

# Modicon TM3 Bus Coupler

## Release Notes

RN0000000033.02

11/2021

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# 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, EOLI, etc.), go to [www.se.com/ww/en/work/support/green-premium/](http://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/](http://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 Notes addresses Modicon TM3 Bus Coupler and TM3 Bus Coupler IO Configurator software information.

The TM3 Bus Coupler IO Configurator software allows you to generate configuration files for Modicon TM3 Bus Couplers. This can be done offline, that is, the PC running the tool does not need to be physically connected to the bus coupler.

## Product Identification

### Firmware 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

### TM3 Bus Coupler IO Configurator Identification

Reference	Description	Version	Date
TM3 Bus Coupler IO Configurator	Configurator Tool	1.1.9	November 2021

### Release History Identification

Version	Release Date	Description
RN0000000023.00	August 2020	Modicon TM3 Bus Coupler IO Configurator V1.0.0 Release Notes
RN00000000.33.01	June 2021	Modicon TM3 Bus Coupler Release Notes

## 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 Modicon TM3 Bus Couplers support the following 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
TM2ARI•	TM2 Temperature Modules
TM2AVO•	TM2 Analog Output Modules

**NOTE:** Modicon TM2 expansion modules are not supported by the TM3 Bus Coupler IO Configurator .

## Installation Instructions and Requirements

### 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 <b>MONITORING</b> page that the Modicon TM3 Bus Coupler is not exchanging data with the controller.
6	Click <b>MAINTENANCE / Firmware</b> .
7	Click <b>Select</b> then select the firmware file. <b>Result:</b> A confirmation window is displayed.
8	Click <b>I agree</b> . <b>Result:</b> At the end of the download and verification of the file, a confirmation window is displayed.
9	Click <b>Yes</b> to close the confirmation window then click <b>Apply</b> . <b>Result:</b> At the end of the firmware update, a message is displayed to inform you whether the firmware update has been completed successfully.

### TM3 Bus Coupler IO Configurator Compatibility

The following table shows the supported TM3 bus couplers and the minimum firmware needed:

Reference	Firmware
TM3BCEIP	2.1.x.x
TM3BCSL	2.0.x.x
TM3BCCO	2.0.x.x

## TM3 Bus Coupler IO Configurator System Requirements

The TM3 Bus Coupler IO Configurator can be installed on any PC that meets the following minimum hardware and software requirements:

Component	Minimum Requirement
Processor	Intel Core 2 Duo processor or greater
RAM	1 GB RAM
Display resolution	1280 x 768 pixels or greater
Operating system	Microsoft Windows 10 (32-bit or 64-bit processor)
Free Hard Disk Space	400 MB

## TM3 Bus Coupler IO Configurator Installation Instructions

- User Rights: you must have the administrator privileges on the workstation to install the TM3 Bus Coupler IO Configurator.

**NOTE:** TM3 Bus Coupler IO Configurator is always installed so that it is available for all the users of the workstation.

- The default destination directory of the TM3 Bus Coupler IO Configurator software installation is set as follows:
  - For a 32 bits Windows operating system: *C:\Program Files\Schneider Electric\TM3BC IO Configurator\*
  - For a 64 bits Windows operating system: *C:\Program Files (x86)\Schneider Electric\TM3BC IO Configurator\*

Follow this procedure to install the TM3 Bus Coupler IO Configurator:

Step	Action
1	Make sure that your system meets the minimum configuration requirements to install and run TM3 Bus Coupler IO Configurator.
2	Make sure that you are connected as an administrator of the workstation.
3	Launch <i>TM3BC IO Configurator.exe</i>
4	Select the language for the installation from the drop-down list and confirm by clicking <b>OK</b> . <b>NOTE:</b> The selected language is used for the TM3BC IO Configurator installation and execution
5	Read the software license, confirm that you agree by checking the <b>I accept the agreement</b> box and click <b>Next</b> to continue.
6	Read the Release Notes dialog then click <b>Next</b> to continue.
7	Select the shortcuts needed and click <b>Next</b> to continue.
8	Click <b>Install</b> to begin the installation.
9	Click <b>Finish</b> to complete the installation process. <b>Result:</b> You can select <b>Launch TM3BC IO Configurator</b> .

