

Modicon Edge I/O

Diagnostic Data

User Guide

Original instructions

EIO0000004826.06
04/2026



Legal Information

The information provided in this document contains general descriptions, technical characteristics and/or recommendations related to products/solutions.

This document is not intended as a substitute for a detailed study or operational and site-specific development or schematic plan. It is not to be used for determining suitability or reliability of the products/solutions for specific user applications. It is the duty of any such user to perform or have any professional expert of its choice (integrator, specifier or the like) perform the appropriate and comprehensive risk analysis, evaluation and testing of the products/solutions with respect to the relevant specific application or use thereof.

The Schneider Electric brand and any trademarks of Schneider Electric and its subsidiaries referred to in this document are the property of Schneider Electric or its subsidiaries. All other brands may be trademarks of their respective owner.

This document and its content are protected under applicable copyright laws and provided for informative use only. No part of this document may be reproduced or transmitted in any form or by any means (electronic, mechanical, photocopying, recording, or otherwise), for any purpose, without the prior written permission of Schneider Electric.

Schneider Electric does not grant any right or license for commercial use of the document or its content, except for a non-exclusive and personal license to consult it on an "as is" basis.

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.

Schneider Electric reserves the right to make changes or updates with respect to or in the content of this document or the format thereof, at any time without notice.

To the extent permitted by applicable law, no responsibility or liability is assumed by Schneider Electric and its subsidiaries for any errors or omissions in the informational content of this document, as well as any non-intended use or misuse of the content thereof.

Table of Contents

Table of Contents	3
Safety Information	11
Before You Begin	11
Start-up and Test	12
Operation and Adjustments	13
About the Document	14
Introduction	19
Monitoring the Module State	20
Group Cyclic Status (GCS).....	21
LEDs Display	23
Explicit Requests.....	24
Explicit Data	24
Extended NIM Port Diagnostics.....	24
Log File.....	26
Diagnostic Codes.....	27
List of Available Information Codes	28
0x010800: OK (Configured).....	29
0x010801: OK (Not Configured).....	29
0x1A0200: Read Node ID Unsuccessful	30
0x1A0201: Write Node ID Unsuccessful	30
0x1B0200: Read ID Node Failed	31
0x1B0201: Write ID Node Failed	31
0x1C0200: Read Node ID Unsuccessful	32
0x1C0201: Write Node ID Unsuccessful	32
0x1C0500: Frequency Meter: Time Base Invalid.....	33
0x1C0501: Frequency Meter: Calibration Factor Invalid	33
0x1C0502: Period Meter: Resolution Invalid.....	34
0x1C0503: Ratio Meter: Time Base Invalid.....	34
0x1C0504: Ratio Meter: Absolute Limit Invalid	35
0x1C0505: Ratio Meter: Calibration Factor Invalid	35
0x1C0506: Single Event Counting: Time Base Invalid	36
0x1C0507: Single Phase Counting: Preset Invalid	37
0x1C0508: Single Phase Counting: Capture Window Start Position Invalid.....	37
0x1C0509: Single Phase Counting: Capture Window End Position Invalid.....	38
0x1C0510: Reflex Output: Threshold Value 1 Invalid	38
0x1C0511: Reflex Output: Threshold Value 2 Invalid.....	39
0x1C0512: Reflex Output: Threshold Value 3 Invalid	39
0x1C050A: Dual Phase Counting: Preset Invalid	40
0x1C050B: Dual Phase Counting: Capture Window Start Position Invalid.....	41
0x1C050C: Dual Phase Counting: Capture Window End Position Invalid.....	41
0x1C050D: PWM Output: Frequency Invalid	42
0x1C050E: PWM Output: Duty Invalid	42
0x1C050F: Reflex Output: Threshold Value 0 Invalid	43

0x1D0200: Read Node ID Unsuccessful	43
0x1D0201: Write node ID Unsuccessful	44
0x1F0600: Tunneling Request Register Full	44
0x1F0601: Tunneling Response Disconnected	45
0x1F0602: Tunneling Response Timeout	45
0x1F0603: Tunneling Response Mismatched ID	45
0x1F0604: Tunneling Response in Process	46
0x2C0202: DI Input Filter Modified Dynamically	46
0x2C0203: CQ Input Filter Modified Dynamically	47
0x2C0300: Port State Inactive	47
0x2C0301: Port State DO	48
0x2C0302: Port State DI	48
0x2C0304: Port State Pre-Operate	48
0x2C0305: Port State Operate	49
0x2C0500: IO-Link-Event	49
0x2C0501: IO-Link-Event-Fifo Overflow	50
0x2C0502: IO-Link-Event-Fifo Unsuccessful	50
0x2C0600: Internal Supply OK	51
0x2C0603: Supply OK	51
0x2C0700: Temperature OK	51
0x2C0800: Module power supply L+ OK	52
0x2C0900: CQ OK	52
0x2C0A00: Start Offline Configuration	53
0x2C0A01: Skip Offline Configuration	53
0x2C0A03: Offline Configuration Done	54
0x2C0B00: Non-Volatile Memory OK	54
0x2C0B01: Non-Volatile Memory Repaired	54
0x2C1001: Configuration OK	55
0x2C1100: Reading Node Unsuccessful	55
0x2C1101: Writing Node Unsuccessful	56
0x2C1102: Start/Stop Channels Modified Dynamically	56
0x2C1103: Start/Stop Scanner Modified Dynamically	57
0x2C1200: Supply OK	57
0x2C1302: Not Used	58
0x2C1F00: Device Operates	58
0x2C1F02: Device Not Active	58
0x2C1F03: Device Stopped	59
0x2C8400: iSDU Read Request	59
0x2C8401: iSDU Write Request	60
0x820200: New Topology Change Detected	60
0x820201: Port Is in Discarding State	61
0x820202: Port Is in Learning State	61
0x820203: Port Is in Forwarding State	61
0x830200: New Modbus Master Elected	62
0x830201: Modbus Master Reservation Has Timed Out	62
0x850100: NTP Client Started	63
0x850101: NTP Client Partially Synchronized with NTP Server	63
0x850102: NTP Client Synchronized with NTP Server	64
0x860100: OK (Configured)	64
0x860101: OK (Not Configured)	64
0x890200: NIM is Connected to the Syslog Server	65

0x890201: Syslog TLS Enabled	65
0x890202: Syslog TCP Enabled.....	66
0x890203: Connection Interrupted With the Syslog Server	66
0x890204: Syslog Service Disabled	67
List of Available Error Codes	68
0x0108C2: Configuration Not Compatible with Firmware.....	70
0x0108C5: Configuration Error Detected	71
0x0208C0: Write Firmware Page Unsuccessful.....	71
0x0208C1: Invalid Firmware Candidate	72
0x0208C2: Firmware Installation Unsuccessful	72
0x0208C3: Unsuccessful Discard of Firmware Installation.....	73
0x0301C1: Client Connection to NIM/CTR has been Disconnected	73
0x0501C0: Configuration Error Detected	74
0x0501C2: Unconfiguration Unsuccessful.....	74
0x0502C0: Cluster Synchronization Lost (IN Cycle Not Performed).....	75
0x0502C3: Input Send Unsuccessful	75
0x0503C0: Cluster Synchronization Lost (Out Cycle Was Not Performed).....	76
0x0503C3: Output Control Command Incorrect Format (Logged Once).....	76
0x0504C0: Invalid Publish Data From I/O modules	77
0x0504C1: Bus Extender Overflowed By I/O module Input Frames	77
0x0505C0: Send Aggregated Frame To Northbound Unsuccessful.....	78
0x060AC0: Error Detected In Shared Memory.....	78
0x0708C0: Invalid Baseplate Detected (Unrecoverable Error)	79
0x0708C1: Address Computation Unsuccessful (Unrecoverable Error)	79
0x0708C2: Address Check Unsuccessful (Unrecoverable Error)	80
0x0708C3: Invalid Baseplate Detected Due to Virtual Module Absent	80
0x0808C2: Synchronization Lost (Timeout, Link Might be Broken).....	81
0x0A01C0: Low Layer Issues Detected	81
0x0A02C0: IOBus Configuration Issue Detected, Module Silent.....	82
0x0A02C1: Apply Schedule Configuration Unsuccessful	82
0x0A05C0: IOBus Configuration Error Detected	83
0x0B01C0: Unauthorized Disable Security Command Received from NIM/CTR Ignored.....	83
0x0B02C1: Unsuccessful Security Enrollment.....	84
0x0C01C1: Synchronization Lost	84
0x0C01C3: Memory Allocation Issue Detected.....	85
0x0D01C0: Device Genuineness Certificate is not Trusted	85
0x1A01C0: Configuration Error Detected	86
0x1A01C1: Commissioning Configuration Unsuccessful	86
0x1B01C0: Configuration Error Detected	87
0x1C01C0: Configuration Error Detected.....	87
0x1C01C1: Commissioning Configuration Unsuccessful	88

0x1D01C0: Configuration Error Detected	88
0x1D01C1: Commissioning Configuration Unsuccessful	89
0x1F01C0: Configuration Error Detected	89
0x1F01C1: Commissioning Configuration Unsuccessful	90
0x2C01C0: Configuration Error	90
0x2C01C1: Commissioning Configuration Unsuccessful	91
0x2C01C2: Unable To Register Method ID Callback	91
0x2C06C4: Supply Undervoltage Alert.....	92
0x2C07C4: Module Temperature Above Critical Level (De-Energizing Outputs).....	92
0x2C0BC2: Non-Volatile Memory Channel(s) Lost.....	93
0x2C0BC3: Non-Volatile Memory Formatting	93
0x2C10C0: Configuration Error	93
0x8101C0: Invalid Cybersecurity Rotary Switch Value Detected	94
0x8101C1: Invalid Upper Rotary Switch Value Detected	94
0x8101C2: Invalid Lower Rotary Switch Value Detected	95
0x8201C0: Invalid FDR Server Configuration Detected.....	95
0x8202C0: Invalid Configuration Detected	96
0x8301C0: EIP Connection Timeout.....	96
0x8401C0: Hold-Up Timeout Detected	97
0x8501C0: NTP Client Configuration Unsuccessful	98
0x8501C1: Cannot Start NTP Client	98
0x8501C2: NTP Synchronization Lost	99
0x8601C0: Invalid Configuration Received.....	99
0x8601C1: Configuration from Non-Volatile Memory is Invalid	100
0x8601C2: Error Detected when Storing Configuration	100
0x8601C3: Configuration Version (\d+)\.(\d+)\.(\d+)\.(\d+) Incompatible With FW Version (\d+)\.(\d+)\.(\d+)\.(\d+)	101
0x8602C0: Configuration Mismatch (Modules Configured but not Physically Present)	101
0x8602C1: Configuration Mismatch (Incorrect Modules Detected)	102
0x8701C0: Duplicate IP Found	102
0x8701C1: Cannot Set NIM IP Address	103
0x8701C2: Cannot Set NIM IP Subnet Mask	104
0x8701C3: Cannot Set NIM IP Gateway Address	104
0x8701C4: Cannot Set USB IP Address.....	105
0x8701C5: Cannot Set USB IP Subnet Mask	105
0x8702C0: Rotary Switches Changed During Run-time	106
0x8801C0: Error Detected During Firmware Upgrade (Invalid Signature)	106
0x8801C1: Error Detected During Firmware Upgrade (Installation Unsuccessful).....	107
0x8801C2: Error Detected During Solution Firmware Upgrade: Installation Unsuccessful	107
0x8801C3: Error Detected During Solution Firmware Upgrade: Files Validation Unsuccessful.....	108
0x8801C4: Update for cluster <cluster>: succeeded for [<slot>,<slot>, ..., <slot>], failed for [<slot>,<slot>, ..., <slot>]	108
0x8901C0: Unrecoverable Error On NIM Rebooting	109
0x8902C0: Invalid Syslog Configuration Detected	109

