

Modicon TM3 Bus Coupler

Release Notes

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Table of Contents

| | |
|--------------------------------------|----|
| About the Book..... | 5 |
| Product Information | 6 |
| Overview | 6 |
| Product Identification | 6 |
| Compatibility | 6 |
| Firmware Update Instructions | 7 |
| Firmware Information | 8 |
| New Features..... | 8 |
| Mitigated Anomalies | 8 |
| Known Anomalies..... | 9 |
| Additional Information | 10 |
| Release Notes History | 11 |
| Release History Identification | 11 |
| New Features TM3BCEIP | 11 |
| New Features TM3BCCO | 11 |
| New Features TM3BCSL | 12 |
| Fallback Behavior..... | 12 |
| Known Anomalies..... | 12 |

Safety Information

Important Information

Read these instructions carefully, and look at the equipment to become familiar with the device before trying to install, operate, service, or maintain it. The following special messages may appear throughout this documentation or on the equipment to warn of potential hazards or to call attention to information that clarifies or simplifies a procedure.



The addition of this symbol to a “Danger” or “Warning” safety label indicates that an electrical hazard exists which will result in personal injury if the instructions are not followed.



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

DANGER

DANGER indicates a hazardous situation which, if not avoided, **will result in** death or serious injury.

WARNING

WARNING indicates a hazardous situation which, if not avoided, **could result in** death or serious injury.

CAUTION

CAUTION indicates a hazardous situation which, if not avoided, **could result in** minor or moderate injury.

NOTICE

NOTICE is used to address practices not related to physical injury.

Please Note

Electrical equipment should be installed, operated, serviced, and maintained only by qualified personnel. No responsibility is assumed by Schneider Electric for any consequences arising out of the use of this material.

A qualified person is one who has skills and knowledge related to the construction and operation of electrical equipment and its installation, and has received safety training to recognize and avoid the hazards involved.

About the Book

Document Scope

This document contains important information about the delivery of the product Modicon TM3 Bus Coupler. Read the complete document before you use the product or products that are described in here.

Validity Note

The information in this Release Notes document is applicable only for Modicon TM3 Bus Coupler products.

For product compliance and environmental information (RoHS, REACH, PEP, EOL, etc.), go to www.se.com/ww/en/work/support/green-premium/.

The characteristics that are described in the present document, as well as those described in the documents included in the Related Documents section below, can be found online. To access the information online, go to the Schneider Electric home page www.se.com/ww/en/download/.

The characteristics that are described in the present document should be the same as those characteristics that appear online. In line with our policy of constant improvement, we may revise content over time to improve clarity and accuracy. If you see a difference between the document and online information, use the online information as your reference.

Product Information

Overview

This release of Modicon TM3 Bus Coupler firmware addresses specific cybersecurity vulnerabilities.

Product Identification

| Reference | Description | Version | Date |
|-----------|------------------------------------|---------|-----------|
| TM3BCEIP | TM3 Ethernet Bus Coupler | 2.2.1.1 | June 2021 |
| TM3BCCO | TM3 CANopen Bus Coupler | 2.1.1.1 | June 2021 |
| TM3BCSL | TM3 Modbus Serial Line Bus Coupler | 2.1.1.1 | June 2021 |

Compatibility

The following table shows the supported Modicon TM3 expansion modules:

| Reference | Description |
|-----------|----------------------------|
| TM3DQ• | TM3 Digital Output Modules |
| TM3DI• | TM3 Digital Input Modules |
| TM3DM• | TM3 Digital Mixed Modules |
| TM3AQ• | TM3 Analog Output Modules |
| TM3AI• | TM3 Analog Input Modules |
| TM3TI• | TM3 Analog Input Modules |
| TM3AM• | TM3 Analog Mixed Modules |
| TM3TM3• | TM3 Analog Mixed Modules |

The following table shows the supported Modicon TM3 expert, safety and transmitter and receiver modules:

| Reference | Description |
|-----------|--|
| TM3XTYS4 | TM3 TeSys module |
| TM3SA• | TM3 Safety module |
| TM3XTRA1 | Data transmitter module for remote I/O |
| TM3XREC1 | Data receiver module for remote I/O |

The following table shows the supported Modicon TM2 expansion modules:

| Reference | Description |
|-----------|----------------------------|
| TM2DO• | TM2 Digital Output Modules |
| TM2DI• | TM2 Digital Input Modules |
| TM2DM• | TM2 Digital Mixed Modules |
| TM2DRI• | TM2 Digital Input Modules |
| TM2AMI• | TM2 Analog Input Modules |
| TM2AMO• | TM2 Analog Output Modules |
| TM2AL• | TM2 Analog Mixed Modules |

| Reference | Description |
|-----------|---------------------------|
| TM2ARI• | TM2 Temperature Modules |
| TM2AVO• | TM2 Analog Output Modules |

Firmware Update Instructions

Firmware Update Procedure

Execute the following steps to update the Modicon TM3 Bus Coupler firmware:

| Step | Action |
|------|--|
| 1 | Remove power from the Modicon TM3 Bus Coupler. |
| 2 | Connect the USB cable. |
| 3 | Apply power to the Modicon TM3 Bus Coupler. |
| 4 | Log into the Web server via USB using the IP address 90.0.0.1. |
| 5 | Verify in the MONITORING page that the Modicon TM3 Bus Coupler is not exchanging data with the controller. |
| 6 | Click MAINTENANCE / Firmware . |
| 7 | Click Select then select the firmware file. Result: A confirmation window is displayed. |
| 8 | Click I agree . Result: At the end of the download and verification of the file, a confirmation window is displayed. |
| 9 | Click Yes to close the confirmation window then click Apply . Result: At the end of the firmware update, a message is displayed to inform you whether the firmware update has been completed successfully. |

Firmware Information

New Features

Cybersecurity bug fixes have been implemented to address Treck stack vulnerabilities.

