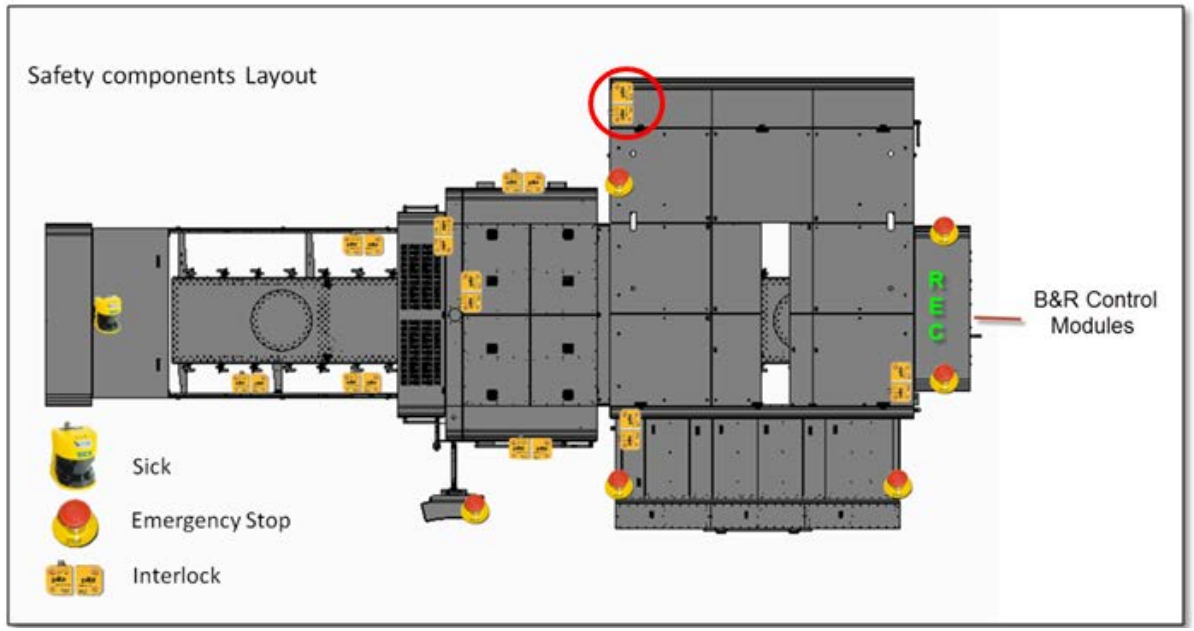
# FB10000 Error Messages Troubleshooting