0x8902C1: A Non-Secure Syslog is Disallowed in Advanced Mode	110
0x8A01C0: SERCOS Error Diagnostic Code and Diagnostic Message	111
0x0503C2: One Output Group Is Applying Fallback	111
0x1A0380: Broken Wire Error Detected	112
0x1A0381: Short Circuit Error Detected	112
0x1A0382: Overflow Error Detected	113
0x1A0383: Underflow Error Detected	113
0x1A0384: Internal Field Power Error Detected	114
0x1A0385: Hardware Error Detected	114
0x1A0386: Calibration Error Detected	115
0x1A0387: DAC Power Error Detected	115
0x1A0480: Broken Wire Error Detected	116
0x1A0482: Overflow Error Detected	116
0x1A0483: Underflow Error Detected	117
0x1A0484: Internal Field Power Error Detected	117
0x1A0485: Hardware Error Detected	118
0x1A0486: Calibration Error Detected	118
0x1A0488: Loop Power Supply Error Detected.....	119
0x1A0489: Error: CJC Error Detected on Channel	119
0x1B0380: Internal Field Power Error Detected	120
0x1B0381: Shortcut Error	120
0x1B0580: Internal Field Power Error	121
0x1B0581: Shortcut Error	121
0x1B0582: Fallback Error	122
0x1B0583: Power Error	122
0x1B0584: Fault Error	123
0x1B0585: Quadrature Error.....	123
0x1B0586: Frame Format Error.....	124
0x1B0587: Frame Parity Error.....	124
0x1B0588: Frame Start Error	125
0x1B0589: Frame Stuck at 1 Error	126
0x1B058A: Endat Timeout Error.....	126
0x1B058B: Endat Protocol Error	127
0x1B058C: Hiperface Timeout Error	127
0x1B058D: Hiperface Protocol	128
0x1B058E: SinCos Signal Error	128
0x1B058F: SinCos Synchro Error.....	129
0x1B0590: CRC Error	129
0x1B0591: Encoder Configuration Not Supported.....	130
0x1B0592: Internal Error	130
0x1B0593: Disabled Axis Error	131
0x1B0594: Hardware Position Limit Positive Error	131
0x1B0595: Hardware Position Limit Negative Error.....	132
0x1B0596: Software Position Limit Positive Error	132
0x1B0597: Software Position Limit Negative Error	133
0x1B0598: Application Stopped Error	134
0x1B05A5: Abort Flag Error on Output.....	134
0x1C0382: Short Circuit Detected on Q0 to Q3	135
0x1C0383: Short Circuit Detected on Q4 to Q7	135

0x1C0384: Internal Field Power Error Detected.....	136
0x1C0484: Internal Field Power Error Detected.....	136
0x1D0380: Broken Wire Detected	137
0x1D0381: Short Circuit Detected	137
0x1D0382: External Power Supply Error Detected.....	138
0x1D0384: Internal Field Power Error Detected.....	138
0x1D0385: Read Back Error Detected	139
0x1D0480: Broken Wire Detected	139
0x1D0481: Short Circuit Detected	140
0x1D0482: External Power Supply Error Detected.....	140
0x1D0483: Sensor Power Supply Error.....	141
0x1D0484: Internal Field Power Error Detected.....	141
0x1F0380: Broken Wire Error Detected	142
0x1F0382: Overflow Error Detected	142
0x1F0383: Underflow Error Detected.....	143
0x1F0384: Internal Field Power Error Detected	143
0x1F0385: Hardware Error Detected	144
0x1F0386: Calibration Error Detected.....	144
0x1F0387: DAC Power Error Detected	145
0x1F0480: Broken Wire Error Detected	145
0x1F0482: Overflow Error Detected	146
0x1F0483: Underflow Error Detected.....	146
0x1F0484: Internal Field Power Error Detected	147
0x1F0485: Hardware Error Detected	147
0x1F0486: Calibration Error Detected.....	148
0x1F0488: Loop Power Supply Error Detected.....	148
0x1F0580: Hart Disconnected.....	149
0x2C0383: Port State: Incorrect Device	149
0x2C0386: Port state: Device missing	150
0x2C0682: Internal Supply Undervoltage Alert	150
0x2C0782: Driver Over Temperature Alert	151
0x2C0881: Module Power Supply L+ Undervoltage	151
0x2C0882: Module Power Supply L+ Overload	152
0x2C0981: CQ overload	152
0x2C0A82: Offline Configuration Unsuccessful	152
0x2C1281: Supply Voltage Alert.....	153
0x2C1F81: Communication Drop	153
List of Available Advisory Codes	155
0x010843: Configuration In Progress.....	156
0x010844: Configuration Does not Apply on this Product Reference	156
0x010846: Unsuccessful Configuration Preparation.....	157
0x020844: Unrecoverable Error Restarted Device	157
0x020845: Unexpected Error Restarted Device.....	158
0x030140: Not Connected to NIM/CTR.....	158
0x030240: Last Exchange with NIM/CTR Unsuccessful	159
0x040740: OPC UA C/S Operation Unsuccessful	159
0x040741: OPC UA Method Call on Unhandled Method ID	160
0x040742: OPC UA Method Call on Unhandled Name Space ID	160
0x040743: OPC UA Read Unknown Node ID	161

0x040744: OPC UA Read Node ID with Unsupported Type	161
0x040745: OPC UA Write Unknow Node ID	162
0x040746: OPC UA Write Node ID with Unsupported Type	162
0x050141: Unsuccessful Configuration Preparation.....	163
0x050241: Input Ready Sooner Than Expected (Not Published).....	163
0x050242: Input Ready Later Than Expected (Not Published)	164
0x050341: Output Not Applied (Not Received or Late)	164
0x070840: Module Not Addressed	165
0x080840: Not Synchronized	165
0x080841: Synchronization Lost	165
0x090940: Wall Clock Synchronization Lost	166
0x0A0242: IOBus Configured With Implicit Exchanges While Module Has No Configuration	166
0x0A0243: IOBus Configured With Implicit Exchanges While Module Configuration Unsuccessful	167
0x0B0141: Disenrollment Process (Received Secure Frame During Disenrollment)	168
0x0B0142: Disenrollment Process: Global Disenrollment Timeout Detected	168
0x0B0240: Not Enrolled To NIM	169
0x0C0140: Not Synchronized	169
0x1A0141: Configuration In Preparation Unsuccessful.....	169
0x1A0142: Node ID Not Allowed In Input Image	170
0x1A0143: Node ID Not Allowed In Output Image.....	170
0x1A044A: Lower Tolerance Alert Detected	171
0x1A044B: Upper Tolerance Alert Detected	171
0x1B0141: Configuration In Preparation Failed	172
0x1B0142: Node ID Not Allowed In Input Image	172
0x1B0143: Node ID Not Allowed In Output Image.....	173
0x1B0559: Advisory Low Vpp	173
0x1B055A: Advisory High Vpp	174
0x1B055B: Advisory Velocity Value	175
0x1B055C: Advisory Acceleration Value	175
0x1B055D: Advisory Deceleration Value	176
0x1B055E: Advisory Jerk Value	176
0x1B055F: Advisory Frequency Value	177
0x1B0560: Advisory Duty Value	177
0x1B0561: Advisory Acceleration/Deceleration Value	178
0x1B0562: Advisory Z Position Value	178
0x1B0563: Advisory Stop Position Value.....	179
0x1B0564: Advisory Set Position Value	179
0x1B0566: Advisory Rising Edge on Output	180
0x1B0567: Advisory Falling Edge on Output	180
0x1C0141: Configuration In Preparation Unsuccessful	181
0x1C0142: Node ID Not Allowed In Input Image	181
0x1C0143: Node ID Not Allowed In output Image	182
0x1D0141: Configuration In Preparation Unsuccessful	182
0x1D0142: Node ID Not Allowed In Input Image	183
0x1D0143: Node ID Not Allowed In Output Image	183
0x1F0141: Configuration In Preparation Unsuccessful.....	184

0x1F0142: Node ID Not Allowed In Input Image	184
0x1F0143: Node ID Not Allowed In Output Image	185
0x1F0200: Read Node ID Unsuccessful	185
0x1F0201: Write Node ID Unsuccessful	186
0x1F044A: Lower Tolerance Alert Detected	186
0x1F044B: Upper Tolerance Alert Detected	187
0x1F0541: Hart Major Difference	187
0x1F0542: Hart Minor Difference	188
0x1F0543: Hart Disconnected	188
0x2C0343: Port State: Incorrect Device	189
0x2C0347: Port state: Port Qualifier (PQI) Not Set	189
0x2C0641: Internal Supply Undervoltage Advisory	189
0x2C0741: Driver Over Temperature Advisory	190
0x2C0743: Module Temperature Above Advisory Level	190
0x8A01C1: SERCOS Advisory Diagnostic Code And Diagnostic Message	191

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 Document

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 versions available at the publication date of this document.

This document has been updated for the release of the Modicon Edge I/O Configurator V1.0.1.

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.

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.

General Cybersecurity Information

In recent years, the growing number of networked machines and production plants has seen a corresponding increase in the potential for cyber threats, such as unauthorized access, data breaches, and operational disruptions. You must, therefore, consider all possible cybersecurity measures to help protect assets and systems against such threats.

To help keep your Schneider Electric products secure and protected, it is in your best interest to implement the cybersecurity best practices as described in the [Cybersecurity Best Practices](#) document.

Schneider Electric provides additional information and assistance:

- [Subscribe to the Schneider Electric security newsletter.](#)
- [Visit the Cybersecurity Support Portal web page to:](#)
 - [Find Security Notifications.](#)
 - [Report vulnerabilities and incidents.](#)
- [Visit the Schneider Electric Cybersecurity and Data Protection Posture web page to:](#)
 - [Access the cybersecurity posture.](#)
 - [Learn more about cybersecurity in the cybersecurity academy.](#)
 - [Explore the cybersecurity services from Schneider Electric.](#)

Available Languages of the Document

The document is available in these languages:

- [English \(EIO0000004826\)](#)
- [French \(EIO0000004827\)](#)
- [Chinese \(EIO0000004831\)](#)

Related Documents

Title of documentation	Reference number
Modicon Edge I/O - System Planning and Installation Guide	EIO0000004786 (ENG)
	EIO0000004787 (FRE)
	EIO0000004791 (CHS)
Modicon Edge I/O - Configurator and Web Interface - User Guide	EIO0000004810 (ENG)
	EIO0000004811 (FRE)
	EIO0000004815 (CHS)
Modicon Edge I/O - Software Integration and Compatibility - User Guide	EIO0000004818 (ENG)
	EIO0000004819 (FRE)
	EIO0000004823 (CHS)
Modicon Edge I/O NTS - Network Interface Modules - User Guide	EIO0000004794 (ENG)
	EIO0000004795 (FRE)
	EIO0000004799 (CHS)
Modicon Edge I/O NTS - Discrete Modules - User Guide	EIO0000005238 (ENG)
	EIO0000005239 (FRE)
	EIO0000005243 (CHS)
Modicon Edge I/O NTS - Analog Modules - User Guide	EIO0000005246 (ENG)
	EIO0000005247 (FRE)
	EIO0000005251 (CHS)
Modicon Edge I/O NTS - Motion Expert Modules - User Guide	EIO0000005254 (ENG)
	EIO0000005255 (FRE)
	EIO0000005259 (CHS)
Modicon Edge I/O NTS - Counting Modules - User Guide	EIO0000005262 (ENG)
	EIO0000005263 (FRE)
	EIO0000005267 (CHS)
Modicon Edge I/O NTS - Field Device Master Modules - User Guide	EIO0000005270 (ENG)
	EIO0000005271 (FRE)
	EIO0000005275 (CHS)

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

Information on Non-Inclusive or Insensitive Terminology

As a responsible, inclusive company, Schneider Electric is constantly updating its communications and products that contain non-inclusive or insensitive terminology. However, despite these efforts, our content may still contain terms that are deemed inappropriate by some customers.

