

Modicon Edge I/O

Diagnostic Data

User Guide

Original instructions

EIO0000004826.01
02/2025



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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.

Before You Begin

Do not use this product on machinery lacking effective point-of-operation guarding. Lack of effective point-of-operation guarding on a machine can result in serious injury to the operator of that machine.

⚠ WARNING**UNGUARDED EQUIPMENT**

- Do not use this software and related automation equipment on equipment which does not have point-of-operation protection.
- Do not reach into machinery during operation.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

This automation equipment and related software is used to control a variety of industrial processes. The type or model of automation equipment suitable for each application will vary depending on factors such as the control function required, degree of protection required, production methods, unusual conditions, government regulations, etc. In some applications, more than one processor may be required, as when backup redundancy is needed.

Only you, the user, machine builder or system integrator can be aware of all the conditions and factors present during setup, operation, and maintenance of the machine and, therefore, can determine the automation equipment and the related safeties and interlocks which can be properly used. When selecting automation and control equipment and related software for a particular application, you should refer to the applicable local and national standards and regulations. The National Safety Council's Accident Prevention Manual (nationally recognized in the United States of America) also provides much useful information.

In some applications, such as packaging machinery, additional operator protection such as point-of-operation guarding must be provided. This is necessary if the operator's hands and other parts of the body are free to enter the pinch points or other hazardous areas and serious injury can occur. Software products alone cannot protect an operator from injury. For this reason the software cannot be substituted for or take the place of point-of-operation protection.

Ensure that appropriate safeties and mechanical/electrical interlocks related to point-of-operation protection have been installed and are operational before placing the equipment into service. All interlocks and safeties related to point-of-operation protection must be coordinated with the related automation equipment and software programming.

NOTE: Coordination of safeties and mechanical/electrical interlocks for point-of-operation protection is outside the scope of the Function Block Library, System User Guide, or other implementation referenced in this documentation.

Start-up and Test

Before using electrical control and automation equipment for regular operation after installation, the system should be given a start-up test by qualified personnel to verify correct operation of the equipment. It is important that arrangements for such a check are made and that enough time is allowed to perform complete and satisfactory testing.

⚠ WARNING**EQUIPMENT OPERATION HAZARD**

- Verify that all installation and set up procedures have been completed.
- Before operational tests are performed, remove all blocks or other temporary holding means used for shipment from all component devices.
- Remove tools, meters, and debris from equipment.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

Follow all start-up tests recommended in the equipment documentation. Store all equipment documentation for future references.

Software testing must be done in both simulated and real environments.

Verify that the completed system is free from all short circuits and temporary grounds that are not installed according to local regulations (according to the National Electrical Code in the U.S.A, for instance). If high-potential voltage testing is necessary, follow recommendations in equipment documentation to prevent accidental equipment damage.

Before energizing equipment:

- Remove tools, meters, and debris from equipment.
- Close the equipment enclosure door.
- Remove all temporary grounds from incoming power lines.
- Perform all start-up tests recommended by the manufacturer.

Operation and Adjustments

The following precautions are from the NEMA Standards Publication ICS 7.1-1995:

(In case of divergence or contradiction between any translation and the English original, the original text in the English language will prevail.)

- Regardless of the care exercised in the design and manufacture of equipment or in the selection and ratings of components, there are hazards that can be encountered if such equipment is improperly operated.
- It is sometimes possible to misadjust the equipment and thus produce unsatisfactory or unsafe operation. Always use the manufacturer's instructions as a guide for functional adjustments. Personnel who have access to these adjustments should be familiar with the equipment manufacturer's instructions and the machinery used with the electrical equipment.
- Only those operational adjustments required by the operator should be accessible to the operator. Access to other controls should be restricted to prevent unauthorized changes in operating characteristics.

About the Book

Document Scope

This document explains how to diagnose the Modicon Edge I/O NTS system and describes the available diagnostic information.

This document provides details about the diagnostic messages displayed in the **DIAGNOSTICS** page of the Modicon Edge I/O Configurator:

- **Criticality level**
- **MainFunction**
- **SubFunction**
- Principle and potential cause
- Possible solutions
- How to clear the diagnostic message

Validity Note

This document has been updated for the release of the Modicon Edge I/O NTS firmware version V1.0.0.

This document has been updated for the release of the Modicon Edge I/O Configurator V1.0.0.

The characteristics of the products described in this document are intended to match the characteristics that are available on www.se.com. As part of our corporate strategy for constant improvement, we may revise the content over time to enhance clarity and accuracy. If you see a difference between the characteristics in this document and the characteristics on www.se.com, consider www.se.com to contain the latest information.

Related Documents

Title of documentation	Reference number
Modicon Edge I/O - System Planning and Installation Guide	EIO0000004786 (ENG)
Modicon Edge I/O - Configurator and Web Interface - User Guide	EIO0000004810 (ENG)
Modicon Edge I/O - Software Integration and Compatibility - User Guide	EIO0000004818 (ENG)
Modicon Edge I/O NTS - Network Interface Modules - User Guide	EIO0000004794 (ENG)
Modicon Edge I/O NTS - Discrete Modules - User Guide	EIO0000005238 (ENG)
Modicon Edge I/O NTS - Analog Modules - User Guide	EIO0000005246 (ENG)
Modicon Edge I/O NTS - Counting Modules - User Guide	EIO0000005262 (ENG)
Modicon Edge I/O NTS - Field Device Master Modules - User Guide	EIO0000005270 (ENG)

To find documents online, visit the Schneider Electric download center (www.se.com/ww/en/download/).

Product Related Information

⚠ WARNING

LOSS OF CONTROL

- Perform a Failure Mode and Effects Analysis (FMEA), or equivalent risk analysis, of your application, and apply preventive and detective controls before implementation.
- Provide a fallback state for undesired control events or sequences.
- Provide separate or redundant control paths wherever required.
- Supply appropriate parameters, particularly for limits.
- Review the implications of transmission delays and take actions to mitigate them.
- Review the implications of communication link interruptions and take actions to mitigate them.
- Provide independent paths for control functions (for example, emergency stop, over-limit conditions, and error conditions) according to your risk assessment, and applicable codes and regulations.
- Apply local accident prevention and safety regulations and guidelines.¹
- Test each implementation of a system for proper operation before placing it into service.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

¹ For additional information, refer to NEMA ICS 1.1 (latest edition), *Safety Guidelines for the Application, Installation, and Maintenance of Solid State Control* and to NEMA ICS 7.1 (latest edition), *Safety Standards for Construction and Guide for Selection, Installation and Operation of Adjustable-Speed Drive Systems* or their equivalent governing your particular location.

⚠ WARNING

UNINTENDED EQUIPMENT OPERATION

- Only use software and hardware components approved by Schneider Electric for use with the system.
- Update your application program every time you change the physical hardware configuration.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

Terminology Derived from Standards

The technical terms, terminology, symbols and the corresponding descriptions in the information contained herein, or that appear in or on the products themselves, are generally derived from the terms or definitions of international standards.

In the area of functional safety systems, drives and general automation, this may include, but is not limited to, terms such as *safety*, *safety function*, *safe state*, *fault*, *fault reset*, *malfunction*, *failure*, *error*, *error message*, *dangerous*, etc.

Among others, these standards include:

Standard	Description
IEC 61131-2:2007	Programmable controllers, part 2: Equipment requirements and tests.
ISO 13849-1:2023	Safety of machinery: Safety related parts of control systems. General principles for design.

Standard	Description
EN 61496-1:2020	Safety of machinery: Electro-sensitive protective equipment. Part 1: General requirements and tests.
ISO 12100:2010	Safety of machinery - General principles for design - Risk assessment and risk reduction
EN 60204-1:2006	Safety of machinery - Electrical equipment of machines - Part 1: General requirements
ISO 14119:2013	Safety of machinery - Interlocking devices associated with guards - Principles for design and selection
ISO 13850:2015	Safety of machinery - Emergency stop - Principles for design
IEC 62061:2021	Safety of machinery - Functional safety of safety-related electrical, electronic, and electronic programmable control systems
IEC 61508-1:2010	Functional safety of electrical/electronic/programmable electronic safety-related systems: General requirements.
IEC 61508-2:2010	Functional safety of electrical/electronic/programmable electronic safety-related systems: Requirements for electrical/electronic/programmable electronic safety-related systems.
IEC 61508-3:2010	Functional safety of electrical/electronic/programmable electronic safety-related systems: Software requirements.
IEC 61784-3:2021	Industrial communication networks - Profiles - Part 3: Functional safety fieldbuses - General rules and profile definitions.
2006/42/EC	Machinery Directive
2014/30/EU	Electromagnetic Compatibility Directive
2014/35/EU	Low Voltage Directive

In addition, terms used in the present document may tangentially be used as they are derived from other standards such as:

Standard	Description
IEC 60034 series	Rotating electrical machines
IEC 61800 series	Adjustable speed electrical power drive systems
IEC 61158 series	Digital data communications for measurement and control – Fieldbus for use in industrial control systems

Finally, the term *zone of operation* may be used in conjunction with the description of specific hazards, and is defined as it is for a *hazard zone* or *danger zone* in the *Machinery Directive (2006/42/EC)* and *ISO 12100:2010*.

NOTE: The aforementioned standards may or may not apply to the specific products cited in the present documentation. For more information concerning the individual standards applicable to the products described herein, see the characteristics tables for those product references.

Introduction

There are two ways to monitor when a module detects an error or an advisory on your Modicon Edge I/O island:

- The LEDs on the module.
- The Group Cyclic Status byte (GCS).

If one of the modules of your Modicon Edge I/O island detects an error or an advisory, open the **DIAGNOSTICS** page to identify which diagnostic ID is active in the module.

For more information about **DIAGNOSTICS** page, refer to the Modicon Edge I/O - Configurator and Web Interface - User Guide.

Diagnostic ID

Each diagnostic ID displayed in the **DIAGNOSTICS** page is composed of eight digits.

The first six digits represent the unique identifier of each diagnostic ID. Use this number to search for a specific diagnostic ID in this manual

The last two digits, depending on the nature of the diagnostic ID, are either:

- The module number
- The channel number
- The port ID
- The component ID
- None of the above: #FF

For example, the diagnostic ID **0x1D038001** means there is the error code **0x1D0380** on channel 01 of the selected module.

There are three levels of criticality for a diagnostic ID:

- Information
- Advisory
- 2 types of error:
 - Error channel: An error is detected on a channel of the module.
 - Error module: An error is detected in the module.

Monitoring the Module State

What’s in This Part

Group Cyclic Status (GCS)	16
LEDs Display	18

Group Cyclic Status (GCS)

Overview

The Group Cyclic Status (GCS) is a one-byte bit field for each module that is part of the implicit exchanges with the network interface module. For more information about data exchange, refer to the Modicon Edge I/O NTS - Network Interface Modules - User Guide.

The GCS provides status information about the module as described in the following tables.

There are three types of GCS:

- GCS for an I/O module
- GCS for a network interface module
- GCS for the embedded extender module

GCS for an I/O Module

The following table presents the GCS for an I/O module:

Bit	Value	Description
0	Data Quality	TRUE = Module data and GCS bits 1...7 are valid. FALSE = Module data and GCS bits 1...7 are not valid.
1	General Module Status	TRUE = No error is detected. FALSE = At least one Error module is detected.
2	I/O Status	TRUE = No I/O error is detected. FALSE = At least one Error channel is detected.
3	Receive Status ⁽¹⁾	TRUE = The output data was received and applied in the last I/O bus cycle. FALSE = The output data was not received in the last I/O bus cycle.
4	Output Status ⁽¹⁾	TRUE = The outputs are operating normally, the output data is applied at each I/O bus cycle. FALSE = The outputs are in fallback state, the output data is not applied at each I/O bus cycle.
5	Advisory Status	TRUE = No advisory is detected. FALSE = At least one advisory is detected.
6	reserved	This bit is reserved (forced to 1).
7	Data Freshness	TRUE = The input data and the GCS bits 0...6 were updated during the latest I/O bus cycle. FALSE = The input data and the GCS bits 0...6 were not updated during the latest I/O bus cycle.
⁽¹⁾ For modules without outputs, This bit is reserved (forced to 1).		

