QUICK CARD

OTDR modules with a Multi-fiber switch and Cable-SLM SW option

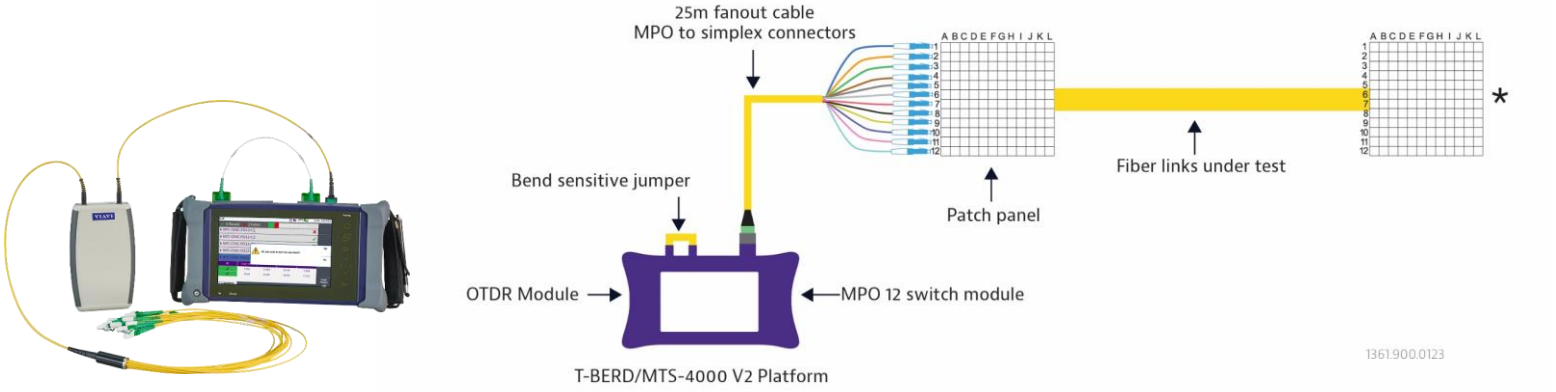
The following procedure describes how to create an automatic OTDR test sequence with a Multi-fiber E41MPOxxxSM switch.

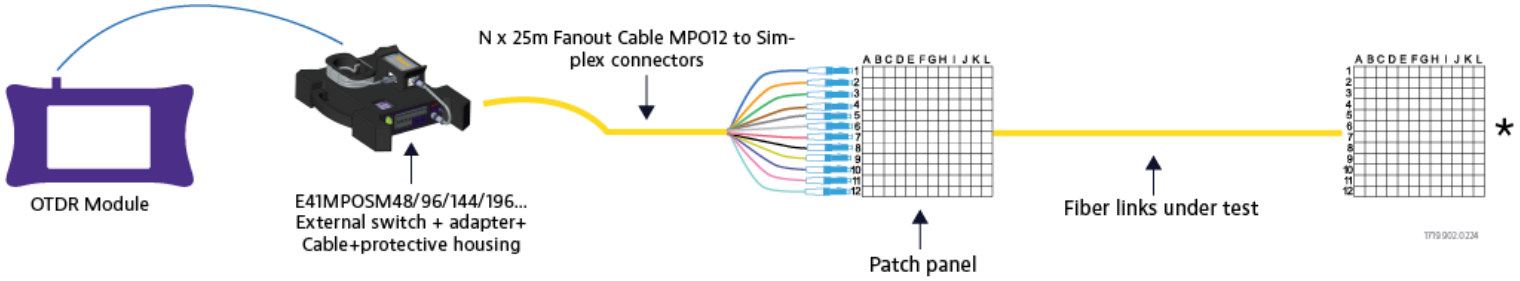
This option will reduce the time to test multiple fiber links from high fiber count cables.

TEST SCENARIOS

- Two test scenarios are described in this document.

1-OTDR automated test sequence with simplex connectors, using fanout test cables.





