

The DYNAMIX Certified Cabling System™ offers a 20 Year Replacement Warranty for all category rated permanent link cabling solutions. Category rated patch panels, jacks and cable products that are certified for use in the DYNAMIX Certified Cabling System display either of the following logo's:



The DYNAMIX Certified Cabling System warranty is provided to the end user by Computer Dynamics and supported by a matching warranty from the original product manufacturer. The DYNAMIX Certified Cabling System can only be offered to end users by installers who have been authorized by Computer Dynamics to offer the warranty. To apply for authorization installers should contact their supplier of DYNAMIX certified products.

## WARRANTY TERMS AND CONDITIONS

### COPPER CABLE WARRANTY

The DYNAMIX Certified Cabling System offers a 20 Year Replacement Warranty for all category rated Permanent link Cabling Solutions. The DYNAMIX Certified Cabling System warranty is provided to the end user by Computer Dynamics. The 20 Year Warranty Period shall commence from the date of issue of the Warranty Certificate. Warranty of the DYNAMIX Certified Cabling System including repairs or product replacement undertaken as part of any Warranty claim will end 20 Year from the date of issue of the Warranty Certificate.

### PRODUCTS COVERED BY THE WARRANTY

The Permanent link Cabling Solution must comprise exclusively of certified DYNAMIX branded products. Patch panels, jacks and cable products that are certified for use in the DYNAMIX Certified Cabling System display either of the following logo's:



### WARRANTY PROVISIONS

Subject to the provisions of the Terms and Conditions, Computer Dynamics warrants to the End User that the DYNAMIX Certified Cabling System will:

- 1 Be free from defects in materials and workmanship under normal and proper usage.
- 2 Equal or exceed the AS/NZS3080, ISO/IEC 11801 and ANSI/TIA/EIA-568-C.2 specifications for link performance prevailing at the time of installation.
- 3 Support any current or future operations designed to operate on the applicable category rated Permanent link Cabling Solution.

Computer Dynamics shall assume responsibility to the End User to remedy any defect or deficiency commencing on the date of issue of the Warranty Certificate.

The Warranty covers the full cost of locating any fault with the DYNAMIX Category rated Permanent link Cabling Solution together with the subsequent repair of the fault including replacement and installation of any parts that form part of the DYNAMIX category rated Permanent Link Cabling Solution.

### END USER OBLIGATIONS

During the Warranty Period the End User is required to retain and make available on request the current copy of the Site Installation Record and the current Test Reports as supplied by the DYNAMIX Approved Installer.

If the End User discovers a problem with the Category rated Permanent link Cabling Solution they must notify their DYNAMIX Approved Installer in writing if the possible fault within 14 days of detecting the fault.

### WARRANTY EXCLUSIONS AND LIMITATIONS

1. The Warranty only applies to the DYNAMIX products as supplied for the DYNAMIX Certified Cabling System and which form the Category rated Permanent link Cabling Solution and does not include those products connected beyond the Permanent link Cabling Solution.
2. The Warranty does not cover the cost for the implementation of any temporary solutions whilst any part of the warranted solution may be inoperable and awaiting repair.
3. The Warranty does not cover damage or defects resulting from improper or noncompliant use, misuse, design or installation errors, adds, moves, changes, alterations, neglect, accident, abuse, fire or any natural disaster.
4. The Warranty does not cover damage caused by or resulting from alteration to any building structure housing any part of the Category rated Permanent link Cabling Solution.
5. The Warranty is immediately voided if any part of the Category rated Permanent link Cabling Solution is altered, moved, changed or added to and the work is undertaken by other than a DYNAMIX Approved Installer.
6. The Warranty does not cover claims for consequential loss or damage, loss of profits or any other loss or damage that may result from the failure of any part of the Warranted system.
7. The maximum liability of Computer Dynamics arising from any loss or claim shall not exceed the total invoiced cost of the Category rated Permanent link Cabling Solution as covered by the Warranty.

### WARRANTY CLAIM

1. The End User will notify their DYNAMIX Approved Installer in writing within 14 days of detecting a fault.
2. The DYNAMIX Approved Installer will then notify Computer Dynamics Limited within 7 business days of receipt of the notification from the End User of the existence of a possible claim under the warranty.
3. As soon as practically possible, and within no more than 30 days from receipt of the written notification of a fault being detected by the End User, the DYNAMIX Approved Installer will investigate the reported fault, will determine whether or not the fault is covered by the provisions of the DYNAMIX Certified Cabling System warranty and if the fault is with the products covered by the warranty the DYNAMIX Approved Installer will undertake all measures to rectify the problem.
4. Upon completion of the repair work undertaken as part of the warranty the DYNAMIX Approved Installer will submit a Warranty Claim to Computer Dynamics

