

- ▷ [Quick Start Steps](#)
- ▷ [Logix Designer](#)
- ▷ [Module Information](#)
- ▲ [Instruction Set](#)

[Logix 5000 Controllers
Instruction and Application
Considerations](#)

[Logix Designer Application
Instruction Set](#)

[Interpret the Attribute Tables
Array Concepts](#)

- ▲ [CIP Axis Attributes](#)
 - [AXIS_CIP_DRIVE Diagrams](#)
 - [AXIS_CIP_DRIVE Structure](#)
 - ▷ [Accessing Attributes](#)
 - [AC Line Condition
Attributes](#)
 - [Acceleration Control
Attributes](#)
 - [Acceleration Control
Configuration Attributes](#)
 - [Additional Error Code
Information](#)
 - ▷ [APR Fault Attributes](#)
 - [Auto-Tune Configuration
Attributes](#)
 - ▷ [Axis Exception Action
Configuration Attributes](#)
 - [Axis Info Attributes](#)
 - [Axis Safety Status
Attributes](#)
 - [Axis Statistical Attributes](#)
 - [CIP Axis Status Attributes](#)
 - [CIP Error Codes](#)
 - [CIP Motion Axis Control
Modes](#)
 - ▷ [Command Reference](#)
 - [Generation Attributes](#)
 - [Configuration Fault
Attributes](#)
 - [Control Mode Attributes](#)
 - [Converter AC Line
Configuration Attributes](#)
 - [Converter AC Line
Monitoring Attributes](#)
 - [Converter AC Line Source
Configuration Attributes](#)
 - [Converter Bus Voltage
Control Configuration
Attributes](#)
 - [Converter Bus Voltage
Control Signal Attributes](#)
 - [Converter Control Mode
Attributes](#)

Exception, Fault and Alarm Attributes

These are the exception, fault, and alarm related attributes associated with a Motion Control Axis. Exceptions are conditions that can occur during axis operation that have the potential of generating faults or alarms based on the Exception Action configuration.

CIP Axis Faults

Usage	Access	T	Data Type	Default	Min	Max	Semantics of Values
Required - All	Get/GSV	T	LWORD	-	-	-	Refer to Standard Exceptions

A bit map that represents the state of all standard runtime faults. The bit map is identical to that of the CIP Axis Exceptions attribute. Fault bits when set are latched until a fault reset occurs. A fault reset clears the runtime fault bits, but the bits set again immediately if the underlying exception condition is still present. Any exceptions whose CIP Axis Exception Action is configured to ignore or report as alarms do not appear in this attribute.

CIP Axis Faults 2

Usage	Access	T	Data Type	Default	Min	Max	Semantics of Values
Required - G Optional - NED	Get/GSV	T	LWORD	-	-	-	Refer to Standard Exceptions

This attributes provides a 64-bit extension to the CIP Axis Faults attribute bit map representing the state of all standard runtime faults. This bit map is identical to that of the CIP Axis Exceptions 2 attribute. Fault bits when set are latched until a fault reset occurs. A fault reset clears the runtime fault bits, but the bits set again immediately if the underlying exception condition is still present.

Any exceptions whose CIP Axis Exception Action is configured to ignore or report as alarms do not appear in this attribute.

CIP Axis Faults - RA

Usage	Access	T	Data Type	Default	Min	Max	Semantics of Values
Required - All	Get/GSV	T	LWORD	-	-	-	Refer to Rockwell Automation Specific Exceptions

A bit map that represents the state of all Rockwell Automation specific runtime faults. Fault bits when set are latched until a fault reset occurs. A fault reset clears the runtime fault bits, but the bits set again immediately if the underlying exception condition is still present. Any exceptions whose CIP Axis Exception Action is configured to ignore or report as alarms do not appear in this attribute.

CIP Axis Faults 2 - RA

Usage	Access	T	Data Type	Default	Min	Max	Semantics of Values
Required - G Optional - NED	Get/GSV	T	LWORD	-	-	-	Refer to Rockwell Automation Specific Exceptions

This attributes provides a 64-bit extension to the CIP Axis Faults 2 attribute bit map that represents the state of all Rockwell Automation specific runtime faults. Fault bits when set are latched until a fault reset occurs. A fault reset clears the runtime fault bits, but the bits set again immediately if the underlying exception condition is still present. Any exceptions whose CIP Axis Exception Action is configured to ignore or report as alarms do not appear in this attribute.

