Nortel Networks™

Technical Solutions Center

Customer Support Bulletin

Number: **CSB-9809001**

Released: **9/29/98**

Subject: **Accelar 1000BASE-LX Fiber Optic Connector Intermateability**

Product: **XLR120xLX, XLR110xLX, XLR1202LR, and XLR1101LR I/O Modules**

Description:

This CSB is written to alert customers and field personnel that severe damage can result to Accelar 1000BASE-LX interfaces if the appropriate cables are not used or handled properly.

Discussion:

1000BASE-LX transceivers have a more narrow mechanical tolerance then 1000BASE-SX transceivers. Table 1 shows the ferrule mechanical tolerance for a fiber cable using FOCIS 3 plugs. Specification information is from ANSI/TIA/EIA-604-3-1997 Fiber Optical Connector Intermateabililty Standard.

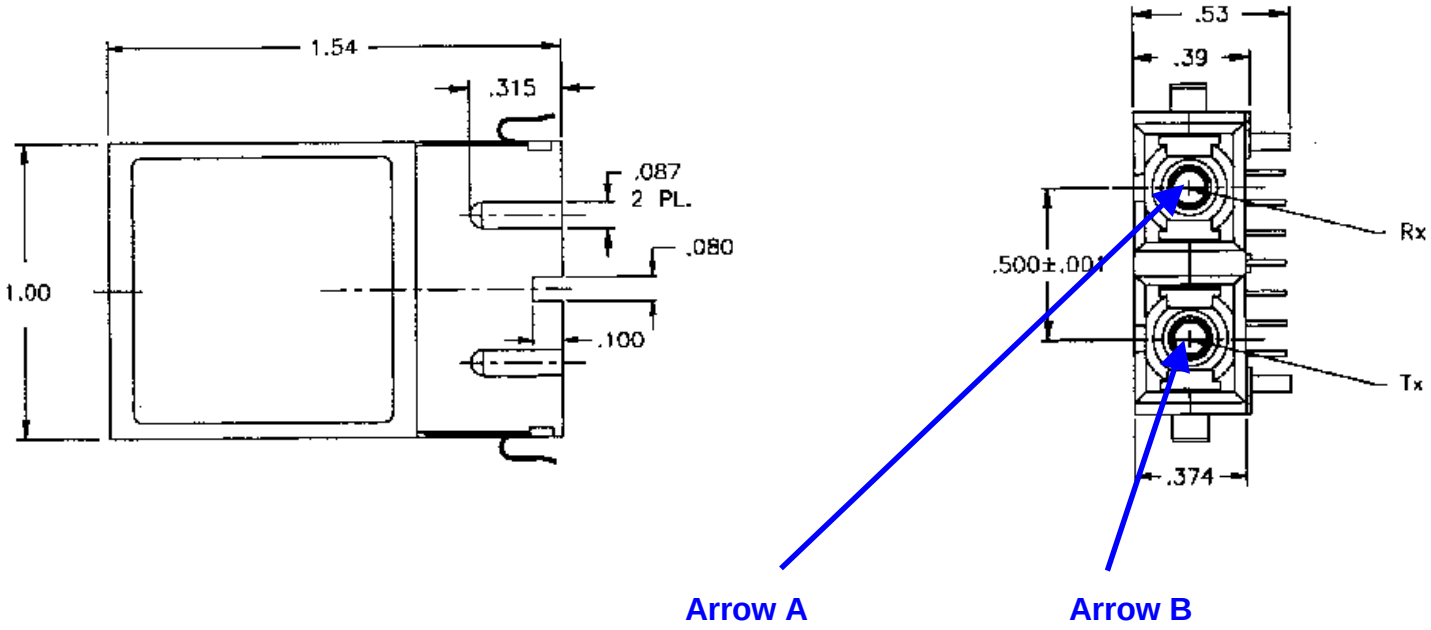
Table 1 Ferrule Diameter for FOCIS 3 plugs.

T	Min. (mm)	Max.(mm)	Min. (in)	Max. (in)	Fiber
1	2.4985	2.4995	0.098366	0.098406	SM
2	2.498	2.500	0.098346	0.098425	MM
3	2.497	2.500	0.098307	0.098425	MM
4	2.494	2.500	0.098187	0.098425	MM

Due to the difference in mechanical tolerance, when a multimode patch cable is used to connect to a 1000BASE-LX interface, the fiber cable ferrule may become wedged into the transceiver. This may result in severe damage to the transceiver.

DO NOT PLUG MULTIMODE CABLES DIRECTLY INTO 1000BASE-LX INTERFACES.

Diagram 1.1Iillustrates 1000BASE-LX transceiver mechanical dimensions.



Area indicated by arrows ‘A’ and ‘B’ shows where a fiber ferrule cable can become wedged and damage the transceiver.

Resolution:

Users should always verify the fiber cable they are using is specified for 1000BASE-LX interfaces. When connecting a 1000BASE-LX interface to an existing multimode cable plant, use a mode conditioning patch cord. Nortel/Bay Networks part number for the mode conditioning patch cord is ‘AA0018035’ (62.5/125um) and ‘AA0018036’ (50/125um). When connecting single-mode fiber cables to 1000BASE-LX interfaces follow these simple guidelines.

Connecting

1. Do not remove dust cap/plug until immediately prior to mating.
2. Hold the connector by the strain relief boot directly behind the connector housing.
3. Insert the connector into the transceiver in such a manner that connector/transceiver keying is observed and properly mated.
4. Verify the connector and transceiver is completely mated.

Disconnecting

1. Grasp the connector housing and pull straight out to disconnect the housing from the coupling.

2. Cover connector and transceiver receptacle with clean dust caps/plugs when not in use.

Cleaning

If the transceiver receptacle becomes contaminated, follow the cleaning procedure below:

1. Wipe inside of the bore with a lint-free pipe cleaner moistened with alcohol.
2. Blow dry with canned micron-filtered compressed air only.

If the connector becomes contaminated, follow the cleaning procedure below:

1. Use a lint-free, alcohol-dampened cloth to thoroughly wipe the side and end of the ferrule.
2. Blow the ferrule dry, with canned, micron-filtered compressed air only.
3. Visually inspect the ferrule for lint.

Regent grade isopropyl alcohol and canned micro-filtered, dry compressed air are recommended for cleaning.

Contact Information:

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