## Error ID: 67014: Safety – Unloader door is open

**Error Severity:** **Critical**

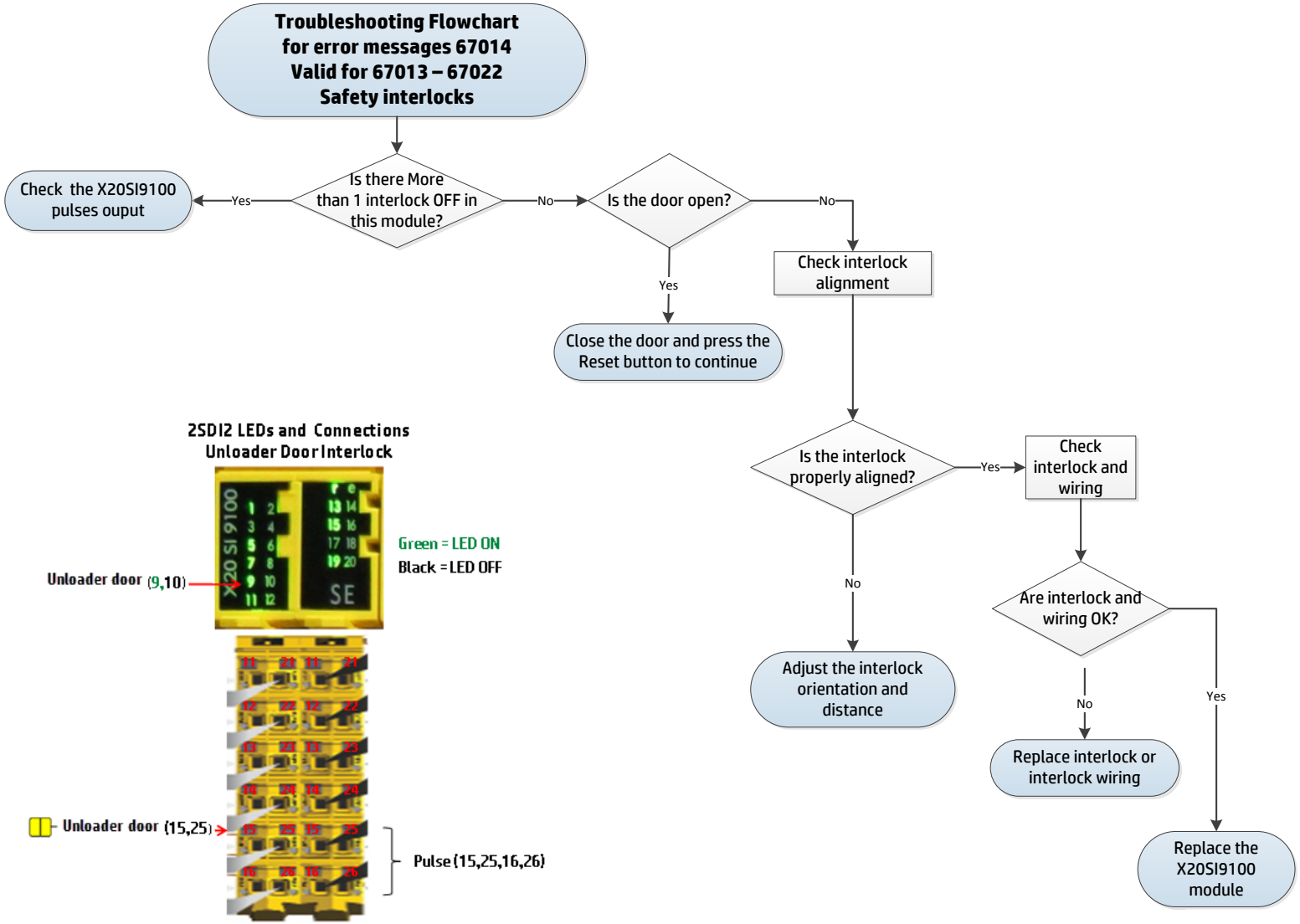
### Possible Causes

- The Unloader door is open
- The Unloader door interlock is not properly aligned
- The interlock is faulty or the cable connecting it to the B&R module is disconnected or damaged
- The B&R module is faulty




Troubleshooting Flowchart

## Troubleshooting Flowchart



## Recommended Actions

### The Unloader door is open

1. Close the door and ensure it is fully closed
2. Press the Reset (blue) button on the operator console.
3. If the lift door was opened during printer operation, perform Get Ready to continue.

### The Unloader door interlock is not properly aligned

1. Check the interlock and ensure it is firmly attached to the printer together with its bracket.
2. Check the orientation of both parts of the interlock and ensure they are aligned with each other.
3. Check the distance between the two interlock parts and ensure they are between 0-3 mm.

**WARNING! High Voltage System! Do not touch any wiring while system is UP!**
**From this stage and on, only an HP certified electrician may perform the tests.**

### The interlock is faulty or cable CX161-03490 connecting it to the B&R module is disconnected or damaged

1. To verify that the module distributes correctly pulses to the TBM distribution block, check voltage of TP 15 via 24V_gnd (24V_0) and of TP25 via 24V_gnd (24V_0). You should get 8-20V. If the voltage measured is 0, this indicates that the entire module does not function properly and should be replaced. If you get 8-20V, continue to the next step.

