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|  | FDOT Traffic Engineering Research Laboratory (TERL) Media Converter Compliance Matrix | By signing this form, the applicant declares that he/she has read and understands the provisions of Sections 684 and 996 of the FDOT *Standard Specifications for Road and Bridge Construction* and all implemented modifications. The requirements listed on this matrix are derived from Sections 684 and 996, and are the basis for determining a product’s compliance and its acceptability for use on Florida’s roads. |  |

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| --- | --- | --- | --- |
| Date: | Click here to enter a date. | Applicant’s Name (print): |  |
| Manufacturer: |       |  |       |
| Item, Model No.: |       | Signature: |       |

|  |  | **\*\* Greyed out rows in table below are for TERL use only \*\*** |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **ID No** | **Section** | **Requirement** | **Item Comply? (Yes/No/NA)** | **Comments(Applicant must provide information as indicated)** | **TERL Evaluation Method** |
| 1 | 996-1.1 | Equipment is permanently marked with manufacturer name or trademark, part number, and serial number. |  | *Applicant may provide comments in this field.* | Physical Inspection |
| TERL Test Cases (Steps): MC002 (Step 1) |       |       | Init.:       |
| 2 | 996-3.6.1 | Media converter connects different transmission media for the purpose of transmitting Ethernet data. |  | *Provide product literature, specifications, user manual, or similar information that shows the product meets this requirement. The media converter must allow transition between transmission media, such as conversion from twisted pair to optical fiber or from twisted pair to coaxial cable.*  | Document Review and Functional Inspection |
| *Indicate location of requested information in submittal.* |
| TERL Test Cases (Steps): MC001 (Step 1), MC003 (Step1) |       |       | Init.:       |
| 3 | 996-3.6.2 | Media converter local area network (LAN) connection supports the requirements detailed in the IEEE 802.3 standard for 10/100 Ethernet connections. |  | *Provide product literature, specifications, user manual, or similar information that shows the product meets this requirement.* | Document Review and Functional Inspection |
| *Indicate location of requested information in submittal.* |
| TERL Test Cases (Steps): MC001 (Step 2), MC003 (Step 2) |       |       | Init.:       |
| 4 |  | Media converter has a minimum of one Ethernet port, which shall be, at a minimum, a 10/100 Base TX connection or a 100 Base FX ST, SC, LC or FC interface. |  | *Provide product literature, specifications, user manual, or similar information that shows the product meets this requirement.* | Document Review and Physical Inspection |
| *Indicate location of requested information in submittal.* |
| TERL Test Cases (Steps): MC001 (Step 3), MC002 (Step 2) |       |       | Init.:       |
| 5 |  | Connectors comply with applicable TIA requirements. |  | *Provide a statement of conformance in this field.* | Compliance Matrix Review |
| TERL Test Cases (Steps): MC001 (Step 4) |       |       | Init.:       |
| 6 |  | Copper-based network interface ports utilize RJ-45 connectors. |  | *Applicant may provide comments in this field.* | Physical Inspection |
| TERL Test Cases (Steps): MC002 (Step 3) |       |       | Init.:       |
| 7 |   | Fiber ports are single mode with a minimum link budget of 30dB. |  | *Fiber ports are not mandatory and type and power may be detailed in plans based upon project needs. If the media converter can be configured with optical ports, then provide product literature that indicates the optics and link budgets that are available.* | Document Review |
| *Indicate location of requested information in submittal.* |
| TERL Test Cases (Steps): MC001 (Step 5) |       |       | Init.:       |
| 8 | 996-3.6.3 | All conductive contact surfaces or pins are gold-plated or made of a noncorrosive, non rusting, conductive metal. |  | *Provide a statement of conformance in this field.* | Compliance Matrix Review |
| TERL Test Cases (Steps): MC001 (Step 6) |       |       | Init.:       |
| 9 |  | There are no self-tapping screws on the exterior of the assembly. |  | *Applicant may provide comments in this field.* | Physical Inspection |
| TERL Test Cases (Steps): MC002 (Step 4) |       |       | Init.:       |
| 10 |  | All parts are made of corrosion-resistant materials, such as plastic, stainless steel, anodized aluminum, brass, or gold-plated metal. |  | *Provide product literature, specifications, user manual, or similar information that shows the product meets this requirement.* | Document Review and Physical Inspection |
| *Indicate location of requested information in submittal.* |
| TERL Test Cases (Steps): MC001 (Step 7), MC002 (Step 5) |       |       | Init.:       |
| The following compliance matrix criteria are for Ethernet to coax media converters. |
| 11 | 996-3.6.4 | Ethernet to coax media converter operates using Power Over Ethernet (PoE). |  | *Provide product literature, specifications, user manual, or similar information that shows the product meets this requirement.* | Document Review and Functional Inspection |
| *Indicate location of requested information in submittal.* |
| TERL Test Cases (Steps): MC001 (Step 8), MC003 (Step 3) |       |       | Init.:       |
| The following compliance matrix criteria are for all media converters. |
| 12 |  | The media converter operates on a nominal voltage of 120 VAC if PoE is unavailable. An appropriate voltage converter is provided for devices that require operating voltages other than 120 VAC. |  | *Environmental test reports must demonstrate that voltage converters required for 120V*AC *operation were subjected to NEMA TS2 environmental testing as part of the functional system.* | Document Review and Physical Inspection |
| TERL Test Cases (Steps): MC001 (Step 9), MC002 (Step 6) |       |       | Init.:       |
| 13 |  | The media converter includes diagnostic LEDs, including link, TX, RX, and power LEDs. |  | *Applicant may provide comments in this field.* | Physical Inspection |
| TERL Test Cases (Steps): MC002 (Step 7) |       |       | Init.:       |
| 14 | 996-3.6.5 | The media converter performs all required functions during and after being subjected to the environmental testing procedures described in NEMA TS2 Sections 2.2.7, 2.2.8, and 2.2.9. |  | *Provide the following:** *A first or third party test report that demonstrates compliance with this requirement. If a voltage converter is required for the device to operate with a 120VAC input voltage, then the voltage converter must be tested with the device, e.g., in the temperature chamber.*
* *A completed Testing Laboratory and Report Checklist.*
* *A completed NEMA TS2 2.2.7-2.2.9 Checklist.*
 | Document Review |
| *Indicate location of requested information in submittal.* |
| TERL Test Cases (Steps): MC001 (Step 10) |       |       | Init.:       |
| 15 | 684-5 | Media Converter has a manufacturer’s warranty covering defects for 1 year from the date of final acceptance. |  | *Provide product warranty documentation that shows the product meets this requirement.* | Document Review |
| *Indicate location of requested information in submittal.* |
| TERL Test Cases (Steps): MC001 (Step 11) |       |       | Init.:       |
| 16 |  | Media Converter manufacturer will furnish replacements for any part or equipment found to be defective during the warranty period at no cost to the Department or the maintaining agency within 10 calendar days of notification. |  | *Provide a statement of conformance in this field.* | Compliance Matrix Review |
| TERL Test Cases (Steps): MC001 (Step 12) |       |       | Init.:       |