GCS for a Network Interface Module

The following table presents the GCS for a network interface module:

Bit	Value	Description
0	Data Quality	This bit is reserved (forced to 1).
1	General Module Status	TRUE = No error is detected. FALSE = At least one Error module is detected.
2	I/O Status	This bit is reserved (forced to 1).
3	Receive Status	This bit is reserved (forced to 1).
4	Output Status	This bit is reserved (forced to 1).
5	Advisory Status	TRUE = No advisory is detected. FALSE = At least one advisory is detected.
6	Reserved	This bit is reserved (forced to 1).
7	Data Freshness	This bit is reserved (forced to 1).

GCS for the Embedded Extender Module

The following table presents the GCS for the embedded extender module:

Bit	Value	Description
0	Data Quality	TRUE = Module data and GCS bits 1...7 are valid. FALSE = Module data and GCS bits 1...7 are not valid.
1	General Module Status	TRUE = No error is detected. FALSE = At least one Error module is detected.
2	I/O Status	This bit is reserved (forced to 1).
3	Receive Status	This bit is reserved (forced to 1).
4	Output Status	This bit is reserved (forced to 1).
5	Advisory Status	TRUE = No advisory is detected. FALSE = At least one advisory is detected.
6	Reserved	This bit is reserved (forced to 1).
7	Data Freshness	TRUE = The extender module data and the GCS bits 0...6 were updated during the latest I/O bus cycle. FALSE = The extender module data and the GCS bits 0...6 were not updated during the latest I/O bus cycle.

LEDs Display

The following table presents the status of the module depending on the **R** (run) and **E** (error) LEDs:

R (Green)	E (Red)	Description
Initialization and non-operational states		
OFF	OFF	Indicates that the module is not energized.
OFF	Fast Flash	Indicates that the module has detected a system error.
Regular Flash	OFF	Indicates that the firmware is being updated.
Single Flash	OFF	Indicates that the module is energized and not configured.
Operational state		
ON	OFF	Indicates that the module is energized, configured and operational.
ON	Single Flash	Indicates an advisory detection.
ON	Regular Flash	Indicates that: - An Error channel is detected on a channel of the module. - Module in fallback state.
ON	ON	Indicates that an Error module is detected for the module.

For more information on how the LEDs of each module provide feedback on the status of the module, refer to the documentation of the related module.

Log File

When troubleshooting your installation, you can download the log entries from the network interface module with the Modicon Edge I/O NTS Web Interface or the Modicon Edge I/O Configurator:

- Log entries contain information on the system operation. The log entries can be helpful when troubleshooting why an error was detected.
- Log files are archives of the log entries.

For each **Diagnostic ID** that appeared during the operation of the network interface module or the I/O modules, a log entry is added the log file.

For example, the entry log 00002;2024-09-30 12:28:05.825;ERR_CHAN;[IOM_AIO.Q_3];Internal Field Power Supply Error Detected on channel 3;436438019. The log entry is built with the following information:

Information	Description	Example
Reboot counter	The number of reboots of the network interface module since the last factory reset.	00002
Date	The date of the log entry (YYYY-MM-DD).	2024-09-30
Time	The time stamp of the log entry (UTC HH:MM:SS.MMM).	12:28:05.825
Criticality level	The criticality level of the log entry.	ERR_CHAN
Function.Sub-function	The function and sub-function associated with the log entry.	[IOM_AIO.Q_3]
Short description	A short description of the log entry.	Internal Field Power Supply Error Detected on channel 3
Diagnostic ID	This is the diagnostic ID in decimal value of the log entry, convert to hexadecimal to match it to the diagnostic ID in this manual.	436438019 = 1A03 8403 hex

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0x010800: OK (Configured)

Criticality level: Information

MainFunction: *ConfigMgr*

SubFunction: *Process*

Principle and Potential Causes

The configuration process is completed successfully.

There are no errors detected on the device. On the network interface module, the I/O modules with the **Device mode** parameter set to **Normal** are publishing input correctly. Each module perform I/O process correctly.

Possible Solutions

Not applicable.

How to Clear the Information

Not applicable.

0x010801: OK (Not Configured)

Criticality level: Information

MainFunction: *ConfigMgr*

SubFunction: *Process*

Principle and Potential Causes

The device is not configured.

Possible Solutions

Build a configuration for this device and download it to the network interface module.

How to Clear the Information

Not applicable.

0x1A0200: Read Node ID Unsuccessful

Criticality level: Information

MainFunction: *IOM_AIO*

SubFunction: *ExplicitAccess*

Principle and Potential Causes

The requested node ID cannot be accessed.

The node ID is incorrect for the module.

Possible Solution

Use a valid node ID.

How to Clear the Information

Not applicable.

0x1A0201: Write Node ID Unsuccessful

Criticality level: Information

MainFunction: *IOM_AIO*

SubFunction: *ExplicitAccess*

Principle and Potential Causes

The requested node ID cannot be accessed.

The node ID is incorrect for the module.

Possible Solution

Use a valid node ID.

How to Clear the Information

Not applicable.

0x1C0200: Read Node ID Unsuccessful

Criticality level: Information

MainFunction: *IOM_HSC*

SubFunction: *ExplicitAccess*

Principle and Potential Causes

The requested node ID cannot be accessed.

The node ID is incorrect for the module.

Possible Solution

Use a valid node ID.

How to Clear the Information

Not applicable.

0x1C0201: Write Node ID Unsuccessful

Criticality level: Information

MainFunction: *IOM_HSC*

SubFunction: *ExplicitAccess*

Principle and Potential Causes

The requested node ID cannot be accessed.

The node ID is incorrect for the module.

Possible Solution

Use a valid node ID.

How to Clear the Information

Not applicable.

0x1C0500: Frequency Meter: Time Base Invalid

Criticality level: Information

MainFunction: *IOM_HSC*

SubFunction: *Channel*

Principle and Potential Causes

The **Time Base** parameter value sent through the explicit exchange is out of range.

Potential causes:

- The value is in an incorrect data type.
- The value is not within the allowed data range.

Possible Solution

- Send a value in a correct data type.
- Send a value within the allowed data range.

How to Clear the Information

Not applicable.

0x1C0501: Frequency Meter: Calibration Factor Invalid

Criticality level: Information

MainFunction: *IOM_HSC*

SubFunction: *Channel*

Principle and Potential Causes

The **Calibration Factor** parameter value sent through the explicit exchange is out of range.

Potential causes:

- The value is in an incorrect data type.
- The value is not within the allowed data range.

Possible Solution

- Send a value in a correct data type.
- Send a value within the allowed data range.

How to Clear the Information

Not applicable.

0x1C0502: Period Meter: Resolution Invalid

Criticality level: Information

MainFunction: *IOM_HSC*

SubFunction: *Channel*

Principle and Potential Causes

The **Resolution** parameter value sent through the explicit exchange is out of range.

Potential causes:

- The value is in an incorrect data type.
- The value is not within the allowed data range.

Possible Solution

- Send a value in a correct data type.
- Send a value within the allowed data range.

How to Clear the Information

Not applicable.

0x1C0503: Ratio Meter: Time Base Invalid

Criticality level: Information

MainFunction: *IOM_HSC*

SubFunction: *Channel*

Principle and Potential Causes

The **Time Base** parameter value sent through the explicit exchange is out of range.

Potential causes:

- The value is in an incorrect data type.
- The value is not within the allowed data range.

Possible Solution

- Send a value in a correct data type.
- Send a value within the allowed data range.

How to Clear the Information

Not applicable.

0x1C0504: Ratio Meter: Absolute Limit Invalid

Criticality level: Information

MainFunction: *IOM_HSC*

SubFunction: *Channel*

Principle and Potential Causes

The **Absolute Limit** parameter value sent through the explicit exchange is out of range.

Potential causes:

- The value is in an incorrect data type.
- The value is not within the allowed data range.

Possible Solution

- Send a value in a correct data type.
- Send a value within the allowed data range.

How to Clear the Information

Not applicable.

0x1C0505: Ratio Meter: Calibration Factor Invalid

Criticality level: Information

MainFunction: *IOM_HSC*

SubFunction: *Channel*

Principle and Potential Causes

The **Calibration Factor** parameter value sent through the explicit exchange is out of range.

Potential causes:

- The value is in an incorrect data type.
- The value is not within the allowed data range.

Possible Solution

- Send a value in a correct data type.
- Send a value within the allowed data range.

How to Clear the Information

Not applicable.

0x1C0506: Single Event Counting: Time Base Invalid

Criticality level: Information

MainFunction: *IOM_HSC*

SubFunction: *Channel*

Principle and Potential Causes

The **Time Base** parameter value sent through the explicit exchange is out of range.

Potential causes:

- The value is in an incorrect data type.
- The value is not within the allowed data range.

Possible Solution

- Send a value in a correct data type.
- Send a value within the allowed data range.

How to Clear the Information

Not applicable.

0x1C0507: Single Phase Counting: Preset Invalid

Criticality level: Information

MainFunction: *IOM_HSC*

SubFunction: *Channel*

Principle and Potential Causes

The **Preset** or **Modulo Value** parameter value sent through the explicit exchange is out of range.

Potential causes:

- The value is in an incorrect data type.
- The value is not within the allowed data range.

Possible Solution

- Send a value in a correct data type.
- Send a value within the allowed data range.

How to Clear the Information

Not applicable.

0x1C0508: Single Phase Counting: Capture Window Start Position Invalid

Criticality level: Information

MainFunction: *IOM_HSC*

SubFunction: *Channel*

Principle and Potential Causes

The **Capture Window Start** parameter value sent through the explicit exchange is out of range.

Potential causes:

- The value is in an incorrect data type.
- The value is not within the allowed data range.

Possible Solution

- Send a value in a correct data type.
- Send a value within the allowed data range.

How to Clear the Information

Not applicable.

0x1C0509: Single Phase Counting: Capture Window End Position Invalid

Criticality level: Information

MainFunction: *IOM_HSC*

SubFunction: *Channel*

Principle and Potential Causes

The **Capture Window End** parameter value sent through the explicit exchange is out of range.

Potential causes:

- The value is in an incorrect data type.
- The value is not within the allowed data range.

Possible Solution

- Send a value in a correct data type.
- Send a value within the allowed data range.

How to Clear the Information

Not applicable.

0x1C0510: Reflex Output: Threshold Value 1 Invalid

Criticality level: Information

MainFunction: *IOM_HSC*

SubFunction: *Channel*

Principle and Potential Causes

The **TH1** parameter value sent through the explicit exchange is out of range.

Potential causes:

- The value does not respect the following rule: $TH0 < TH1 < TH2 < TH3$.
- The value is in an incorrect data type.
- The value is not within the allowed data range.

Possible Solution

- Send a value that respects the following rule: $TH0 < TH1 < TH2 < TH3$.
- Send a value in a correct data type.
- Send a value within the allowed data range.

How to Clear the Information

Not applicable.

0x1C0511: Reflex Output: Threshold Value 2 Invalid

Criticality level: Information

MainFunction: *IOM_HSC*

SubFunction: *Channel*

Principle and Potential Causes

The **TH2** parameter value sent through the explicit exchange is out of range.

Potential causes:

- The value does not respect the following rule: $TH0 < TH1 < TH2 < TH3$.
- The value is in an incorrect data type.
- The value is not within the allowed data range.

Possible Solution

- Send a value that respects the following rule: $TH0 < TH1 < TH2 < TH3$.
- Send a value in a correct data type.
- Send a value within the allowed data range.

How to Clear the Information

Not applicable.

0x1C0512: Reflex Output: Threshold Value 3 Invalid

Criticality level: Information

MainFunction: *IOM_HSC*

SubFunction: *Channel*

Principle and Potential Causes

The **TH3** parameter value sent through the explicit exchange is out of range.

Potential causes:

- The value does not respect the following rule: $TH0 < TH1 < TH2 < TH3$.
- The value is in an incorrect data type.
- The value is not within the allowed data range.

Possible Solution

- Send a value that respects the following rule: $TH0 < TH1 < TH2 < TH3$.
- Send a value in a correct data type.
- Send a value within the allowed data range.

How to Clear the Information

Not applicable.

0x1C050A: Dual Phase Counting: Preset Invalid

Criticality level: Information

MainFunction: *IOM_HSC*

SubFunction: *Channel*

Principle and Potential Causes

The **Preset** or **Modulo Value** parameter value sent through the explicit exchange is out of range.

Potential causes:

- The value is in an incorrect data type.
- The value is not within the allowed data range.