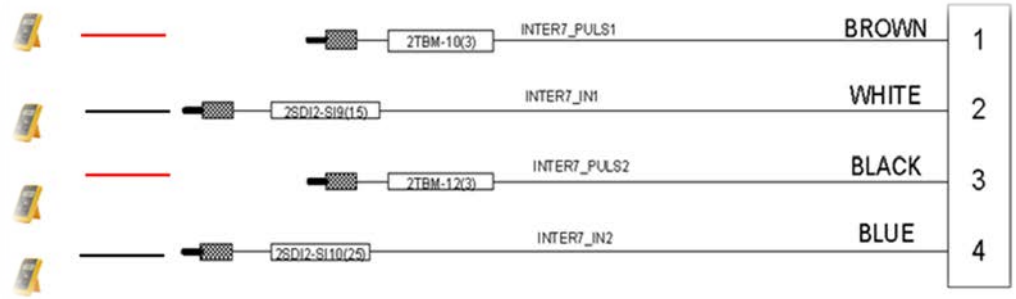
   Note: For redundancy, the 2SDI2 B&R module receives 24V DC and distributes them as 24V pulses through pins 15,16,25,26. From there they are routed to: → TBMs → interlocks → B&R module inputs. Therefore, voltage along this route will be measured as 8-20V.

2. Check the cable connecting the interlock to the B&R module [CX161-03490] and ensure its wires are properly connected to the B&R pins and its coax connector is firmly attached to the interlock receiver.
3. Go to the REC cabinet and check LEDs 9 and 10 in the 2SDI2 B&R safety module. LED 9 & 10 should display as shown below


Door closed correct state


Door open correct state

4. If the LEDS do not behave as shown above, this might indicate one of three:
    - The two parts of the interlock are not aligned
    - The cable is faulty
    - The interlock is faulty.



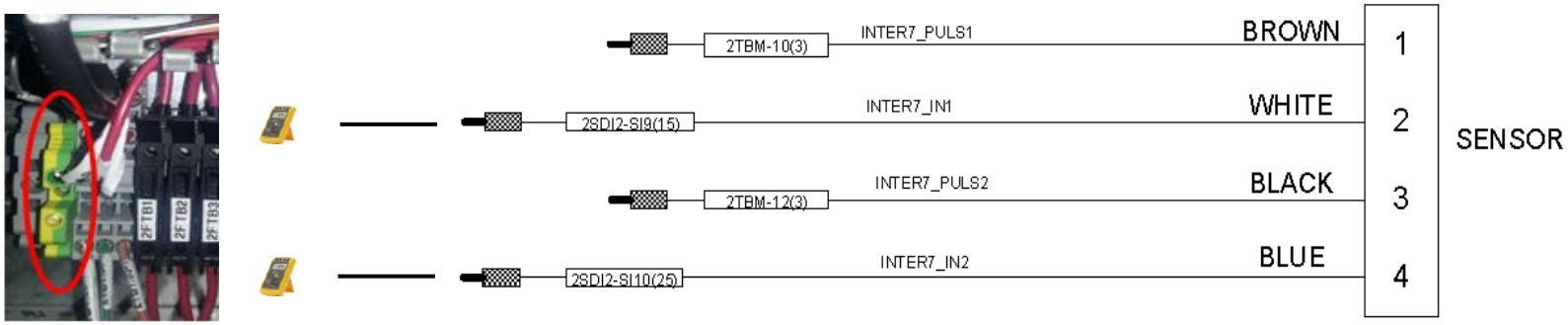


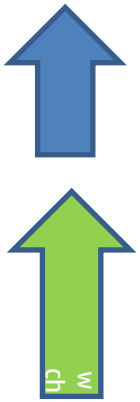
Receiver Transmitter

5. Check the yellow coaxial cable connecting the interlock receiver to the B&R twice: once with the door closed and once with the door open.
6. With the door is CLOSED, disconnect the 2SDI2-SI9(15) white wire from the B&R module and the 2TBM-10(3) brown wire from the TBM block and check their continuity. You should get continuity between these two test points.
7. With the door OPEN, disconnect the 2SDI2-SI10(25) (blue) wire from the B&R module and the 2TBM-12(3) (black) wire from the TBM block and check their continuity. With the door open you should get continuity between these two test points.
8. If the results correspond to the above, then we know that the yellow coaxial cable and both parts of the interlock are ok.
9. If the results do not correspond, this might indicate that the interlock receiver is faulty. If this is the case, replace the receiver.
10. If the problem persists after replacing the receiver, this indicates that the safety B&R module X20 SI9100 might be faulty.