QUICK CARD

OTDR modules with a Multi-fiber switch module / Cable-SLM SW option

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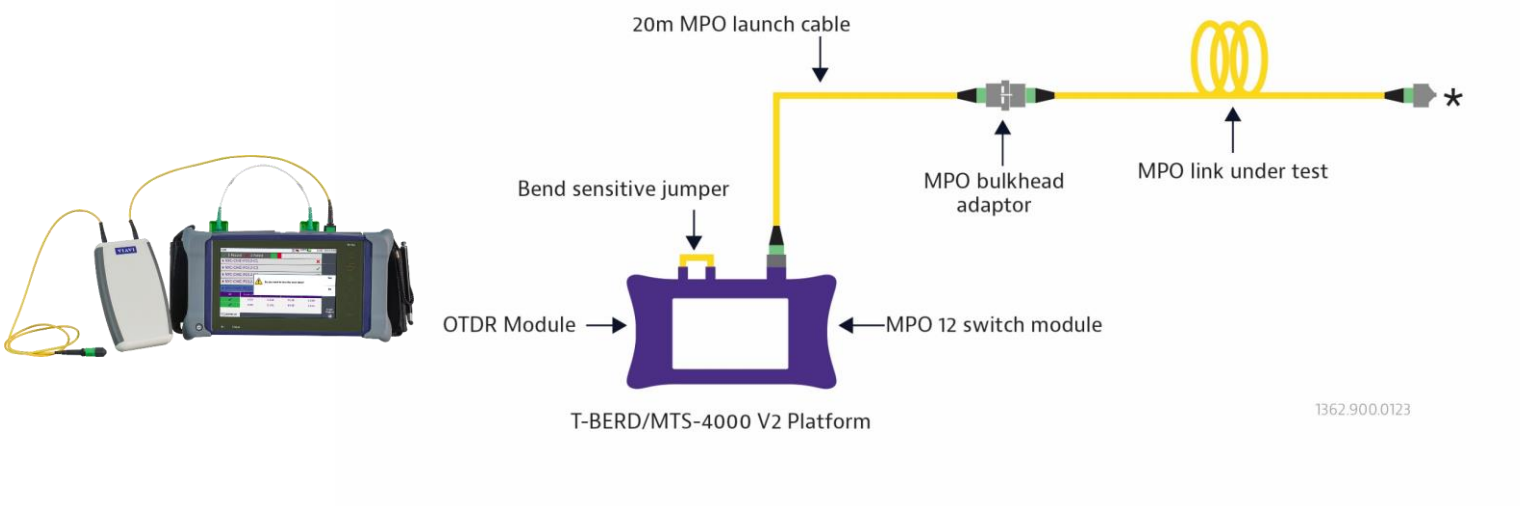
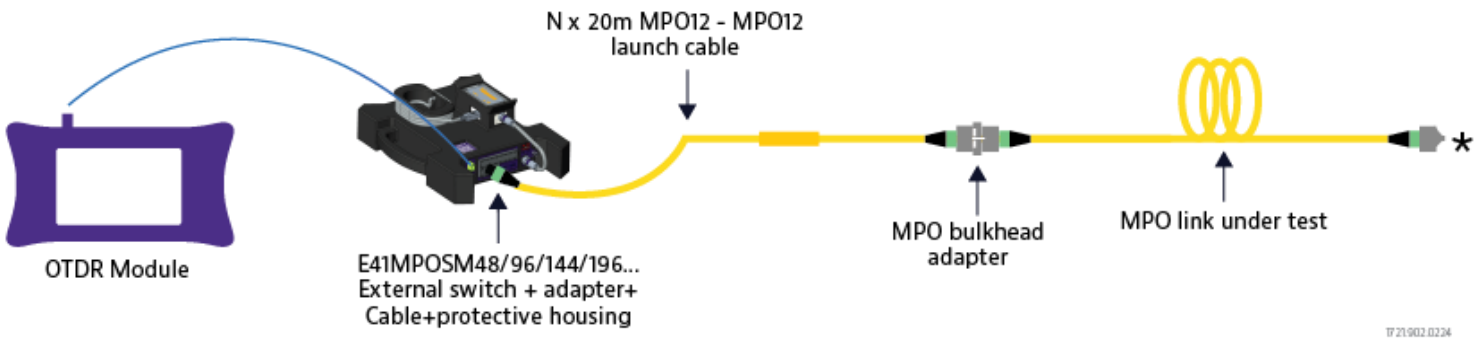
TEST SCENARIOS

► Two test scenarios are described in this document.

2- OTDR automated test sequence with native MPO connectors.





