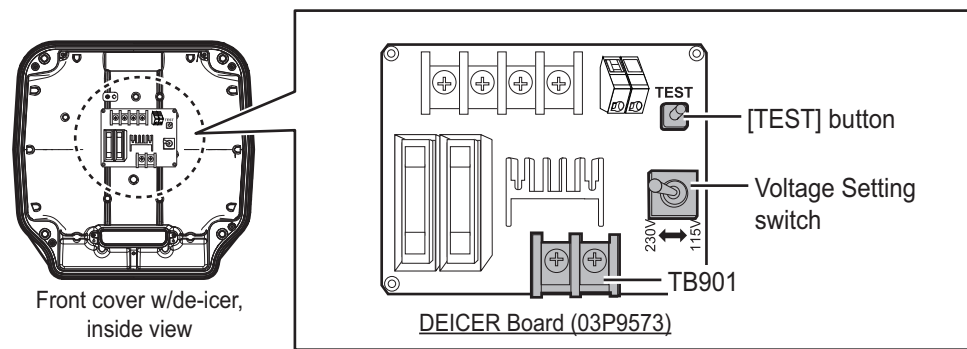
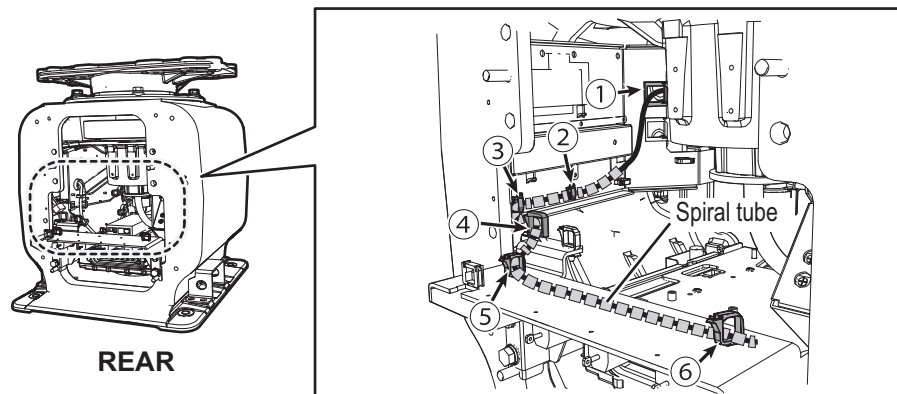


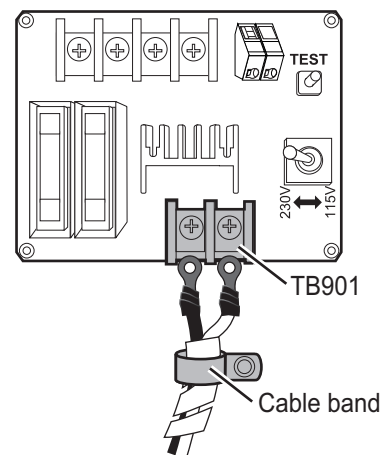
14. For **DE-ICER INSTALLATION**, connect the de-icer power cable the de-icer board 03P9573 attached on the front cover. If the de-icer is not provided, go to step 12.



- 1) Wrap the supplied spiral tube around the de-icer power cable, starting from the crimp-on lugs. Set a locking wire saddle (supplied) at location (6) shown in the following figure. Pass the de-icer power cable through the locking wire saddles (1) to (6) and it to the front side.

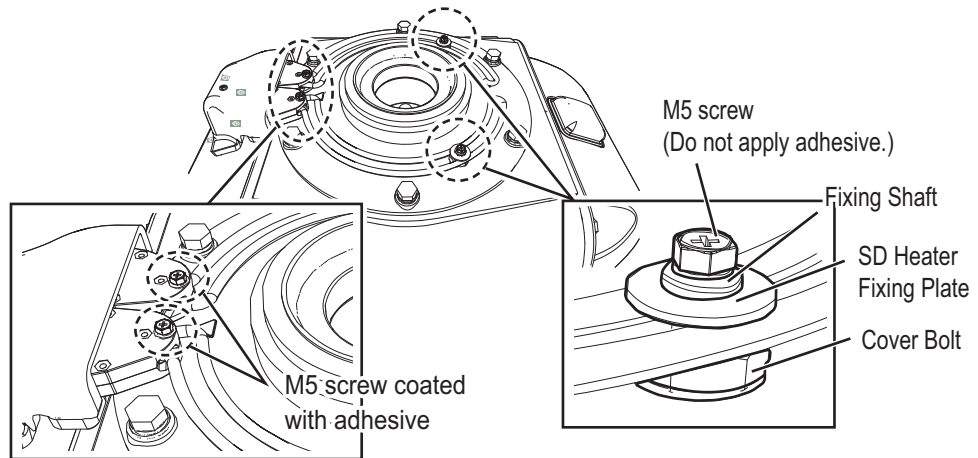


- 2) Pass the de-icer power cable through the cable band. Connect the cable to TB901 on the DE-ICER board (03P9573), using the supplied crimp-on lugs.
- 3) Set the Voltage Setting switch according to the power source for the de-icer; 115 V or 230 V. The default setting is 230 V.
- 4) Apply power to the de-icer then press and hold the **TEST** button for about ten seconds. Check that the heater gets hot and then release the **TEST** button.
- 5) Set the front cover to the Antenna Unit. Close the open heater and return to its original position. Take care not to hit the heater elements on the chassis or radiator.
- 6) Fasten the two heater elements to the chassis with the four bolts removed at step 1 on page 2-28. Fasten the base of the heater with two bolts coated with

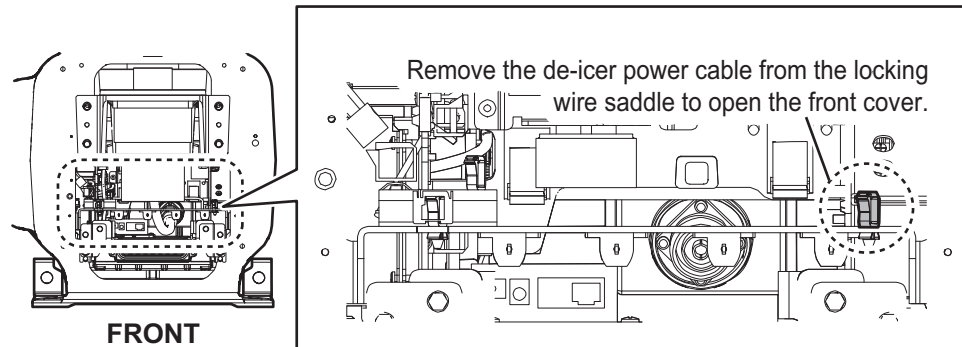


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the supplied adhesive. Fasten the installation materials to each of the cover bolts.