## The B&R module is faulty

1. Measure 2TBM-10(3) and 2TBM-12(3) voltage via 24V_gnd (24V_0). You should get 8-20V this means that the entire route is ok and that the module is faulty.
2. As a last check before replacing the module, ensure that the wires between the pulse outputs and the 2TBM distribution block are properly attached.




Note: Each B&R Safety module is comprised of three parts: Base, BU (Bus Unit), and two (12 pins) terminal blocks. Replacing a faulty B&R module means replacing only its BU, which is the “heart” of the module.

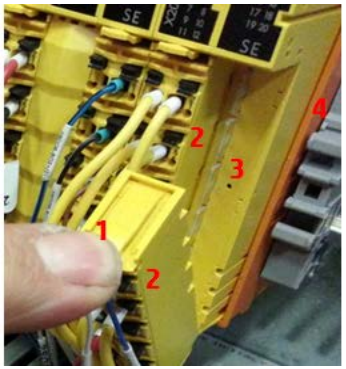
3. Before replacing a B&R module, turn the machine power OFF.
4. Release the two TBs from the faulty BU module together with their wires, as shown in the figure below.
5. Pull the BU out of the module base and replace it by a new module BU module.
6. Plug the two TBs back into the module BU until you hear a click.
   Upon turning on the machine, the R/E led will blink green single pulse, signaling that it has detected the new module.

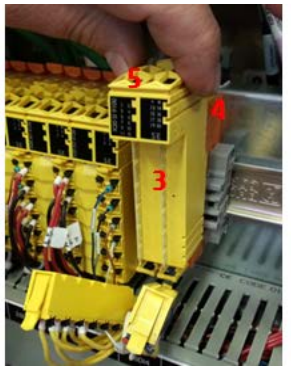
Step 1: Press the two latches (1) on top of the two TBs (2) and unplug them from the faulty BU.

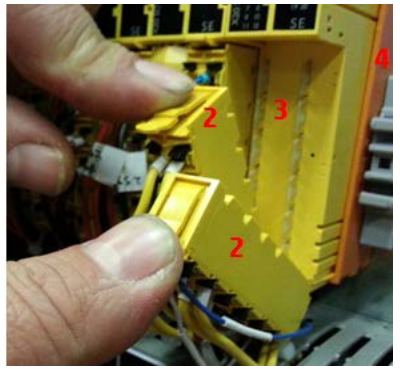
Step 2: Press the two latches (5) on top of the module BU (3) and unplug it from its base (4).

Step 3: Plug the new BU (3) into its base (4).

