VIAVI Solutions

Referencing and Testing UNPINNED 12 Fiber MM MPO APC Links

With the Viavi MPOLx

November 2025

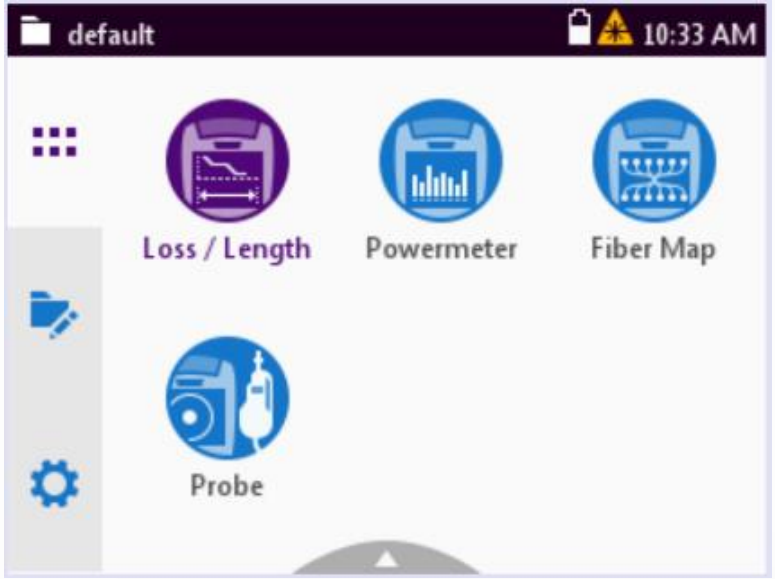
Link Testing of UNPINNED Multimode Links

With Adapter Cord Reference Method

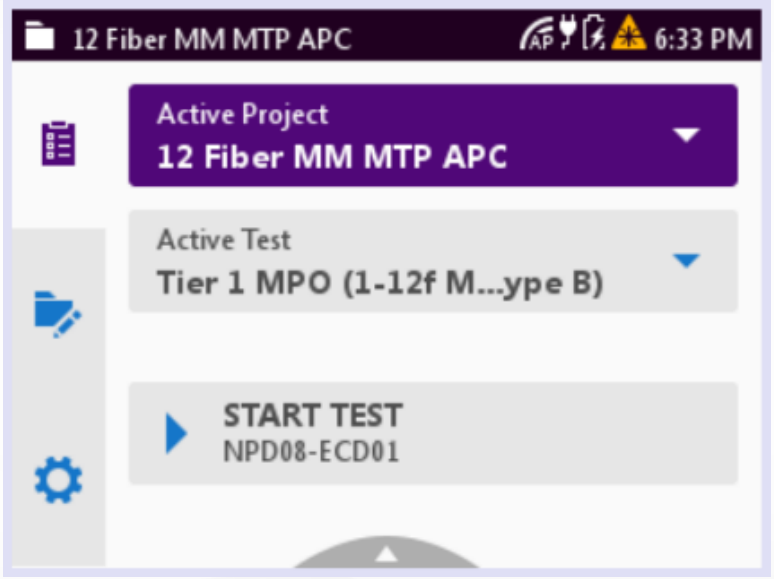
Specific to 12 Fiber **UNPINNED** MPO **APC** Terminated Links

When powered on, the home screen layout is based on the active project type

Default layout is Test Tool Mode



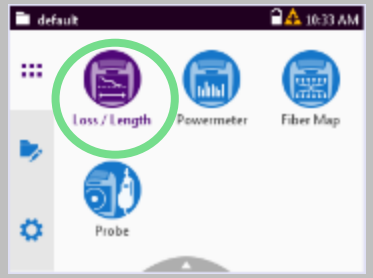
Workflow/Test Process Automation Mode



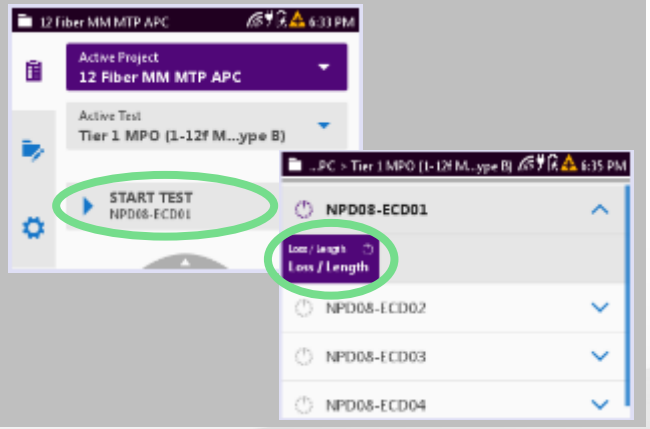
The default Reference Wizard (guide) does not pertain to this test configuration and must be turned off in Test Configuration