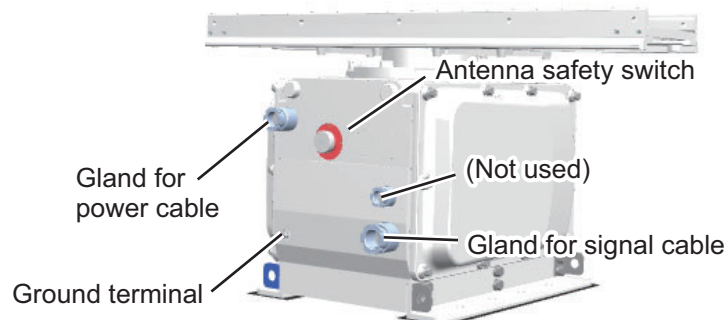
Note: If it is necessary to open the front cover after installing the DE-ICER kit, remove the de-icer power cable from the locking wire saddle shown in the following figure then detach the cover slowly to prevent damage to the heater.



15. Reconnect the performance monitor connector (J807).
16. **Check that the gasket on the front and rear cover is seated properly**, then close the covers. The torque for the fixing bolts must be 28.0 N·m.
Note: For the de-icer specifications, take care not to hit the heater elements on the chassis or radiator. If the heater hits something, unfasten the fixing screws for the heater to adjust the position of the heater. Then fix the heater again.

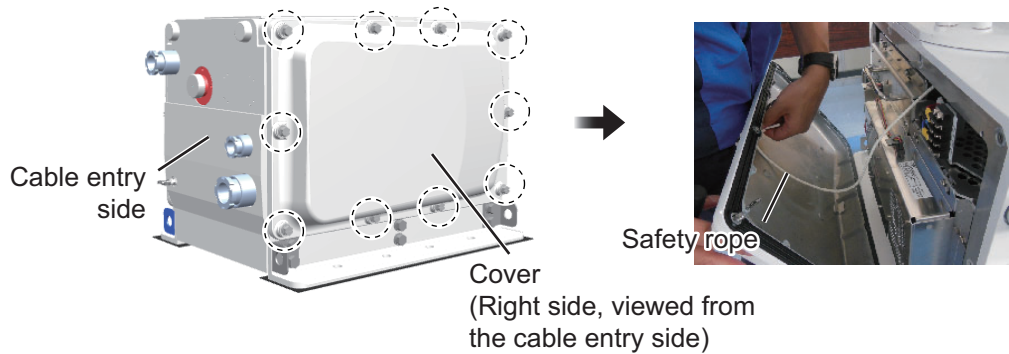
2.4.3 How to connect the cables for S-band radar (TR-UP, FAR-2268DS radar)

Some parts or wiring have been omitted from the illustrations for clarity.

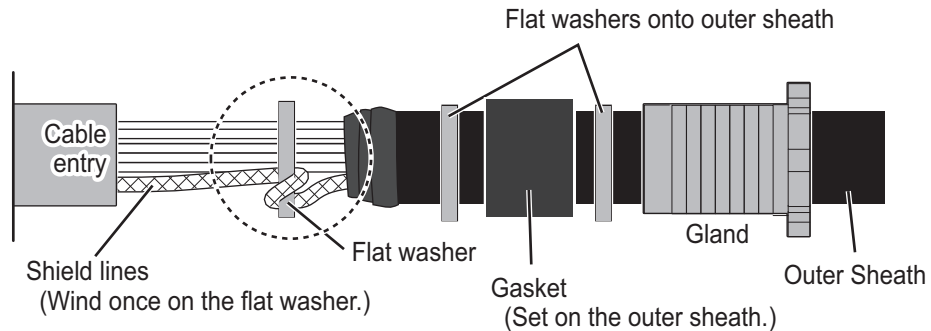


1. Remove 10 bolts from the cover, right side viewed from the cable entry side, to remove the cover.

Note: The safety rope is attached to this cover to prevent falling the cover.



2. Unfasten the cable glands for the antenna and power cables and remove the gasket, three flat washers and remove the gland cap of each entrance. The gland caps may be discarded.
3. Slide the flat washers and gasket onto the cables as shown in the figure below.

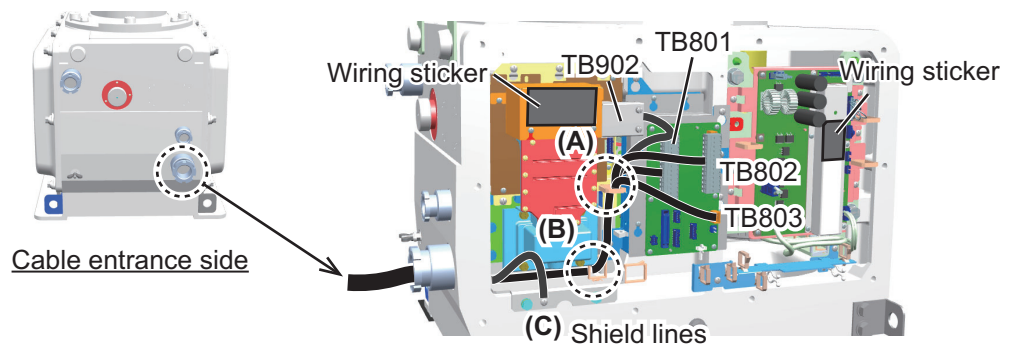


4. Pass the antenna and power cables through each cable glands and attach the appropriate connectors to the appropriate cables. For how to connect the cables to WAGO connector, see "WAGO connector" on page 2-5. For pin arrangement, see the interconnection diagram at the back of this manual.