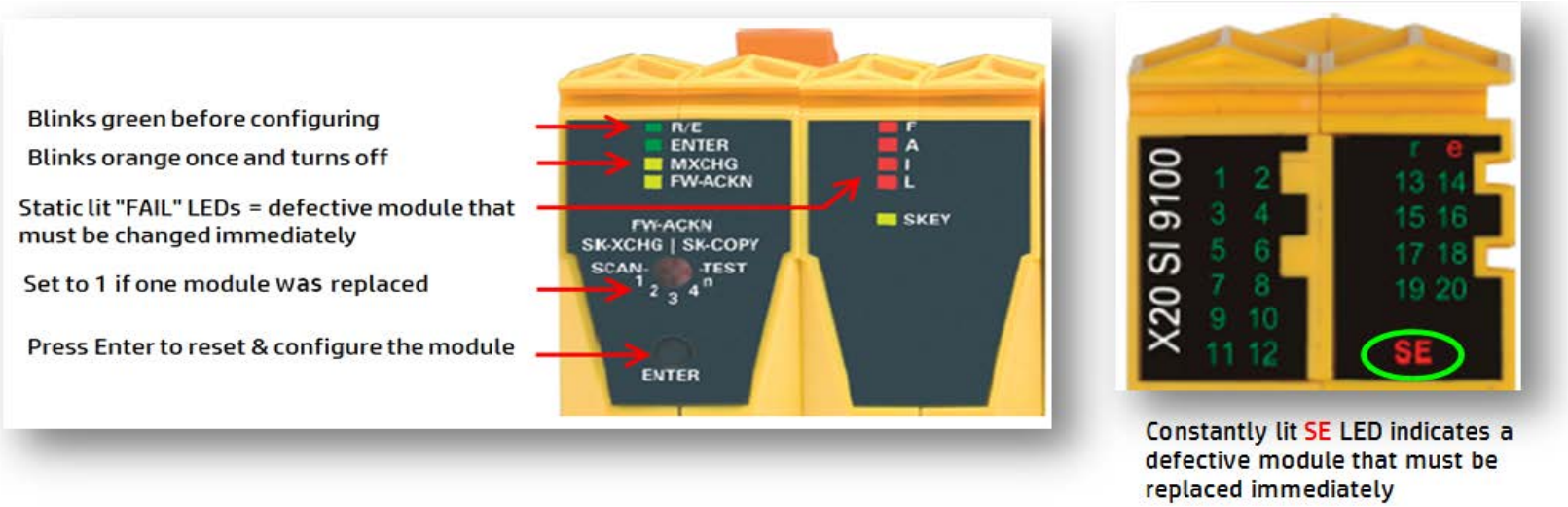
Step 4: Plug the two TBs (2) back into the BU (3) until you hear a click.




7. Turn the machine on and configure the B&R Safety PLC to recognize and set the new module(s) as described below.




8. Set the Safety PLC selector to 1 (one new module) and press the Enter button to instruct the Safety PLC to configure the new module. Upon completion, the MXCHG LED will blink orange single pulse and then will turn off to confirm that the module was configured.

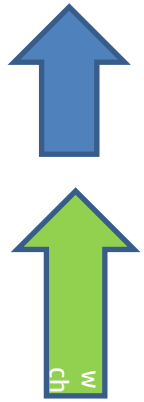
Note: This procedure takes up to two minutes. However, when the PLC encounters internal errors, it runs a full system scan and resets the entire system. This procedure takes between 40 to 60 minutes.

9. If the MXCHG LED continues blinking orange single pulse every 5 seconds, this indicates that the PLC failed to configure the new module (in case of 2 replaced modules, it will blink twice every 5 seconds etc.). Check if you have set the scan selector according to the number of new modules.

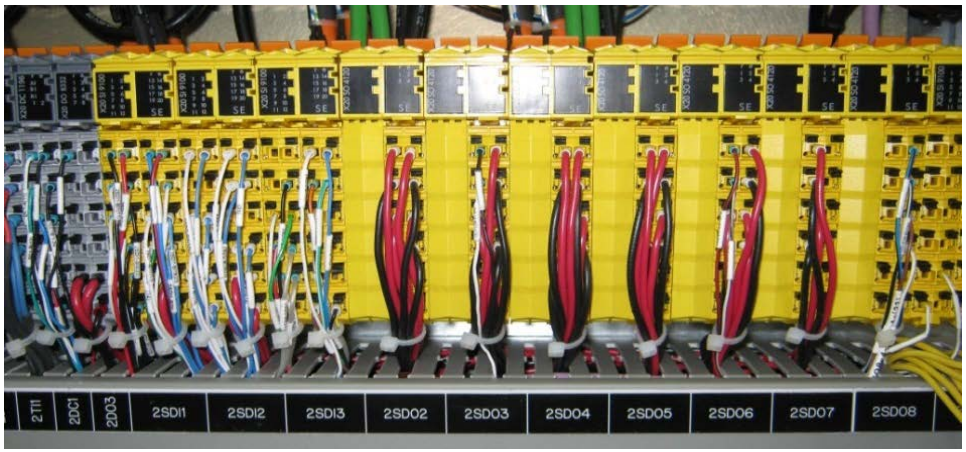
   Note: Interchanging two existing modules will be detected by the Safety PLC as two new modules.