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.
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).

In addition, you can get more information about the status of your module through explicit requests.

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)	21
LEDs Display	23
Explicit Requests	24

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

In addition to monitoring the status of the modules, the GCS bytes also provide information about the validity of both incoming and outgoing data exchanged between the island and the controller.

▲ WARNING

UNINTENDED EQUIPMENT OPERATION

Continuously monitor the Group Cyclic Status (GCS) bytes in your application to verify data validity.

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

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 and forced to TRUE.
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 and forced to TRUE.

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 and forced to TRUE.
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 and forced to TRUE.
3	Receive Status	This bit is reserved and forced to TRUE.
4	Output Status	This bit is reserved and forced to TRUE.
5	Advisory Status	TRUE = No advisory is detected. FALSE = At least one advisory is detected.
6	Reserved	This bit is reserved and forced to TRUE.
7	Data Freshness	This bit is reserved and forced to TRUE.

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 and forced to TRUE.
3	Receive Status	This bit is reserved and forced to TRUE.
4	Output Status	This bit is reserved and forced to TRUE.
5	Advisory Status	TRUE = No advisory is detected. FALSE = At least one advisory is detected.
6	Reserved	This bit is reserved and forced to TRUE.
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.
Regular Flash	ON	Indicates that a module mismatch is detected.
Single Flash	OFF	Indicates that the module is energized and not configured.
Fast Flash	-	Indicates that the module is in commissioning mode.
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: <ul style="list-style-type: none"> • 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.

Explicit Requests

What's in This Chapter

Explicit Data	24
Extended NIM Port Diagnostics	24

Explicit Data

Each module provides on demand explicit data.

The available explicit data is provided in the parameter description section of the user guide of each module.

Extended NIM Port Diagnostics

NimExtendedStatus is a bit field diagnostic of the network interface module accessible through OPC UA in a single explicit read-only node.

The following table provides the definition of the bit field for network interface modules using Ethernet/IP and Modbus TCP:

Bit	Description
0	USB link status <ul style="list-style-type: none"> • TRUE = Link up • FALSE = No link
1	LOWER port link status <ul style="list-style-type: none"> • TRUE = Link up • FALSE = No link
2	UPPER port link status <ul style="list-style-type: none"> • TRUE = Link up • FALSE = No link
3	NTP Sync <ul style="list-style-type: none"> • TRUE = Link up • FALSE = No link
4–7	Reserved
8-9	LOWER port RSTP state: <ul style="list-style-type: none"> • 00 = Disabled • 01 = Discarding • 10 = Learning • 11 = Forwarding
10–11	Reserved
12-13	UPPER port RSTP state <ul style="list-style-type: none"> • 00 = Disabled • 01 = Discarding • 10 = Learning • 11 = Forwarding
14–15	Reserved
16–31	Reserved

The following table provides the definition of the bit field for network interface modules using Sercos III communication protocol:

Bit	Description
0	USB link status <ul style="list-style-type: none"> • TRUE = Link up • FALSE = No link
1	LOWER port link status <ul style="list-style-type: none"> • TRUE = Link up • FALSE = No link
2	UPPER port link status <ul style="list-style-type: none"> • TRUE = Link up • FALSE = No link
3	Sercos Time Sync <ul style="list-style-type: none"> • TRUE = Link up • FALSE = No link
4–7	Reserved
8-9	Device Status: <ul style="list-style-type: none"> • 00 = No link at inactive port • 01 = P-Telegram on inactive port • 10 = S-Telegram on inactive port • 11 = Fast-forward on both ports
10–11	Reserved
12-13	Current Topology <ul style="list-style-type: none"> • 00 = Fast-forward on both ports • 01 = loopback with forward of P-Telegrams • 10 = loopback with forward of P-Telegrams • 11 = NRT mode (store and forward)
14–15	Reserved
16–31	Reserved

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; 43643801900002; 2024-09-30 12:28:05.825; ERR_CHAN; [IOM_AIO.Q_3]; Internal Field Power Supply Error Detected on channel 3; 0x1A038403. 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 ⁽¹⁾	The date of the log entry (YYYY-MM-DD).	2024-09-30
Time ⁽¹⁾	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 hexadecimal value of the log entry. NOTE: If you are using a software version lower than 1.1.0, the diagnostic ID is provided in decimal. Convert to hexadecimal to match it to the diagnostic ID in this manual.	0x1A0384030
⁽¹⁾ After a power cycle, the NTP time is not retained. NTP Synchronization requires some time to align with the time server. If NTP time is not available, the system uses the build time of the firmware as a fallback for time-stamping.		

Diagnostic Codes

What's in This Part

List of Available Information Codes.....	28
List of Available Error Codes.....	68
List of Available Advisory Codes.....	155

List of Available Information Codes

What's in This Chapter

0x010800: OK (Configured)	29
0x010801: OK (Not Configured)	29
0x1A0200: Read Node ID Unsuccessful	30
0x1A0201: Write Node ID Unsuccessful	30
0x1B0200: Read ID Node Failed	31
0x1B0201: Write ID Node Failed	31
0x1C0200: Read Node ID Unsuccessful	32
0x1C0201: Write Node ID Unsuccessful	32
0x1C0500: Frequency Meter: Time Base Invalid	33
0x1C0501: Frequency Meter: Calibration Factor Invalid	33
0x1C0502: Period Meter: Resolution Invalid	34
0x1C0503: Ratio Meter: Time Base Invalid	34
0x1C0504: Ratio Meter: Absolute Limit Invalid	35
0x1C0505: Ratio Meter: Calibration Factor Invalid	35
0x1C0506: Single Event Counting: Time Base Invalid	36
0x1C0507: Single Phase Counting: Preset Invalid	37
0x1C0508: Single Phase Counting: Capture Window Start Position Invalid	37
0x1C0509: Single Phase Counting: Capture Window End Position Invalid	38
0x1C0510: Reflex Output: Threshold Value 1 Invalid	38
0x1C0511: Reflex Output: Threshold Value 2 Invalid	39
0x1C0512: Reflex Output: Threshold Value 3 Invalid	39
0x1C050A: Dual Phase Counting: Preset Invalid	40
0x1C050B: Dual Phase Counting: Capture Window Start Position Invalid	41
0x1C050C: Dual Phase Counting: Capture Window End Position Invalid	41
0x1C050D: PWM Output: Frequency Invalid	42
0x1C050E: PWM Output: Duty Invalid	42
0x1C050F: Reflex Output: Threshold Value 0 Invalid	43
0x1D0200: Read Node ID Unsuccessful	43
0x1D0201: Write node ID Unsuccessful	44
0x1F0600: Tunneling Request Register Full	44
0x1F0601: Tunneling Response Disconnected	45
0x1F0602: Tunneling Response Timeout	45
0x1F0603: Tunneling Response Mismatched ID	45
0x1F0604: Tunneling Response in Process	46
0x2C0202: DI Input Filter Modified Dynamically	46
0x2C0203: CQ Input Filter Modified Dynamically	47
0x2C0300: Port State Inactive	47
0x2C0301: Port State DO	48
0x2C0302: Port State DI	48
0x2C0304: Port State Pre-Operate	48
0x2C0305: Port State Operate	49
0x2C0500: IO-Link-Event	49
0x2C0501: IO-Link-Event-Fifo Overflow	50
0x2C0502: IO-Link-Event-Fifo Unsuccessful	50
0x2C0600: Internal Supply OK	51
0x2C0603: Supply OK	51
0x2C0700: Temperature OK	51
0x2C0800: Module power supply L+ OK	52
0x2C0900: CQ OK	52
0x2C0A00: Start Offline Configuration	53
0x2C0A01: Skip Offline Configuration	53
0x2C0A03: Offline Configuration Done	54
0x2C0B00: Non-Volatile Memory OK	54
0x2C0B01: Non-Volatile Memory Repaired	54
0x2C1001: Configuration OK	55
0x2C1100: Reading Node Unsuccessful	55
0x2C1101: Writing Node Unsuccessful	56
0x2C1102: Start/Stop Channels Modified Dynamically	56
0x2C1103: Start/Stop Scanner Modified Dynamically	57

0x2C1200: Supply OK	57
0x2C1302: Not Used	58
0x2C1F00: Device Operates	58
0x2C1F02: Device Not Active.....	58
0x2C1F03: Device Stopped	59
0x2C8400: iSDU Read Request	59
0x2C8401: iSDU Write Request	60
0x820200: New Topology Change Detected	60
0x820201: Port Is in Discarding State	61
0x820202: Port Is in Learning State	61
0x820203: Port Is in Forwarding State	61
0x830200: New Modbus Master Elected	62
0x830201: Modbus Master Reservation Has Timed Out.....	62
0x850100: NTP Client Started	63
0x850101: NTP Client Partially Synchronized with NTP Server	63
0x850102: NTP Client Synchronized with NTP Server	64
0x860100: OK (Configured)	64
0x860101: OK (Not Configured)	64
0x890200: NIM is Connected to the Syslog Server.....	65
0x890201: Syslog TLS Enabled	65
0x890202: Syslog TCP Enabled	66
0x890203: Connection Interrupted With the Syslog Server	66
0x890204: Syslog Service Disabled.....	67

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.

0x1B0200: Read ID Node Failed

Criticality level: Information

MainFunction: *IOM_MOTION*

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.

0x1B0201: Write ID Node Failed

Criticality level: Information

MainFunction: *IOM_MOTION*

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.

0x1F0600: Tunneling Request Register Full

Criticality level: Information

MainFunction: *IOM_HART*

SubFunction: *HART_Tunneling*

Principle and Potential Causes

The tunneling request register is full. Subsequent request will be rejected.

All transaction ID storage space are occupied.

Possible Solutions

Write a clear ID queue command (FE hex).

Download the configuration again and send the response with the stored ID to the release register.

How to Clear the Information

The diagnostic ID automatically clears when the cause is resolved.

0x1F0601: Tunneling Response Disconnected

Criticality level: Information

MainFunction: *IOM_HART*

SubFunction: *HART_Tunneling*

Principle and Potential Causes

The connection on the selected channel is interrupted.

Possible Solutions

Verify the connection and take whatever remedial action is necessary.

How to Clear the Information

The diagnostic ID automatically clears when the cause is resolved.

0x1F0602: Tunneling Response Timeout

Criticality level: Information

MainFunction: *IOM_HART*

SubFunction: *HART_Tunneling*

Principle and Potential Causes

The command from the selected channel timed out.

The command is either not supported or contains incorrect data.

Possible Solutions

Ensure that the command and the requested data are correct.

How to Clear the Information

The diagnostic ID automatically clears when the cause is resolved.

0x1F0603: Tunneling Response Mismatched ID

Criticality level: Information

MainFunction: *IOM_HART*

SubFunction: *HART_Tunneling*

Principle and Potential Causes

The selected transaction ID is incorrect.

Possible Solutions

Ensure that the transaction ID is correct.

How to Clear the Information

The diagnostic ID automatically clears when the cause is resolved.

0x1F0604: Tunneling Response in Process

Criticality level: Information

MainFunction: *IOM_HART*

SubFunction: *HART_Tunneling*

Principle and Potential Causes

A command is already in progress.

Possible Solutions

Wait, then send the command again using the same transaction ID.

How to Clear the Information

The diagnostic ID automatically clears when the cause is resolved.

0x2C0202: DI Input Filter Modified Dynamically

Criticality level: Information

MainFunction: *FDM*

SubFunction: *EXPLICIT_ACCESS*

Principle and Potential Causes

DI input filter modified by an explicit exchange.