Possible Solution

- Send a value in a correct data type.
- Send a value within the allowed data range.

How to Clear the Information

Not applicable.

0x1C050B: Dual Phase Counting: Capture Window Start Position Invalid

Criticality level: Information

MainFunction: *IOM_HSC*

SubFunction: *Channel*

Principle and Potential Causes

The **Capture Window Start** parameter value sent through the explicit exchange is out of range.

Potential causes:

- The value is in an incorrect data type.
- The value is not within the allowed data range.

Possible Solution

- Send a value in a correct data type.
- Send a value within the allowed data range.

How to Clear the Information

Not applicable.

0x1C050C: Dual Phase Counting: Capture Window End Position Invalid

Criticality level: Information

MainFunction: *IOM_HSC*

SubFunction: *Channel*

Principle and Potential Causes

The **Capture Window End** parameter value sent through the explicit exchange is out of range.

Potential causes:

- The value is in an incorrect data type.
- The value is not within the allowed data range.

Possible Solution

- Send a value in a correct data type.
- Send a value within the allowed data range.

How to Clear the Information

Not applicable.

0x1C050D: PWM Output: Frequency Invalid

Criticality level: Information

MainFunction: *IOM_HSC*

SubFunction: *Channel*

Principle and Potential Causes

The PWM frequency value sent through the explicit exchange is out of range.

Potential causes:

- The value is in an incorrect data type.
- The value is not within the allowed data range.

Possible Solution

- Send a value in a correct data type.
- Send a value within the allowed data range.

How to Clear the Information

Not applicable.

0x1C050E: PWM Output: Duty Invalid

Criticality level: Information

MainFunction: *IOM_HSC*

SubFunction: *Channel*

Principle and Potential Causes

The PWM duty cycle value sent through the explicit exchange is out of range.

Potential causes:

- The value is in an incorrect data type.
- The value is not within the allowed data range.

Possible Solution

- Send a value in a correct data type.
- Send a value within the allowed data range.

How to Clear the Information

Not applicable.

0x1C050F: Reflex Output: Threshold Value 0 Invalid

Criticality level: Information

MainFunction: *IOM_HSC*

SubFunction: *Channel*

Principle and Potential Causes

The **TH0** parameter value sent through the explicit exchange is out of range.

Potential causes:

- The value does not respect the following rule: $TH0 < TH1 < TH2 < TH3$.
- The value is in an incorrect data type.
- The value is not within the allowed data range.

Possible Solution

- Send a value that respects the following rule: $TH0 < TH1 < TH2 < TH3$.
- Send a value in a correct data type.
- Send a value within the allowed data range.

How to Clear the Information

Not applicable.

0x1D0200: Read Node ID Unsuccessful

Criticality level: Information

MainFunction: *IOM_DIO*

SubFunction: *ExplicitAccess*

Principle and Potential Causes

The requested node ID cannot be accessed.

The node ID is incorrect for the module.

Possible Solution

Use a valid node ID.

How to Clear the Information

Not applicable.

0x1D0201: Write node ID Unsuccessful

Criticality level: Information

MainFunction: *IOM_DIO*

SubFunction: *ExplicitAccess*

Principle and Potential Causes

The requested node ID cannot be accessed.

The node ID is incorrect for the module.

Possible Solution

Use a valid node ID.

How to Clear the Information

Not applicable.

0x2C0101: Configuration OK

Criticality level: Information

MainFunction: *FDM*

SubFunction: *CONF*

Principle and Potential Causes

The field device master module is configured.

Possible Solutions

Not applicable.

How to Clear the Information

Not applicable.

0x2C0200: Reading Node Unsuccessful

Criticality level: Information

MainFunction: *FDM*

SubFunction: *EXPLICIT_ACCESS*

Principle and Potential Causes

The requested node ID cannot be accessed.

The node ID is incorrect for the module.

Possible Solutions

Use a valid node ID.

How to Clear the Information

Not applicable.

0x2C0201: Writing Node Unsuccessful

Criticality level: Information

MainFunction: *FDM*

SubFunction: *EXPLICIT_ACCESS*

Principle and Potential Causes

The requested node ID cannot be accessed.

The node ID is incorrect for the module.

Possible Solutions

Use a valid node ID.

How to Clear the Information

Not applicable.

0x2C0300: Port State Inactive

Criticality level: Information

MainFunction: *FDM*

SubFunction: *IO-Link*

Principle and Potential Causes

The IO-Link port changed to the status described.

Possible Solutions

Not applicable.

How to Clear the Information

Not applicable.

0x2C0301: Port State DO

Criticality level: Information

MainFunction: *FDM*

SubFunction: *IO-Link*

Principle and Potential Causes

The IO-Link port changed to the status described.

Possible Solutions

Not applicable.

How to Clear the Information

Not applicable.

0x2C0302: Port State DI

Criticality level: Information

MainFunction: *FDM*

SubFunction: *IO-Link*

Principle and Potential Causes

The IO-Link port changed to the status described.

Possible Solutions

Not applicable.

How to Clear the Information

Not applicable.

0x2C0304: Port State Pre-Operate

Criticality level: Information

MainFunction: *FDM*

SubFunction: *IO-Link*

Principle and Potential Causes

The IO-Link port changed to the status described.

Possible Solutions

Not applicable.

How to Clear the Information

Not applicable.

0x2C0305: Port State Operate

Criticality level: Information

MainFunction: *FDM*

SubFunction: *IO-Link*

Principle and Potential Causes

The IO-Link port changed to the status described.

Possible Solutions

Not applicable.

How to Clear the Information

Not applicable.

0x2C0500: IO-Link-Event

Criticality level: Information

MainFunction: *FDM*

SubFunction: *IO-Link-Event*

Principle and Potential Causes

Provides the qualifier and the code of the IO-Link event.

Possible Solutions

Not applicable.

How to Clear the Information

Not applicable.

0x2C0501: IO-Link-Event-Fifo Overflow

Criticality level: Information

MainFunction: *FDM*

SubFunction: *IO-Link-Event*

Principle and Potential Causes

The least recent event is removed from the FIFO diagnostic queue.

The IO-Link event is discarded because the FIFO diagnostic queue is full.

Possible Solutions

Not applicable.

How to Clear the Information

Not applicable.

0x2C0502: IO-Link-Event-Fifo Unsuccessful

Criticality level: Information

MainFunction: *FDM*

SubFunction: *IO-Link-Event*

Principle and Potential Causes

The IO-Link event could not be added to the FIFO diagnostic queue.

Possible Solutions

Not applicable.

How to Clear the Information

Not applicable.

0x2C0600: Internal Supply OK

Criticality level: Information

MainFunction: *FDM*

SubFunction: *Supply*

Principle and Potential Causes

The voltage of the bus power is within the allowed range.

Possible Solutions

Not applicable.

How to Clear the Information

Not applicable.

0x2C0603: Supply OK

Criticality level: Information

MainFunction: *FDM*

SubFunction: *Supply*

Principle and Potential Causes

The voltage of the internal field power is within the allowed range.

Possible Solutions

Not applicable.

How to Clear the Information

Not applicable.

0x2C0700: Temperature OK

Criticality level: Information

MainFunction: *FDM*

SubFunction: *Temperature*

Principle and Potential Causes

The operating temperature is within the allowed range.

Possible Solutions

Not applicable.

How to Clear the Information

Not applicable.

0x2C0800: Module power supply L+ OK

Criticality level: Information

MainFunction: *FDM*

SubFunction: *L*

Principle and Potential Causes

The voltage on the L+ pins is within the allowed range.

Possible Solutions

Not applicable.

How to Clear the Information

Not applicable.

0x2C0900: CQ OK

Criticality level: Information

MainFunction: *FDM*

SubFunction: CQ

Principle and Potential Causes

This diagnostic ID is published when there are no errors detected on CQ or when the 0x2C0981 error is cleared.

Possible Solutions

Not applicable.

How to Clear the Information

Not applicable.

0x2C8400: iSDU Read Request

Criticality level: Information

MainFunction: *FDM*

SubFunction: *IO-Link-iSDU*

Principle and Potential Causes

A read request of the IO-Link index is sent.

Possible Solutions

Not applicable.

How to Clear the Information

Not applicable.

0x2C8401: iSDU Write Request

Criticality level: Information

MainFunction: *FDM*

SubFunction: *IO-Link-iSDU*

Principle and Potential Causes

A write request of the IO-Link index is sent.

Possible Solutions

Not applicable.

How to Clear the Information

Not applicable.

0x2C0A00: Start Offline Configuration

Criticality level: Information

MainFunction: *FDM*

SubFunction: *OfflineConfig*

Principle and Potential Causes

The offline configuration is started.

Possible Solutions

Not applicable.

How to Clear the Information

Not applicable.

0x2C0A01: Skip Offline Configuration

Criticality level: Information

MainFunction: *FDM*

SubFunction: *OfflineConfig*

Principle and Potential Causes

The offline configuration is skipped.

Possible Solutions

Not applicable.

How to Clear the Information

Not applicable.

0x2C0A03: Offline Configuration Done

Criticality level: Information

MainFunction: *FDM*

SubFunction: *OfflineConfig*

Principle and Potential Causes

The offline configuration is done.

Possible Solutions

Not applicable.

How to Clear the Information

Not applicable.

0x2C0B00: Non-Volatile Memory OK

Criticality level: Information

MainFunction: *FDM*

SubFunction: *EEPROM*

Principle and Potential Causes

There are no errors detected on the non-volatile memory.

Possible Solutions

Not applicable.

How to Clear the Information

Not applicable.

0x2C0B01: Non-Volatile Memory Repaired

Criticality level: Information

MainFunction: *FDM*

SubFunction: *EEPROM*

Principle and Potential Causes

The non-volatile memory is repaired.

Possible Solutions

Not applicable.

How to Clear the Information

Not applicable.

0x860100: OK (Configured)

Criticality level: Information

MainFunction: *ConfigMgr*

SubFunction: *MainProcess*

Principle and Potential Causes

The network interface module is configured.

Possible Solutions

Not applicable.

How to Clear the Information

Not applicable.

0x860101: OK (Not Configured)

Criticality level: Information

MainFunction: *ConfigMgr*

SubFunction: *MainProcess*

Principle and Potential Causes

The network interface module is not configured.

Possible Solutions

Not applicable.

How to Clear the Information

Not applicable.

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0x0108C2: Configuration Not Compatible with Firmware

Criticality level: Error module

MainFunction: *ConfigMgr*

SubFunction: *Process*

Principle and Potential Causes

The software configuration is not compatible with the firmware of the module.

Possible Solutions

- Update (upgrade or downgrade) the firmware of the module.
- Install a software version compatible with the firmware.

How to Clear the Error Code

The diagnostic ID automatically clears when the cause is resolved.

0x0108C5: Configuration Error Detected

Criticality level: Error module

MainFunction: *ConfigMgr*

SubFunction: *Process*

Principle and Potential Causes

An error is detected while configuring the device.

Potential causes:

- Configuration format is not compatible.
- There is a mismatch between the configuration and the physical setup of your island.

Possible Solutions

Send a new configuration on your network interface module matching the physical setup of your island.

If the error persists, contact your local Schneider Electric representative.

How to Clear the Error Code

The diagnostic ID automatically clears when the cause is resolved.

0x0208C0: Write Firmware Page Unsuccessful

Criticality level: Error module

MainFunction: *FirmwareUpdate*

SubFunction: *Process*

Principle and Potential Causes

An error occurred while performing the verification of the firmware candidate.

Communication interruption during the firmware update process.

Possible Solutions

Reboot the cluster and retry the firmware update.

If the error persists, contact your local Schneider Electric representative.

How to Clear the Error Code

The diagnostic ID automatically clears when the cause is resolved.

0x0208C1: Invalid Firmware Candidate

Criticality level: Error module

MainFunction: *FirmwareUpdate*

SubFunction: *Process*

Principle and Potential Causes

An error occurred while performing the verification of the firmware candidate.
Firmware file is corrupted.

Possible Solution

Contact your local Schneider Electric representative.

How to Clear the Error Code

The diagnostic ID automatically clears when the cause is resolved.

0x0208C2: Firmware Installation Unsuccessful

Criticality level: Error module

MainFunction: *FirmwareUpdate*

SubFunction: *Process*

Principle and Potential Causes

An error occurred while installing the firmware candidate.