Note: For the antenna cable, **pass the coaxial cable first**, and then the signal cables through the cable gland not to bend the coaxial cable as possible.

Antenna cable

Connect the wires of the antenna cable to the appropriate WAGO connectors (pre-attached on the RF-TB board), according to wiring stickers.



2. WIRING

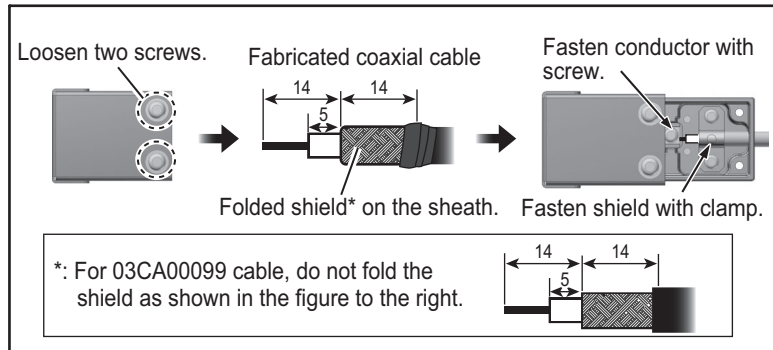
- Signal lines: TB801, TB802 and TB803, through the wire saddles (A), (B).



CAUTION

High voltage is present at the No. 1 pin of TB801. Miswiring at this pin can damage the antenna unit.

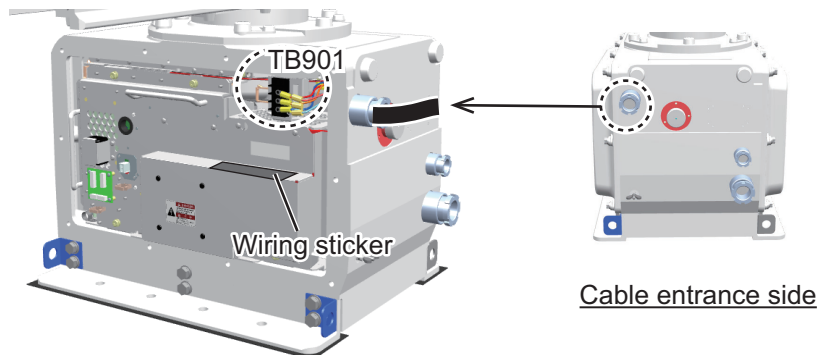
- Coaxial cable: TB902 on the TNC Junction Box, through the wire saddles (A), (B). Before connecting the coaxial cable, remove the TNC junction box. After connecting the coaxial cable referring to the figure shown below, re-mount the box to the RF unit.



- Shield lines: Wing bolt (C).

Motor power cable

Connect the wires of the motor power cable to the Terminal board TB901, according to wiring sticker.



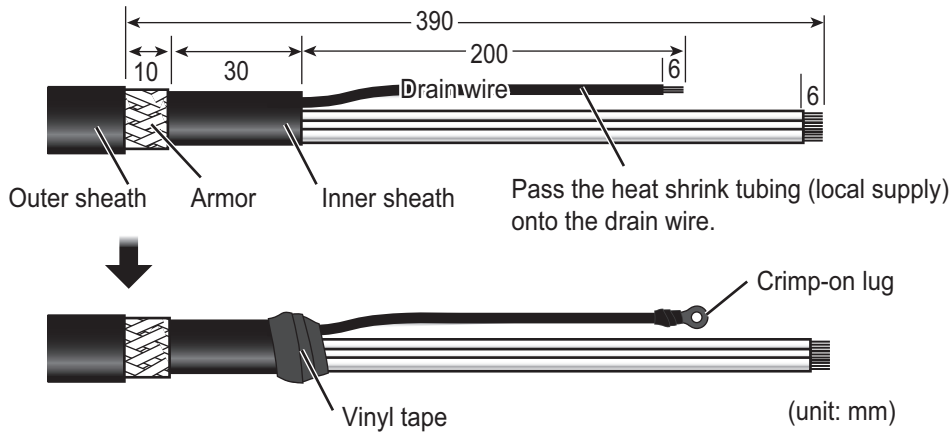
5. Apply the supplied adhesive to the threads of the cable glands, and then fasten it tightly with the hook spanner.
Note: Use the wrench of the correct size referring to cable gland size below. If you do not have the hook spanner, contact your dealer.
 - Gland for the antenna cable: $\phi 50$
 - Gland for the motor power cable: $\phi 42$
6. Check that the gasket on cover are seated properly, then close the cover. The torque for the fixing bolts must be 15.0 N·m.
7. Seal the cable glands for the power cable with putty.

2.5 Antenna Unit for S-band, TR-DOWN Radar

2.5.1 How to fabricate the cables

For how to connect the WAGO connector, see "WAGO connector" on page 2-5.