Possible Solutions

Not applicable.

How to Clear the Information

Not applicable.

0x2C0203: CQ Input Filter Modified Dynamically

Criticality level: Information

MainFunction: *FDM*

SubFunction: *EXPLICIT_ACCESS*

Principle and Potential Causes

CQ input filter modified by an explicit exchange.

Possible Solutions

Not applicable.

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 state 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 state 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 state 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 state 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 state 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.

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.

0x2C1001: 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.

0x2C1100: 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.

0x2C1101: 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.

0x2C1102: Start/Stop Channels Modified Dynamically

Criticality level: Information

MainFunction: *FDM*

SubFunction: *EXPLICIT_ACCESS*

Principle and Potential Causes

Start/Stop channels modified with an explicit exchange.

Possible Solutions

Not applicable.

How to Clear the Information

Not applicable.

0x2C1103: Start/Stop Scanner Modified Dynamically

Criticality level: Information

MainFunction: *FDM*

SubFunction: *EXPLICIT_ACCESS*

Principle and Potential Causes

Start/Stop scanner modified with an explicit exchange.

Possible Solutions

Not applicable.

How to Clear the Information

Not applicable.

0x2C1200: 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.

0x2C1302: Not Used

Criticality level: Information

MainFunction: *FDM*

SubFunction: *RS232*

Principle and Potential Causes

The RS-232 serial line type is not activated.

Possible Solutions

Not applicable.

How to Clear the Information

Not applicable.

0x2C1F00: Device Operates

Criticality level: Information

MainFunction: *FDM*

SubFunction: *IOS_X*

Principle and Potential Causes

The device is operating without a detected error.

Possible Solutions

Not applicable.

How to Clear the Information

Not applicable.

0x2C1F02: Device Not Active

Criticality level: Information

MainFunction: *FDM*

SubFunction: *IOS_X*

Principle and Potential Causes

The device is not active.

Possible Solutions

Not applicable.

How to Clear the Information

Not applicable.

0x2C1F03: Device Stopped

Criticality level: Information

MainFunction: *FDM*

SubFunction: *IOS_X*

Principle and Potential Causes

The device is stopped.

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.

0x820200: New Topology Change Detected

Criticality level: Information

MainFunction: *EthernetServices*

SubFunction: *RSTP*

Principle and Potential Causes

An RSTP topology change is detected.

Possible Solutions

Not applicable.

How to Clear the Information

Not applicable.

0x820201: Port Is in Discarding State

Criticality level: Information

MainFunction: *EthernetServices*

SubFunction: *RSTP*

Principle and Potential Causes

The port is in discarding state.

Possible Solutions

Not applicable.

How to Clear the Information

Not applicable.

0x820202: Port Is in Learning State

Criticality level: Information

MainFunction: *EthernetServices*

SubFunction: *RSTP*

Principle and Potential Causes

The port is in learning state.

Possible Solutions

Not applicable.

How to Clear the Information

Not applicable.

0x820203: Port Is in Forwarding State

Criticality level: Information

MainFunction: *EthernetServices*

SubFunction: *RSTP*

Principle and Potential Causes

The port is in forwarding state.

Possible Solutions

Not applicable.

How to Clear the Information

Not applicable.

0x830200: New Modbus Master Elected

Criticality level: Information

MainFunction: *EIPModbus*

SubFunction: *Modbus*

Principle and Potential Causes

A new Modbus master is elected.

Possible Solutions

Not applicable.

How to Clear the Information

Not applicable.

0x830201: Modbus Master Reservation Has Timed Out

Criticality level: Information

MainFunction: *EIPModbus*

SubFunction: *Modbus*

Principle and Potential Causes

The configured **Modbus reservation time** parameter value is reached.

Possible Solutions

Not applicable.

How to Clear the Information

Not applicable.

0x850100: NTP Client Started

Criticality level: Information

MainFunction: *TimeMgt*

SubFunction: *NTP*

Principle and Potential Causes

The NTP Client is started.

Possible Solutions

Not applicable.

How to Clear the Information

Not applicable.

0x850101: NTP Client Partially Synchronized with NTP Server

Criticality level: Information

MainFunction: *TimeMgt*

SubFunction: *NTP*

Principle and Potential Causes

The NTP client is partially synchronized with the NTP server. The synchronization may take more time than expected.

Possible Solutions

Not applicable.

How to Clear the Information

Not applicable.

0x850102: NTP Client Synchronized with NTP Server

Criticality level: Information

MainFunction: *TimeMgt*

SubFunction: *NTP*

Principle and Potential Causes

The NTP client is synchronized with the NTP server.

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.

0x890200: NIM is Connected to the Syslog Server

Criticality level: Information

MainFunction: *Syslog*

SubFunction: *Log*

Principle and Potential Causes

The network interface module is connected to the Syslog Server.

Possible Solutions

Not applicable.

How to Clear the Error Code

Not applicable.

0x890201: Syslog TLS Enabled

Criticality level: Information

MainFunction: *Syslog*

SubFunction: *Log*

Principle and Potential Causes

Syslog TLS Enabled.

Possible Solutions

Not applicable.

How to Clear the Error Code

Not applicable.

0x890202: Syslog TCP Enabled

Criticality level: Information

MainFunction: *Syslog*

SubFunction: *Log*

Principle and Potential Causes

Syslog TCP enabled.

Possible Solutions

Not applicable.

How to Clear the Error Code

Not applicable.

0x890203: Connection Interrupted With the Syslog Server

Criticality level: Information

MainFunction: *Syslog*

SubFunction: *Log*

Principle and Potential Causes

The connection with the Syslog server is interrupted.

Possible Solutions

Not applicable.

How to Clear the Error Code

Not applicable.

0x890204: Syslog Service Disabled

Criticality level: Information

MainFunction: *Syslog*

SubFunction: *Log*

Principle and Potential Causes

Syslog service is disabled

Possible Solutions

Not applicable.

How to Clear the Error Code

Not applicable.

List of Available Error Codes

What's in This Chapter

0x0108C2: Configuration Not Compatible with Firmware	70
0x0108C5: Configuration Error Detected.....	71
0x0208C0: Write Firmware Page Unsuccessful	71
0x0208C1: Invalid Firmware Candidate	72
0x0208C2: Firmware Installation Unsuccessful.....	72
0x0208C3: Unsuccessful Discard of Firmware Installation.....	73
0x0301C1: Client Connection to NIM/CTR has been Disconnected.....	73
0x0501C0: Configuration Error Detected.....	74
0x0501C2: Unconfiguration Unsuccessful.....	74
0x0502C0: Cluster Synchronization Lost (IN Cycle Not Performed)	75
0x0502C3: Input Send Unsuccessful	75
0x0503C0: Cluster Synchronization Lost (Out Cycle Was Not Performed)	76
0x0503C3: Output Control Command Incorrect Format (Logged Once).....	76
0x0504C0: Invalid Publish Data From I/O modules	77
0x0504C1: Bus Extender Overflowed By I/O module Input Frames	77
0x0505C0: Send Aggregated Frame To Northbound Unsuccessful	78
0x060AC0: Error Detected In Shared Memory.....	78
0x0708C0: Invalid Baseplate Detected (Unrecoverable Error)	79
0x0708C1: Address Computation Unsuccessful (Unrecoverable Error)	79
0x0708C2: Address Check Unsuccessful (Unrecoverable Error)	80
0x0708C3: Invalid Baseplate Detected Due to Virtual Module Absent	80
0x0808C2: Synchronization Lost (Timeout, Link Might be Broken)	81
0x0A01C0: Low Layer Issues Detected.....	81
0x0A02C0: IOBus Configuration Issue Detected, Module Silent	82
0x0A02C1: Apply Schedule Configuration Unsuccessful	82
0x0A05C0: IOBus Configuration Error Detected	83
0x0B01C0: Unauthorized Disable Security Command Received from NIM/CTR Ignored	83
0x0B02C1: Unsuccessful Security Enrollment	84
0x0C01C1: Synchronization Lost	84
0x0C01C3: Memory Allocation Issue Detected	85
0x0D01C0: Device Genuineness Certificate is not Trusted	85
0x1A01C0: Configuration Error Detected	86
0x1A01C1: Commissioning Configuration Unsuccessful	86
0x1B01C0: Configuration Error Detected	87
0x1C01C0: Configuration Error Detected	87
0x1C01C1: Commissioning Configuration Unsuccessful	88
0x1D01C0: Configuration Error Detected	88
0x1D01C1: Commissioning Configuration Unsuccessful	89
0x1F01C0: Configuration Error Detected	89
0x1F01C1: Commissioning Configuration Unsuccessful.....	90
0x2C01C0: Configuration Error	90
0x2C01C1: Commissioning Configuration Unsuccessful	91
0x2C01C2: Unable To Register Method ID Callback	91
0x2C06C4: Supply Undervoltage Alert.....	92
0x2C07C4: Module Temperature Above Critical Level (De- Energizing Outputs)	92
0x2C0BC2: Non-Volatile Memory Channel(s) Lost.....	93
0x2C0BC3: Non-Volatile Memory Formatting	93
0x2C10C0: Configuration Error	93
0x8101C0: Invalid Cybersecurity Rotary Switch Value Detected	94

0x8101C1: Invalid Upper Rotary Switch Value Detected	94
0x8101C2: Invalid Lower Rotary Switch Value Detected	95
0x8201C0: Invalid FDR Server Configuration Detected	95
0x8202C0: Invalid Configuration Detected	96
0x8301C0: EIP Connection Timeout	96
0x8401C0: Hold-Up Timeout Detected	97
0x8501C0: NTP Client Configuration Unsuccessful	98
0x8501C1: Cannot Start NTP Client	98
0x8501C2: NTP Synchronization Lost	99
0x8601C0: Invalid Configuration Received	99
0x8601C1: Configuration from Non-Volatile Memory is Invalid	100
0x8601C2: Error Detected when Storing Configuration	100
0x8601C3: Configuration Version (\d+)\.(\d+)\.(\d+)\.(\d+) Incompatible With FW Version (\d+)\.(\d+)\.(\d+)\.(\d+)	101
0x8602C0: Configuration Mismatch (Modules Configured but not Physically Present)	101
0x8602C1: Configuration Mismatch (Incorrect Modules Detected)	102
0x8701C0: Duplicate IP Found	102
0x8701C1: Cannot Set NIM IP Address	103
0x8701C2: Cannot Set NIM IP Subnet Mask	104
0x8701C3: Cannot Set NIM IP Gateway Address	104
0x8701C4: Cannot Set USB IP Address	105
0x8701C5: Cannot Set USB IP Subnet Mask	105
0x8702C0: Rotary Switches Changed During Run-time	106
0x8801C0: Error Detected During Firmware Upgrade (Invalid Signature)	106
0x8801C1: Error Detected During Firmware Upgrade (Installation Unsuccessful)	107
0x8801C2: Error Detected During Solution Firmware Upgrade: Installation Unsuccessful	107
0x8801C3: Error Detected During Solution Firmware Upgrade: Files Validation Unsuccessful	108
0x8801C4: Update for cluster <cluster>: succeeded for [<slot>, <slot>, ..., <slot>], failed for [<slot>, <slot>, ..., <slot>]	108
0x8901C0: Unrecoverable Error On NIM Rebooting	109
0x8902C0: Invalid Syslog Configuration Detected	109
0x8902C1: A Non-Secure Syslog is Disallowed in Advanced Mode	110
0x8A01C0: SERCOS Error Diagnostic Code and Diagnostic Message	111
0x0503C2: One Output Group Is Applying Fallback	111
0x1A0380: Broken Wire Error Detected	112
0x1A0381: Short Circuit Error Detected	112
0x1A0382: Overflow Error Detected	113
0x1A0383: Underflow Error Detected	113
0x1A0384: Internal Field Power Error Detected	114
0x1A0385: Hardware Error Detected	114
0x1A0386: Calibration Error Detected	115
0x1A0387: DAC Power Error Detected	115
0x1A0480: Broken Wire Error Detected	116
0x1A0482: Overflow Error Detected	116
0x1A0483: Underflow Error Detected	117
0x1A0484: Internal Field Power Error Detected	117
0x1A0485: Hardware Error Detected	118
0x1A0486: Calibration Error Detected	118
0x1A0488: Loop Power Supply Error Detected	119
0x1A0489: Error: CJC Error Detected on Channel	119
0x1B0380: Internal Field Power Error Detected	120
0x1B0381: Shortcut Error	120
0x1B0580: Internal Field Power Error	121
0x1B0581: Shortcut Error	121
0x1B0582: Fallback Error	122
0x1B0583: Power Error	122
0x1B0584: Fault Error	123
0x1B0585: Quadrature Error	123
0x1B0586: Frame Format Error	124