Possible Solutions

Reboot the cluster and retry the firmware update.
If the error persists, contact your local Schneider Electric representative.

How to Clear the Error Code

The diagnostic ID automatically clears when the cause is resolved.

0x0301C1: Client Connection to NIM/CTR has been Disconnected

Criticality level: Error module

MainFunction: *ExplicitCommToCtr*

SubFunction: *Connection*

Principle and Potential Causes

The connection between the I/O module and the network interface module is disrupted.

Potential causes:

- There is a communication interruption between the I/O module and the network interface module.
- An internal error occurred on the network interface module.

Possible Solutions

Reboot your cluster if the communication is not automatically restored.

If the error persists, contact your local Schneider Electric representative.

How to Clear the Error Code

The diagnostic ID automatically clears when the cause is resolved.

0x0501C0: Configuration Error Detected

Criticality level: Error module

MainFunction: *ImplicitCommWithCtr*

SubFunction: *Configuration*

Principle and Potential Causes

0x0501C001: An error is detected on the configuration of the implicit data received by the I/O module.

0x0501C002: An error is detected on the configuration of the implicit data received by the bus extender.

Possible Solutions

Contact your local Schneider Electric representative.

How to Clear the Error Code

Not applicable.

0x0501C2: Unconfiguration Unsuccessful

Criticality level: Error module

MainFunction: *ImplicitCommWithCtr*

SubFunction: *Configuration*

Principle and Potential Causes

An error is detected on implicit data deconfiguration.

Possible Solutions

Contact your local Schneider Electric representative.

How to Clear the Error Code

The diagnostic ID automatically clears when the cause is resolved.

0x0502C0: Cluster Synchronization Lost (IN Cycle Not Performed)

Criticality level: Error module

MainFunction: *ImplicitCommWithCtr*

SubFunction: *Input*

Principle and Potential Cause

The synchronization on the cluster is disrupted.

Possible Solutions

Wait for the module to synchronize.

If the error persists, contact your local Schneider Electric representative.

How to Clear the Error Code

The diagnostic ID automatically clears when the cause is resolved.

0x0502C3: Input Send Unsuccessful

Criticality level: Error module

MainFunction: *ImplicitCommWithCtr*

SubFunction: *Input*

Principle and Potential Causes

The input was not sent.

Possible Solutions

Contact your local Schneider Electric representative.

How to Clear the Error Code

The diagnostic ID automatically clears when the cause is resolved.

0x0503C0: Cluster Synchronization Lost (Out Cycle Was Not Performed)

Criticality level: Error module

MainFunction: *ImplicitCommWithCtr*

SubFunction: *Output*

Principle and Potential Cause

The synchronization on the cluster is disrupted.

Possible Solutions

Wait for the module to synchronize.

If the error persists, contact your local Schneider Electric representative.

How to Clear the Error Code

Not applicable.

0x0503C3: Output Control Command Incorrect Format (Logged Once)

Criticality level: Error module

MainFunction: *ImplicitCommWithCtr*

SubFunction: *Output*

Principle and Potential Causes

The output frame format is incorrect.

Possible Solutions

Contact your local Schneider Electric representative.

How to Clear the Error Code

Not applicable.

0x0504C0: Invalid Publish Data From I/O modules

Criticality level: Error module

MainFunction: *ExplicitCommToCtr*

SubFunction: *ModulesPublish*

Principle and Potential Cause

An error is detected on inputs published by I/O modules.

At least one I/O module is not publishing its data within the I/O cycle. It might be the case for a few cycles after a configuration.

Possible Solutions

Verify on the diagnostic tab whether there are any detected errors on the associated modules.

If the error persists, contact your local Schneider Electric representative.

How to Clear the Error Code

The diagnostic ID automatically clears when the cause is resolved.

0x0504C1: Bus Extender Overflowed By I/O module Input Frames

Criticality level: Error module

MainFunction: *ImplicitCommWithCtr*

SubFunction: *ModulesPublish*

Principle and Potential Causes

The bus extender cannot manage the rate of incoming implicit data published by I/O modules.

Possible Solutions

Contact your local Schneider Electric representative.

How to Clear the Error Code

The diagnostic ID automatically clears when the cause is resolved.

0x0505C0: Send Aggregated Frame To Northbound Unsuccessful

Criticality level: Error module

MainFunction: *ImplicitCommWithCtr*

SubFunction: *LinkWithCtr*

Principle and Potential Causes

The bus extender cannot send the implicit data exchange frames on northbound.

Possible Solutions

Contact your local Schneider Electric representative.

How to Clear the Error Code

Not applicable.

0x060AC0: Error Detected In Shared Memory

Criticality level: Error module

MainFunction: *SharedMemory*

SubFunction: *AsynchComm*

Principle and Potential Cause

The device receives too many asynchronous messages. The logs and I/O LED on the bus extender are not updated.

Too many messages are in transit in the system.

Possible Solutions

Contact your local Schneider Electric representative.

How to Clear the Error Code

The diagnostic ID automatically clears when the cause is resolved.

0x0708C0: Invalid Baseplate Detected (Unrecoverable Error)

Criticality level: Error module

MainFunction: *IOBusAddressing*

SubFunction: *Process*

Principle and Potential Causes

An invalid base number is detected at startup.

Potential causes:

- There are more than 32 bases in the cluster.
- The cluster termination is missing or there is an incorrect connection.
- There is an incorrect connection between the bases at startup.

Possible Solutions

- Reduce the number of bases on the cluster.
- Replug the cluster termination, verify the bases connection and do a power cycle on the cluster.

If the error persists after a power cycle, contact your local Schneider Electric representative.

How to Clear the Error Code

Reboot your cluster.

0x0708C1: Address Computation Unsuccessful (Unrecoverable Error)

Criticality level: Error module

MainFunction: *IOBusAddressing*

SubFunction: *Process*

Principle and Potential Causes

Address computation is performed regularly during operation.

The cluster termination is no longer present.

Possible Solutions

Replug the cluster termination, verify the bases connection and do a power cycle on the cluster.

If the error persists after a power cycle, contact your local Schneider Electric representative.

How to Clear the Error Code

Reboot your cluster.

0x0708C2: Address Check Unsuccessful (Unrecoverable Error)

Criticality level: Error module

MainFunction: *IOBusAddressing*

SubFunction: *Process*

Principle and Potential Causes

During the module addressing protocol, the address verification of an addressed module is unsuccessful.

Potential causes:

- Several modules are hot-swapped at the same time.
- A module is hot-swapped during the initial addressing phase of a cluster (during power on).

Possible Solutions

- Do not hot-swap more than one module at a time on a running cluster.
- Do not hot-swap any module during the starting phase of the cluster.

How to Clear the Error Code

Reboot your cluster.

0x0808C2: Synchronization Lost (Timeout, Link Might be Broken)

Criticality level: Error module

MainFunction: *IOBusSynchro*

SubFunction: *Process*

Principle and Potential Causes

This error can occur when there are incorrect connections between bases.

Possible Solutions

Replug the cluster termination, verify the bases connection and do a power cycle on the cluster.

If the error persists after a power cycle, contact your local Schneider Electric representative.

How to Clear the Error Code

Reboot your cluster.

0x0A01C0: Low Layer Issues Detected

Criticality level: Error module

MainFunction: *PhysicalLayer*

SubFunction: *IOBus*

Principle and Potential Cause

An error is detected by the hardware (MAC).

Possible Solutions

Contact your local Schneider Electric representative.

How to Clear the Error Code

Not applicable.

0x0A02C0: IOBus Configuration Issue Detected, Module Silent

Criticality level: Error module

MainFunction: *PhysicalLayer*

SubFunction: *TSN*

Principle and Potential Causes

The communication conditions on the I/O bus are not reached.

Possible Solutions

Wait for the module to reach the necessary communication conditions.

If the error persists, contact your local Schneider Electric representative.

How to Clear the Error Code

The diagnostic ID automatically clears when the cause is resolved.

0x0A02C1: Apply Schedule Configuration Unsuccessful

Criticality level: Error module

MainFunction: *PhysicalLayer*

SubFunction: *TSN*

Principle and Potential Cause

An internal error on Time Sensitive Network (TSN) configuration is detected.

Possible Solutions

Send a new configuration on your network interface module.

Reboot your cluster.

If the error persists, contact your local Schneider Electric representative.

How to Clear the Error Code

Not applicable.

0x0A05C0: IOBus Configuration Error Detected

Criticality level: Error module

MainFunction: *PhysicalLayer*

SubFunction: *IoBusConf*

Principle and Potential Cause

An internal error on the I/O bus configuration of the bus extender is detected.

Possible Solutions

Contact your local Schneider Electric representative.

How to Clear the Error Code

Not applicable.

0x0B01C0: Unauthorized Disable Security Command Received from NIM/CTR Ignored

Criticality level: Error module

MainFunction: *SecureComm*

SubFunction: *Management*

Principle and Potential Cause

An unauthorized disable security command received from network interface module was ignored.

The network interface module is not genuine.

Possible Solutions

Contact your local Schneider Electric representative.

How to Clear the Error Code

Not applicable.

0x0B02C1: Unsuccessful Security Enrollment

Criticality level: Error module

MainFunction: *SecureComm*

SubFunction: *Enrollment*

Principle and Potential Cause

An error is detected during security enrollment.

Possible causes:

- A communication interruption has occurred during the enrollment process.
- The module does not have a valid genuineness certificate.

Possible Solutions

Reboot the cluster.

If the error persists, contact your local Schneider Electric representative.

How to Clear the Error Code

Not applicable.

0x0C01C1: Synchronization Lost

Criticality level: Error module

MainFunction: *Synchro*

SubFunction: *Process*

Principle and Potential Causes

There are communication issues between the network interface module, the controller and the bus extender.

Possible Solutions

Wait for synchronization.

If the error persists, contact your local Schneider Electric representative.

How to Clear the Error Code

Not applicable.

0x0C01C3: Memory Allocation Issue Detected

Criticality level: Error module

MainFunction: *Synchro*

SubFunction: *Process*

Principle and Potential Causes

An internal error is detected.

Possible Solutions

Contact your local Schneider Electric representative.

How to Clear the Error Code

Not applicable.

0x0D01C0: Device Genuineness Certificate is not Trusted

Criticality level: Error module

MainFunction: *Genuineness*

SubFunction: *Process*

Principle and Potential Causes

A module without a trusted certificate is connected to the cluster.

Possible Solutions

Contact your local Schneider Electric representative.

How to Clear the Error Code

Not applicable.

0x1A01C0: Configuration Error Detected

Criticality level: Error module

MainFunction: *IOM_AIO*

SubFunction: *Conf*

Principle and Potential Causes

The configuration received is invalid.

There is a misalignment between the configuration software, network interface module, and I/O modules versions.

Possible Solutions

Send a new configuration to align the configuration software, network interface module, and I/O modules versions.

How to Clear the Error Code

The diagnostic ID automatically clears when the cause is resolved.

0x1C01C0: Configuration Error Detected

Criticality level: Error module

MainFunction: *IOM_HSC*

SubFunction: *Config*

Principle and Potential Causes

The configuration received is invalid.

There is a misalignment between the configuration software, network interface module, and I/O modules versions.

Possible Solutions

Send a new configuration to align the configuration software, network interface module, and I/O modules versions.

How to Clear the Error Code

The diagnostic ID automatically clears when the cause is resolved.

0x1D01C0: Configuration Error Detected

Criticality level: Error module

MainFunction: *IOM_DIO*

SubFunction: *Conf*

Principle and Potential Causes

The configuration received is invalid.

There is a misalignment between the configuration software, network interface module, and I/O modules versions.

Possible Solutions

Send a new configuration to align the configuration software, network interface module, and I/O modules versions.

How to Clear the Error Code

The diagnostic ID automatically clears when the cause is resolved.

0x2C01C0: Configuration Error

Criticality level: Error module

MainFunction: *FDM*

SubFunction: *CONF*

Principle and Potential Causes

The configuration received is invalid.

There is a misalignment between the configuration software, network interface module, and I/O modules versions.

Possible Solutions

Send a new configuration to align the configuration software, network interface module, and I/O modules versions.

How to Clear the Error Code

The diagnostic ID automatically clears when the cause is resolved.

0x2C01C2: Unable To Register Method ID Callback.

Criticality level: Error module

MainFunction: *FDM*

SubFunction: *CONF*

Principle and Potential Causes

A Standardized Master Interface (SMI) method cannot be used.