CIP Axis Alarms

Usage	Access	T	Data Type	Default	Min	Max	Semantics of Values
Optional - All	Get/GSV	T	LWORD	-	-	-	Refer to Standard Exceptions

A bit map that represents the current state of all standard alarm conditions. The bit map is identical to that of the CIP Axis Exceptions attribute. Only exception conditions whose Axis Exception Action is configured to report as an alarm appear in this attribute, and will not be reported in the CIP Axis Faults attribute. Alarm bits when set are not latched and will clear as soon as the underlying exception condition is corrected.

CIP Axis Alarms 2

Usage	Access	T	Data Type	Default	Min	Max	Semantics of Values
Optional - All	Get/GSV	T	LWORD	-	-	-	Refer to Standard Exceptions

This attributes provides a 64-bit extension to the CIP Axis Alarms attribute bit map representing the current state of all standard alarm conditions. The bit map is identical to that of the CIP Axis Exceptions attribute. Only exception conditions whose CIP Axis Exception Action is configured to report as an alarm appear in this attribute, and will not be reported in the CIP Axis Faults attribute. Alarm bits when set are not latched and will clear as soon as the underlying exception condition is corrected.

CIP Axis Alarms - RA

Usage	Access	T	Data Type	Default	Min	Max	Semantics of Values
Optional- All	Get/GSV	T	LWORD	-	-	-	Refer to Rockwell Automation Specific Exceptions

A bit map that represents the current state of all Rockwell Automation specific alarm conditions. Only exception conditions whose Axis Exception Action is configured to report as an alarm appear in this attribute, and will not be reported in the CIP Axis Faults attribute. Alarm bits when set are not latched and will clear as soon as the underlying

[Attributes](#)

[Converter Current Control Configuration Attributes](#)

[Converter Current Control Signal Attributes](#)

[Converter Current Reference Configuration Attributes](#)

[Converter Current Reference Signal Attributes](#)

[Converter Output Attributes](#)

[Converter Reactive Power Control Attributes](#)

[Converter Types](#)

[Current Control Signal Attributes](#)

[Current Control Configuration Attributes](#)

[Cyclic Read and Cyclic Write](#)

[DC Bus Condition Attributes](#)

[Device Function Codes](#)

[Device Commissioning Attributes](#)

[Drive General Purpose I/O Attributes](#)

[Drive Output Attributes](#)

[Drive Parameters](#)

[Event Capture Attributes](#)

[Exception Factory Limit Info Attributes](#)

[Exception User Limit Configuration Attributes](#)

[Exception, Fault and Alarm Attributes](#)

[Exceptions](#)

[Fault and Alarm Behavior](#)

[Feedback Interface Types](#)

[Feedback Configuration Attributes](#)

[Frequency Control Configuration Attributes](#)

[Frequency Control Signal Attribute](#)

[General Feedback Info Attributes](#)

[General Feedback Signal Attributes](#)

[General Linear Motor Attributes](#)

[General Motor Attributes](#)

[General Permanent Magnet Motor Attributes](#)

[General Rotary Motor](#)

exception condition is corrected.

CIP Axis Alarms 2 - RA

Usage	Access	T	Data Type	Default	Min	Max	Semantics of Values
Optional-All	Get/GSV	T	LWORD	-	-	-	Refer to Rockwell Automation Specific Exceptions

This attributes provides a 64-bit extension to the CIP Axis Alarms 2 RA attribute bit map that represents the current state of all Rockwell Automation specific alarm conditions. Only exception conditions whose CIP Axis Exception Action is configured to report as an alarm appear in this attribute, and will not be reported in the CIP Axis Faults attribute. Alarm bits when set are not latched and will clear as soon as the underlying exception condition is corrected.

See also

[Exceptions](#)

[Module Node Fault and Alarm Attributes](#)

[Standard Exceptions](#)

[Rockwell Automation Specific Exceptions](#)

[Attributes](#)

[Guard Safety Attributes](#)

[Guard Safety Status](#)

[Attributes](#)

[Hookup Test Configuration](#)

[Attributes](#)

[Hookup Test Result](#)

[Attributes](#)

[Identify Motion Axis](#)

[Attributes Based on Device](#)

[Function Codes](#)

[Induction Motor Attributes](#)

[Inertia Test Configuration](#)

[Attributes](#)

[Inertia Test Result](#)

[Attributes](#)

[Initialization Faults](#)

[Attributes](#)

[Interior Permanent Magnet](#)