- **Click on Loss / Length icon or START TEST**

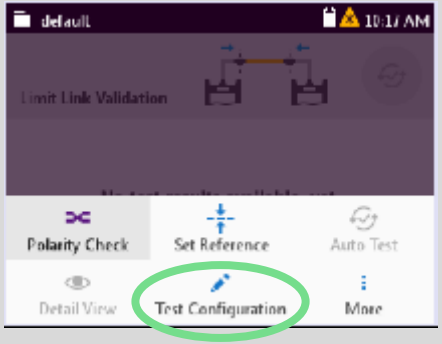
Test Tool Mode



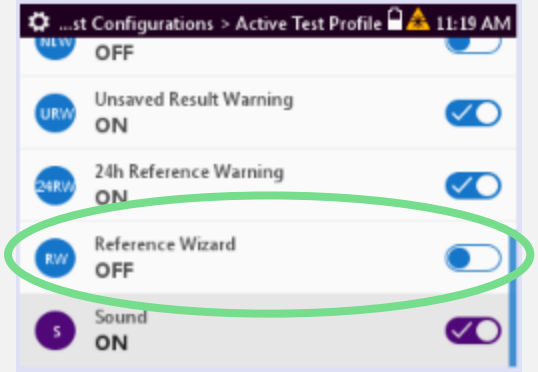
Workflow/TPA mode



- **Click on the Menu button**



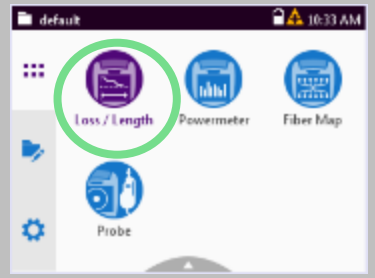
- **Create a new test configuration or go to the Active Test Profile and scroll down to turn Reference Wizard OFF**



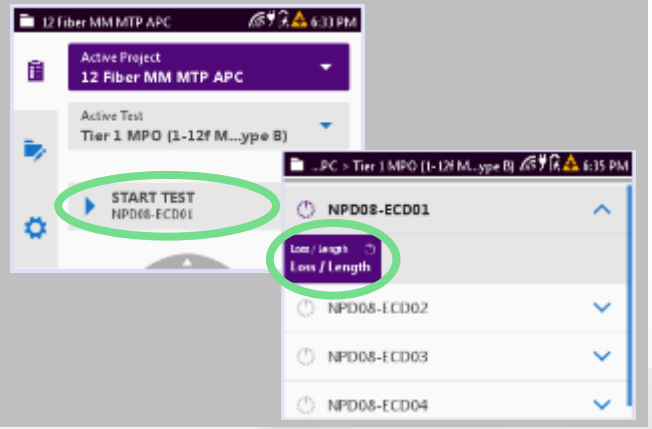
Go to Set Reference to begin the referencing process

- Click on Loss / Length icon or START TEST

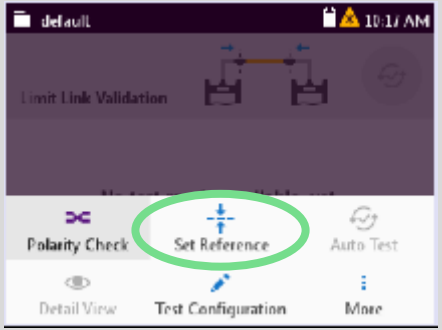
Test Tool Mode



Workflow/TPA mode



- Click on the Menu button



- FOLLOW THE STEP BY STEP PROCESS TO PERFORM A ONE JUMPER REFERENCE, REFERENCE VERIFICATION, AND TO BEGIN TESTING

Required Test Cords

Adapter Cord Reference Method

For testing 12 fiber MM UNPINNED MPO APC Type B Links

All test reference cords (TRCs) must be “low attenuation grade” with a mated pair loss of 0.35dB or less

- TC1 (launch cord): MM UPC-unpinned to APC-unpinned, Polarity B
- TC2 (receive cord): MM UPC-unpinned to APC-pinned, Polarity A
- TC3 (adapter cord): MM APC-pinned to APC-pinned, Polarity B, length ≤ 2m
- SC1 (substitution/verification cord): MM APC-unpinned to APC-unpinned, Polarity B