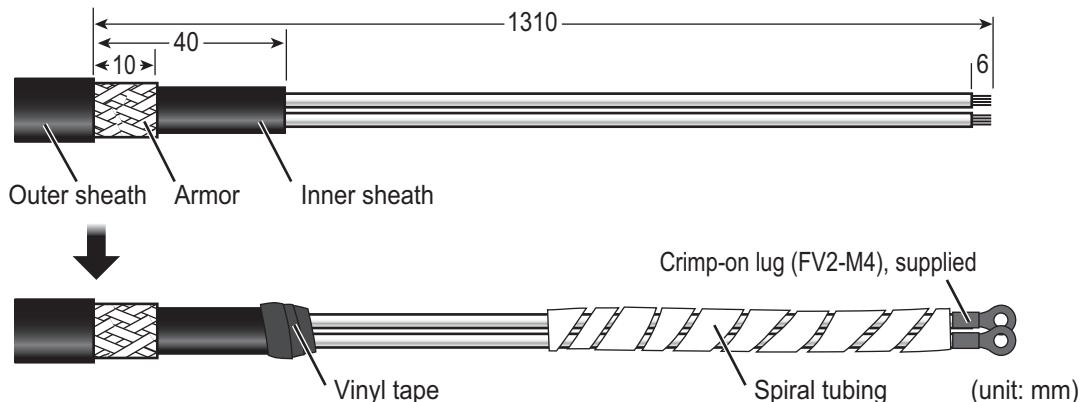
TTYCYSLA-10 (for serial cable)



DPYCY-1.5 (for the optional de-icer)

- Before beginning any work on the Antenna Unit, turn off the breaker for the de-icer at the mains switchboard. (Turning off the display unit has no effect.)
- The de-icer activates when the temperature becomes 0 °C, and shuts down when the temperature reaches 5 °C.

Wrap the spiral tubing near the crimp-on lugs.



Microwave coaxial cable

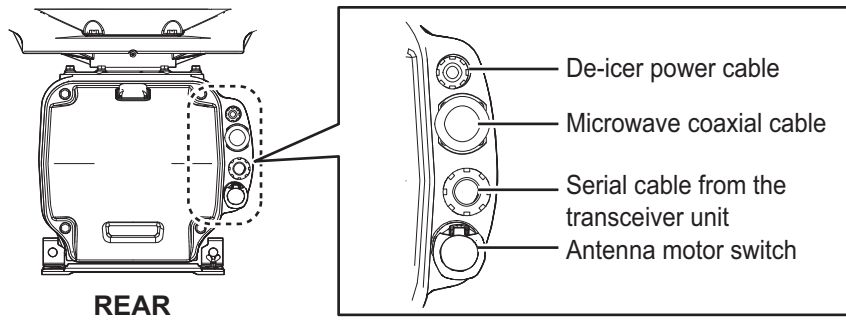
See the supplied instruction manual (C32-01904) in Antenna Unit for details.

2.5.2 How to connect the cables for S-band radar (TR-DOWN)

Three cables are connected to the Antenna Unit: serial cable from the transceiver unit, microwave coaxial cable and de-icer power cable (option). The procedure shows how to connect all cables. Disregard the descriptions for the optional equipment if not applicable.

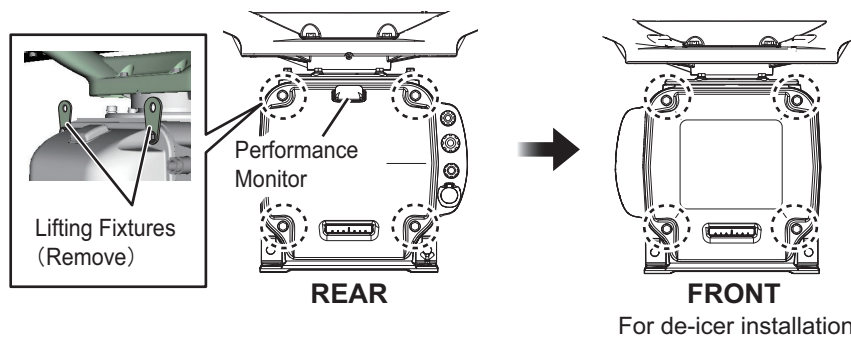
Note: Apply the supplied adhesive to the unused cable glands.

2. WIRING



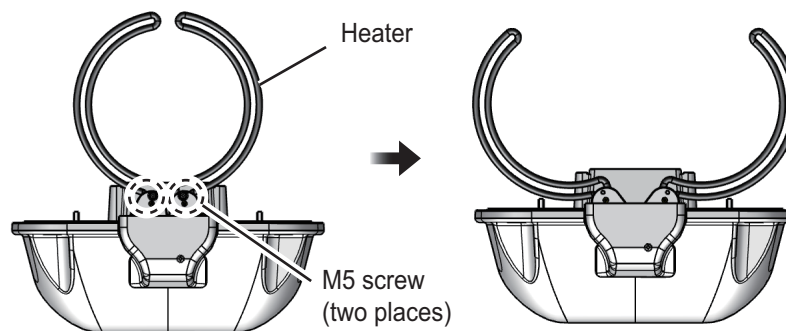
Some parts or wiring have been omitted from the illustrations for clarity.

1. Loosen four bolts on the rear cover to remove the rear cover. If the de-icer is already installed, loosen also four bolts on the front cover to remove the front cover. If the lifting fixtures are still attached, they should be removed. For how to remove the lifting fixtures, see section .

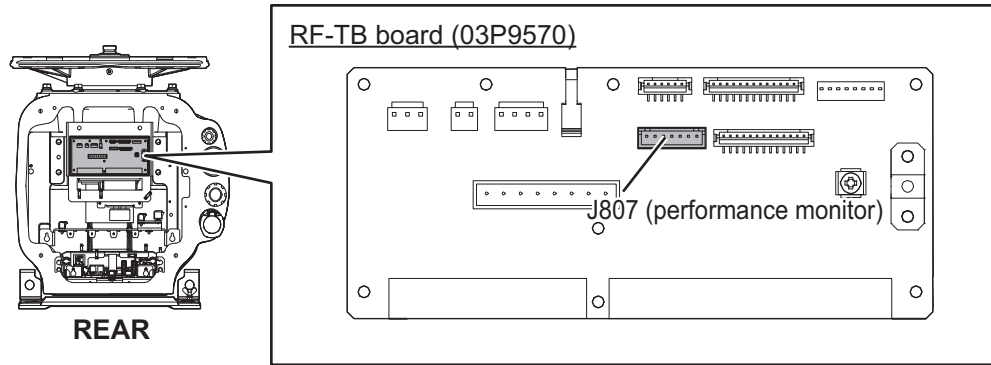


Note 1: The cable for the performance monitor is connected between the rear cover and the RF-TB Board in the Antenna Unit. Open the cover slowly to prevent damage to the cable and connector.