0x1B0587: Frame Parity Error	124
0x1B0588: Frame Start Error	125
0x1B0589: Frame Stuck at 1 Error	126
0x1B058A: Endat Timeout Error	126
0x1B058B: Endat Protocol Error	127
0x1B058C: Hiperface Timeout Error	127
0x1B058D: Hiperface Protocol	128
0x1B058E: SinCos Signal Error	128
0x1B058F: SinCos Synchro Error	129
0x1B0590: CRC Error	129
0x1B0591: Encoder Configuration Not Supported	130
0x1B0592: Internal Error	130
0x1B0593: Disabled Axis Error	131
0x1B0594: Hardware Position Limit Positive Error	131
0x1B0595: Hardware Position Limit Negative Error	132
0x1B0596: Software Position Limit Positive Error	132
0x1B0597: Software Position Limit Negative Error	133
0x1B0598: Application Stopped Error	134
0x1B05A5: Abort Flag Error on Output	134
0x1C0382: Short Circuit Detected on Q0 to Q3	135
0x1C0383: Short Circuit Detected on Q4 to Q7	135
0x1C0384: Internal Field Power Error Detected	136
0x1C0484: Internal Field Power Error Detected	136
0x1D0380: Broken Wire Detected	137
0x1D0381: Short Circuit Detected	137
0x1D0382: External Power Supply Error Detected	138
0x1D0384: Internal Field Power Error Detected	138
0x1D0385: Read Back Error Detected	139
0x1D0480: Broken Wire Detected	139
0x1D0481: Short Circuit Detected	140
0x1D0482: External Power Supply Error Detected	140
0x1D0483: Sensor Power Supply Error	141
0x1D0484: Internal Field Power Error Detected	141
0x1F0380: Broken Wire Error Detected	142
0x1F0382: Overflow Error Detected	142
0x1F0383: Underflow Error Detected	143
0x1F0384: Internal Field Power Error Detected	143
0x1F0385: Hardware Error Detected	144
0x1F0386: Calibration Error Detected	144
0x1F0387: DAC Power Error Detected	145
0x1F0480: Broken Wire Error Detected	145
0x1F0482: Overflow Error Detected	146
0x1F0483: Underflow Error Detected	146
0x1F0484: Internal Field Power Error Detected	147
0x1F0485: Hardware Error Detected	147
0x1F0486: Calibration Error Detected	148
0x1F0488: Loop Power Supply Error Detected	148
0x1F0580: Hart Disconnected	149
0x2C0383: Port State: Incorrect Device	149
0x2C0386: Port state: Device missing	150
0x2C0682: Internal Supply Undervoltage Alert	150
0x2C0782: Driver Over Temperature Alert	151
0x2C0881: Module Power Supply L+ Undervoltage	151
0x2C0882: Module Power Supply L+ Overload	152
0x2C0981: CQ overload	152
0x2C0A82: Offline Configuration Unsuccessful	152
0x2C1281: Supply Voltage Alert	153
0x2C1F81: Communication Drop	153

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.

0x0208C3: Unsuccessful Discard of Firmware Installation

Criticality level: Error module

MainFunction: *FirmwareUpdate*

SubFunction: *Process*

Principle and Potential Causes

An error is detected while performing the discard installation of the firmware.

Possible Solutions

Reboot the cluster and retry the firmware update installation.

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 or the REC connected to 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.

0x0708C3: Invalid Baseplate Detected Due to Virtual Module Absent

Criticality level: Error module

MainFunction: *IOBusAddressing*

SubFunction: *Process*

Principle and Potential Causes

An invalid base number is detected.

The number of virtual absent modules added to the physical number of bases is greater than the maximum number allowed for the cluster (32).

NOTE: The erroneous slot addressing is not applied as it can result in inconsistent diagnostics of web pages and/or network interface module (*Topology* sub-function of the **ConfigMgr** main function).

Possible Solutions

Download a new configuration with the correct number of bases with **Virtual absent** modules.

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

Download 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.

0x1A01C1: Commissioning Configuration Unsuccessful

Criticality level: Error module

MainFunction: *IOM_AIO*

SubFunction: *Conf*

Principle and Potential Causes

The configuration received is invalid in Commissioning Mode.

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

Possible Solutions

Download 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.

0x1B01C0: Configuration Error Detected

Criticality level: Error module

MainFunction: *IOM_MOTION*

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

Download 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

Download 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.

0x1C01C1: Commissioning Configuration Unsuccessful

Criticality level: Error module

MainFunction: *IOM_HSC*

SubFunction: *Config*

Principle and Potential Causes

The configuration received is invalid in Commissioning Mode.

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

Possible Solutions

Download 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

Download 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.

0x1D01C1: Commissioning Configuration Unsuccessful

Criticality level: Error module

MainFunction: *IOM_DIO*

SubFunction: *Conf*

Principle and Potential Causes

The configuration received is invalid in Commissioning Mode.

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

Possible Solutions

Download 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.

0x1F01C0: Configuration Error Detected

Criticality level: Error module

MainFunction: *IOM_HART*

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

Download 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.

0x1F01C1: Commissioning Configuration Unsuccessful

Criticality level: Error module

MainFunction: *IOM_HART*

SubFunction: *Conf*

Principle and Potential Causes

The configuration received is invalid in Commissioning Mode.

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

Possible Solutions

Download 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

Download 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.

0x2C01C1: Commissioning Configuration Unsuccessful

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

Download 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.

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

Download 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.

0x8202C0: Invalid Configuration Detected

Criticality level: Error module

MainFunction: *EthernetServices*

SubFunction: *RSTP*

Principle and Potential Cause

The RSTP configuration is invalid.

Potential causes:

- The Rapid Spanning Tree Protocol (RSTP) configuration contains one or more parameters that do not meet the required format or operational criteria.
- One or more RSTP parameters are set to incorrect values.

Possible Solutions

Verify the RSTP 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

Download 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.

0x8601C3: Configuration Version (\d+)\.(\d+)\.(\d+)\.(\d+) Incompatible With FW Version (\d+)\.(\d+)\.(\d+)\.(\d+)

Criticality level: Error module

MainFunction: *ConfigMgr*

SubFunction: *MainProcess*

Principle and Potential Causes

The selected firmware version of the I/O modules part of your island configuration is not compatible with the network interface module firmware version.

Potential causes:

- The network interface module firmware is not up to date.
- The selected firmware of the I/O modules is not correct.

Possible Solutions

- Update the firmware of the network interface module.
- Create a configuration with I/O modules firmware compatible with the network interface module firmware version.

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.

0x8801C2: Error Detected During Solution 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 solution firmware.

Potential causes:

- An error is detected related to the memory of the network interface module.
- The network interface module is not operating correctly.
- The I/O modules are not operating correctly.

Possible Solutions

- Stop any communication with the network interface module, reboot it, and download again the solution package to the network interface module.
- Verify that the I/O modules are communicating correctly.

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.

0x8801C3: Error Detected During Solution Firmware Upgrade: Files Validation Unsuccessful

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.

0x8801C4: Update for cluster <cluster>: succeeded for [<slot>,<slot>, ..., <slot>], failed for [<slot>,<slot>, ..., <slot>]

Criticality level: Error module

MainFunction: *FwUpdate*

SubFunction: *MainProcess*

Principle and Potential Causes

An error is detected during the installation of the new solution firmware.

Potential causes:

- An error is detected related to the memory of the network interface module.
- The network interface module is not operating correctly.
- The I/O modules are not operating correctly.

Possible Solutions

- Stop any communication with the network interface module, reboot it, and download again the solution package to the network interface module.
- Verify that the I/O modules are communicating correctly.

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.

0x8902C0: Invalid Syslog Configuration Detected

Criticality level: Error module

MainFunction: *Syslog*

SubFunction: *Log*

Principle and Potential Causes

The network interface module identified that the syslog configuration does not meet the required format or parameters.

Potential causes:

- One or more syslog parameters are missing, incorrect, or use unsupported values.
- The configuration file contains syntax errors or unsupported options.

Possible Solutions

- Verify the syslog configuration parameters of your network interface module.
- Verify that the syslog configuration software is compatible with the specified network interface module version.

How to Clear the Error Code

The diagnostic ID automatically clears when the cause is resolved.

0x8902C1: A Non-Secure Syslog is Disallowed in Advanced Mode

Criticality level: Error module

MainFunction: *Syslog*

SubFunction: *Log*

Principle and Potential Causes

The device is operating in Advanced cybersecurity mode and syslog is configured to use plain TCP.

Syslog transport was manually set to TCP instead of TLS while Advanced cybersecurity mode is active.

Possible Solutions

Configure the syslog to use TLS or change the cybersecurity mode to Standard if TCP is required.

How to Clear the Error Code

The diagnostic ID automatically clears when the cause is resolved.

0x8A01C0: SERCOS Error Diagnostic Code and Diagnostic Message

Criticality level: Error module

MainFunction: *SERCOS*

SubFunction: *DiagMessage*

Principle and Potential Causes

A *SERCOS* diagnostic number of class C1D (IDN **S-0-0390**) is reported.

A *SERCOS* diagnostic message (IDN **S-0-0095**) is reported.

Possible Solutions

Identify the root cause of the error with the *SERCOS* diagnostic number provided and take the appropriate corrective actions.

For more information about the *SERCOS* diagnostic numbers, refer to the Modicon Edge I/O NTS - Network Interface Modules - User Guide.

How to Clear the Error Code

Acknowledge the error from the *SERCOS* master interface.

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 and take appropriate action.

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 and take appropriate action.

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.

0x1A0489: Error: CJC Error Detected on Channel

Criticality level: Error channel

MainFunction: *IOM_AIO*

SubFunction: /

Principle and Potential Causes

A Cold Junction Compensation (CJC) error is detected on the indicated channel.

Potential causes:

- Internal or external CJC temperature out of range.
- External CJC not connected.
- External CJC not correct.

Possible Solutions

Verify the type of CJC chosen and take appropriate action.

How to Clear the Error Code

The diagnostic ID automatically clears when the cause is resolved.

0x1B0380: Internal Field Power Error Detected

Criticality level: Error channel

MainFunction: *IOM_MOTION*

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 and take appropriate action.

How to Clear the Error Code

The diagnostic ID automatically clears when the cause is resolved.

0x1B0381: Shortcut Error

Criticality level: Error channel

MainFunction: *IOM_MOTION*

SubFunction: Q

Principle and Potential Causes

The indicated channel has a short circuit.

Potential causes:

- The wiring on the indicated channel is incorrect.
- The wire on the indicated channel is damaged.

Possible Solutions

Verify the wiring on the channel.

How to Clear the Error Code

Depending 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.

0x1B0580: Internal Field Power Error

Criticality level: Error channel

MainFunction: *IOM_MOTION*

SubFunction: *Channell/ExpertQ*

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 and take appropriate action.