QUICK CARD

Full process steps

Estimation time for the 1st getting started: 20 min.(if 100% manual)

1-INSPECT AND CLEAN CONNECTORS

2-CONNECT ALL HARDWARE

3-ACTIVATE THE FUNCTIONS

4-CONFIGURE THE OTDR MEASUREMENT*/**

5-CONFIGURE DATA STORAGE */**

6-CONFIGURE A PROJECT FOR AN AUTOMATIC SWITCH SEQUENCE**

7-CUSTOMIZE THE TEST SEQUENCE

8-RUN TESTS

9-VIEW RESULTS

10-REDO TEST

11-GENERATE THE SUMMARY PROJECT REPORT*

Note

The steps marked with “One star” can be performed immediately by just loading a configuration file.

The steps marked with “Two stars” can be performed through Stratasync /TPA to streamline all the configuration process.

T-BERD/MTS 4000V2 / One Advisor 800

SW version ≥ 23.6x

VIAVI Solutions

QUICK CARD

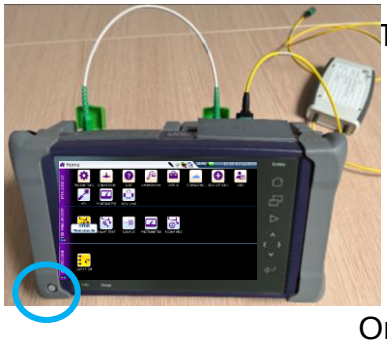
INSPECT AND CLEAN CONNECTORS

Before connecting a fiber to the test set, inspect and clean the tester bulkhead and the test cables (TC) connectors.

► Use a video inspection scope / probe to inspect connector end faces for dirt and/or damage. Inspect ALL connectors including bulkheads and test ports.

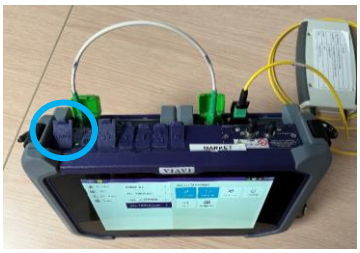
CONNECT ALL HARDWARE - with on board E41MPO12SM switch

1. Connect the SC/APC Switch module port to the OTDR port with the 30 cm dedicated bend insensitive jumper. (This jumper is always provided with the switch module.)
2. Connect a fanout cable MPO to simplex connectors or a MPO launch cable to the MPO pinned switch module port.
3. Press the ON/OFF hard key to turn on both units.

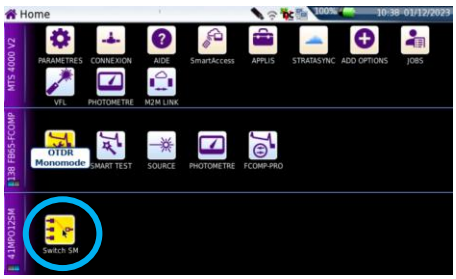


T-BERD/MTS

One Advisor 800

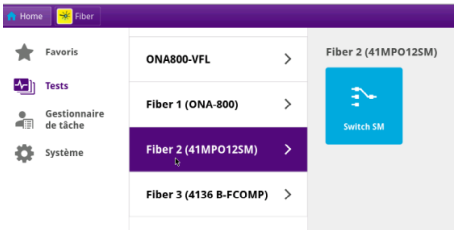


ACTIVATE THE FUNCTIONS - with on board E41MPO12SM switch



T-BERD/MTS…:

On the HOME page, tap on the icon « Expert OTDR» and the icon « Switch SM » (the icon turns yellow when app is active).



One Adivsor 800:

On the HOME page, press “Tests”. Press the icon « OTDR Expert» and the icon « Switch SM » to turn on the functions. (the icon turns blue when app is active).

T-BERD/MTS 4000V2 / One Advisor 800

SW version ≥ 23.6x

VIAVI Solutions

QUICK CARD

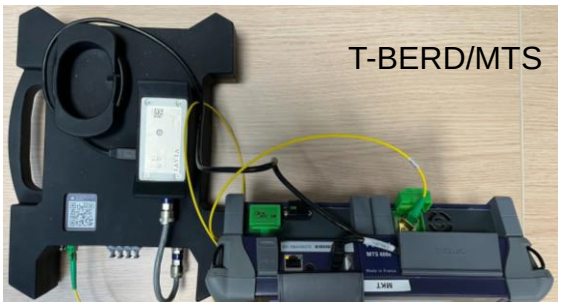
INSPECT AND CLEAN CONNECTORS

Before connecting a fiber to the test set, inspect and clean the tester bulkhead and the test cables (TC) connectors.

► Use a video inspection scope / probe to inspect connector end faces for dirt and/or damage. Inspect ALL connectors including bulkheads and test ports.