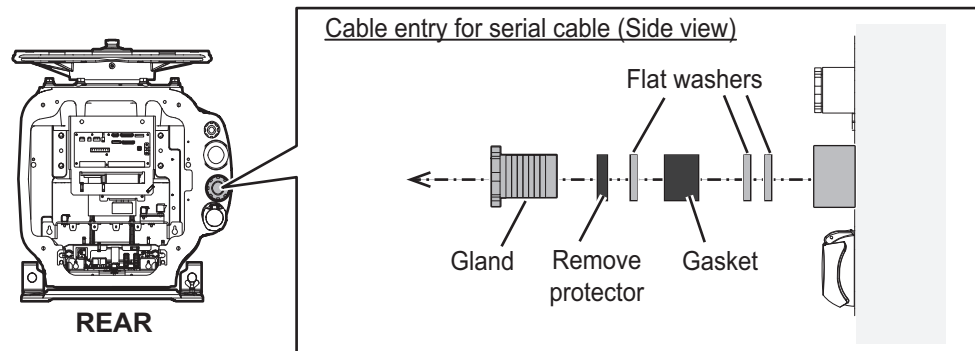
Note 2: If the de-icer is to be installed, remove two M5 screws and spread open the right and left heater elements on the cover, then remove the front cover, being careful not to hit the elements on the radiator or chassis.



2. Disconnect the performance monitor connector (J807) from the RF-TB Board.



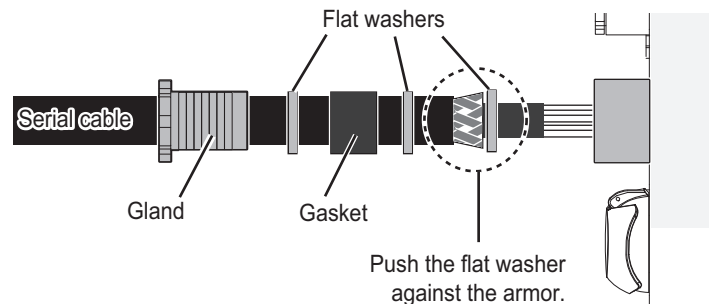
3. Unfasten the cable gland for the serial cable (TTYCSLA-10) and remove the gasket and three flat washers and remove the protector.



4. Slide the cable gland, the gasket and three flat washers onto the cable.

5. Push the flat washer against the armor.

6. Trim the armor so that it does not extend past the flat washers.



7. Pass the serial cable through the cable entrance.

If applicable, unfasten the appropriate cable gland and pass the de-icer power cable through the cable entrance. Pass the cable through appropriate locking wire saddle.

8. Apply the supplied adhesive to the threads of the cable glands, and then fasten it tightly with the hook spanner.

Note: Use the wrench of the correct size referring to cable gland size below. If you do not have the hook spanner, contact your dealer.

- Gland for the antenna cable: $\phi 42$
- Gland for the sub monitor cable or de-icer cable: $\phi 34$

9. Attach the appropriate WAGO connectors to the serial cable, and then connect the serial cable to the RF-TB Board as shown in the following figure. For how to connect the WAGO connector, see "WAGO connector" on page 2-5. For pin arrangement, see the interconnection diagram at the back of this manual.

Note 1: Make sure to pass the cable through the specified locking wire saddle.

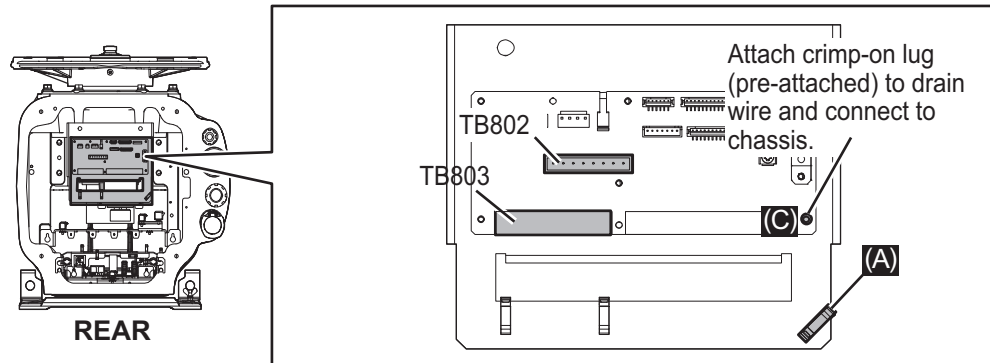
Note 2: A terminal opener is provided on the RF-TB Board.

2. WIRING

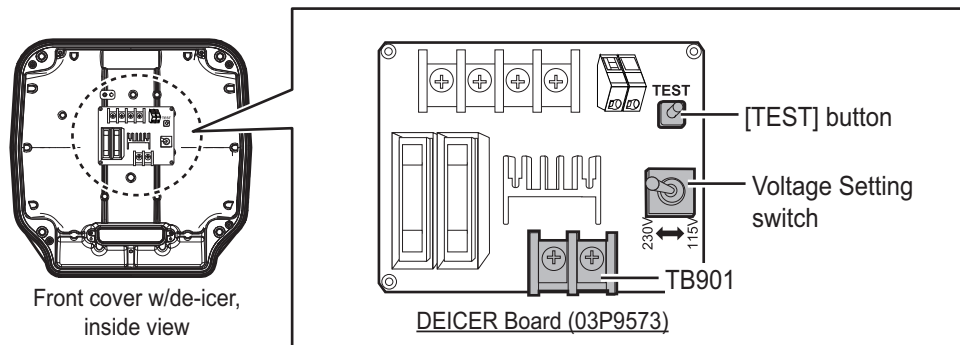
- Destination of serial cable:

Serial line: TB802 (8-pin) and TB803 (16-pin) through the locking wire saddle (A)