How to Clear the Error Code

The diagnostic ID automatically clears when the cause is resolved.

0x1B0581: Shortcut Error

Criticality level: Error channel

MainFunction: *IOM_MOTION*

SubFunction: *Channell/ExpertQ*

Principle and Potential Causes

The indicated channel is in short circuit.

Potential causes:

- The wiring on the indicated channel is incorrect.
- The wire on the indicated channel is damaged.

Possible Solutions

Verify the wiring on the channel.

How to Clear the Error Code

Depending 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.

0x1B0582: Fallback Error

Criticality level: Error channel

MainFunction: *IOM_MOTION*

SubFunction: *ChannellExpertQ*

Principle and Potential Causes

The communication between the network interface module and the controller is interrupted. The module is in fallback state.

Potential causes:

- The controller stopped, is halted or underwent a power cycle.
- There is an issue with the wiring cable between controller and network interface module.

Possible Solutions

- Verify the controller state and application.
- Verify the wiring cable from controller to the network interface module.

How to Clear the Error Code

Disable and enable the expert function.

0x1B0583: Power Error

Criticality level: Error channel

MainFunction: *IOM_MOTION*

SubFunction: *Channel*

Principle and Potential Causes

The power supply monitoring of the encoder does not detect the encoder power return.

Potential causes:

- The wiring is incorrect.
- The wiring for the optional encoder power return is disconnected.

Possible Solutions

- Verify the wiring.
- Disable the **Power Supply Monitor** parameter if it is not necessary for your application.

How to Clear the Error Code

Depending on the expert function and its configuration (operating mode, etc.):

- The diagnostic ID automatically clears when the cause is resolved.
- Disable and enable the expert function.

For more information about the operating mode of your function, refer to *Modicon Edge I/O NTS - Motion Expert Modules - User Guide*.

0x1B0584: Fault Error

Criticality level: Error channel

MainFunction: *IOM_MOTION*

SubFunction: *Channel*

Principle and Potential Causes

Insufficient power supplied to the encoder.

The encoder power supply does not match with the encoder specifications.

Possible Solutions

Verify the encoder specifications and update your power supply.

How to Clear the Error Code

Depending on the expert function and its configuration (operating mode, etc.):

- The diagnostic ID automatically clears when the cause is resolved.
- Disable and enable the expert function.

For more information about the operating mode of your function, refer to *Modicon Edge I/O NTS - Motion Expert Modules - User Guide*.

0x1B0585: Quadrature Error

Criticality level: Error channel

MainFunction: *IOM_MOTION*

SubFunction: *Channel*

Principle and Potential Causes

Signals from the incremental encoder are incorrect.

Potential causes:

- The wiring between the module and the encoder is incorrect.
- The wiring between the module and the encoder is damaged.
- The power supply to the encoder is non-existent or insufficient.

Possible Solutions

- Verify the wiring between the module and the encoder.
- Verify if the encoder is connected and supplied.

How to Clear the Error Code

Disable and enable the expert function.

0x1B0586: Frame Format Error

Criticality level: Error channel

MainFunction: *IOM_MOTION*

SubFunction: *Channel*

Principle and Potential Causes

A communication error is detected between the module and the encoder.

Potential causes:

- The wiring between the module and the encoder is incorrect.
- The wiring between the module and the encoder is damaged.
- The power supply to the encoder is non existent or insufficient.

Possible Solutions

- Verify the wiring between the module and the encoder.
- Verify if the encoder is connected and supplied.

How to Clear the Error Code

Disable and enable the expert function.

0x1B0587: Frame Parity Error

Criticality level: Error channel

MainFunction: *IOM_MOTION*

SubFunction: *Channel*

Principle and Potential Causes

A communication error is detected between the module and the encoder.

Potential causes:

- The wiring between the module and the encoder is incorrect.
- The wiring between the module and the encoder is damaged.
- The power supply to the encoder is non existent or insufficient.

Possible Solutions

- Verify the wiring between the module and the encoder.
- Verify if the encoder is connected and supplied.

How to Clear the Error Code

Disable and enable the expert function.

0x1B0588: Frame Start Error

Criticality level: Error channel

MainFunction: *IOM_MOTION*

SubFunction: *Channel*

Principle and Potential Causes

A communication error is detected between the module and the encoder.

Potential causes:

- The wiring between the module and the encoder is incorrect.
- The wiring between the module and the encoder is damaged.
- The power supply to the encoder is non existent or insufficient.

Possible Solutions

- Verify the wiring between the module and the encoder.
- Verify if the encoder is connected and supplied.

How to Clear the Error Code

Disable and enable the expert function.

0x1B0589: Frame Stuck at 1 Error

Criticality level: Error channel

MainFunction: *IOM_MOTION*

SubFunction: *Channel*

Principle and Potential Causes

A communication error is detected between the module and the encoder.

Potential causes:

- The wiring between the module and the encoder is incorrect.
- The wiring between the module and the encoder is damaged.
- The power supply to the encoder is non existent or insufficient.

Possible Solutions

- Verify the wiring between the module and the encoder.
- Verify if the encoder is connected and supplied.

How to Clear the Error Code

Disable and enable the expert function.

0x1B058A: Endat Timeout Error

Criticality level: Error channel

MainFunction: *IOM_MOTION*

SubFunction: *Channel*

Principle and Potential Causes

The encoder does not answer to communication requests.

Potential causes:

- Incorrect wiring or damaged wiring between module and encoder.
- The encoder is not supplied.
- The encoder is missing.

Possible Solutions

- Verify the wiring between the module and the encoder.
- Verify if the encoder is connected and supplied.

How to Clear the Error Code

Disable and enable the expert function.

0x1B058B: Endat Protocol Error

Criticality level: Error channel

MainFunction: *IOM_MOTION*

SubFunction: *Channel*

Principle and Potential Causes

An internal error is detected on the encoder.

The encoder specifications are not met.

Possible Solutions

Verify the encoder status and take appropriate action.

How to Clear the Error Code

Disable and enable the expert function.

0x1B058C: Hipertace Timeout Error

Criticality level: Error channel

MainFunction: *IOM_MOTION*

SubFunction: *Channel*

Principle and Potential Causes

The encoder does not answer to communication requests.

Potential causes:

- The wiring between the module and the encoder is incorrect or disconnected.
- The encoder is not supplied.
- The encoder is missing.

Possible Solutions

- Verify the wiring between the module and the encoder.
- Verify if the encoder is connected and supplied.

How to Clear the Error Code

Disable and enable the expert function.

0x1B058D: Hiperface Protocol

Criticality level: Error channel

MainFunction: *IOM_MOTION*

SubFunction: *Channel*

Principle and Potential Causes

An internal error is detected on the encoder.

The encoder specifications are not met.

Possible Solutions

Verify the encoder status and take appropriate action.

How to Clear the Error Code

Disable and enable the expert function.

0x1B058E: SinCos Signal Error

Criticality level: Error channel

MainFunction: *IOM_MOTION*

SubFunction: *Channel*

Principle and Potential Causes

The encoder does not answer to communication request.

Potential causes:

- Incorrect wiring or damaged wiring between module and encoder.
- Encoder not supplied or encoder missing.

Possible Solutions

- Verify the wiring from module to encoder.
- Verify if the encoder is connected and supplied.

How to Clear the Error Code

Disable and enable the expert function.

0x1B058F: SinCos Synchro Error

Criticality level: Error channel

MainFunction: *IOM_MOTION*

SubFunction: *Channel*

Principle and Potential Causes

The position cannot be calculated because there is a synchronization issue between the number of periods and the angle in the period.

The encoder frequency is over 400 kHz.

Possible Solutions

Do not exceed 400 kHz encoder frequency.

How to Clear the Error Code

Disable and enable the expert function.

0x1B0590: CRC Error

Criticality level: Error channel

MainFunction: *IOM_MOTION*

SubFunction: *Channel*

Principle and Potential Causes

The content exchanged between the module and the encoder is incorrect.

The environment between the module and the encoder is under high electromagnetic disturbance.

Possible Solutions

Reduce the electromagnetic disturbance in the environment between the module and the encoder.

How to Clear the Error Code

Depending on the expert function and its configuration (operating mode, etc.):

- The diagnostic ID automatically clears when the cause is resolved.
- Disable and enable the expert function.

For more information about the operating mode of your function, refer to *Modicon Edge I/O NTS - Motion Expert Modules - User Guide*.

0x1B0591: Encoder Configuration Not Supported

Criticality level: Error channel

MainFunction: *IOM_MOTION*

SubFunction: *Channel*

Principle and Potential Causes

The encoder is not supported by the module.

Possible Solutions

Use an encoder that is supported by the module.

How to Clear the Error Code

Depending on the expert function and its configuration (operating mode, etc.):

- The diagnostic ID automatically clears when the cause is resolved.
- Disable and enable the expert function.

For more information about the operating mode of your function, refer to *Modicon Edge I/O NTS - Motion Expert Modules - User Guide*.

0x1B0592: Internal Error

Criticality level: Error channel

MainFunction: *IOM_MOTION*

SubFunction: *Channel*

Principle and Potential Causes

An internal error is detected on the motion controller.

Possible Solutions

Contact your local Schneider Electric representative.

How to Clear the Error Code

Perform a PTO reset (**AdminType** = 1)

0x1B0593: Disabled Axis Error

Criticality level: Error channel

MainFunction: *IOM_MOTION*

SubFunction: *Channel*

Principle and Potential Causes

The *AxisState* parameter is set to *Disabled*, the ongoing move command is aborted.

Potential causes:

- **PowerEnable** is set to FALSE.
- The wiring of **Drive Ready** input is incorrect or disconnected.

Possible Solutions

- Set **PowerEnable** to TRUE.
- Verify the wiring on the **Drive Ready** input.

How to Clear the Error Code

Perform a PTO reset (**AdminType** = 1).

0x1B0594: Hardware Position Limit Positive Error

Criticality level: Error channel

MainFunction: *IOM_MOTION*

SubFunction: *Channel*

Principle and Potential Causes

A positive movement command is sent when the input assigned to the **Positive HW Limit** is TRUE.

Potential causes:

- The axis position is out of the machine limits.
- A wire is missing or damaged on input assigned to the **Positive HW Limit** parameter.

Possible Solutions

- Verify the axis position regarding the machine limits and take appropriate action.
- Verify the wiring on positive input assigned to the **Positive HW Limit** parameter.

How to Clear the Error Code

Perform a PTO reset (**AdminType** = 1) and send a motion command with a negative direction.

0x1B0595: Hardware Position Limit Negative Error

Criticality level: Error channel

MainFunction: *IOM_MOTION*

SubFunction: *Channel*

Principle and Potential Causes

A negative movement command is sent when the input assigned to the **Negative HW Limit** is TRUE.

Potential causes:

- The axis position is out of the machine limits.
- A wire is missing or damaged on input assigned to the **Negative HW Limit** parameter.

Possible Solutions

- Verify the axis position regarding the machine limits and take appropriate action.
- Verify the wiring on positive input assigned to the **Negative HW Limit** parameter.

How to Clear the Error Code

Perform a PTO reset (**AdminType** = 1) and send a motion command with a positive direction.

0x1B0596: Software Position Limit Positive Error

Criticality level: Error channel

MainFunction: *IOM_MOTION*

SubFunction: *Channel*

Principle and Potential Causes

CurrentPosition value exceeded the **SW Positive Limit** parameter on the indicated channel.

Potential causes:

- The axis position is out of the machine limits.
- A wire is missing or damaged on input assigned to the **SW Positive Limit** parameter.

Possible Solutions

- Verify the axis position regarding the machine limits and take appropriate action.
- Verify the wiring on positive input assigned to the **SW Positive Limit** parameter.