CONNECT ALL HARDWARE - with high capacity E41MPOxxSM switch

1. Connect the LC/APC Switch module port to the OTDR port with the 3m dedicated bend insensitive jumper. (This jumper is always provided with the switch module.)
2. Connect the USB connector port cable to the USB mainframe unit port
3. Connect a fanout cable MPO to simplex connectors or a MPO launch cable to the MPO pinned switch module port.
4. Press the ON/OFF hard key to turn on both units.



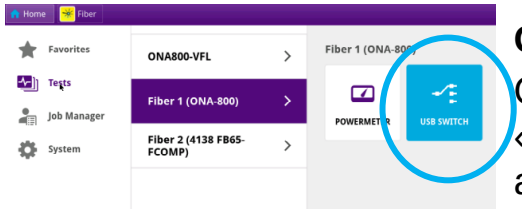
T-BERD/MTS

One Advisor 800

ACTIVATE THE FUNCTIONS - with high capacity E41MPOxxSM switch

T-BERD/MTS…:

On the HOME page, tap on the icon « Expert OTDR» and the icon « USB Switch » (the icon turns yellow when app is active).



One Adivsor 800:

On the HOME page, press “Tests”. Press the icon « ONA800/ USB Switch » to turn on the switch. Select the appropriate icon for the OTDR selection (the icon turns blue when app is active).

QUICK CARD

CONFIGURE THE OTDR MEASUREMENT

Tap the **Setup** soft key.

- Press **Load config**. file. and select the pre-defined config.

"OTDR AutoTest Singlemode.SM" (recommended)

Or

- Edit your manual configuration by following the next following steps.

Acquisition:

Switch Port:

- For an Automatic sequence: Do not fill this field as port selection/switching is managed directly by the project creation/ opening (next step) in cable tab.
- For a Manual sequence: select the port number/channel corresponding to the fiber to be tested.

Laser: "1310/1550 nm" or "All" to enable bend detection with the OTDR.

Acquisition mode:

- **Manual**: select **Range, Pulse, Resolution & Acq. time**
- **Auto** : Recommended
- **SmartAcq:** select **Acq. time**

Connector test = "Yes & continue" (recommended)

Test Cables: Adjust only the **Launch Cable / Receive cable** and select Yes to **Include Link start connector** and **Link End Connector**

Alarms:

- **Alarm level:** Fail (Recommended)
- **Threshold :** Default (Recommended)

Display: adjust accordingly

- Section Attenuation / Section Length / Index of Refraction/ Scatter Coefficient/ Distance Unit/ Results On Trace / Show Cursors

Advanced:

- Front connector Measurement: no (recommended) / Detection/ Event after End: no (recommended)

QUICK CARD

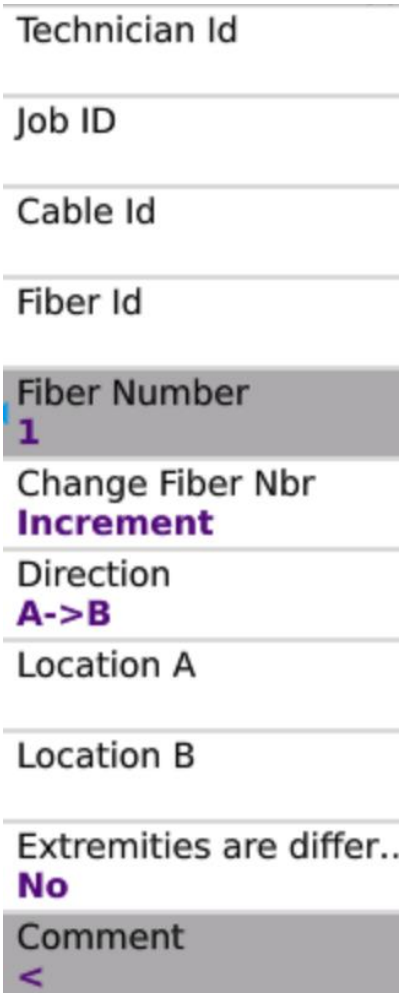
CONFIGURE DATA STORAGE

Tap **Link Description** and customize the information

- Technician Id
- Job ID
- Cable Id
- Fiber ID
- Change Fiber Number : no need to set up (see **Create project** section)
- Direction
- Location A and Location B :here you can name each location
- Extremities are different = No

(Yes is currently not managed with a project)

- Comment



In the Report area**:**

Do NOT fill the following fields, as they are automatically managed by the project. (next step). :

