

ASSMANN ELECTRONIC GmbH

ASSMANN SYSTEM GUARANTEE

DIGITUS[®] Fiber Optic Cabling System

Appendix B - Provisions for acceptance

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1. Acceptance test of the installation link

The installation link must be subjected to acceptance testing on the basis of the test setup prescribed for the category or class to be tested. Observe the requirements of the standard chosen for the installation. Perform acceptance tests using ASSMANN-approved measurement devices only. Values obtained from measurements of the transmission path that do not match the prescribed test set-ups are invalid. Readings from measurement devices that do not appear in the approved equipment list are invalid.

2. Calibration of the measurement devices / adapters

Measurement devices must be calibrated by the manufacturer's test laboratory at regular intervals. The last calibration run should not be more than 15 months ago (prior to the date of the acceptance test). The measurement adapters must not exceed the permissible number of mating cycles (as specified by the manufacturer).

3. Measurement / measured values

Take the measured values by applying the settings prescribed in the appropriate standard.

The values obtained from the measurement of the transmission paths must be in accordance with the threshold values defined in the standard. If supported by the measurement device, store the measured data together with diagrams of the measured values. Report the measured data in electronic form. Mail the measured data in a file format (.flw, .sdf or .sor depending on the equipment type) to systemwarranty@assmann.com or send them on a conventional data storage device (CD, DVD, USB stick) to ASSMANN.

4. Cleaning of connector surfaces and provisioning of microscope pictures

The party using the guarantee ensures that the connector surface of every patch is cleaned appropriately. Therefore, the DIGITUS[®] connector cleaning tools (e.g. item code DN-FO-PCT-1 and DN-FO-PCT-2) can be used. Additionally the party using the guarantee has to send ASSMANN microscope pictures of every connector surface after installation.

Backscattering according to DIN EN 60793-1-40:

A measuring device with an optical time domain pulse reflectometer (OTDR) is to be used. The device should have at least two cursors or markers, which can be set on appropriate measuring points or points. In addition, it should each have an optical transmission source with a wavelength of 850 nm, 1310 nm and 1550 nm. In the case of fiber optic cables with single-mode (monomode) fibers, the reflection measurements are carried out at wavelengths of 1310 nm and 1550 nm. All measurements must be carried out in such a way that a meaningful documentation can be created. The documentation is intended to provide accurate information about all joints such as plugs and splices.

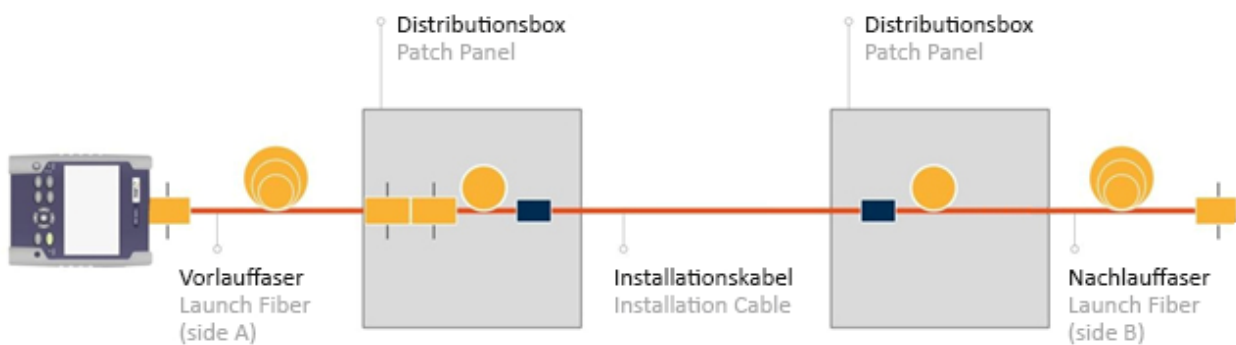
The reflexion measurements must always be carried out with pre- and post-load laser. The distance to be tested is to be measured from both sides.

The measurement protocol for back scattering and reflection measurement shall include the following information per fiber:

- place, building and space,
- Measuring direction from ... to ...,
- fiber number and color,
- wavelength,
- fiber length and attenuation values,
- Location and locations,
- Cursor or marker positions are at the beginning and end of the measurement (Immediately before the plug reflection, i.e., the rise of the measurement curve).

5. Acceptance test for permanent links

4.1. Measurement setup:



4.2. Acceptance test permanent links

Applicable standards:

DIN EN 60793-1-40
EN 50174
ISO/IEC 11801
CENELEC EN 50173
EIA/TIA 568B

Approved measurement devices for acceptance testing

| Measurement device | DIGITUS [®] Launch Fiber / couplers | File format |
|---------------------------------------|--|-------------------|
| Fluke optiFiber [®] Pro OTDR | DN-LFxxxxxx; DN-9600x-1; DN-9601x-1 | *.flw/*.sdf/*.sor |
| Smart OTDR Viavi | | *.flw/*.sdf/*.sor |
| VIAVI MTS | | *.sdf/*.sdf/*.sor |

(Subject to technical modifications)