An internal error is detected.

Possible Solutions

Contact your local Schneider Electric representative.

How to Clear the Error Code

Not applicable.

0x2C0301: Supply Voltage Alert

Criticality level: Error module

MainFunction: *FDM*

SubFunction: *Supply*

Principle and Potential Causes

An error is detected on the internal field power supply.

The internal field power supply is not present.

Possible Solutions

Verify the internal field power supply and its connection.

How to Clear the Error Code

The diagnostic ID automatically clears when the cause is resolved.

0x2C06C4: Supply Undervoltage Alert

Criticality level: Error module

MainFunction: *FDM*

SubFunction: *Supply*

Principle and Potential Causes

The internal field power supply voltage is below the correct range.

The power supply energizing the field power segment is insufficient.

Possible Solutions

Verify that the power supply energizing the field power segment meets the minimum power supply requirements.

How to Clear the Error Code

Reboot the cluster.

0x2C07C4: Module Temperature Above Critical Level (De-Energizing Outputs)

Criticality level: Error module

MainFunction: *FDM*

SubFunction: *Temperature*

Principle and Potential Causes

The temperature of the microcontroller exceeds 95 °C (203 °F).

The module is in overload.

Possible Solutions

Verify the ambient temperature and take appropriate action.

How to Clear the Error Code

Not applicable.

0x2C0BC2: Non-Volatile Memory Channel(s) Lost

Criticality level: Error module

MainFunction: *FDM*

SubFunction: *EEPROM*

Principle and Potential Causes

An internal error is detected.

Possible Solutions

Contact your local Schneider Electric representative.

How to Clear the Error Code

Not applicable.

0x2C0BC3: Non-Volatile Memory Formatting

Criticality level: Error module

MainFunction: *FDM*

SubFunction: *EEPROM*

Principle and Potential Causes

An internal error is detected.

Possible Solutions

Contact your local Schneider Electric representative.

How to Clear the Error Code

Not applicable.

0x2C10C0: Configuration Error

Criticality level: Error module

MainFunction: *FDM*

SubFunction: *Configuration*

Principle and Potential Causes

The configuration received is invalid.

There is a misalignment between the configuration software, network interface module, and I/O modules versions.

Possible Solutions

Send a new configuration to align the configuration software, network interface module, and I/O modules versions.

How to Clear the Error Code

The diagnostic ID automatically clears when the cause is resolved.

0x8101C0: Invalid Cybersecurity Rotary Switch Value Detected

Criticality level: Error module

MainFunction: *Startup*

SubFunction: *RotarySwitch*

Principle and Potential Cause

The position of the cybersecurity switch is invalid.

Possible Solutions

Turn the cybersecurity switch to a valid position.

If the error persists, contact your local Schneider Electric representative.

How to Clear the Error Code

Reboot your cluster.

0x8101C1: Invalid Upper Rotary Switch Value Detected

Criticality level: Error module

MainFunction: *Startup*

SubFunction: *RotarySwitch*

Principle and Potential Cause

The position of the upper rotary switch is invalid.

Possible Solutions

Turn the upper rotary switch to a valid position.

If the error persists, contact your local Schneider Electric representative.

How to Clear the Error Code

Reboot your cluster.

0x8101C2: Invalid Lower Rotary Switch Value Detected

Criticality level: Error module

MainFunction: *Startup*

SubFunction: *RotarySwitch*

Principle and Potential Cause

The read value of the lower rotary switch is considered not valid.

Possible Solutions

Turn the lower rotary switch to a valid position.

If the error persists, contact your local Schneider Electric representative.

How to Clear the Error Code

Reboot your cluster.

0x8201C0: Invalid FDR Server Configuration Detected.

Criticality level: Error module

MainFunction: *EthernetServices*

SubFunction: *FDR*

Principle and Potential Cause

The island configuration retrieved from the fast device replacement server is not valid.

Potential causes:

- The configuration is not compatible with the firmware version.
- The configuration is corrupted.

Possible Solutions

Create a new island configuration. The FDR server configuration is replaced by the new configuration.

How to Clear the Error Code

The diagnostic ID automatically clears when the cause is resolved.

0x8301C0: EIP Connection Timeout

Criticality level: Error module

MainFunction: *EIPModbus*

SubFunction: *EIP*

Principle and Potential Cause

The EtherNet/IP implicit connection has timed out.

Potential causes:

- The RJ45 cable is unplugged.
- The controller is not operational.

Possible Solutions

- Ensure that the RJ45 cable is connected.
- Verify the state of the controller.

How to Clear the Error Code

The diagnostic ID automatically clears when the cause is resolved.

0x8401C0: Hold-Up Timeout Detected

Criticality level: Error module

MainFunction: *ImplicitCommWithCtr*

SubFunction: *MainProcess*

Principle and Potential Cause

The configured **Communication Hold-up time** parameter value is reached.

Potential causes:

- The **Communication Hold-up time** parameter value is too low.
- The controller is not operational.
- The RJ45 cable is unplugged.

Possible Solutions

- Increase the **Communication Hold-up time** value in the Modicon Edge I/O configuration.
- Verify the RJ45 cable connection.
- Verify the state of the controller.

How to Clear the Error Code

The diagnostic ID automatically clears when the cause is resolved.

0x8501C0: NTP Client Configuration Unsuccessful

Criticality level: Error module

MainFunction: *TimeMgt*

SubFunction: *NTP*

Principle and Potential Causes

The network interface module cannot configure the NTP client.

The NTP server IP addresses are not configured properly.

Possible Solutions

Configure the NTP settings.

How to Clear the Error Code

The diagnostic ID automatically clears when the cause is resolved.

0x8501C1: Cannot Start NTP Client

Criticality level: Error module

MainFunction: *TimeMgt*

SubFunction: *NTP*

Principle and Potential Causes

The network interface module cannot start its NTP client.
The NTP server IP addresses are not configured properly.

Possible Solutions

Configure the NTP settings.

How to Clear the Error Code

The diagnostic ID automatically clears when the NTP is properly started/stopped.

0x8501C2: NTP Synchronization Lost

Criticality level: Error module

MainFunction: *TimeMgt*

SubFunction: *NTP*

Principle and Potential Causes

The network interface module cannot synchronize with the NTP server.

Potential causes:

- The NTP server IP addresses are not configured properly.
- The RJ45 cable is unplugged.
- The NTP servers are down.

Possible Solutions

- Ensure that the RJ45 cable is connected.
- Verify your NTP configuration.
- Ensure that your NTP servers are connected.

How to Clear the Error Code

The diagnostic ID automatically clears when the cause is resolved.

0x8601C0: Invalid Configuration Received

Criticality level: Error module

MainFunction: *ConfigMgr*

SubFunction: *MainProcess*

Principle and Potential Causes

The configuration received is considered not valid by the network interface module.

Potential causes:

- The network interface module is not compatible with the software configuration.
- The configuration was not successfully downloaded.
- The configuration file is corrupted.

Possible Solutions

Send a new configuration to align the configuration software, network interface module, and I/O modules versions.

How to Clear the Error Code

The diagnostic ID automatically clears when the cause is resolved.

0x8601C1: Configuration from Non-Volatile Memory is Invalid

Criticality level: Error module

MainFunction: *ConfigMgr*

SubFunction: *MainProcess*

Principle and Potential Causes

The configuration stored in non-volatile memory is not valid in the network interface module module.

Potential causes:

- The configuration stored is not compatible with the firmware version of the network interface module.
- The configuration stored is corrupted.

Possible Solutions

Send a new configuration on your network interface module.

How to Clear the Error Code

The diagnostic ID automatically clears when the cause is resolved.

0x8601C2: Error Detected when Storing Configuration

Criticality level: Error module

MainFunction: *ConfigMgr*

SubFunction: *MainProcess*

Principle and Potential Causes

An error was detected when the network interface module saved the configuration in non-volatile memory.

Possible Solutions

Send a new configuration on your network interface module. If the error persists contact your local Schneider Electric representative.

How to Clear the Error Code

The diagnostic ID automatically clears when the cause is resolved.

0x8602C0: Configuration Mismatch (Modules Configured but not Physically Present)

Criticality level: Error module

MainFunction: *ConfigMgr*

SubFunction: *Topology*

Principle and Potential Causes

The island configuration received by the network interface module does not match the physical configuration of your island.

Potential causes:

- An I/O module is missing in the island setup.
- The island configuration is not up-to-date.

Possible Solutions

Add the missing I/O module in the Modicon Edge I/O setup.

Send a new configuration on your network interface module matching the physical configuration of your island.

How to Clear the Error Code

The diagnostic ID automatically clears when the cause is resolved.

0x8602C1: Configuration Mismatch (Incorrect Modules Detected)

Criticality level: Error module

MainFunction: *ConfigMgr*

SubFunction: *Topology*

Principle and Potential Causes

The island configuration received by the network interface module does not match the physical configuration of your island.

Potential causes:

- An incorrect module is inserted in the indicated slot.
- The island configuration is not up-to-date.

Possible Solutions

Replace the I/O module in the indicated slot.

Send a new configuration on your network interface module matching the physical configuration of your island.

How to Clear the Error Code

The diagnostic ID automatically clears when the cause is resolved.

0x8701C0: Duplicate IP Found

Criticality level: Error module

MainFunction: *IPAddressing*

SubFunction: *MainProcess*

Principle and Potential Causes

A duplicated IP address is found by the network interface module on the fieldbus port.

Another device in the network has the same IP address as the network interface module.

Possible Solutions

- Modify the IP address of the network interface module.
- Modify the IP address of the other device.

How to Clear the Error Code

The diagnostic ID automatically clears when the cause is resolved.

0x8701C1: Cannot Set NIM IP Address

Criticality level: Error module

MainFunction: *IPAddressing*

SubFunction: *MainProcess*

Principle and Potential Causes

The network interface module cannot set the configured IP address on the fieldbus ports.

Potential causes:

- The IP address format is considered not valid.
- Another device has the same IP address as the network interface module.
- The subnet IP address is already taken by another interface (USB / IOBUS).

Possible Solutions

When you configure the subnet IP of the network interface module, ensure that it is different from USB interface or the I/O bus interface.

How to Clear the Error Code

The diagnostic ID automatically clears when the cause is resolved.

0x8701C2: Cannot Set NIM IP Subnet Mask

Criticality level: Error module

MainFunction: *IPAddressing*

SubFunction: *MainProcess*

Principle and Potential Causes

The network interface module cannot set the configured subnet mask on the fieldbus ports.

The subnet mask is not valid.

Possible Solutions

When you configure the subnet mask of the network interface module, ensure that it is different from USB interface or the I/O bus interface.

How to Clear the Error Code

The diagnostic ID automatically clears when the cause is resolved.

0x8701C3: Cannot Set NIM IP Gateway Address

Criticality level: Error module

MainFunction: *IPAddressing*

SubFunction: *MainProcess*

Principle and Potential Causes

The network interface module cannot set the configured gateway IP address on the fieldbus ports.

The gateway IP address format is not valid.

Possible Solutions

Modify the gateway IP address of the network interface module.

How to Clear the Error Code

The diagnostic ID automatically clears when the cause is resolved.

0x8701C4: Cannot Set USB IP Address

Criticality level: Error module

MainFunction: *IPAddressing*

SubFunction: *MainProcess*

Principle and Potential Causes

The network interface module cannot set the configured IP address gateway address on the USB port.

Potential causes:

- The IP address format is not valid.
- The IP address subnet is already taken by another interface (Fieldbus / IOBUS).

Possible Solutions

Modify the configured USB IP address of the network interface module and ensure that it is different from the fieldbus interface or the I/O bus interface.

How to Clear the Error Code

The diagnostic ID automatically clears when the cause is resolved.

0x8701C5: Cannot Set USB IP Subnet Mask

Criticality level: Error module

MainFunction: *IPAddressing*

SubFunction: *MainProcess*

Principle and Potential Causes

The network interface module cannot set the configured IP address subnet mask on the USB port.

The subnet mask is not valid.

Possible Solutions

Modify the configured USB subnet mask of the network interface module and ensure that it is different from fieldbus interface or the I/O bus interface.

How to Clear the Error Code

The diagnostic ID automatically clears when the cause is resolved.