– “File save in”, “Filenaming”, “Autostore”

Only fill the following:

- File Content: All traces

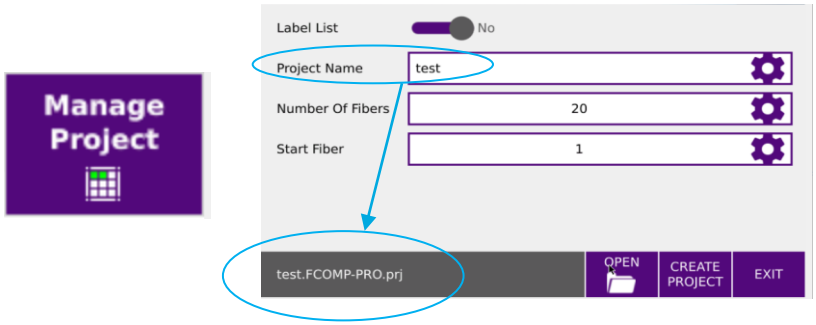
(“one and all traces” is currently not managed with a project)

- **Report As**: select the report format: .pdf recommended

QUICK CARD

CONFIGURE A PROJECT FOR AN AUTOMATIC SWITCH SEQUENCE

1. Tap the **MANAGE Project** soft key in order to create a project.



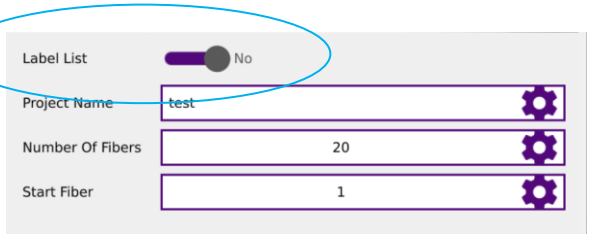
Managing the test with an opened project automates the switching sequence.

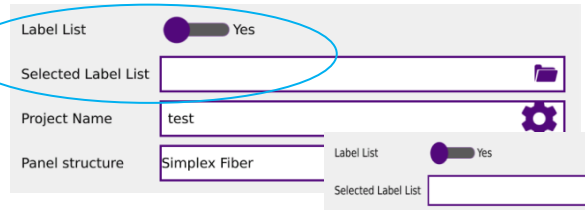
When a project is created, a project sub folder is automatically created in the main directory « EXPERT_OTDR > OTDR_SM ». All measurement files and reports are automatically saved in this dedicated directory as well as the summary cable report. (see Generate summary project report section)

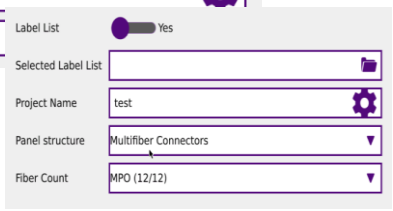
- If the fibers do not have labels (default), just fill the project name, number of fibers to be tested and the start fiber number.

Or

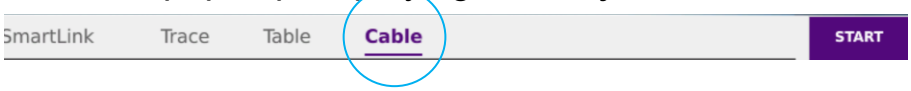
- If a Label list should be used, set “Label list” to Yes and browse by clicking on the “selected label list” section. A .csv label list example is stored in the Project directory.
- Fill the other requested information. accordingly.







2. Press “Create Project” .
If a project with a similar name already exists, a pop-up message “modifying file not allowed” will be displayed.
A new ”Cable” tab pops up displaying the Project: with fiber number or labels.



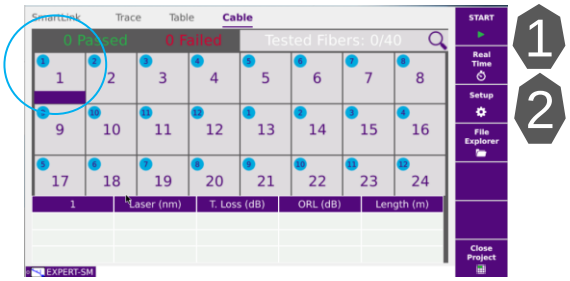
NOTE
Once a project is created, the parameters cannot be modified except those from “Acquisition”.