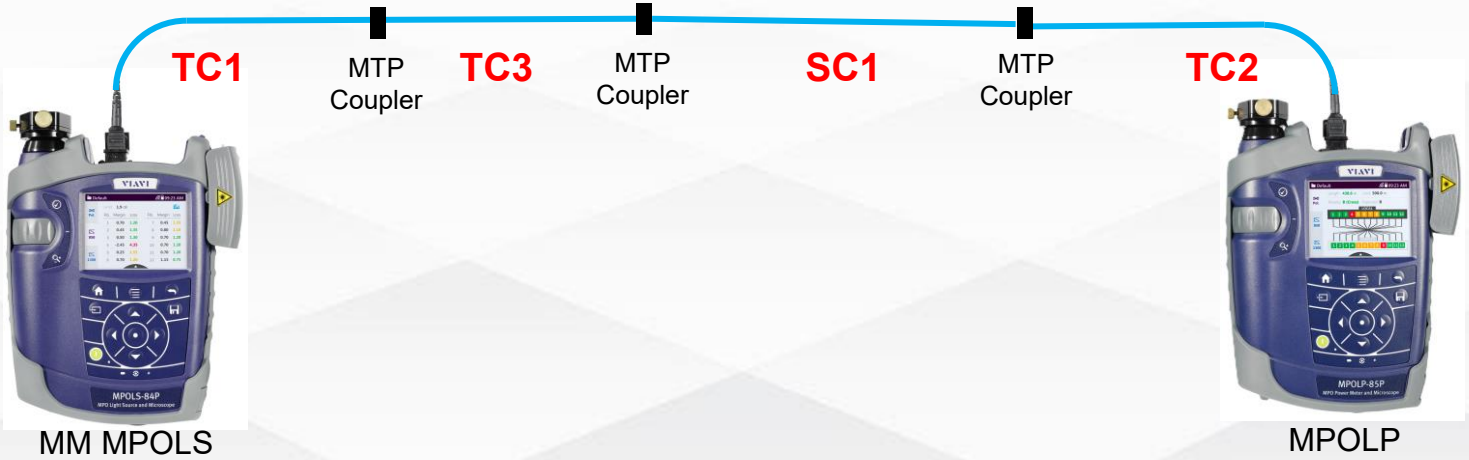
Based on the size of your project, it is extremely important to have multiple sets of TRCs on hand.

For reference: An MPO connector is rated for 500 mating cycles, however how the TRCs are cared for can impact that number either way

Test cords required for Link testing?

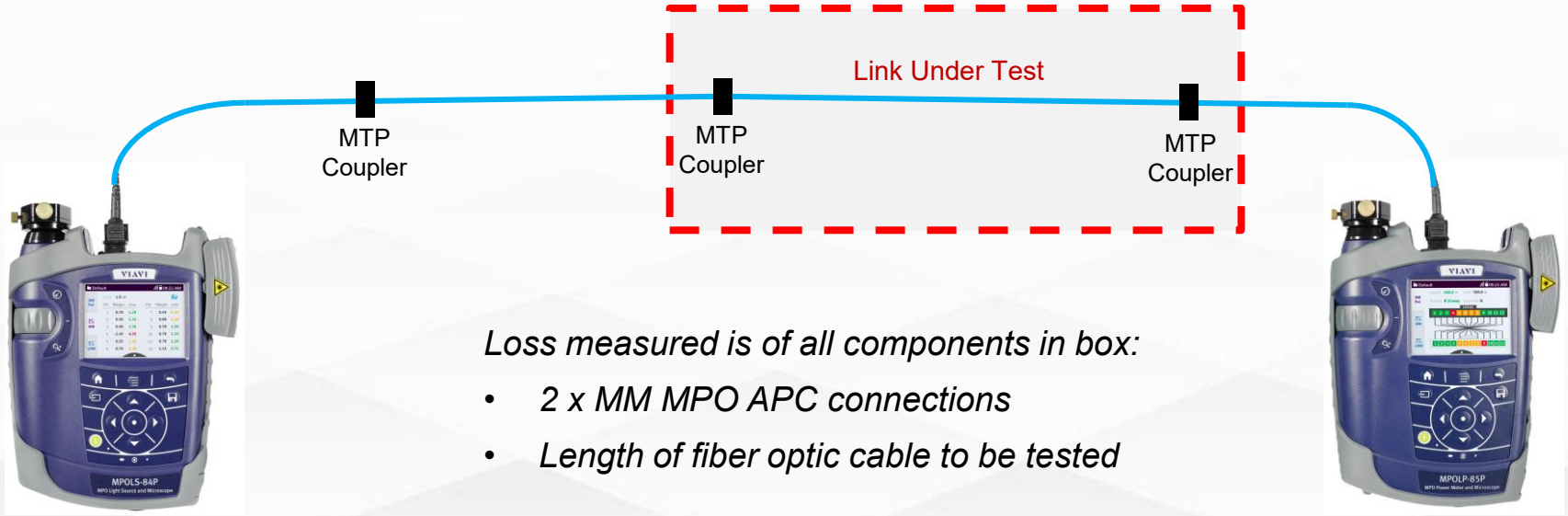
All test reference cords (TRCs) must be “low attenuation grade” – mated pair loss of 0.35dB or less