How to Clear the Error Code

Perform a PTO reset (**AdminType** = 1) and send a motion command with a negative direction.

0x1B0597: Software Position Limit Negative Error

Criticality level: Error channel

MainFunction: *IOM_MOTION*

SubFunction: *Channel*

Principle and Potential Causes

CurrentPosition value exceeded the **SW Negative Limit** parameter on the indicated channel.

Potential causes:

- The axis position is out of the machine limits.
- **SW Negative Limit** parameter value is not aligned with your installation.

Possible Solutions

- Verify the axis position regarding the machine limits and take appropriate action.
- Adjust **SW Negative Limit** parameter value.
- Deactivate **SW Negative Limit Enabled** parameter.

How to Clear the Error Code

Perform a PTO reset (**AdminType** = 1) and send a motion command with a positive direction.

0x1B0598: Application Stopped Error

Criticality level: Error channel

MainFunction: *IOM_MOTION*

SubFunction: *Channel*

Principle and Potential Causes

Potential causes:

- The controller stopped, is halted or undergo a power cycle.
- There is an issue with the wiring cable between controller and network interface module.

Possible Solutions

- Verify the controller state and application.
- Verify the wiring cable from controller to the network interface module.

How to Clear the Error Code

Perform a PTO reset (**AdminType** = 1)

0x1B05A5: Abort Flag Error on Output

Criticality level: Error channel

MainFunction: *IOM_MOTION*

SubFunction: *ExpertQ*

Principle and Potential Causes

New generation is requested but *Status.AbortFlag* = TRUE.

Command.Abort is TRUE.

Possible Solutions

Set *Command.Abort* to FALSE.

How to Clear the Error Code

Send a new *Execute* command.

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

Depending 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

Depending 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 and take appropriate action.

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: I

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 and take appropriate action.

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 securely to the terminal block, or the wiring is damaged.
- There is an excessive load impedance.
- The wire is connected to an external 24 V (only for the NTSSDO0402 module).

Possible Solutions

- Verify the wire connection and the load impedance.
- Disable the **Broken Wire Checked** parameter if it is not necessary for your application (only for the NTSSDO0402 module).

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.

How to Clear the Error Code

Depending 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 and take appropriate action.

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.
- For NTSDDI0402 / NTSDDI0402H: there is a short circuit to ground.

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

How to Clear the Error Code

Depending 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 and take appropriate action.

How to Clear the Error Code

The diagnostic ID automatically clears when the cause is resolved.

0x1F0380: Broken Wire Error Detected

Criticality level: Error channel

MainFunction: *IOM_HART*

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 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.

0x1F0382: Overflow Error Detected

Criticality level: Error channel

MainFunction: *IOM_HART*

SubFunction: Q

Principle and Potential Causes

An overflow error is detected on the indicated channel.

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

Possible Solutions

- Change the output value.
- Adjust the **Overflow Threshold** parameter value.
- 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.

0x1F0383: Underflow Error Detected

Criticality level: Error channel

MainFunction: *IOM_HART*

SubFunction: Q

Principle and Potential Causes

An underflow error is detected on the indicated channel.

The output value read is under the **Underflow Threshold** parameter value.

Possible Solutions

- Change the output value.
- Adjust the **Underflow Threshold** parameter value.
- 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.

0x1F0384: Internal Field Power Error Detected

Criticality level: Error channel

MainFunction: *IOM_HART*

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 and take appropriate action.

How to Clear the Error Code

The diagnostic ID automatically clears when the cause is resolved.

0x1F0385: Hardware Error Detected

Criticality level: Error channel

MainFunction: *IOM_HART*

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.

0x1F0386: Calibration Error Detected

Criticality level: Error channel

MainFunction: *IOM_HART*

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.

0x1F0387: DAC Power Error Detected

Criticality level: Error channel

MainFunction: *IOM_HART*

SubFunction: Q

Principle and Potential Causes

A DAC power error is detected on the indicated channel.

Potential causes:

- DAC internal power is not available.
- Broken wire is detected.

Possible Solutions

Verify the connection and the load and take appropriate action.

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

How to Clear the Error Code

Reboot the module.

0x1F0480: Broken Wire Error Detected

Criticality level: Error channel

MainFunction: *IOM_HART*

SubFunction: I

Principle and Potential Causes

A broken wire error is detected on the indicated channel.

Potential causes:

- The wire is not connected to the terminal block, or the wiring is damaged.
- There is an excessive load impedance.

Possible Solutions

- Verify the wire connection and the load impedance.
- Disable **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.

0x1F0482: Overflow Error Detected

Criticality level: Error channel

MainFunction: *IOM_HART*

SubFunction: /

Principle and Potential Causes

An overflow error is detected on the indicated channel.

The output value is above the **Overflow Threshold** value.

Possible Solutions

- Change the output value.
- Adjust **Overflow Threshold** parameter value.
- Disable **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.

0x1F0483: Underflow Error Detected

Criticality level: Error channel

MainFunction: *IOM_HART*

SubFunction: /

Principle and Potential Causes

An underflow error is detected on the indicated channel.

An output value is under **Underflow Threshold** parameter value.

Possible Solutions

- Change the output value.
- Adjust **Underflow Threshold** parameter value.
- Disable **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.

0x1F0484: Internal Field Power Error Detected

Criticality level: Error channel

MainFunction: *IOM_HART*

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 and take appropriate action.

How to Clear the Error Code

The diagnostic ID automatically clears when the cause is resolved.

0x1F0485: Hardware Error Detected

Criticality level: Error channel

MainFunction: *IOM_HART*

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.

0x1F0486: Calibration Error Detected

Criticality level: Error channel

MainFunction: *IOM_HART*

SubFunction: /

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.

0x1F0488: Loop Power Supply Error Detected

Criticality level: Error channel

MainFunction: *IOM_HART*

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.

0x1F0580: Hart Disconnected

Criticality level: Error channel

MainFunction: *IOM_HART*

SubFunction: *HART*

Principle and Potential Causes

The **HART Enabled** parameter is TRUE and the communication with the device is interrupted.

Potential causes:

- The device is not connected.
- The address range is incorrect.

Possible Solutions

- Verify the physical connection.
- Set a larger range of addresses and send a new configuration.
- Set the **HART Enabled** parameter to FALSE and send a new configuration.

How to Clear the Error Code

Not applicable.

0x2C0383: Port State: Incorrect Device

Criticality level: Error channel

MainFunction: *FDM*

SubFunction: *IO-Link*

Principle and Potential Causes

The IO-Link port changed to the state described.

The connected device is incorrect.

Possible Solutions

Verify the configuration and the connected device.

How to Clear the Advisory Code

Not applicable.

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.

0x2C1281: Supply Voltage Alert

Criticality level: Error channel

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 and take appropriate action.

How to Clear the Error Code

The diagnostic ID automatically clears when the cause is resolved.

0x2C1F81: Communication Drop

Criticality level: Error channel

MainFunction: *FDM*

SubFunction: *IOS_X*

Principle and Potential Causes

The communication with the connected Modbus device(s) is not successful.

Possible Solutions

Verify the connection between the Field Device Master and the Modbus device.

How to Clear the Error Code

The diagnostic ID automatically clears when the cause is resolved.

List of Available Advisory Codes

What's in This Chapter

0x010843: Configuration In Progress	156
0x010844: Configuration Does not Apply on this Product Reference	156
0x010846: Unsuccessful Configuration Preparation	157
0x020844: Unrecoverable Error Restarted Device	157
0x020845: Unexpected Error Restarted Device	158
0x030140: Not Connected to NIM/CTR	158
0x030240: Last Exchange with NIM/CTR Unsuccessful	159
0x040740: OPC UA C/S Operation Unsuccessful	159
0x040741: OPC UA Method Call on Unhandled Method ID	160
0x040742: OPC UA Method Call on Unhandled Name Space ID	160
0x040743: OPC UA Read Unknown Node ID	161
0x040744: OPC UA Read Node ID with Unsupported Type	161
0x040745: OPC UA Write Unknown Node ID	162
0x040746: OPC UA Write Node ID with Unsupported Type	162
0x050141: Unsuccessful Configuration Preparation	163
0x050241: Input Ready Sooner Than Expected (Not Published)	163
0x050242: Input Ready Later Than Expected (Not Published)	164
0x050341: Output Not Applied (Not Received or Late)	164
0x070840: Module Not Addressed	165
0x080840: Not Synchronized	165
0x080841: Synchronization Lost	165
0x090940: Wall Clock Synchronization Lost	166
0x0A0242: IOBus Configured With Implicit Exchanges While Module Has No Configuration	166
0x0A0243: IOBus Configured With Implicit Exchanges While Module Configuration Unsuccessful	167
0x0B0141: Disenrollment Process (Received Secure Frame During Disenrollment)	168
0x0B0142: Disenrollment Process: Global Disenrollment Timeout Detected	168
0x0B0240: Not Enrolled To NIM	169
0x0C0140: Not Synchronized	169
0x1A0141: Configuration In Preparation Unsuccessful	169
0x1A0142: Node ID Not Allowed In Input Image	170
0x1A0143: Node ID Not Allowed In Output Image	170
0x1A044A: Lower Tolerance Alert Detected	171
0x1A044B: Upper Tolerance Alert Detected	171
0x1B0141: Configuration In Preparation Failed	172
0x1B0142: Node ID Not Allowed In Input Image	172
0x1B0143: Node ID Not Allowed In Output Image	173
0x1B0559: Advisory Low Vpp	173
0x1B055A: Advisory High Vpp	174
0x1B055B: Advisory Velocity Value	175
0x1B055C: Advisory Acceleration Value	175
0x1B055D: Advisory Deceleration Value	176
0x1B055E: Advisory Jerk Value	176
0x1B055F: Advisory Frequency Value	177
0x1B0560: Advisory Duty Value	177
0x1B0561: Advisory Acceleration/Deceleration Value	178
0x1B0562: Advisory Z Position Value	178
0x1B0563: Advisory Stop Position Value	179
0x1B0564: Advisory Set Position Value	179
0x1B0566: Advisory Rising Edge on Output	180
0x1B0567: Advisory Falling Edge on Output	180
0x1C0141: Configuration In Preparation Unsuccessful	181
0x1C0142: Node ID Not Allowed In Input Image	181
0x1C0143: Node ID Not Allowed In output Image	182
0x1D0141: Configuration In Preparation Unsuccessful	182
0x1D0142: Node ID Not Allowed In Input Image	183

0x1D0143: Node ID Not Allowed In Output Image.....	183
0x1F0141: Configuration In Preparation Unsuccessful.....	184
0x1F0142: Node ID Not Allowed In Input Image.....	184
0x1F0143: Node ID Not Allowed In Output Image.....	185
0x1F0200: Read Node ID Unsuccessful.....	185
0x1F0201: Write Node ID Unsuccessful.....	186
0x1F044A: Lower Tolerance Alert Detected.....	186
0x1F044B: Upper Tolerance Alert Detected.....	187
0x1F0541: Hart Major Difference.....	187
0x1F0542: Hart Minor Difference.....	188
0x1F0543: Hart Disconnected.....	188
0x2C0343: Port State: Incorrect Device.....	189
0x2C0347: Port state: Port Qualifier (PQI) Not Set.....	189
0x2C0641: Internal Supply Undervoltage Advisory.....	189
0x2C0741: Driver Over Temperature Advisory.....	190
0x2C0743: Module Temperature Above Advisory Level.....	190
0x8A01C1: SERCOS Advisory Diagnostic Code And Diagnostic Message.....	191

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 or REC 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 OPC UA 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 OPC UA 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 OPC UA 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 OPC UA 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 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.

0x040744: OPC UA Read Node ID with Unsupported Type

Criticality level: Advisory

MainFunction: *ExplicitCommToCtr*

SubFunction: *Server*

Principle and Potential Causes

The OPC UA 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 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.

