

MOLEX CONNECTED ENTERPRISE SOLUTIONS

APPROVED TESTERS LIST

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TECHNICAL BULLETIN
Molex Connected Enterprise Solutions

LIST OF APPROVED TEST EQUIPMENT - COPPER

All testers of at least Level III and current generation from the following manufacturers are accepted by Molex Connected Enterprise Solutions.

Test results shall be submitted by the Certified Installers in their native formats only

To warrant installations completed by Molex Connected Enterprise Solutions Certified Installers, using end-to-end Molex Connected Enterprise Solutions products in the installed Channel / Permanent Link, the test results to be submitted by the Certified Installers must be in their native formats only. **It is mandatory to test all the installed links using the Permanent link test settings on the tester with appropriate adapters.**

Molex Connected Enterprise Solutions insists that the test equipment be factory calibrated annually or as recommended by the tester OEMs, and that the latest firmware is applied to testers before installations are tested for warranty purposes.

The list of test equipment is as follows:

1. Fluke Networks

- DSX Cable Analyzer Series: DSX-600, DSX-5000 and DSX-8000
- DTX 1500 (This product will be supported by Fluke until June 2020)

Note: For more information about the listed tester models, please refer the Fluke Networks website <http://www.flukenetworks.com/>

2. Ideal Industries

- Lantek III Series
- Lantek II Series (This has been discontinued by Ideal Industries and the product support is available until March 2022)

Note: For more information about the listed tester models, please refer the Ideal Networks website <https://www.idealnetworks.net/in/en/index.aspx>

3. VIAVI Solutions (formerly JDSU)

- Certifier 10G
- Certifier 40G

Note: For more information about the listed tester models, please refer the Viavi Solutions website <https://www.viavisolutions.com/en-us>

4. Softing

- WireXpert WX500-CU
- WireXpert WX500-PLUS
- WireXpert WX4500-FA-SC

Note: For more information about the listed tester models, please refer the Softing website <https://itnetworks.softing.com/>

5. AEM

- TestPro CV100

Note: For more information about the listed tester models, please refer the AEM website <http://aem-test.com>

Test results shall be submitted by the Certified Installers in their native formats only

LIST OF APPROVED TEST EQUIPMENT – FIBER OPTIC

Factors that affect the integrity and performance of the installed Fiber Optic cable may be severe cable bends, poorly installed connectors, or presence of dirt on the face of the connector.

The attenuation measurement result should always be less than the **loss budget** or the link attenuation allowance, and is dependent on the cable length, number of terminations, and number of splices, if any.

An Optical Loss Test Set (OLTS) can measure the optical attenuation quite accurately. Testing the installed Fiber Optic cabling with an OLTS and verifying the cable length and the polarity add up to **Tier 1** testing as specified in the standard. **Tier 1 testing is required for Molex Connected Enterprise Solutions Warranty Certification.** **Tier 2**, which is optional, includes Tier 1 testing plus an OTDR trace

The list of test equipment is as follows:

1. Fluke Networks

- CertiFiber Pro

Note: For more information about the listed tester models, please refer the Fluke Networks website <http://www.flukenetworks.com/>

2. Ideal Industries

- Ideal Industries OC 1

Note: For more information about the listed tester models, please refer the Ideal Networks website <https://www.idealnetworks.net/in/en/index.aspx>

3. VIAVI Solutions (formerly JDSU)

- SmartClass Fiber OLTS-85/85P Optical Loss Test Sets

Note: For more information about the listed tester models, please refer the Viavi Solutions website <https://www.viavisolutions.com/en-us>

4. EXFO

- MaxTester 940/945 Fiber CertiFiber OLTS (sample reports available)

Note: For more information about the listed tester models, please refer the EXFO website <https://www.exfo.com/en/products/maxtester-940-945-telco-olts/>

5. Softing

- WireXpert WX500-PLUS
- WireXpert WX4500-FA-SC

Note: For more information about the listed tester models, please refer the Softing website <https://itnetworks.softing.com/>

6. Optical Wavelength Laboratories

- Fiber OWL 7 BIDI OLTS

Important notes on this tester:

1. The Fiber OWL 7 gives us all the information that we look for in the Test reports. Since we insist on bi-directional testing, you must opt for the Fiber OWL 7 BIDI model. Here is the link:

<http://owl-inc.com/products/sub/olts/htm/bidi-chooser.htm>.