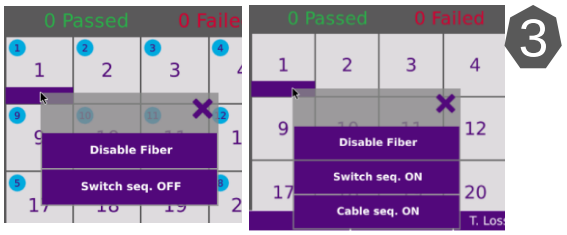
QUICK CARD

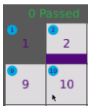
CUSTOMIZE THE TEST SEQUENCE

Project **without** fiber labels

1. The Cable tab displays a « bingo » card. The Blue circles on top left of each square indicates the switch port number.
2. The test sequence starts from the fiber / label case underlined in purple.
3. A customizing menu is displayed by making a long press on any case.







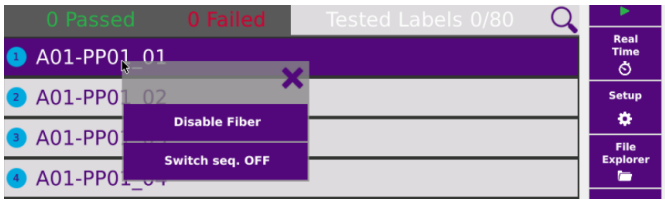
- ► Disable a selected fiber (= Disable fiber) / Disable all the project (= Switch seq. OFF)

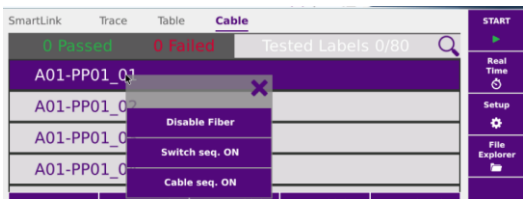
Disabled cases turn dark grey

- ► Re-activate a switch sequence (= switch seq. ON) or re-activate the full project (= Cable seq. ON).

Project **with** fiber labels - Simplex connectors connectors

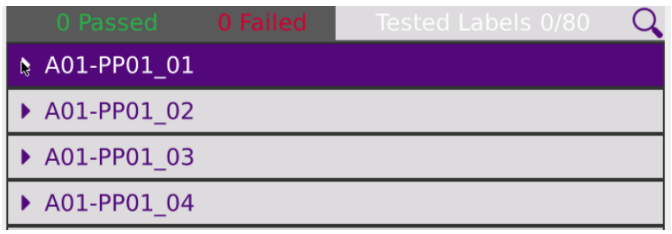
Same process as above.

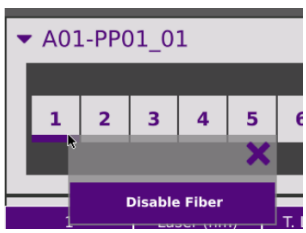


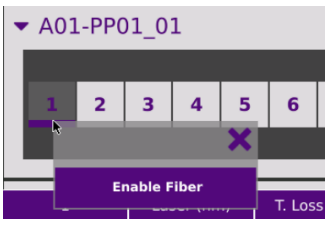


Project **with** fiber labels - Multifiber connectors (MPO)

With Multifiber connectors, you can unselect fibers one by one with a long press.