0x8702C0: Rotary Switches Changed During Run-time

Criticality level: Error module

MainFunction: *IPAddressing*

SubFunction: *Rotary Switch*

Principle and Potential Causes

The rotary switches position was changed while in operation.

Possible Solutions

Set the rotary switches to their initial positions.

How to Clear the Error Code

Reboot your cluster.

0x8801C0: Error Detected During Firmware Upgrade (Invalid Signature)

Criticality level: Error module

MainFunction: *FwUpdate*

SubFunction: *MainProcess*

Principle and Potential Causes

The firmware signature received is considered not valid by the network interface module.

Potential causes:

- The firmware is corrupted.
- An error was detected during firmware download.

Possible Solutions

Retry the download of the firmware package to the network interface module. If the error persists, update with another firmware package.

How to Clear the Error Code

The diagnostic ID automatically clears when the cause is resolved.

0x8801C1: Error Detected During Firmware Upgrade (Installation Unsuccessful)

Criticality level: Error module

MainFunction: *FwUpdate*

SubFunction: *MainProcess*

Principle and Potential Causes

An error is detected during the installation of the new network interface module firmware.

A error is detected with the memory of the network interface module.

Possible Solutions

Stop any communication with the network interface module, reboot it, and download again the firmware package to the network interface module.

If the error persists, do a factory reset of the network interface module.

How to Clear the Error Code

The diagnostic ID automatically clears when the cause is resolved.

0x8901C0: Unrecoverable Error On NIM Rebooting

Criticality level: Error module

MainFunction: *Log*

SubFunction: *crashlog*

Principle and Potential Causes

There was a non recoverable error on the network interface module and the network interface module rebooted.

Possible Solutions

Wait until the network interface module reboots and do a powercycle to restart the network interface module.

If the error persists, do a factory reset of the network interface module.

How to Clear the Error Code

The network interface module is started successfully without any crash anymore.

0x0503C2: One Output Group Is Applying Fallback

Criticality level: Error channel

MainFunction: *ImplicitCommWithCtr*

SubFunction: *Output*

Principle and Potential Causes

At least one output group is in fallback.

There is a communication interruption between the network interface module and the controller.

Possible Solutions

Verify the connection between the network interface module and the controller.

How to Clear the Error Code

The diagnostic ID automatically clears when the cause is resolved.

0x1A0380: Broken Wire Error Detected

Criticality level: Error channel

MainFunction: *IOM_AIO*

SubFunction: Q

Principle and Potential Causes

A broken wire error is detected on the indicated channel.

Potential causes:

- The wire is not connected on the terminal block.
- There is an excessive load impedance.

Possible Solutions

- Verify the wire connection and the load impedance.
- Disable the **Broken Wire Checked** parameter if it is not necessary for your application.

How to Clear the Error Code

The diagnostic ID automatically clears when the cause is resolved.

0x1A0381: Short Circuit Error Detected

Criticality level: Error channel

MainFunction: *IOM_AIO*

SubFunction: Q

Principle and Potential Causes

A short circuit error is detected on the indicated channel.

Potential causes:

- There is an incorrect or a damaged wiring on the indicated channel.
- The load on the channel is too small.

Possible Solutions

- Verify the circuit connection and the load impedance.
- Disable the **Shorted Wire Checked** parameter if it is not necessary for your application.

How to Clear the Error Code

The diagnostic ID automatically clears when the cause is resolved.

0x1A0382: Overflow Error Detected

Criticality level: Error channel

MainFunction: *IOM_AIO*

SubFunction: Q

Principle and Potential Causes

An overflow error is detected on the indicated channel.

The channel output is above the **Overflow threshold** parameter value.

Possible Solutions

- Adjust the overflow threshold.
- Disable the **Overflow Checked** parameter if it is not necessary for your application.

How to Clear the Error Code

The diagnostic ID automatically clears when the cause is resolved.

0x1A0383: Underflow Error Detected

Criticality level: Error channel

MainFunction: *IOM_AIO*

SubFunction: Q

Principle and Potential Causes

An underflow error is detected on the indicated channel.

An output value is read under the **Underflow threshold** parameter value.

Possible Solutions

- Adjust the underflow threshold.
- Disable the **Underflow Checked** parameter if it is not necessary for your application.

How to Clear the Error Code

The diagnostic ID automatically clears when the cause is resolved.

0x1A0384: Internal Field Power Error Detected

Criticality level: Error channel

MainFunction: *IOM_AIO*

SubFunction: Q

Principle and Potential Causes

An error is detected on the internal field power supply.

The internal field power supply is not present.

Possible Solutions

Verify the internal field power supply and its connection.

How to Clear the Error Code

The diagnostic ID automatically clears when the cause is resolved.

0x1A0385: Hardware Error Detected

Criticality level: Error channel

MainFunction: *IOM_AIO*

SubFunction: Q

Principle and Potential Causes

A hardware error is detected on the indicated channel.

This can occur due to electromagnetic interferences.

Possible Solutions

Clear the electromagnetic interference.

If the error persists, contact your local Schneider Electric representative.

How to Clear the Error Code

Not applicable.

0x1A0386: Calibration Error Detected

Criticality level: Error channel

MainFunction: *IOM_AIO*

SubFunction: Q

Principle and Potential Causes

A calibration error is detected on the indicated channel.

The calibration data is not correct.

Possible Solutions

Contact your local Schneider Electric representative.

How to Clear the Error Code

Not applicable.

0x1A0387: DAC Power Error Detected

Criticality level: Error channel

MainFunction: *IOM_AIO*

SubFunction: Q

Principle and Potential Causes

There is a Digital-to-Analog Converter (DAC) power error detected on the indicated channel.

Potential causes:

- The DAC internal power is not available.
- A broken wire is detected.

Possible Solutions

Verify the connection and the load.

If the error persists, contact your local Schneider Electric representative.

How to Clear the Error Code

Reboot the module.

0x1A0480: Broken Wire Error Detected

Criticality level: Error channel

MainFunction: *IOM_AIO*

SubFunction: /

Principle and Potential Causes

A broken wire error is detected on the indicated channel.

Potential causes:

- The wire is not connected on the terminal block.
- The input value is below the **Underflow Threshold** parameter value.
- The input value is under 0.3 mA when NE43 enabled.

Possible Solutions

- Adjust the **Underflow Threshold** parameter value.
- Disable the **Underflow Checked** parameters if it is not necessary for your application.

How to Clear the Error Code

The diagnostic ID automatically clears when the cause is resolved.

0x1A0482: Overflow Error Detected

Criticality level: Error channel

MainFunction: *IOM_AIO*

SubFunction: /

Principle and Potential Causes

An overflow error is detected on indicated channel.

The input value read is above the **Overflow Threshold** parameter value.

Possible Solutions

- Verify the input value and take appropriate action.
- Adjust **Overflow Threshold** parameter.
- Disable the **Overflow Checked** parameter if it is not necessary for your application.

How to Clear the Error Code

The diagnostic ID automatically clears when the cause is resolved.

0x1A0483: Underflow Error Detected

Criticality level: Error channel

MainFunction: *IOM_AIO*

SubFunction: /

Principle and Potential Causes

An underflow error is detected on the indicated channel.

An input value is read under **Underflow Threshold** parameter value.

Possible Solutions

- Adjust the **Underflow Threshold** parameter.
- Disable the **Underflow Checked** parameter if it is not necessary for your application.

How to Clear the Error Code

The diagnostic ID automatically clears when the cause is resolved.

0x1A0484: Internal Field Power Error Detected

Criticality level: Error channel

MainFunction: *IOM_AIO*

SubFunction: /

Principle and Potential Causes

An error is detected on the internal field power supply.

The internal field power supply is not present.

Possible Solutions

Verify the internal field power supply and its connection.

How to Clear the Error Code

The diagnostic ID automatically clears when the cause is resolved.

0x1A0485: Hardware Error Detected

Criticality level: Error channel

MainFunction: *IOM_AIO*

SubFunction: /

Principle and Potential Causes

A hardware error is detected on the indicated channel.

This can occur due to electromagnetic interferences.

Possible Solutions

Clear the electromagnetic interference.

If the error persists, contact your local Schneider Electric representative.

How to Clear the Error Code

Not applicable.

0x1A0486: Calibration Error Detected

Criticality level: Error channel

MainFunction: *IOM_AIO*

SubFunction: /

Principle and Potential Causes

A calibration error is detected on the indicated channel.

The calibration data is not correct.

Possible Solutions

If the error persists, contact your local Schneider Electric representative.

How to Clear the Error Code

Not applicable.

0x1A0488: Loop Power Supply Error Detected

Criticality level: Error channel

MainFunction: *IOM_AIO*

SubFunction: /

Principle and Potential Causes

A loop power supply error is detected on the indicated channel.

Potential causes:

- Short circuit
- Overload
- Undervoltage

Possible Solutions

Verify the connection and the load.

How to Clear the Error Code

The diagnostic ID automatically clears when the cause is resolved.

0x1C0382: Short Circuit Detected on Q0 to Q3

Criticality level: Error channel

MainFunction: *IOM_HSC*

SubFunction: Q

Principle and Potential Causes

A short circuit is detected on the outputs Q0...Q3.

There is an incorrect or a damaged wiring on the indicated channel.

Possible Solutions

Verify the wiring on the channel.

How to Clear the Error Code

Depends on the **Rearming Output Mode** parameter:

- When **Rearming Output Mode** parameter = **Latched Off**, manually set **RearmOutputCmd** to TRUE.
- When **Rearming Output Mode** parameter = **Auto Recovery**, the diagnostic ID automatically clears when the cause is resolved.

0x1C0383: Short Circuit Detected on Q4 to Q7

Criticality level: Error channel

MainFunction: *IOM_HSC*

SubFunction: Q

Principle and Potential Causes

A short circuit detected on the outputs Q4...Q7.

There is an incorrect or a damaged wiring on the indicated channel.

Possible Solutions

Verify the wiring on the channel.

How to Clear the Error Code

Depends on the **Rearming Output Mode** parameter:

- When **Rearming Output Mode** parameter = **Latched Off**, manually set **RearmOutputCmd** to TRUE.
- When **Rearming Output Mode** parameter = **Auto Recovery**, the diagnostic ID automatically clears when the cause is resolved.

0x1C0384: Internal Field Power Error Detected

Criticality level: Error channel

MainFunction: *IOM_HSC*

SubFunction: Q

Principle and Potential Causes

An error is detected on the internal field power supply.

The internal field power supply is not present.

Possible Solutions

Verify the internal field power supply and its connection.

How to Clear the Error Code

The diagnostic ID automatically clears when the cause is resolved.

0x1C0484: Internal Field Power Error Detected

Criticality level: Error channel

MainFunction: *IOM_HSC*

SubFunction: /

Principle and Potential Causes

An error is detected on the internal field power supply.

The internal field power supply is not present.

Possible Solutions

Verify the internal field power supply and its connection.

How to Clear the Error Code

The diagnostic ID automatically clears when the cause is resolved.

0x1D0380: Broken Wire Detected

Criticality level: Error channel

MainFunction: *IOM_DIO*

SubFunction: Q

Principle and Potential Causes

A broken wire error is detected on the indicated channel.

Potential causes:

- The wire is not connected on the terminal block.
- There is an excessive load impedance.

Possible Solutions

Verify the wire connection and the load impedance.

How to Clear the Error Code

The diagnostic ID automatically clears when the cause is resolved.

0x1D0381: Short Circuit Detected

Criticality level: Error channel

MainFunction: *IOM_DIO*

SubFunction: Q

Principle and Potential Causes

A short circuit error is detected on the indicated channel.

There is an incorrect or a damaged wiring on the indicated channel.

Possible Solutions

- Verify the wiring on the channel.
- Disable the **Diag Enable Shorten Wire** parameter if it is not necessary for your application.

How to Clear the Error Code

Depends on the **Rearming Output Mode** parameter:

- When **Rearming Output Mode** parameter = **Latched Off**, manually set **RearmOutputCmd** to TRUE.
- When **Rearming Output Mode** parameter = **Auto Recovery**, the diagnostic ID automatically clears when the cause is resolved.

0x1D0382: External Power Supply Error Detected

Criticality level: Error channel

MainFunction: *IOM_DIO*

SubFunction: Q

Principle and Potential Causes

An error is detected on the external power supply.

The external power supply is not present.

Possible Solutions

Verify the external power supply and its connection.

How to Clear the Error Code

The diagnostic ID automatically clears when the cause is resolved.