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# WARRANTY TERMS AND CONDITIONS

## FIBRE CABLE WARRANTY

For a fibre warranty to be issued on DYNAMIX certified fibre products, in addition to following the strict guidelines of ANSI/TIA-568-C.2, ISO/IEC 11801 and ISO/IEC 14763-3, the following must be supplied with warranty applicable:

- Power meter results for all installed fibres from an approved industry test device, capable of storing and submitting the above results electronically
- 1 OTDR plot per installed cable (to verify length), or length by cable meter marker.
- Built documentation showing locations

Informative information on testing procedures are outlined below



## PASSIVE LINK SEGMENTS

Attenuation testing should be performed on each passive link segment of the fibre cabling system. A link segment consists of the cable, connectors, adapters and splices between two fibre-optic termination units (patch panels, information outlets, etc.).

Each terminated fibre within a link segment should be tested. The link segment attenuation measurement includes the representative attenuation of connectors at the termination unit interface on both ends of the link.

## GENERAL TESTING GUIDELINES

- Multimode fibre shall be testing using the 1 test cord reference method. Testing shall be undertaken in both directions at 850nm and 1300nm
- Single-mode fibre shall be tested using the 1 test cord reference method. Testing shall be undertaken in both directions at 1310nm and 1500nm

In compliance with TIA/EIA-526-14-C "Optical Power Loss Measurements of Installed Multimode Fibre Cable Plant", IEC 61280-4-1 edition 2, "Fibre-Optic Communication Subsystem Test Procedure – Part 4-1: Installed cable plant – Multimode attenuation measurement", TIA/EIA-526-7 "Measurement of Optical Power Loss of Installed Singlemode Fibre Cable Plant" and IEC 61280-4-2 edition 2, "Fibre-Optic Communication Subsystem Test Procedure – Part 4-2: Installed cable plant – Singlemode attenuation and optical return loss measurement", the following information should be recorded electronically during the test procedure:

1. Names of personnel conducting the test
2. Type of test equipment used (manufacturer, model, serial number and calibration date\*)
3. Date test is being performed
4. Optical source wavelength, spectral width
5. Fibre identification
6. End point locations
7. Test direction
8. Reference power measurement (when not using a power meter with a Relative Power Measurement Mode)
9. Measured attenuation of the link segment
10. Acceptable link attenuation

\*Test equipment should be calibrated according to the test equipment manufacturer's specifications.

## TEST CORD PERFORMANCE VERIFICATION

In compliance with TIA/EIA-526-14-C and TIA/EIA-526-7 (and IEC equivalents), test cords shall be 3 ~ 5 meters long, and have the same fibre construction (i.e. core diameter and numerical aperture) as the link segment being tested. Before carrying out any test, clean the test cord connectors and test adapter.

Procedure:

1. Prepare the required launch cord with the necessary launch conditioner to meet the Encircled Flux launch conditions for multimode measurements or mode suppression loop for singlemode measurements.
2. Clean all test cords connectors and the test adapter per the manufacturer's instructions.
3. Follow the test equipment manufacturer's initial adjustment instructions.
4. Connect the launch cord between the light source and the power meter.

## TIA AND ISO/IEC STANDARDS

ISO/IEC 14763-3 covers "Implementation and Operation of Customer Premises Cabling: Testing of Optical Fibre Cabling" and references.

- IEC 61280-4-1 for installed multimode fibre optic cable plant attenuation measurement
- IEC 61280-4-2 for installed singlemode fibre optic cable plant attenuation measurement

Besides the TIA/EIA-526-14-C and TIA/EIA-526-7 standards already discussed, ANSI/TIA 568-C.2 covers additional guidelines for field testing length, loss and polarity of optical fibre cabling systems.

## IMPORTANT NOTE FOR MULTIMODE FIBRE TESTING

The fibre optic industry has long understood the importance of a consistent launch condition for accurate and repeatable multimode measurements in both the field and the factory. This has led to mode conditioning of the launch cord attached to the light source. For multimode fibre testing in the field, this mode conditioner has traditionally been a mandrel around which the launch cord is wrapped. Standards have recently been updated to specify Encircled Flux (EF) launch conditions. These new requirements are defined in TIA-526-14-C (an adoption of IEC 61280-04-1 ed.2) and normatively referenced in TIA-568-C.2 (August 2012), ISO/IEC 11801 and ISO/IEC 14763-3.

It is important to note that customers who require compliance to these standards also require the use of EF launch conditions for all multimode cabling attenuation tests. This change was driven by the recognition that loss budgets have diminished as data rates have increased, thus necessitating more precise measurements.

Dynamix requires the use of optical test equipment that provides an Encircled Flux-compliant launch condition for fibre optic warranted systems/installations.

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