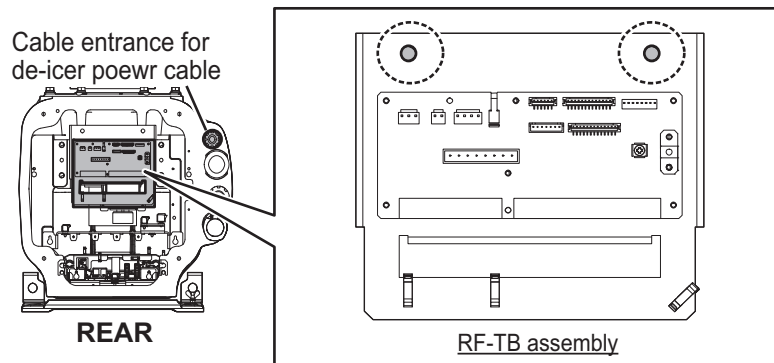
Shield of serial line: Screw (C)



10. For **DE-ICER INSTALLATION**, connect the de-icer power cable the de-icer board 03P9573 attached on the front cover. If the de-icer is not provided, go to step 12.

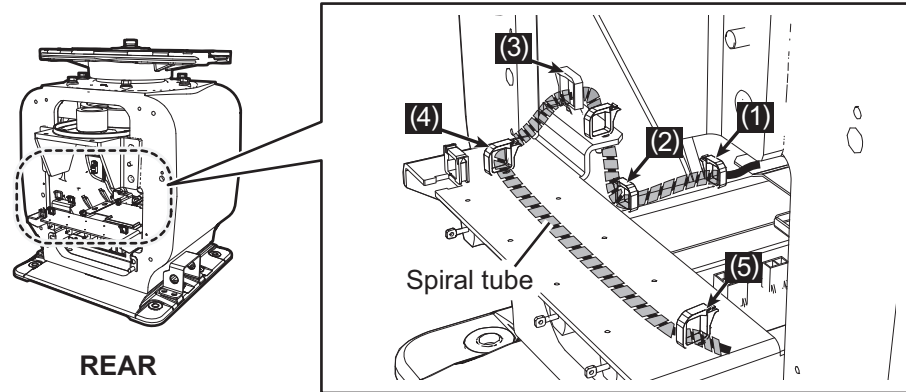


- 1) Unfasten two bolts to remove the RF-TB assembly, then pass the de-icer power cable through the cable entrance.

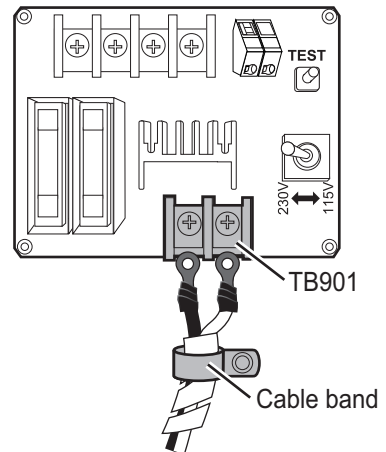


- 2) Wrap the supplied spiral tube around the de-icer power cable, starting from the crimp-on lugs. Set a locking wire saddle (supplied) at location (5) shown

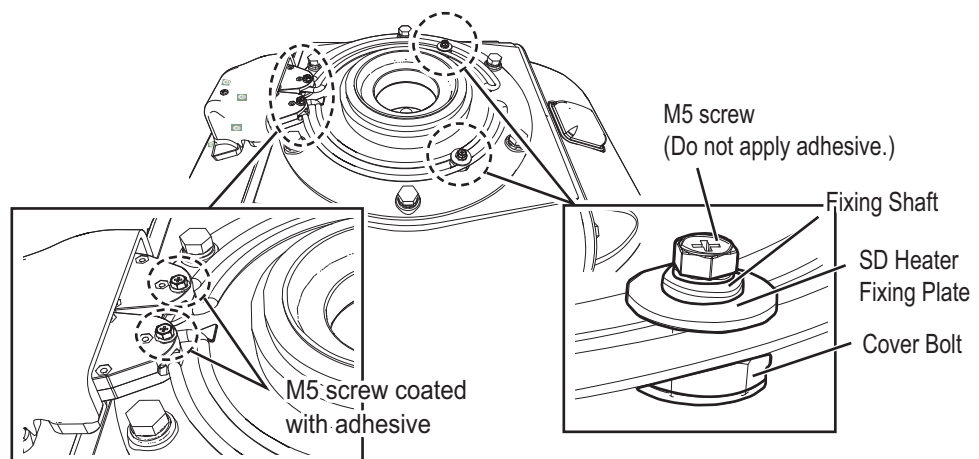
in the following figure. Pass the de-icer power cable through the locking wire saddles (1) to (5) and it to the front side.



- 3) Pass the de-icer power cable through the cable band. Connect the cable to TB901 on the DE-ICER board (03P9573), using the supplied crimp-on lugs.
- 4) Set the Voltage Setting switch according to the power source for the de-icer; 115 V or 230 V. The default setting is 230 V.
- 5) Apply power to the de-icer then press and hold the **TEST** button for about ten seconds. Check that the heater gets hot and then release the **TEST** button.

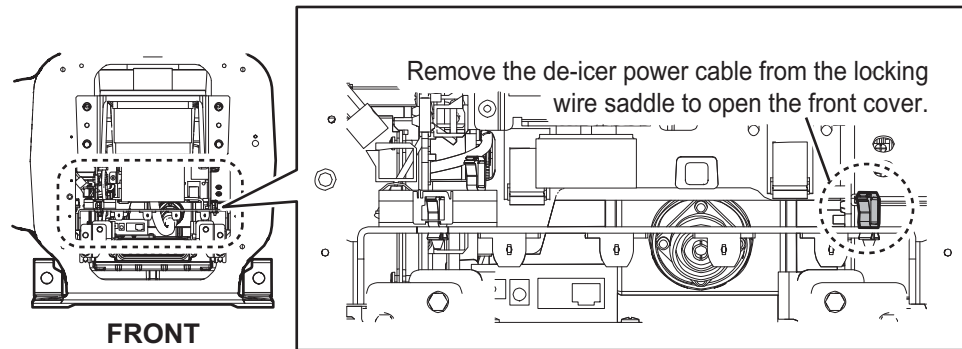


- 6) Set the front cover to the Antenna Unit. Close the open heater and return to its original position. Take care not to hit the heater elements on the chassis or radiator.
- 7) Fasten the two heater elements to the chassis with the four bolts removed at step 1 on page 2-38). Fasten the base of the heater with two bolts coated with the supplied adhesive. Fasten the installation materials to each of the cover bolts.