# Firmware Information

## New Features

No update.

## Mitigated Anomalies

No update.

## Known Anomalies

No update.

# TM3 Bus Coupler IO Configurator Information

## New Features

Support of functional fallback mode for TM3 digital output expansion modules.

## Mitigated Anomalies

ID	Description
TM3BC-1376	XSY file generated by TM3 Bus Coupler IO Configurator retained diagnostic input though diagnostics were disabled.
TM3BC-1382	EDS generated by TM3 Bus Coupler IO Configurator did not work with Rockwell Software Studio5000.
TM3BC-1385	TM3 Bus Coupler IO Configurator did not handle COB-ID assignment for all PDOs when DCF file was generated for TM3BCCO.
TM3BC-1469	[TM3 Bus Coupler IO Configurator] It was possible to configure more than 10 safety modules.
TM3BC-1515	SPF file generated by TM3 Bus Coupler IO Configurator resets Min/Max values to default values instead of retaining modified Min/Max values.
TM3BC-2309	[TM3 Bus Coupler IO Configurator] Fallback values applied on non-renewal TM3 modules.

## Known Operational Anomalies

ID	Description
TM3BC-2461	Not all installed components are removed if TM3 Bus Coupler IO Configurator is uninstalled while an application is still open.

# 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

## Modicon TM3 Bus Coupler Release Notes Firmware Version 2.2.1.1

### Firmware Version Identification

Firmware Version	Release Date	Description
2.2.1.1	June 2021	Specific Cybersecurity Vulnerabilities Improvement

### 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 <b>ACL Enabled</b> button is unchecked.
TM3BC-689	Fallback for TM3 module did not operate correctly when the CANopen cable was disconnected.

ID	Description
TM3BC-1245	When the webserver 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 <b>Duplicate IP Error</b> .
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

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

## Modicon TM3 Bus Coupler Release Notes Firmware Versions 2.1.50.2 and 2.0.50.2

### TM3BCEIP Firmware Version Identification

Firmware 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

### TM3BCEIP New Features

- 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

## TM3BCCO Firmware Version Identification

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

## TM3BCCO New Features

- 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

## TM3BCSL Firmware Version Identification

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

## TM3BCSL New Features

- 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.

## Mitigated Anomalies

No mitigated anomalies.

## Known Anomalies

ID	Description
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.

# Modicon TM3 Bus Coupler IO Configurator V1.0.0

## TM3 Bus Coupler IO Configurator Product Identification

Version	Release Date	Description
1.0.0	August 2020	V1.0.0 - August 2020

## TM3 Bus Coupler IO Configurator New Features

- Configure up to 14 TM3 expansion I/O modules.
- Optional modules configuration.
- Power consumption information.
- Export of generic configuration files for EtherNet/IP and CANopen.
- Export of XSY symbol table for Control Expert.
- Export of *devdesc* files for SoMachine and EcoStruxure Machine Expert.
- Memory mapping table for EtherNet/IP, Modbus Serial Line and Modbus TCP/IP.
- Compatible with TM3 bus couplers TM3BCEIP, TM3BCSL and TM3BCCO.

## Mitigated Anomalies

No mitigated anomalies.

## Known Anomalies

ID	Description
TM3BC-1260	<p>On Windows 7 Operating System, some bottom parts of the application could not be visible with some screen resolution (1920x1080). For lower resolution such as 1366x768 or 1280x768, some scrollbars may not be working properly.</p> <p>Workaround: you can use arrow down key or mouse wheel to reach parts of the application</p>
TM3BC-1266	<p>On a reduced-size window, some scrollbars may not behave properly.</p> <p>Workaround: use of mouse wheel</p>

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RN0000000033.02