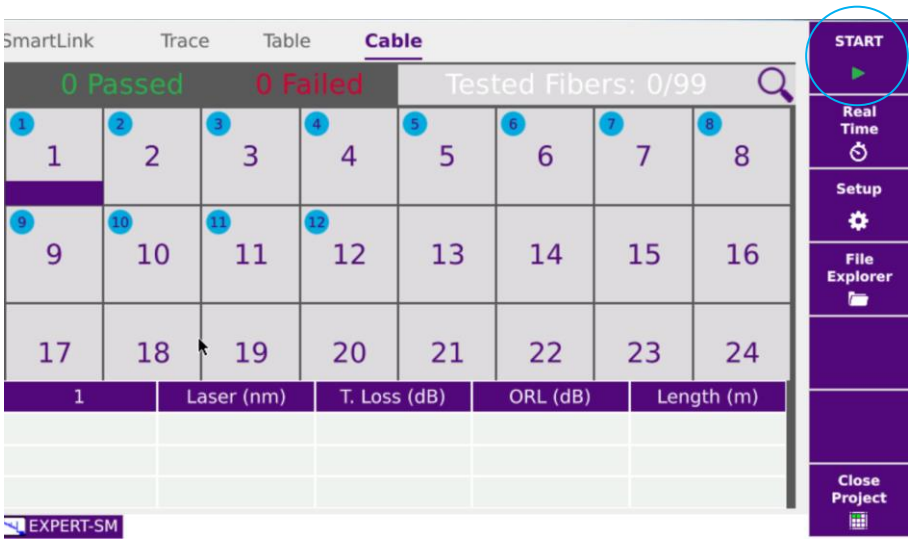




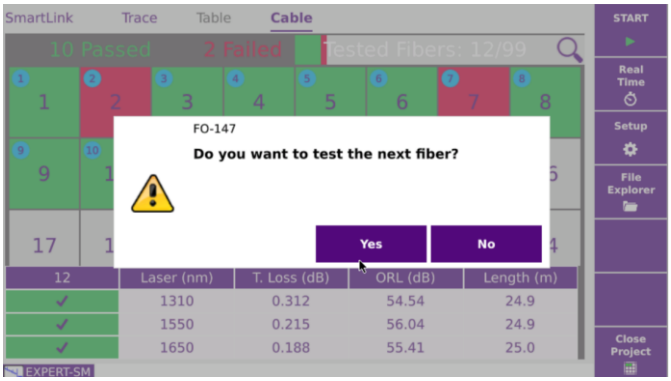
QUICK CARD

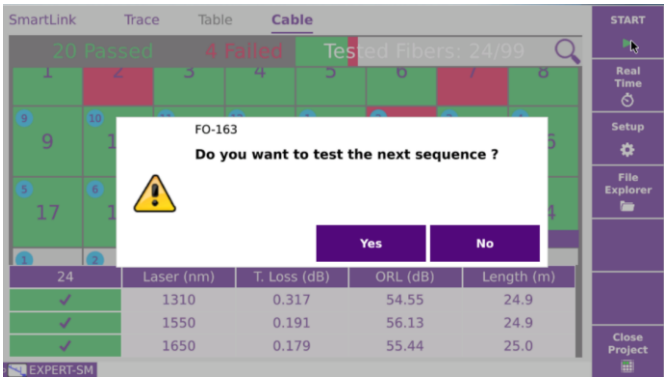
RUN TESTS

1. Press **START** – preferably from Cable tab to make sure of the fiber selection.



2. Once the test sequence is complete, a message pops up asking either to test ”the next fiber” or “the next 12 fibers sequence” depending on your customization





3. Prior pressing YES, disconnect the launch/receive cables from the already tested batch and connect them to the next batch to be tested.

QUICK CARD

VIEW RESULTS

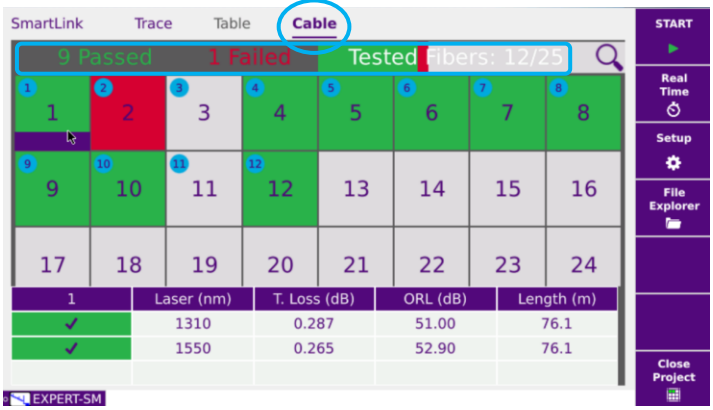
In **Cable tab:**

A **summary** is available on the top of the list indicating the numbers of Passed / Failed / Tested fibers.

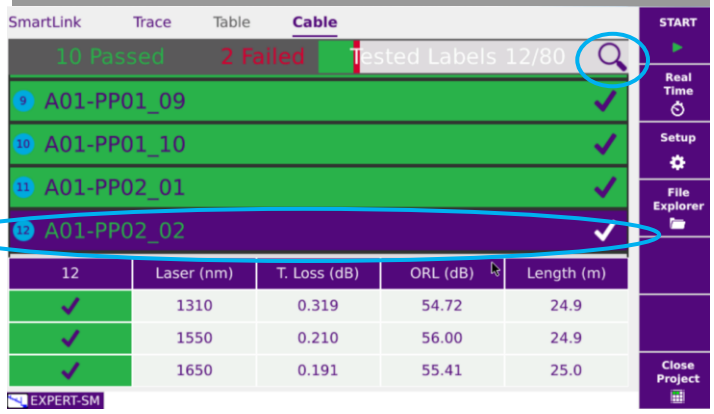
A **test status** is provided for each fiber with a color coding.

