

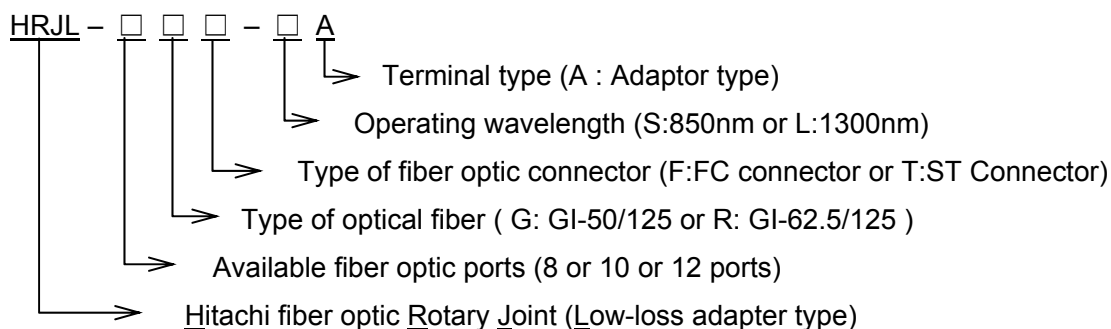
Maintenance Guideline
 for
Fiber Optic Rotary Joint for Type HRJL-12RT-SA

1. Description

This specifications to provide maintenance of FORJ by the customer.

2. Type

The designation used in our product type has the following definition.



3. Test item for maintenance

FORJ must be removed from the facilities when maintenance is done.

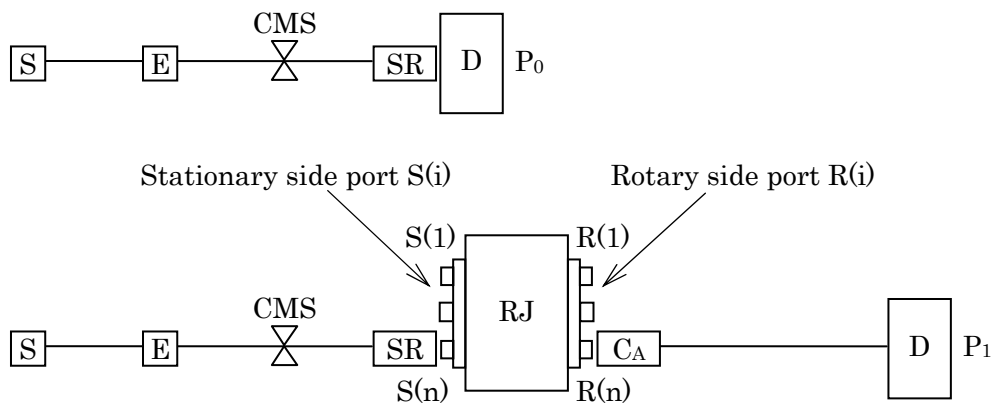
The test items are below.

(1) Check of smoothness for rotary holder.

Rotate the rotary holder slowly. And, make sure rotary holder rotates smoothly.

(2) Measurement of insertion loss

Insertion loss shall be measured in accordance with IEC 874-1(2)27. I. 2. 3.



$$\text{Insertion Loss [dB]} = P_1 - P_0$$

Rotate the rotary holder for two turns, and record maximum(P_{\max}) and minimum(P_{\min}) output power.

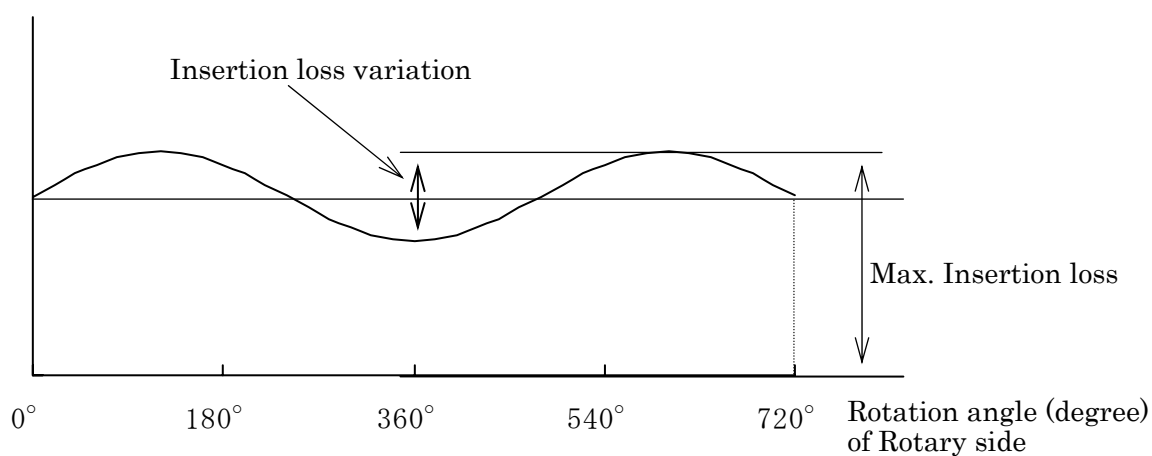


Fig. 1

- S : LED source 850nm
- E :Excitation system
- CMS :Cladding mode stripper
- SR :Standard reference connector (ST type)
- D :Detector
- C_A :Connector (ST type)
- S(i) :i-th port of stationary side
- R(j) :j-th port of rotary side
- $P_0=P_0(i)$:Input power into S(i) port
- $P_1(j)$:Output power from R(j) port

4. Frequency of maintenance

Maintenance should be done every six months.

But, the number of hours worked will be considered when the frequency is decided.

Maintenance Check for Fiber Optic Rotary Joint

| | |
|---------------|--------------|
| Type | HRJL-12RT-SA |
| Production ID | |
| Facilities | |

| | |
|-------------|--|
| Date | |
| Tester | |
| Temperature | |

| Item | Requirement | | | | | | Result |
|-----------------------------|---------------------------------|-----------------------|-----------------------|---|--|---|--------------|
| Smoothness of rotary holder | Rotary holder rotates smoothly. | | | | | | PASS FAIL |
| Insertion loss | P ₀ : Input Power | | | dB | | | PASS FAIL |
| | Port No | Max. P _{max} | Min. P _{min} | Insertion loss | | | |
| | | | | Max. IL _{max} : P _{max} - P ₀ ≤ 2.0 dB | Min. IL _{min} : P _{min} - P ₀ | Change in loss IL _{max} - IL _{min} ≤ 1.0 dB | |
| | 1 | | | | | | |
| | 2 | | | | | | |
| | 3 | | | | | | |
| | 4 | | | | | | |
| | 5 | | | | | | |
| | 6 | | | | | | |
| | 7 | | | | | | |
| | 8 | | | | | | |
| | 9 | | | | | | |
| | 10 | | | | | | |
| 11 | | | | | | | |
| 12 | | | | | | | |

Result : PASS / FAIL

Overhaul will be needed when the result is FAIL.

Also, please compare the result with the previous result.

Please ask HITACHI when a change is large.

End of Document