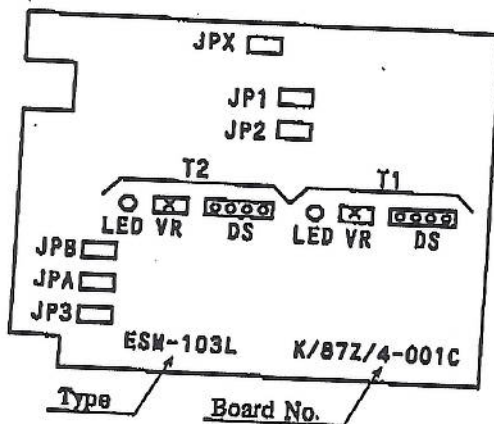


## 3. ESM-103 Series Module

The jumper connection scheme is partially changed for version-up.

When replacing the starter module, follow these instructions to set the Jumper pins and the timer.

## (1) Parts Arrangement



Mounted Parts

| Type       | JP1 | JP2 | JP3 | JPA | JPB | JPX | T1 | T2 |
|------------|-----|-----|-----|-----|-----|-----|----|----|
| ESM-103B   | ○   | ○   | ○   | ○   | ○   | ○   | ○  | ×  |
| ESM-103D   | ○   | ○   | ○   | ○   | ○   | ○   | ○  | ○  |
| ESM-103G   | ○   | ○   | ○   | ○   | ○   | ○   | ×  | ×  |
| ESM-103J   | ○   | ○   | ○   | ○   | ○   | ○   | ○  | ×  |
| ESM-103K   | ○   | ○   | ○   | ○   | ○   | ○   | ○  | ○  |
| ESM-103M   | ○   | ○   | ○   | ○   | ○   | ○   | ○  | ○  |
| ESM-103L   | ○   | ○   | ○   | ○   | ○   | ○   | ○  | ○  |
| ESM-103S   | ×   | ×   | ○   | ○   | ○   | ○   | ○  | ○  |
| ESM-103T   | ×   | ×   | ○   | ○   | ○   | ○   | ○  | ×  |
| ESM-103V   | ×   | ×   | ○   | ○   | ○   | ○   | ○  | ○  |
| ESM-103X   | ×   | ×   | ○   | ○   | ○   | ○   | ○  | ○  |
| ESM-103Y   | ×   | ×   | ○   | ○   | ○   | ○   | ○  | ○  |
| ESM-103Z   | ×   | ×   | ○   | ○   | ○   | ○   | ○  | ○  |
| ESM-103Y-n | ×   | ×   | ○   | ○   | ○   | ○   | ○  | ○  |

○ --- Outfit    × --- Not outfit

## (2) Replacement Precautions

Replace the module board according to the following table.

| New Board      |                           | Board No.                                                                      |                                                                                                                                                            |
|----------------|---------------------------|--------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Existing Board | Board No.                 | K/87Z/4-001A<br>K/87Z/4-001B                                                   | K/87Z/4-001C (D, E, F---)                                                                                                                                  |
|                |                           | Set in the same way as the existing board or according to the separate drawing | JP3--- OPEN<br>JPA--- JUMPER<br>JPB--- OPEN<br>JPX--- JUMPER<br>Set JP1 and JP2 in the same way as the existing board or according to the separate drawing |
|                | K/87Z/4-001C (D, E, F---) | Not applicable                                                                 | Set in the same way as the existing board or according to the separate drawing                                                                             |

Module board K/87Z/4-001A and K/87Z/4-001B are not furnished with JP3, JPA, JPB and JPX.

## (3) Jumper Pin Functions

| Jumper Pin | Setting             | Function                                                          | Remark                                              |
|------------|---------------------|-------------------------------------------------------------------|-----------------------------------------------------|
| JPX        | JUMPER              | Relay 5 --- OFF delay                                             | Applicable to boards with No. K/87Z/4-001C or later |
|            | OPEN                | Relay 5 --- Disable OFF delay function                            |                                                     |
| JP1        | OPEN<br>or<br>CLOSE | For circuit control<br>(For setting refer to the circuit diagram) |                                                     |
| JP2        |                     |                                                                   |                                                     |
| JP3        |                     |                                                                   |                                                     |
| JPA        |                     |                                                                   |                                                     |
| JPB        |                     |                                                                   |                                                     |

## ⚠ Caution

Do not connect the jumper pins of both JPA and JPB. Doing so will cause a short-circuit in the module board and blow out the protective fuse on the module board. The jumper pins of JPA are connected at the factory.

## (4) Timer Setting

Set the timer in the same way as the existing board.

For the setting procedure refer to the label on the near of the module board metal shield cover or the Operating Instructions for the 「MODULES FOR MARINE STARTER CONTROL CIRCUITS」.