- Green = Passed / Red = Failed
- No color = no test performed
- Dark grey = unselected fiber
- Caution: No alarm or Stop pressed during sequence -> without color

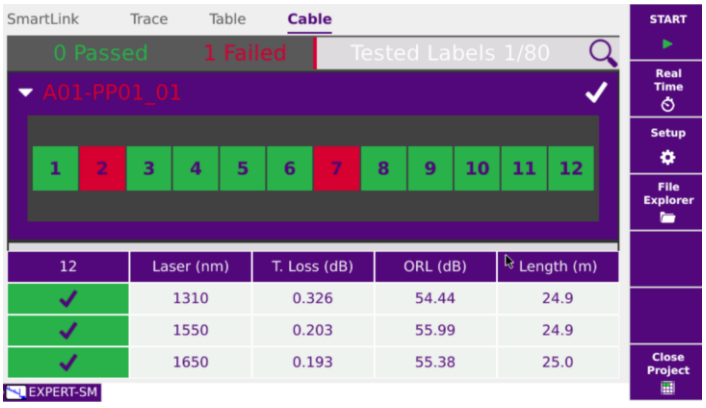
Project without label



Project with label Simplex connectors connectors



Project with label Multifiber connectors



For **Individual fiber** results: select the fiber in the cable tab (the selected fiber will be underlined in purple)

Tip: To easily find a fiber, press the search glass icon (top right). It displays a filter to select fiber number or label number.

T-BERD/MTS 4000V2 / One Advisor 800

SW version ≥ 23.6x

VIAVI Solutions

QUICK CARD

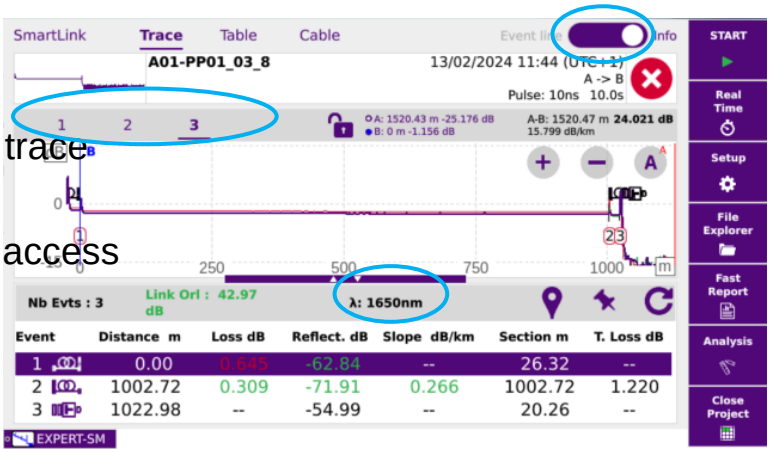
VIEW RESULTS

In Trace tab

All traces (up to 3) are displayed .

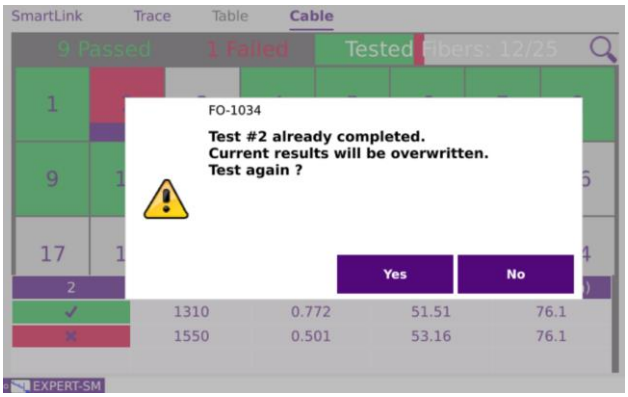
Browse through each trace by selecting the trace number.

Clicking on the Smartlink or Table tabs give access to the other results representation.



REDO TEST

1. Identify the cause of failure and troubleshoot the fiber
2. In the cable tab, select the fiber to be retested.
3. Hit the start button to re-test.
4. Press Yes to overwrite automatically the existing failed results which will then be replaced.



GENERATE THE SUMMARY PROJECT REPORT

1. When all tests and re-do are finished: Press “Close Project” key
2. A summary .pdf cable report is automatically generated and stored in the project directory.