- TC1 (launch cord): MM PC-unpinned to APC-unpinned, Polarity B
- TC2 (receive cord): MM PC-unpinned to APC-pinned, Polarity A
- TC3 (adapter cord): MM APC-pinned to APC-pinned, Polarity B
- SC1 (substitution/verification cord): MM APC-unpinned to APC-unpinned, Polarity B



What needs to be tested?

Link tests need to **include** the loss between the test cords and the link under test



Loss measured is of all components in box:

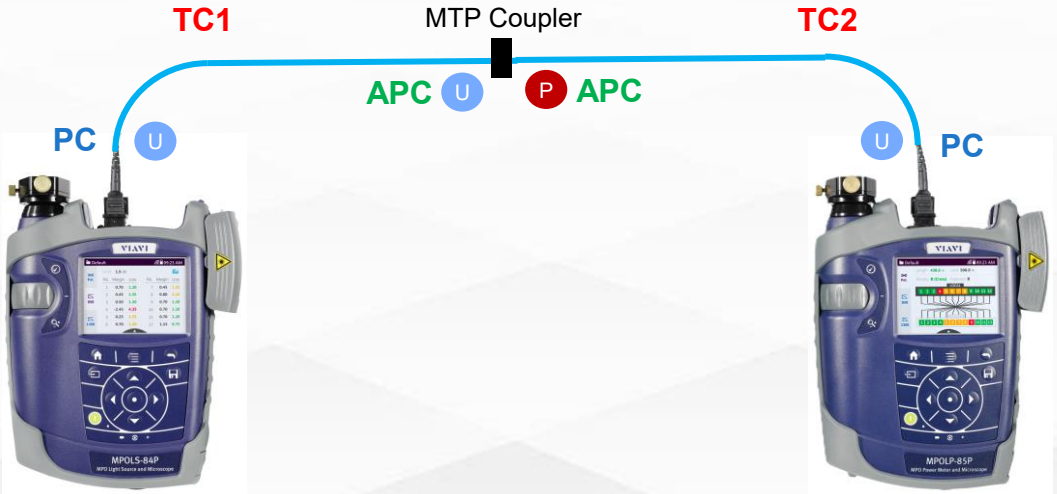
- *2 x MM MPO APC connections*
- *Length of fiber optic cable to be tested*

MM MPOLS-84

MPOLP-85

Step 1: Set the Reference

- **Turn off the Reference Wizard** - the default wizard (on screen guide) does not apply to this reference configuration. See previous slide for instructions on how to turn this feature off.
- Connect the MPOLS-84 to the MPOLP-85 using TC1, an MPO coupler, and TC2 as shown below
- Set the reference