0x1D0384: Internal Field Power Error Detected

Criticality level: Error channel

MainFunction: *IOM_DIO*

SubFunction: Q

Principle and Potential Causes

An error is detected on the internal field power supply.

The internal field power supply is not present.

Possible Solutions

Verify the internal field power supply and its connection.

How to Clear the Error Code

The diagnostic ID automatically clears when the cause is resolved.

0x1D0385: Read Back Error Detected

Criticality level: Error channel

MainFunction: *IOM_DIO*

SubFunction: Q

Principle and Potential Causes

There is a misalignment between the targeted output value and the physical output value.

Externally supplied wire is connected on the indicated channel

Possible Solutions

Verify the wiring on the channel.

How to Clear the Error Code

The diagnostic ID automatically clears when the cause is resolved.

0x1D0480: Broken Wire Detected

Criticality level: Error channel

MainFunction: *IOM_DIO*

SubFunction: /

Principle and Potential Causes

A broken wire error is detected on the indicated channel.

Potential causes:

- The wire is not connected on the terminal block.
- There is an excessive load impedance.

Possible Solutions

Verify the wire connection and the load impedance.

How to Clear the Error Code

The diagnostic ID automatically clears when the cause is resolved.

0x1D0481: Short Circuit Detected

Criticality level: Error channel

MainFunction: *IOM_DIO*

SubFunction: /

Principle and Potential Causes

A short circuit error is detected on the indicated channel.

There is an incorrect or a damaged wiring on the indicated channel.

Possible Solutions

Verify the wiring on the channel.

How to Clear the Error Code

Depends on the **Rearming Output Mode** parameter:

- When **Rearming Output Mode** parameter = **Latched Off**, manually set **RearmOutputCmd** to TRUE.
- When **Rearming Output Mode** parameter = **Auto Recovery**, the diagnostic ID automatically clears when the cause is resolved.

0x1D0482: External Power Supply Error Detected

Criticality level: Error channel

MainFunction: *IOM_DIO*

SubFunction: /

Principle and Potential Causes

An error is detected on the external power supply.

The external power supply is not present.

Possible Solutions

Verify the external power supply and its connection.

How to Clear the Error Code

The diagnostic ID automatically clears when the cause is resolved.

0x1D0483: Sensor Power Supply Error

Criticality level: Error channel

MainFunction: *IOM_DIO*

SubFunction: /

Principle and Potential Causes

External power supply needed for the sensor is missing.

The external power supply is not present.

Possible Solutions

Verify the external power supply and its connection.

How to Clear the Error Code

The diagnostic ID automatically clears when the cause is resolved.

0x1D0484: Internal Field Power Error Detected

Criticality level: Error channel

MainFunction: *IOM_DIO*

SubFunction: */*

Principle and Potential Causes

An error is detected on the internal field power supply.

The internal field power supply is not present.

Possible Solutions

Verify the internal field power supply and its connection.

How to Clear the Error Code

The diagnostic ID automatically clears when the cause is resolved.

0x2C0386: Port state: Device missing

Criticality level: Error channel

MainFunction: *FDM*

SubFunction: *IO-Link*

Principle and Potential Causes

The IO-Link port changed to the state described.

The device is missing.

Possible Solutions

Install the device at the correct location.

How to Clear the Error Code

The diagnostic ID automatically clears when the cause is resolved.

0x2C0682: Internal Supply Undervoltage Alert

Criticality level: Error channel

MainFunction: *FDM*

SubFunction: *Supply*

Principle and Potential Causes

The internal voltage is below 9V.

Undervoltage or overload of internal supply.

Possible Solutions

Disconnect the terminal.

How to Clear the Error Code

The diagnostic ID automatically clears when the cause is resolved.

0x2C0782: Driver Over Temperature Alert

Criticality level: Error channel

MainFunction: *FDM*

SubFunction: *Temperature*

Principle and Potential Causes

The transceiver is over 150 °C (302 °F).

Potential causes:

- Overtemperature
- Overload

Possible Solutions

- Verify the ambient temperature and take appropriate action.
- Verify the load and take appropriate action.

How to Clear the Error Code

The diagnostic ID automatically clears when the cause is resolved.

0x2C0881: Module Power Supply L+ Undervoltage

Criticality level: Error channel

MainFunction: *FDM*

SubFunction: /

Principle and Potential Causes

There is an undervoltage or an overload on the L+ pin.

Possible Solutions

- Verify the field power supply and take appropriate action.
- Verify the load on the L+ pin and take appropriate action.

How to Clear the Error Code

The diagnostic ID automatically clears when the cause is resolved.

0x2C0882: Module Power Supply L+ Overload

Criticality level: Error channel

MainFunction: *FDM*

SubFunction: /

Principle and Potential Causes

There is an overload on the L+ pin.

Possible Solutions

Verify the load on the L+ pin and take appropriate action.

How to Clear the Error Code

The diagnostic ID automatically clears when the cause is resolved.

0x2C0981: CQ overload

Criticality level: Error channel

MainFunction: *FDM*

SubFunction: *CQ*

Principle and Potential Causes

There is an overload on the CQ pin.

Possible Solutions

Verify the device connected to the CQ pin.

How to Clear the Error Code

Unplug and replug the device connected to the CQ pin.

0x2C0A82: Offline Configuration Unsuccessful

Criticality level: Error channel

MainFunction: *FDM*

SubFunction: *OfflineConfig*

Principle and Potential Causes

The I/O Data Dictionary (IODD) file is not valid.

Possible Solutions

Send a new configuration.

How to Clear the Error Code

The diagnostic ID automatically clears when the cause is resolved.

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0x010843: Configuration In Progress

Criticality level: Advisory

MainFunction: *ConfigMgr*

SubFunction: *Process*

Principle and Potential Causes

The configuration process is in progress and encountered issues.

Potential causes:

- The network interface module is not ready to provide configuration.
- There is a communication interruption with the network interface module.

Possible Solutions

- Wait until the network interface module is ready.
- Wait until the communication is recovered.

If the communication recovery seems too long, you can reboot and/or resend a configuration to restart the process.

How to Clear the Information

The diagnostic ID automatically clears when the cause is resolved.

0x010844: Configuration Does not Apply on this Product Reference

Criticality level: Advisory

MainFunction: *ConfigMgr*

SubFunction: *Process*

Principle and Potential Causes

The configured module does not match the module connected on the indicated slot. In this case, the network interface module detects the mismatch and displays the module diagnostic **Device Mismatch Error Detected**.

Possible Solutions

Send a new configuration on your network interface module matching the physical configuration of your island.

How to Clear the Advisory Code

The diagnostic ID automatically clears when the cause is resolved.

0x010846: Unsuccessful Configuration Preparation

Criticality level: Advisory

MainFunction: *ConfigMgr*

SubFunction: *Process*

Principle and Potential Causes

The configuration node ID is unknown or is rejected.

Possible Solutions

Contact your local Schneider Electric representative.

How to Clear the Advisory Code

Not applicable.

0x020844: Unrecoverable Error Restarted Device

Criticality level: Advisory

MainFunction: *FirmwareUpdate*

SubFunction: *Process*

Principle and Potential Causes

A previously detected unrecoverable error caused a restart of the device.

Potential causes:

- An error is detected by the firmware.
- The watchdog timer is expired.
- A hardware error is detected.

Possible Solutions

Contact your local Schneider Electric representative.

How to Clear the Advisory Code

Reboot your cluster.

0x020845: Unexpected Error Restarted Device

Criticality level: Advisory

MainFunction: *FirmwareUpdate*

SubFunction: *Process*

Principle and Potential Causes

A previously detected internal error caused a restart of the device.

Possible Solutions

Contact your local Schneider Electric representative.

How to Clear the Advisory Code

Reboot your cluster.

0x030140: Not Connected to NIM/CTR

Criticality level: Advisory

MainFunction: *ExplicitCommToCtr*

SubFunction: *Connection*

Principle and Potential Causes

The diagnostic shows this ID until the I/O module has successfully opened a client connection with the network interface module for explicit exchanges.

The module is not connected to the network interface module Unit.

Possible Solutions

Wait for connection.

How to Clear the Advisory Code

The diagnostic ID automatically clears when the cause is resolved.

0x030240: Last Exchange with NIM/CTR Unsuccessful

Criticality level: Advisory

MainFunction: *ExplicitCommToCtr*

SubFunction: *LastExchange*

Principle and Potential Causes

The last exchange with the network interface module unit was unsuccessful.

Possible Solutions

Wait for connection.

How to Clear the Advisory Code

The diagnostic ID automatically clears when the cause is resolved.

0x040740: OPC UA C/S Operation Unsuccessful

Criticality level: Advisory

MainFunction: *ExplicitCommToCtr*

SubFunction: *Server*

Principle and Potential Causes

The OPCUA server process API was unsuccessful.

Potential causes:

- There is a server process interruption.
- The system is not operational.

Possible Solutions

Contact your local Schneider Electric representative.

How to Clear the Advisory Code

The diagnostic ID automatically clears when the cause is resolved.

0x040741: OPC UA Method Call on Unhandled Method ID

Criticality level: Advisory

MainFunction: *ExplicitCommToCtr*

SubFunction: *Server*

Principle and Potential Causes

The OPCUA server received an unsupported method call.

The server receives unsupported requests.

Possible Solutions

Identify the originator of message to fix the detected error.

NOTE: The user log can contain details of the exchanges to help you identify the originator.

How to Clear the Advisory Code

The diagnostic ID automatically clears when the cause is resolved.

0x040742: OPC UA Method Call on Unhandled Name Space ID

Criticality level: Advisory

MainFunction: *ExplicitCommToCtr*

SubFunction: *Server*

Principle and Potential Causes

The OPCUA server received a method call on a unhandled name space ID.

The server receives unsupported requests.

Possible Solutions

Identify the originator of message to fix the detected error.

NOTE: The user log can contain details of the exchanges to help you identify the originator.

How to Clear the Advisory Code

The diagnostic ID automatically clears when the cause is resolved.

0x040743: OPC UA Read Unknown Node ID

Criticality level: Advisory

MainFunction: *ExplicitCommToCtr*

SubFunction: *Server*

Principle and Potential Causes

The OPCUA server received a read access on an unknown Node ID.

The server receives unsupported requests.

Possible Solutions

Identify the originator of message to fix the detected error.

NOTE: The user log can contain details the exchanges to help you identify the originator.

How to Clear the Advisory Code

The diagnostic ID automatically clears when the cause is resolved.

0x040744: OPC UA Read Node ID with Unsupported Type

Criticality level: Advisory

MainFunction: *ExplicitCommToCtr*

SubFunction: *Server*

Principle and Potential Causes

The OPCUA server received a read access on a Node ID with an unsupported type.

The server receives unsupported requests.

Possible Solutions

Identify the originator of message to fix the detected error.

NOTE: The user log can contain details the exchanges to help you identify the originator.

How to Clear the Advisory Code

The diagnostic ID automatically clears when the cause is resolved.

0x040745: OPCUA Write Unknow Node ID

Criticality level: Advisory

MainFunction: *ExplicitCommToCtr*

SubFunction: *Server*

Principle and Potential Causes

The OPCUA server received a write access on an unknown Node ID.

The server receives unsupported requests.

Possible Solutions

Identify the originator of message to fix the detected error.

NOTE: The user log can contain details the exchanges to help you identify the originator.

How to Clear the Advisory Code

The diagnostic ID automatically clears when the cause is resolved.

0x040746: OPCUA Write Node ID with Unsupported Type

Criticality level: Advisory

MainFunction: *ExplicitCommToCtr*

SubFunction: *Server*

Principle and Potential Causes

The OPCUA server received a write access on a Node ID with an unsupported type.

The server receives unsupported requests.

Possible Solutions

Identify the originator of message to fix the detected error.

NOTE: The user log can contain details the exchanges to help you identify the originator.

How to Clear the Advisory Code

The diagnostic ID automatically clears when the cause is resolved.

0x050141: Unsuccessful Configuration Preparation

Criticality level: Advisory

MainFunction: *ImplicitCommWithCtr*

SubFunction: *Configuration*

Principle and Potential Causes

0x05014101: An advisory is detected on the configuration of the implicit data received by the I/O module.

0x05014102: An advisory is detected on the configuration of the implicit data received by the bus extender.

Possible Solutions

Verify that the layout of the configured modules matches the physical layout of your cluster.