10. If the MXCHG LED continues blinking orange single pulse every 5 seconds, please consult the detailed B&R PLC configuration guide, on page 4 for further instructions.
11. If none of the above steps solved the problem, contact your HP service specialist.

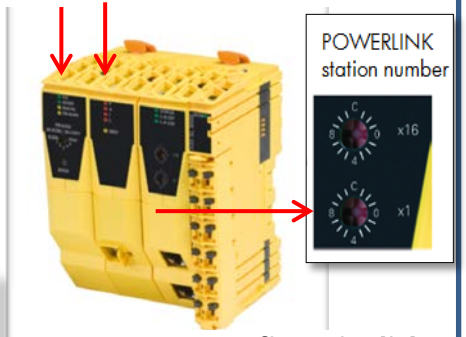
    Note: The diagram in the page below shows the tested components and provides a legend of the B&R naming conventions.



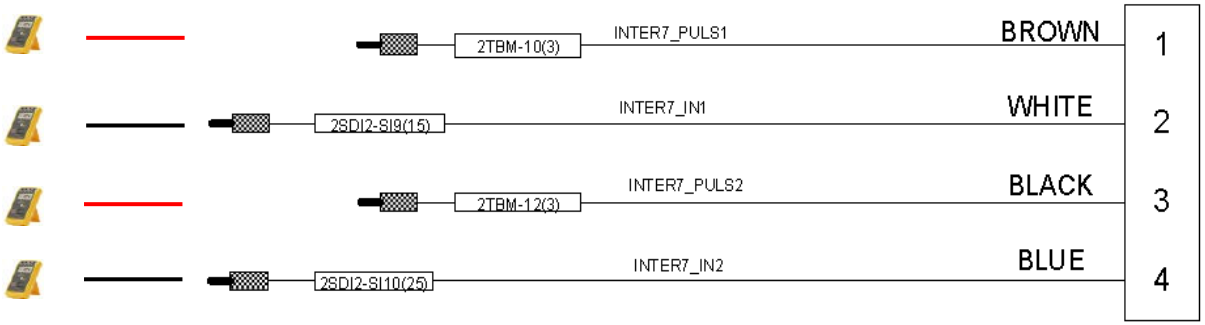
2SDI1
Digital Input 1


B&R Safety

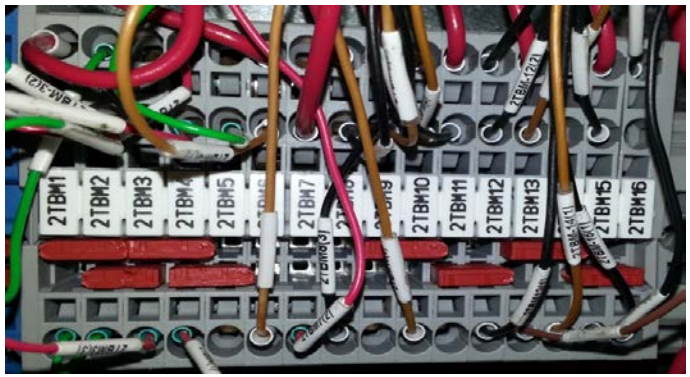


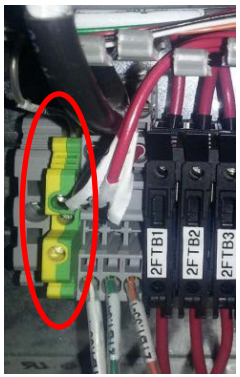

**Configuration link is set as Station 6**








| Location [2=REC] | S = Safety | I/O Type | B&R Module # | B&R LED # | Terminal point |
|---|---|---|---|---|---|
| 2 | S | DI | 2 – SI 9 | | (15) |