MM MPOLS-84

MPOLP-85

U = Unpinned MTP Connector

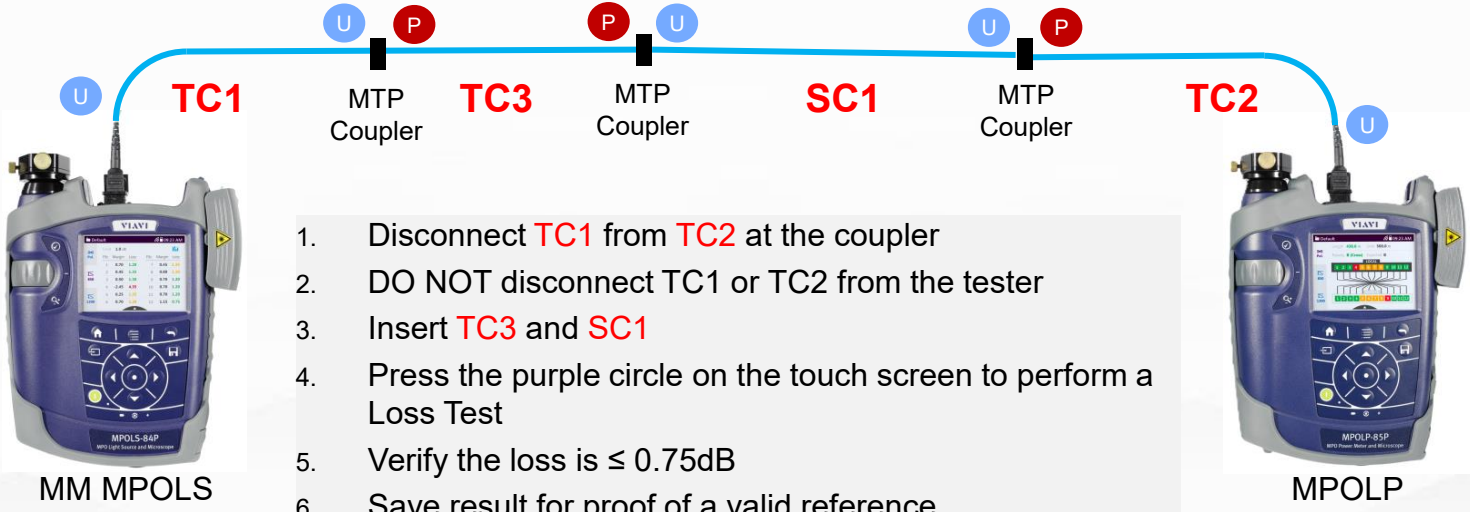
P = Pinned MTP Connector

TC1 (launch cord): MM PC-unpinned to APC-unpinned, Polarity B

TC2 (receive cord): MM PC-unpinned to APC-pinned, Polarity A

Step 2: Reference Verification

It is recommended, if not required, to save the results of this test for confirmation



1. Disconnect TC1 from TC2 at the coupler
2. DO NOT disconnect TC1 or TC2 from the tester
3. Insert TC3 and SC1
4. Press the purple circle on the touch screen to perform a Loss Test
5. Verify the loss is ≤ 0.75dB
6. Save result for proof of a valid reference

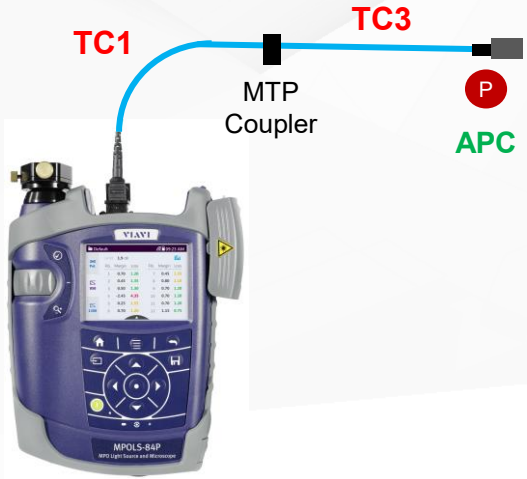
- TC1 (launch cord): MM PC-unpinned to APC-unpinned, Polarity B
- TC2 (receive cord): MM PC-unpinned to APC-pinned, Polarity A
- TC3 (adapter cord): MM APC-pinned to APC-pinned, Polarity B
- SC1 (substitution/verification cord): MM APC-unpinned to APC-unpinned, Polarity B

U = Unpinned MTP Connector

P = Pinned MTP Connector

You are now ready to begin testing!

- Remove the two MTP couplers and SC1
- Connect TC3 and TC2 to the fiber link to be tested
- Test and save your results



MM MPOLS-84

MPOLP-85

ReportPRO

Test result management software

VIAVI ReportPRO

https://reportpro.updatemyunit.net/

To import the test data into ReportPRO

- Simply connect the MPOLP to a laptop running ReportPRO with a USB cable
- Select “Test Results” from the drop down menu list
- Select 

to import the test data off the MPOLP
- Select 

to import the test data stored in StrataSync

To import the test data into ReportPRO

- Simply connect the MPOLP to a laptop running ReportPRO with a USB cable
- Select “Test Results” from the drop down menu lis

Viavi’s Test Process Automation (TPA) makes it simple to configure test equipment and generate close out reports faster

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