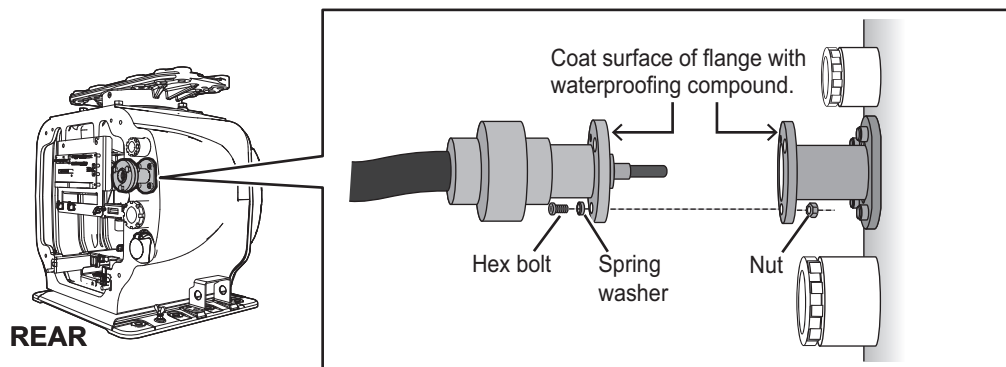


2. WIRING

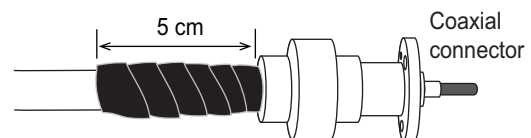
Note: If it is necessary to open the front cover after installing the DE-ICER kit, remove the de-icer power cable from the locking wire saddle shown in the following figure then detach the cover slowly to prevent damage to the heater.



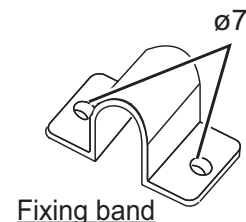
11. Coat the O-ring in the gland for the microwave coaxial cable with silicon grease.
12. Coat the mating surface between the coaxial connector of the cable and the waveguide flange on the Antenna Unit with the supplied waterproofing compound.
Note: Do not coat the O-ring with the waterproofing compound.
13. Fasten the coaxial connector to the waveguide flange with three sets of M6×20 hex bolts, M6 spring washers and M6 nuts.



14. Tape the cable with two or more turns of self-bonding tape then wrap with PVC tape.



15. Secure the cable with fixing bands (supplied) or the optional cable clamping fixture (Type: 03-011-3228) to the mast and to the wheelhouse structure. For the optional through-deck cable gland, see the outline drawing at the back of this manual.



16. Reconnect the performance monitor connector (J807).
17. Check that the gasket on the front and rear cover is seated properly, then close the covers. The torque for the fixing bolts must be 28.0 N•m.
Note: For the de-icer specifications, take care not to hit the heater elements on the chassis or radiator. If the heater hits something, unfasten the fixing screws for the heater to adjust the position of the heater. Then fix the heater again.

2.6 Power Supply Unit

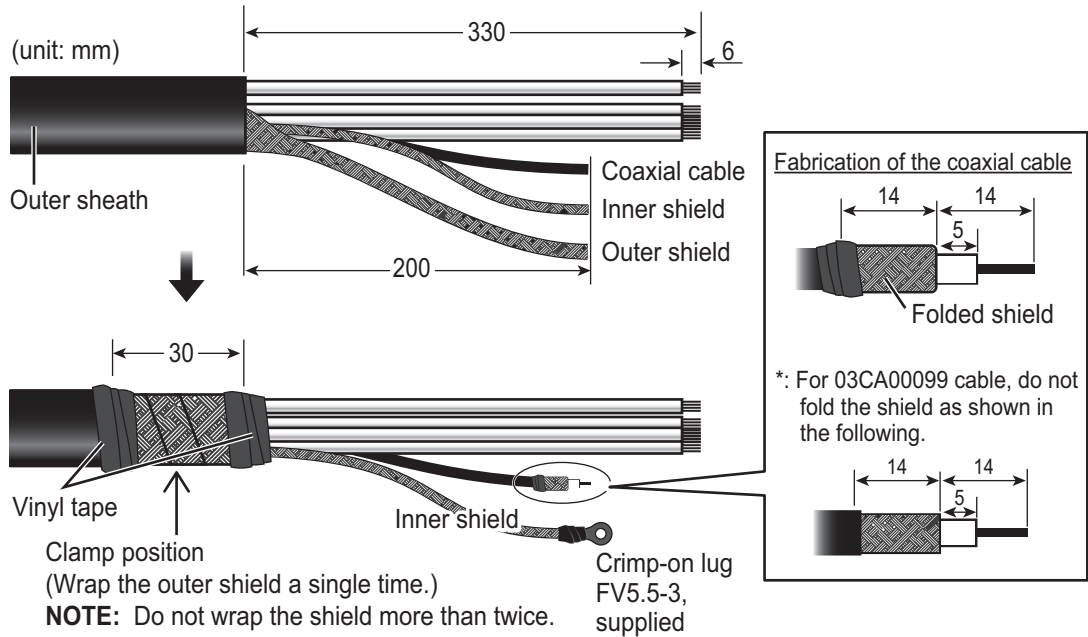
2.6.1 How to fabricate cables

For locations of cables and cores, see the sticker on the reverse side of the top cover.
(All dimensions in millimeters)