Mitigated Anomalies

| ID | Description |
|----------------|--|
| CVE-2020-11896 | Specific Cybersecurity vulnerabilities have been mitigated. |
| CVE-2020-11897 | |
| CVE-2020-11898 | |
| CVE-2020-11899 | |
| CVE-2020-11900 | |
| CVE-2020-11901 | |
| CVE-2020-11902 | |
| CVE-2020-11903 | |
| CVE-2020-11904 | |
| CVE-2020-11905 | |
| CVE-2020-11906 | |
| CVE-2020-11907 | |
| CVE-2020-11908 | |
| CVE-2020-11909 | |
| CVE-2020-11910 | |
| CVE-2020-11911 | |
| CVE-2020-11912 | |
| CVE-2020-11913 | |
| CVE-2020-11914 | |
| CVE-2020-25066 | |
| CVE-2020-27336 | Specific Cybersecurity vulnerabilities have been mitigated. Applicable to TM3BCEIP only. |
| CVE-2020-27337 | |
| CVE-2020-27338 | |
| TM3BC-645 | Incorrect display of IO values in the monitoring tab of the web server when using two double modules (TM3DM24) because only one of the two were displayed. |
| TM3BC-646 | [Web Server] It was possible to configure Broadcast and network address as IP/Gateway address. |
| TM3BC-647 | [ACL] Current IP inclusion is no longer verified when ACL Enabled button is unchecked. |
| TM3BC-689 | Fallback for TM3 module did not operate correctly when the CANopen cable was disconnected. |
| TM3BC-1245 | When the webservice was accessed with a timeout of less than 25 ms, communication with the TM3 Ethernet Bus Couplers was interrupted. |
| TM3BC-1276 | System state was not documented correctly for TM3BCSL. |
| TM3BC-1339 | TM3BCEIP Web server Monitoring page did not detect IO modules when configuration had TM2 modules. |
| TM3BC-1343 | In FDR served mode, sometimes DPWS worked incorrectly. |
| TM3BC-1441 | |
| TM3BC-1345 | TM3BCEIP stopped sending DHCP request after reboot with Duplicate IP Error . |

| ID | Description |
|------------|---|
| TM3BC-1363 | Runtime error occurred if TM3AQ4 configured as 4-20 mA and disable diagnostic. |
| TM3BC-1381 | Events were not triggered when 16-bits objects (Object 6100) were used in PDO exchange for TM3BCCO. |
| TM3BC-1515 | TM3BCEIP and TM3BCSL - Saved Min/Max values were reset to default values. |

Known Anomalies

Known Anomalies

| ID | Description |
|------------|--|
| TM3BC-1333 | Documentation does not advise user that TM3 module output values are set to 0 during device configuration. |

Additional Information

Cybersecurity Best Practices

Schneider Electric has incorporated cybersecurity best practices and solutions in our products.

NOTE: To help keep your Schneider Electric products secure and protected, it is in your best interest that you implement the cybersecurity best practices as indicated in the *Cybersecurity Best Practices* document provided on the Schneider Electric website.

Release Notes History

Release History Identification

TM3BCEIP

| Version | Release Date | Description |
|----------|---------------|---------------------------|
| 2.1.50.2 | August 2020 | Support of new features |
| 1.3.1.2 | December 2019 | Cybersecurity Improvement |
| 1.2.1.1 | July 2019 | First Release |

TM3BCCO

| Version | Release Date | Description |
|----------|---------------|-------------------------|
| 2.0.50.2 | August 2020 | Support of new features |
| 1.0.16.1 | February 2020 | First Release |

TM3BCSL

| Version | Release Date | Description |
|-----------|--------------|-------------------------|
| 2.0.50.2 | August 2020 | Support of new features |
| 1.0.15.11 | January 2020 | First Release |

New Features TM3BCEIP

- Support of configurations generated by the software TM3 Bus Coupler IO Configurator
- Device discovery (DPWS)
- TM3 IO Modules Firmware update
- Modbus TCP Diagnostics
- RSTP Diagnostics
- Webserver Multiuser
- Syslog (RFC3164)
- Secure Webserver (HTTPS)
- Fast device Replacement (FDR)
- Support of Filter for TM3DI• and TM3DM• modules with SW version greater than 2.0
- Support of Fallback for TM3DQ• modules with SW version greater than 2.0

New Features TM3BCCO

- Support of configurations generated by the software TM3 Bus Coupler IO Configurator
- Secure Webserver (HTTPS)
- Support of Filter for TM3DI• and TM3DM• modules with SW version greater than 2.0
- Support of Fallback for TM3DQ• modules with SW version greater than 2.0

New Features TM3BCSL

- Support of configurations generated by the software TM3 Bus Coupler IO Configurator
- Secure Webserver (HTTPS)
- Support of Filter for TM3DI• and TM3DM• modules with SW version greater than 2.0
- Support of Fallback for TM3DQ• modules with SW version greater than 2.0

Fallback Behavior

After receiving a new configuration request from the controller, the TM3 bus coupler sets the output values of the expansion modules to 0. The configuration request is sent by the controller after any of the following events is done: reset cold, reset warm, communication timeout.

After a webserver session, Modbus TCP communication or EtherNet/IP communication timeout, the TM3 bus coupler:

- applies the fallback values if they have been configured
- sets the output values of the expansion modules to 0 if no fallback values have been configured.

Known Anomalies

TM3BC-1336

In Modbus TCP protocol communication, configuring a timeout less than 100 ms may generate communication errors when the user access to the webpages of the TM3 bus couplers.

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As standards, specifications, and design change from time to time,
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