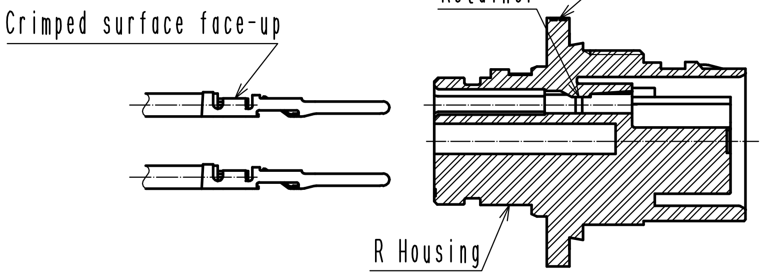
1

▣Contact Installation

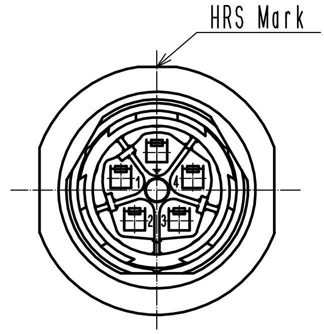
First of all, proceed cable termination and crimp termination as shown in No.1 "Cable Jacket and Wire Jacket Strip" and 2 "Crimp Termination" of "Jack Assembly Instruction".

Align crimped contact orientation to retainer on the R Housing as shown in the diagram below and insert the contacts into the R Housing until click sound is heard. Following installation, check that the contact is fixed to the correct position in the R Housing by lightly pulling the lead wire with approx. 2-3 N of force.

Check the arrangement after the contact insertion. In the case of mis-wiring, use the contact removal tool(HR41A-TP) to pull out the contact. Refer to the manual (ETAD-C0314) for the operation of the contact remoral tool(HR41A-TP).

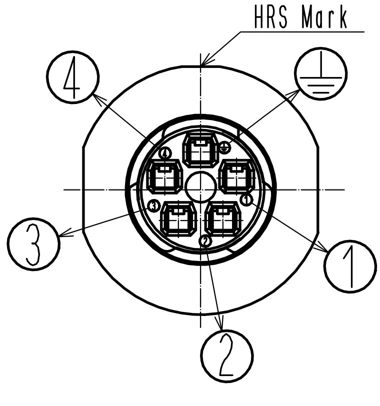


Connector interface



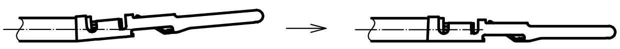
Attention:
- Insertion of the contacts without aligning the orientation of retainer and contact could damage the contact.
- Excessive insertion of contact could damage R Housing.
- Pulling an inserted wire with 20 N or more could damage the retainer on the R Housing.

Termination side



Contact Installation Technic
Contact insertion becomes easier to adjust the contact in aliqnment with the wire when the contact leans upward.

Contact leans upward from the wire



2

Assembly process is completed.
It is recommended to proceed with Waterproof and Electrical Performance tests using any method under the individual conditions.