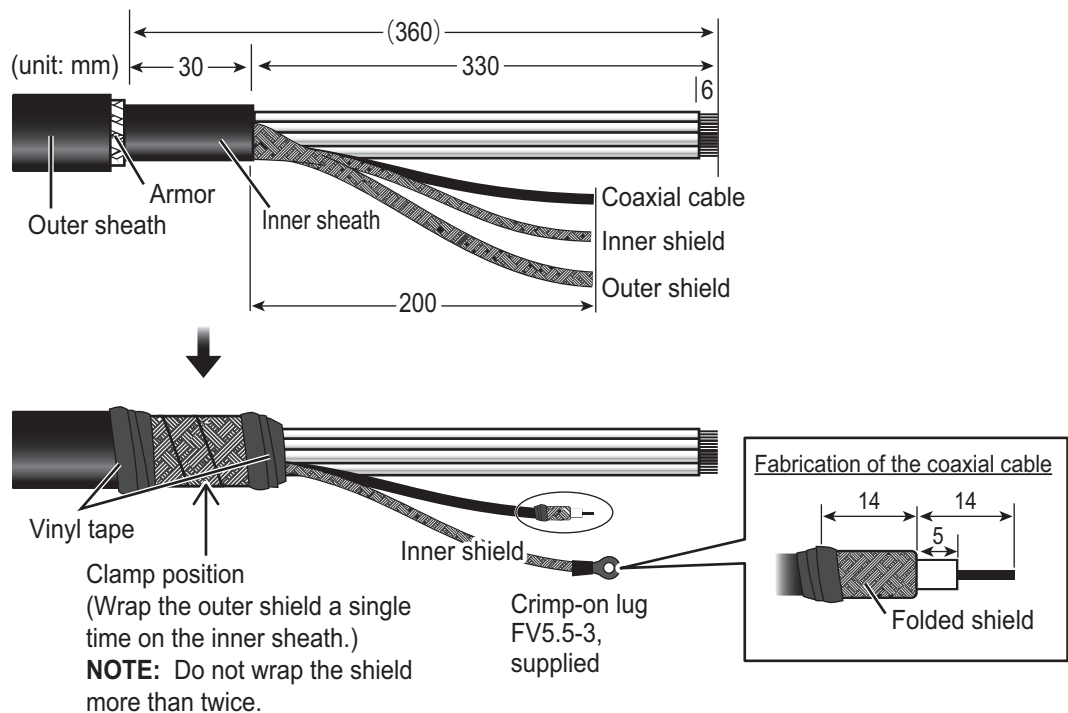
For how to connect the LAN modular plug, see "LAN cable" on page 2-6. For how to connect the WAGO connector, see "WAGO connector" on page 2-5.

RW-0013/RW-0030/03CA00099 (for Antenna cable)

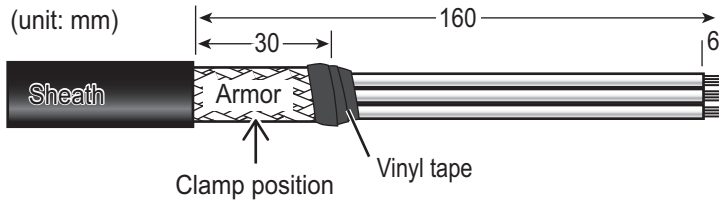
<RW-0013/03CA00099>



<RW-0030>

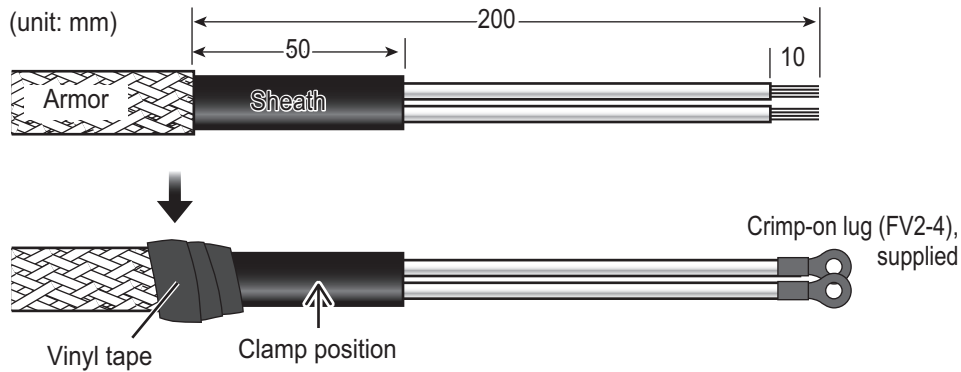


TPYCY-2.5 (for Motor power cable)



DPYC-2.5 cable (for Power)

Clamp the sheath with the cable clamp.



RW-00339 (for Processor Unit)

The end of the cable RW-00339 which connects to the Power Supply Unit is prefabricated. Clamp the cable at the outer shield which is wrapped on the outer sheath.

RW-4864/00136 (for sub monitor)

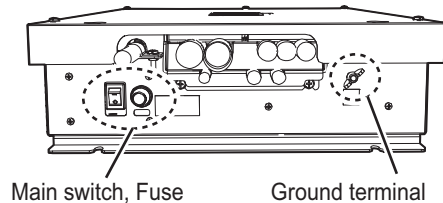
The ends of the sub monitor cable are prefabricated. Clamp the cable at the outer shield.

2.6.2 How to connect cables inside the Power Supply Unit

Connect the ground wire between the ground terminal on the chassis and the ship's earth.

Note 1: If the Processor Unit is turned on, turn it off before wiring of the Power Supply Unit.

Note 2: Turn the main switch of the Processor Unit off before turning the Power Supply Unit off.



How to open/close the top cover

Unfasten five screws (M4×8) to open the top cover from the Processor Unit.

After the appropriate cable connections are completed, fasten five screws to close the top cover.