**Document History for:**

**Media Converter Compliance Matrix**

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| --- | --- | --- | --- | --- | --- | --- |
| Rev | Description | Authored and Checked | Reviewed | Approved | Approval Date | Rev More Stringent? |
| 1.0 | Creation of new matrix to match new requirements for Media Converter in Section 684 (FA 7-30-13) | R. Meyer | J. Morgan | J. Morgan | 08/15/2013 | N/A |
| 2.0 | Replaced FDOT logo with latest approved one and added CM ID # to header. Revised document approver title. | D. BremerK. Moser | J. Morgan | J. Morgan | 10/30/2014 | No |
| 3.0 | Changing FA Date to the latest approved one 01/06/2015. No content change for TERL. | M. Lucas | J. Morgan | J. Morgan | 09/09/2015 | No |
| 4.0 | Update to FA Date of 8-5-19.  | W. Geitz | J. Morgan | D. Vollmer | 09/19/2019 | No |
| 5.0 | Update to FA date of 2-3-21. | W. Geitz | C. RaimerM. DeWitt | D. Vollmer | 05/26/2022 | No |
| 6.0 | Added test cases and steps. Updated to reflect latest FA approved spec 10-24-22. | D. Bremer | V. JohnsonW. Geitz | D. Vollmer | 09/18/2023 | No |
| 7.0 | Updated to latest FA dates of 12-4-23 and 12-1-23 for specs 684 and 996, respectively. | W. Geitz | V. Johnson  | D. Vollmer | 01/11/2024 | No |
| 8.0 | Updated to latest FA dates of 10-16-24 for specs 684 and 996. | W. Geitz | D. Bremer | M. DeWitt | 06/09/2025 | No |