*Pay careful attention
to these special
notes if using the
Fiber OWL tester*

2. Currently, we do not see the latest Standards in their firmware for ISO which we believe may be added at any time. At this point, you should choose TIA 568.3-D as your test Standard.
3. The other settings remain the same for 1 jumper method.
4. This tester is capable to measure cable length, however the tester software "OWLView" supports different tester models where a few variants do not measure the length and it is instead manually keyed in the test report. As a result, the software gives the option to edit Link Parameters like Length, Number of Connections, Number of Splices and Fiber Type. Our advice is not to modify any of these parameters once the measurements are made and any modifications later identified will void the warranty. Just as with any other approved OLTS, the lengths mentioned in the reports MUST match the physical length derived from the marking on the cable sheath.
5. The test reports must be submitted in their native format (.fo7 in this case).
6. We believe this tester has custom setup (User defined), in case it is required.
7. Like a few other tester OEM's, OWL recommends annual calibration and the installer is required to ensure that the tester is within valid calibration at the time of testing.
8. Finally, it is always recommended to share sample reports from the site before testing of the complete site, so that we can review and advise of any changes required in the test settings.

In case you have further queries on this tester, please contact us at ces.support@molex.com.

7. AEM

- TestPro CV100

Note: For more information about the listed tester models, please refer the AEM website <http://aem-test.com>

ALTERNATE TESTER MODEL POLICY

If you wish to use a tester model that is not listed in this document, and which has the ability to test the installed cable to our requirements, please send a mail to ces.support@molex.com giving the tester details. This must be done prior to the purchase of the tester/testing of the installation.

IMPORTANT REMINDERS

MOLEX CONNECTED ENTERPRISE SOLUTIONS ONLY ACCEPTS PERMANENT LINK TEST REPORTS FOR WARRANTY PURPOSES, REGARDLESS OF ARCHITECTURE.

Additionally, End Users should require Channel test reports for any Cross-connect channel to confirm that other components of the channel are functioning properly...

A MOLEX CONNECTED ENTERPRISE SOLUTIONS-APPROVED TESTER MUST BE USED AND THE RESULTING MEASUREMENTS MUST BE IN THAT TESTER'S PROPRIETARY FORMAT.

Some tester Software can re-certify results (RC) with adjusted NVP without affecting the results.

Note that Molex Connected Enterprise Solutions does not accept (RC) test results on their own for certification. Should you need to use this function please ensure you provide the original results with the (RC) results.

Please read and understand all these important notes.

AN OPTICAL LOSS TEST SET (OLTS) CAN MEASURE THE OPTICAL ATTENUATION QUITE ACCURATELY. TESTING WITH AN OLTS AND VERIFYING THE CABLE LENGTH AND POLARITY ADD UP TO TIER 1 TESTING AS SPECIFIED IN THE STANDARD. THIS IS THE REQUIRED TEST FOR MOLEX CONNECTED ENTERPRISE SOLUTIONS WARRANTY APPLICATIONS.

The optional Tier 2 includes the Tier 1 testing plus an OTDR trace.

THE TEST LEADS REQUIRED FOR MULTIMODE FIBER TESTING ARE REQUIRED TO BE ENCIRCLED FLUX TEST REFERENCE CORDS USED FOR THE OUTPUT ON THE TESTER.



REMEMBER THAT MOLEX CONNECTED ENTERPRISE SOLUTIONS MPO CASSETTES HAVE A LOSS OF NO MORE THAN 0.5dB WHICH WILL REQUIRE A CUSTOM SETUP.

TESTER CALIBRATION

THE TESTER MUST BE UNDER VALID CALIBRATION AT THE TIME OF TESTING. THIS IS A KEY REQUIREMENT.

In addition:

1. Tester Calibration should be as per manufacturers' recommendations (i.e., Fluke Networks recommends calibration intervals of 1 year)
2. Molex Connected Enterprise Solutions will accept longer calibration intervals; however you **MUST** provide a certificate from an authorized calibration facility proving that the calibration has not expired.
3. Molex Connected Enterprise Solutions will also continue to accept test results even if that particular model has been discontinued and is not supported by the manufacturer anymore **SO LONG AS IT IS UNDER VALID CALIBRATION. – Test reports showing a note such as “Calibration Due” or similar, will be rejected.**

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