0x040745: OPC UA Write Unknow Node ID

Criticality level: Advisory

MainFunction: *ExplicitCommToCtr*

SubFunction: *Server*

Principle and Potential Causes

The OPC UA 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 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.

0x040746: OPC UA Write Node ID with Unsupported Type

Criticality level: Advisory

MainFunction: *ExplicitCommToCtr*

SubFunction: *Server*

Principle and Potential Causes

The OPC UA 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 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.

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.

The time configured in the network interface module parameters is changed.

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 71.

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

Download 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

Download 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

Download 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.

0x1B0141: Configuration In Preparation Failed

Criticality level: Advisory

MainFunction: *IOM_MOTION*

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

Download 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.

0x1B0142: Node ID Not Allowed In Input Image

Criticality level: Advisory

MainFunction: *IOM_MOTION*

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

Download 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.

0x1B0143: Node ID Not Allowed In Output Image

Criticality level: Advisory

MainFunction: *IOM_MOTION*

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

Download 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.

0x1B0559: Advisory Low Vpp

Criticality level: Advisory

MainFunction: *IOM_MOTION*

SubFunction: *Channel*

Principle and Potential Causes

The signals from the encoder are incorrect.

Potential causes:

- The wiring between the module and the encoder is incorrect or disconnected.
- The encoder is not supplied.
- The encoder is missing.

Possible Solutions

- Verify the wiring between the module and the encoder.
- Verify if the encoder is connected and supplied.

How to Clear the Advisory Code

The advisory is cleared on the rising edge of the *WarningAck* parameter.

0x1B055A: Advisory High Vpp

Criticality level: Advisory

MainFunction: *IOM_MOTION*

SubFunction: *Channel*

Principle and Potential Causes

The signals from the encoder are incorrect.

Potential causes:

- The wiring between the module and the encoder is incorrect or disconnected.
- The encoder is not supplied.
- The encoder is missing.

Possible Solutions

- Verify the wiring between the module and the encoder.
- Verify if the encoder is connected and supplied.

How to Clear the Advisory Code

The advisory is cleared on the rising edge of the *WarningAck* parameter.

0x1B055B: Advisory Velocity Value

Criticality level: Advisory

MainFunction: *IOM_MOTION*

SubFunction: *Channel*

Principle and Potential Causes

The commanded velocity parameter is out of range.

The commanded velocity exceeds **Maximum Velocity** parameter value.

Possible Solutions

Send a new command with a velocity value within the configured range.

How to Clear the Advisory Code

The diagnostic ID automatically clears when the cause is resolved.

0x1B055C: Advisory Acceleration Value

Criticality level: Advisory

MainFunction: *IOM_MOTION*

SubFunction: *Channel*

Principle and Potential Causes

The commanded acceleration parameter is out of range.

The commanded acceleration exceeds the **Maximum Acceleration** parameter value.

Possible Solutions

Send a new command with an acceleration value within the configured range.

How to Clear the Advisory Code

The diagnostic ID automatically clears when the cause is resolved.

0x1B055D: Advisory Deceleration Value

Criticality level: Advisory

MainFunction: *IOM_MOTION*

SubFunction: *Channel*

Principle and Potential Causes

The commanded deceleration parameter is out of range.

The commanded deceleration exceeds the **Maximum Deceleration** parameter value.

Possible Solutions

Send a new command with a deceleration value within the configured range.

How to Clear the Advisory Code

The diagnostic ID automatically clears when the cause is resolved.

0x1B055E: Advisory Jerk Value

Criticality level: Advisory

MainFunction: *IOM_MOTION*

SubFunction: *Channel*

Principle and Potential Causes

The commanded jerk ratio parameter is out of range.

The commanded jerk ratio exceeds 100 %.

Possible Solutions

Send a new command with a jerk ratio value below 100 %.

How to Clear the Advisory Code

The diagnostic ID automatically clears when the cause is resolved.

0x1B055F: Advisory Frequency Value

Criticality level: Advisory

MainFunction: *IOM_MOTION*

SubFunction: *Channel*

Principle and Potential Causes

The commanded frequency parameter is out of range.

The commanded frequency exceeds 20 kHz (PWM) or 100 kHz (frequency generator).

Possible Solutions

Send a new command with a frequency value below 20 kHz (PWM) or below 100 kHz (frequency generator).

How to Clear the Advisory Code

The diagnostic ID automatically clears when the cause is resolved.

0x1B0560: Advisory Duty Value

Criticality level: Advisory

MainFunction: *IOM_MOTION*

SubFunction: *Channel*

Principle and Potential Causes

The PWM duty cycle value is out of range.

Potential causes:

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

Possible Solutions

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

How to Clear the Advisory Code

The diagnostic ID automatically clears when the cause is resolved.

0x1B0561: Advisory Acceleration/Deceleration Value

Criticality level: Advisory

MainFunction: *IOM_MOTION*

SubFunction: *Channel*

Principle and Potential Causes

The commanded acceleration or deceleration parameter value is out of range.

The commanded acceleration or deceleration value exceeds the **Maximum Acceleration** or the **Maximum Deceleration** parameter values, respectively.

Possible Solutions

Send a new command with an acceleration or deceleration value below the **Maximum Acceleration** or the **Maximum Deceleration** parameter values, respectively.

How to Clear the Advisory Code

The diagnostic ID automatically clears when the cause is resolved.

0x1B0562: Advisory Z Position Value

Criticality level: Advisory

MainFunction: *IOM_MOTION*

SubFunction: *Channel*

Principle and Potential Causes

The commanded Z position parameter is out of range.

Possible Solutions

Send a new command with a valid Z position value.

Ensure that the value respects the configured limits for single-turn and multi-turn positions.

How to Clear the Advisory Code

The diagnostic ID automatically clears when the cause is resolved.

0x1B0563: Advisory Stop Position Value

Criticality level: Advisory

MainFunction: *IOM_MOTION*

SubFunction: *Channel*

Principle and Potential Causes

The commanded stop position parameter is out of range.

Possible Solutions

Send a new command with a valid stop position value.

Ensure that the value respects the configured limits for single-turn and multi-turn positions.

NOTE:

- When your output encoder is configured as a single turn encoder, the value of *StopMultiTurnPos* must be 0.
- When your output encoder is configured as a multi turn encoder, the value of *StopMultiTurnPos* must be different than 0 and below the maximum turn value.

How to Clear the Advisory Code

The diagnostic ID automatically clears when the cause is resolved.

0x1B0564: Advisory Set Position Value

Criticality level: Advisory

MainFunction: *IOM_MOTION*

SubFunction: *Channel*

Principle and Potential Causes

The commanded Z position parameter is out of range.

Possible Solutions

Send a new command with a valid position value.

Ensure that the value respects the configured limits for single-turn and multi-turn positions.

How to Clear the Advisory Code

The diagnostic ID automatically clears when the cause is resolved.

0x1B0566: Advisory Rising Edge on Output

Criticality level: Advisory

MainFunction: *IOM_MOTION*

SubFunction: *ExpertQ*

Principle and Potential Causes

A configured rising edge is not generated.

A configured rising edge, that was not generated, is overwritten.

Possible Solutions

Ensure that the rising edge is generated before overwriting the rising edge value.

How to Clear the Advisory Code

Disable and enable the expert function.

0x1B0567: Advisory Falling Edge on Output

Criticality level: Advisory

MainFunction: *IOM_MOTION*

SubFunction: *ExpertQ*

Principle and Potential Causes

A configured falling edge is not generated.

A configured falling edge, that was not generated, is overwritten.

Possible Solutions

Ensure that the falling edge is generated before overwriting the falling edge value.

How to Clear the Advisory Code

Disable and enable the expert function.

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 OPC UA node IDs related to the I/O, inside the configuration.
- Download 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

Download 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

Download 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

Download 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

Download 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

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

How to Clear the Advisory Code

Not applicable.

0x1F0141: Configuration In Preparation Unsuccessful

Criticality level: Advisory

MainFunction: *IOM_HART*

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

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

How to Clear the Advisory Code

Not applicable.

0x1F0142: Node ID Not Allowed In Input Image

Criticality level: Advisory

MainFunction: *IOM_HART*

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

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

How to Clear the Advisory Code

Not applicable.

0x1F0143: Node ID Not Allowed In Output Image

Criticality level: *Advisory*

MainFunction: *IOM_HART*

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

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

How to Clear the Advisory Code

Not applicable.

0x1F0200: Read Node ID Unsuccessful

Criticality level: *Advisory*

MainFunction: *IOM_HART*

SubFunction: *ExplicitAccess*

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 Advisory Code

Not applicable.

0x1F0201: Write Node ID Unsuccessful

Criticality level: Advisory

MainFunction: *IOM_HART*

SubFunction: *ExplicitAccess*

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 Advisory Code

Not applicable.

0x1F044A: Lower Tolerance Alert Detected

Criticality level: Advisory

MainFunction: *IOM_HART*

SubFunction: */*

Principle and Potential Causes

A lower tolerance alert is detected on the indicated channel.

The channel input value is below the minimum threshold parameter value.

Possible Solutions

- Verify and adjust the threshold 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.

0x1F044B: Upper Tolerance Alert Detected

Criticality level: Advisory

MainFunction: *IOM_HART*

SubFunction: /

Principle and Potential Causes

An upper tolerance alert is detected on the indicated channel.

The channel input value is above the maximum threshold parameter value.

Possible Solutions

- Verify and adjust the threshold 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.

0x1F0541: Hart Major Difference

Criticality level: Advisory

MainFunction: *IOM_HART*

SubFunction: *HART*

Principle and Potential Causes

The HART enabled channel detected a major change to the instrument.

The connected instrument changes.

Possible Solutions

- Reset **CHResetChanged**.
- Change instrument and update configuration.

How to Clear the Advisory Code

Disable HART on channel and download configuration again.

0x1F0542: Hart Minor Difference

Criticality level: Advisory

MainFunction: *IOM_HART*

SubFunction: *HART*

Principle and Potential Causes

The HART enabled channel detected a minor change to the instrument.
The connected instrument changes.

Possible Solutions

- Reset **CHResetChanged**.
- Change instrument and update configuration.

How to Clear the Advisory Code

Disable HART on channel and download configuration again.

0x1F0543: Hart Disconnected

Criticality level: Advisory

MainFunction: *IOM_HART*

SubFunction: *HART*

Principle and Potential Causes

The **HART Enabled** parameter is TRUE and the communication with the device is interrupted.

Potential causes:

- The device is not connected.
- The address range is incorrect.

Possible Solutions

- Verify the physical connection.
- Set a larger range of addresses and send a new configuration.
- Set the **HART Enabled** parameter to FALSE.

How to Clear the Error 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 state 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.

0x8A01C1: SERCOS Advisory Diagnostic Code And Diagnostic Message

Criticality level: Advisory

MainFunction: *SERCOS*

SubFunction: *DiagMessage*

Principle and Potential Causes

A *SERCOS* diagnostic number of class C2D (IDN **S-0-0390**) is reported.

A *SERCOS* diagnostic message (IDN **S-0-0095**) is reported.

Possible Solutions

Identify the root cause of the advisory with the *SERCOS* diagnostic number provided and take the appropriate corrective actions.

For more information about the *SERCOS* diagnostic numbers, refer to the Modicon Edge I/O NTS - Network Interface Modules - User Guide.

How to Clear the Advisory Code

The diagnostic ID automatically clears when the cause is resolved.

Schneider Electric
35 rue Joseph Monier
92500 Rueil Malmaison
France

www.se.com

As standards, specifications, and design change from time to time, please ask for confirmation of the information given in this publication.

© 2026 Schneider Electric. All rights reserved.

EIO0000004826.06