If the advisory persists, contact your local Schneider Electric representative.

How to Clear the Advisory Code

The diagnostic ID automatically clears when the cause is resolved.

0x050241: Input Ready Sooner Than Expected (Not Published)

Criticality level: Advisory

MainFunction: *ImplicitCommWithCtr*

SubFunction: *Input*

Principle and Potential Causes

Input of cycle N cannot be published.

Possible Solutions

If the advisory persists, contact your local Schneider Electric representative.

How to Clear the Advisory Code

Not applicable.

0x050242: Input Ready Later Than Expected (Not Published)

Criticality level: Advisory

MainFunction: *ImplicitCommWithCtr*

SubFunction: *Input*

Principle and Potential Causes

Input of cycle N cannot be published.

Possible Solutions

If the advisory persists, contact your local Schneider Electric representative.

How to Clear the Advisory Code

Not applicable.

0x050341: Output Not Applied (Not Received or Late)

Criticality level: Advisory

MainFunction: *ImplicitCommWithCtr*

SubFunction: *Output*

Principle and Potential Causes

Outputs of cycle N cannot be applied.

Possible Solutions

If the advisory persists, contact your local Schneider Electric representative.

How to Clear the Advisory Code

Not applicable.

0x070840: Module Not Addressed

Criticality level: Advisory

MainFunction: *IOBusAddressing*

SubFunction: *Process*

Principle and Potential Causes

The module is not addressed.

Possible Solutions

Wait for slot addressing completion.

How to Clear the Advisory Code

The diagnostic ID automatically clears when the cause is resolved.

0x080840: Not Synchronized

Criticality level: Advisory

MainFunction: *IOBusSynchro*

SubFunction: *Process*

Principle and Potential Causes

There is no synchronization between the I/O bus and the I/O modules.

Possible Solutions

Wait for the synchronisation completion.

How to Clear the Advisory Code

The diagnostic ID automatically clears when the cause is resolved.

0x080841: Synchronization Lost

Criticality level: Advisory

MainFunction: *IOBusSynchro*

SubFunction: *Process*

Principle and Potential Causes

The synchronization with the I/O bus and the I/O modules is disrupted during the the initial synchronization between the network interface module and the bus receiver.

Possible Solutions

Not applicable.

How to Clear the Advisory Code

The diagnostic ID automatically clears when the cause is resolved.

0x090940: Wall Clock Synchronization Lost

Criticality level: Advisory

MainFunction: *Time*

SubFunction: *SynchronizationState*

Principle and Potential Causes

The device is synchronized with wall clock but the synchronization is lost.

The device stopped receiving the time server update.

Possible Solutions

Verify the time server device is connected and is operating.

How to Clear the Advisory Code

The diagnostic ID automatically clears when the cause is resolved.

0x0A0242: IOBus Configured With Implicit Exchanges While Module Has No Configuration

Criticality level: Advisory

MainFunction: *PhysicalLayer*

SubFunction: *TSN*

Principle and Potential Causes

I/O bus is being configured with implicit exchanges while the module is not configured.

Potential causes:

- The module is not part of the island configuration.
- The module has not finished to get its configuration when the network interface module started the I/O bus scheduling.

Possible Solutions

Send a new configuration on your network interface module.

Wait for completion of the configuration of the module.

How to Clear the Advisory Code

The diagnostic ID automatically clears when the cause is resolved.

0x0A0243: IOBus Configured With Implicit Exchanges While Module Configuration Unsuccessful

Criticality level: Advisory

MainFunction: *PhysicalLayer*

SubFunction: *TSN*

Principle and Potential Causes

I/O bus is being configured with implicit exchanges while the module is in error
0x0108C5: Configuration Error Detected, page 50.

Possible Solutions

Clear the 0x0108C5 error.

How to Clear the Advisory Code

The diagnostic ID automatically clears when the cause is resolved.

0x0B0141: Disenrollment Process (Received Secure Frame During Disenrollment)

Criticality level: Advisory

MainFunction: *SecureComm*

SubFunction: *Management*

Principle and Potential Causes

An internal error is detected.

Possible Solutions

Contact your local Schneider Electric representative.

How to Clear the Advisory Code

Not applicable.

0x0B0142: Disenrollment Process: Global Disenrollment Timeout Detected

Criticality level: Advisory

MainFunction: *SecureComm*

SubFunction: *Management*

Principle and Potential Causes

An internal error is detected.

Possible Solutions

Contact your local Schneider Electric representative.

How to Clear the Advisory Code

Not applicable.

0x0B0240: Not Enrolled To NIM

Criticality level: Advisory

MainFunction: *SecureComm*

SubFunction: *Enrollment*

Principle and Potential Causes

The module is not enrolled to the network interface module.

Possible Solutions

Wait for enrollment.

How to Clear the Advisory Code

The diagnostic ID automatically clears when the cause is resolved.

0x0C0140: Not Synchronized

Criticality level: Advisory

MainFunction: *Synchro*

SubFunction: *Process*

Principle and Potential Causes

The module receiver is not synchronized with the network interface module or the controller.

Possible Solutions

Wait for synchronization.

How to Clear the Advisory Code

The diagnostic ID automatically clears when the cause is resolved.

0x1A0141: Configuration In Preparation Unsuccessful

Criticality level: Advisory

MainFunction: *IOM_AIO*

SubFunction: *Conf*

Principle and Potential Causes

The configuration received contains invalid configuration node.

There is a misalignment between the configuration software, network interface module, and I/O modules versions.

Possible Solutions

Send a new configuration to align the configuration software, network interface module, and I/O modules versions.

How to Clear the Advisory Code

The diagnostic ID automatically clears when the cause is resolved.

0x1A0142: Node ID Not Allowed In Input Image

Criticality level: Advisory

MainFunction: *IOM_AIO*

SubFunction: *Conf*

Principle and Potential Causes

The configuration received contains invalid cyclic node.

There is a misalignment between the configuration software, network interface module, and I/O modules versions.

Possible Solutions

Send a new configuration to align the configuration software, network interface module, and I/O modules versions.

How to Clear the Advisory Code

The diagnostic ID automatically clears when the cause is resolved.

0x1A0143: Node ID Not Allowed In Output Image

Criticality level: Advisory

MainFunction: *IOM_AIO*

SubFunction: *Conf*

Principle and Potential Causes

The configuration received contains invalid cyclic node.

There is a misalignment between the configuration software, network interface module, and I/O modules versions.

Possible Solutions

Send a new configuration to align the configuration software, network interface module, and I/O modules versions.

How to Clear the Advisory Code

The diagnostic ID automatically clears when the cause is resolved.

0x1A044A: Lower Tolerance Alert Detected

Criticality level: Advisory

MainFunction: *IOM_AIO*

SubFunction: */*

Principle and Potential Causes

A lower tolerance alert is detected on the indicated channel.

The channel input value is below the minimum **Range mode** parameter value.

Possible Solutions

- Verify and adjust the **Range mode** parameter to better align with your sensor specifications.
- Verify your installation and take appropriate action.

How to Clear the Advisory Code

The diagnostic ID automatically clears when the cause is resolved.

0x1A044B: Upper Tolerance Alert Detected

Criticality level: Advisory

MainFunction: *IOM_AIO*

SubFunction: */*

Principle and Potential Causes

A upper tolerance alert is detected on the indicated channel.

The channel input value is above the maximum **Range mode** parameter value.

Possible Solutions

- Verify and adjust the **Range mode** parameter to better align with your sensor specifications.
- Verify your installation and take appropriate action.

How to Clear the Advisory Code

The diagnostic ID automatically clears when the cause is resolved.

0x1C0141: Configuration In Preparation Unsuccessful

Criticality level: Advisory

MainFunction: *IOM_HSC*

SubFunction: *Config*

Principle and Potential Causes

An advisory is reported when the configuration preparation is unsuccessful.

There is a misalignment between the configuration software, network interface module, and I/O modules versions.

Possible Solutions

- Verify all UA node IDs related to front end part, inside the configuration blob.
- Send a new configuration to align the configuration software, network interface module, and I/O modules versions.

How to Clear the Advisory Code

Not applicable.

0x1C0142: Node ID Not Allowed In Input Image

Criticality level: Advisory

MainFunction: *IOM_HSC*

SubFunction: *Config*

Principle and Potential Causes

The configuration received contains invalid cyclic node.

There is a misalignment between the configuration software, network interface module, and I/O modules versions.

Possible Solutions

Send a new configuration to align the configuration software, network interface module, and I/O modules versions.

How to Clear the Advisory Code

Not applicable.

0x1C0143: Node ID Not Allowed In output Image

Criticality level: Advisory

MainFunction: *IOM_HSC*

SubFunction: *Config*

Principle and Potential Causes

The configuration received contains invalid cyclic node.

There is a misalignment between the configuration software, network interface module, and I/O modules versions.

Possible Solutions

Send a new configuration to align the configuration software, network interface module, and I/O modules versions.

How to Clear the Advisory Code

Not applicable.

0x1D0141: Configuration In Preparation Unsuccessful

Criticality level: Advisory

MainFunction: *IOM_DIO*

SubFunction: *Conf*

Principle and Potential Causes

The configuration received contains invalid configuration node.

There is a misalignment between the configuration software, network interface module, and I/O modules versions.

Possible Solutions

Send a new configuration to align the configuration software, network interface module, and I/O modules versions.

How to Clear the Advisory Code

Not applicable.

0x1D0142: Node ID Not Allowed In Input Image

Criticality level: Advisory

MainFunction: *IOM_DIO*

SubFunction: *Conf*

Principle and Potential Causes

The configuration received contains invalid cyclic node.

There is a misalignment between the configuration software, network interface module, and I/O modules versions.

Possible Solutions

Send a new configuration to align the configuration software, network interface module, and I/O modules versions.

How to Clear the Advisory Code

Not applicable.

0x1D0143: Node ID Not Allowed In Output Image

Criticality level: Advisory

MainFunction: *IOM_DIO*

SubFunction: *Conf*

Principle and Potential Causes

The configuration received contains invalid cyclic node.

There is a misalignment between the configuration software, network interface module, and I/O modules versions.

Possible Solutions

Send a new configuration to align the configuration software, network interface module, and I/O modules versions.

How to Clear the Advisory Code

Not applicable.

0x2C0343: Port State: Incorrect Device

Criticality level: Advisory

MainFunction: *FDM*

SubFunction: *IO-Link*

Principle and Potential Causes

The IO-Link port changed to the status described.

The connected device is incorrect.

Possible Solutions

Verify the configuration and the connected device.

How to Clear the Advisory Code

Not applicable.

0x2C0347: Port state: Port Qualifier (PQI) Not Set

Criticality level: Advisory

MainFunction: *FDM*

SubFunction: *IO-Link*

Principle and Potential Causes

The device is not providing valid data.

Possible Solutions

Refer to the device documentation.

How to Clear the Advisory Code

The diagnostic ID automatically clears when the cause is resolved.

0x2C0641: Internal Supply Undervoltage Advisory

Criticality level: Advisory

MainFunction: *FDM*

SubFunction: *Supply*

Principle and Potential Causes

The internal power supply voltage is below 18 V.

Potential causes:

- There is an undervoltage or an overload of the internal power supply.
- An internal error is detected.

Possible Solutions

Unplug/plug the terminal.

If the advisory persists, contact your local Schneider Electric representative.

How to Clear the Advisory Code

Not applicable.

0x2C0741: Driver Over Temperature Advisory

Criticality level: Advisory

MainFunction: *FDM*

SubFunction: *Temperature*

Principle and Potential Causes

The temperature of the transceiver is over 135 °C (275 °F).

Potential causes:

- Overtemperature
- Overload

Possible Solutions

- Verify the ambient temperature and take appropriate action.
- Verify the load and take appropriate action.

How to Clear the Advisory Code

The diagnostic ID automatically clears when the cause is resolved.

0x2C0743: Module Temperature Above Advisory Level

Criticality level: Advisory

MainFunction: *FDM*

SubFunction: *Temperature*

Principle and Potential Causes

The temperature of the microcontroller exceeds 90 °C (194 °F).

Potential causes:

- Overtemperature
- Overload

Possible Solutions

Verify the ambient temperature and take appropriate action.

How to Clear the Advisory Code

The diagnostic ID automatically clears when the cause is resolved.

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EIO0000004826.01