[Motor Attributes](#)

[Linear PM Motor Attributes](#)

[Load Transmission and](#)

[Actuator Attributes](#)

[Local Mode Configuration](#)

[Attribute](#)

[Module/Node Fault and](#)

[Alarm Attributes](#)

▷ [Motion Control Axis](#)

[Behavior Model](#)

[Motion Control](#)

[Configuration Attributes](#)

[Motion Control Interface](#)

[Attributes](#)

[Motion Control Methods](#)

[Motion Control Modes](#)

[Motion Control Signal](#)

[Attributes](#)

[Motion Control Status](#)

[Attributes](#)

[Motion Database Storage](#)

[Attributes](#)

[Motion Dynamic](#)

[Configuration Attributes](#)

[Motion Fault and Alarm](#)

[Exceptions](#)

[Motion Homing](#)

[Configuration Attributes](#)

[Motion Instruction](#)

[Compatibility](#)

[Motion Planner](#)

[Configuration Attributes](#)

[Motion Planner Output](#)

[Attributes](#)

▷ [Motion Scaling Attributes](#)

[Motor Attributes](#)

[Motor Attributes Model](#)

[Motor Attributes Model](#)

[Motor Test Result Attributes](#)

[No Control Mode](#)

[Position Control Mode](#)

[Position Loop Signal Attributes](#)

[Position Loop Configuration Attributes](#)

[Power and Thermal Management Configuration Attributes](#)

[Power and Thermal Management Status Attributes](#)

[Replicated Attributes](#)

[Required vs. Optional Axis Attributes](#)

[Reset an APR Fault](#)

[Rockwell Automation Specific CIP Axis Alarm Names](#)

[Rockwell Automation Specific Exceptions](#)

[Rockwell Automation Specific CIP Axis Fault Names](#)

[Rockwell Automation Specific Initialization Faults](#)

[Rockwell Automation Specific Start Inhibits](#)

[Rotary PM Motor Attributes Standard CIP Axis Fault and Alarm Names](#)

[Standard Exceptions](#)

[Rotary PM Motor Attributes Standard Initialization Faults](#)

[Standard Start Inhibits](#)

[Start Inhibits Attributes](#)

[State Behavior](#)

▷ [Stopping and Braking Attributes](#)

[Torque Control Mode](#)

[Torque/Force Control Configuration Attributes](#)

[Torque/Force Control Signal Attributes](#)

[Velocity Control Mode](#)

[Velocity Loop Configuration Attributes](#)

[Velocity Loop Signal Attributes](#)

▷ [Module Configuration Attributes](#)

[Bit Addressing](#)

[Common Attributes](#)

[Data Conversions](#)

[Elementary data types](#)

[LINT data types](#)

[Floating Point Values](#)

[Immediate values](#)

[Index Through Arrays](#)

[Math Status Flags](#)

[Motion Error Codes \(.ERR\)](#)

[Structures](#)

- ▷ [Equipment Sequence instructions](#)
- ▷ [Equipment Phase Instructions](#)
- ▷ [Alarm Instructions](#)
- ▷ [Advanced Math Instructions](#)
- ▷ [Array_\(File\)/Misc Instructions](#)
- ▷ [Array_\(File\)/Shift Instructions](#)
- ▷ [ASCII Conversion Instructions](#)
- ▷ [ASCII Serial Port Instructions](#)
- ▷ [ASCII String Instructions](#)
- ▷ [Bit Instructions](#)
- ▷ [Compare Instructions](#)
- ▷ [Debug Instructions](#)
- ▷ [Drives Instructions](#)
- ▷ [Drive Safety Instructions](#)
- ▷ [For/Break Instructions](#)
- ▷ [Filter Instructions](#)
- ▷ [Function Block Attributes](#)
- ▷ [Structured Text Attributes](#)
- ▷ [Compute/Math Instructions](#)
- ▷ [Move/Logical Instructions](#)
- ▷ [Input/Output Instructions](#)
- ▷ [License Instructions](#)
- ▷ [Math Conversion Instructions](#)
- ▷ [Metal Form Instructions](#)
- ▷ [Motion Configuration Instructions](#)
- ▷ [Motion Event Instructions](#)
- ▷ [Motion Group Instructions](#)
- ▷ [Motion Move Instructions](#)
- ▷ [Motion State Instructions](#)
- ▷ [Multi-Axis Coordinated Motion Instructions](#)
- ▷ [Logical and Move Instructions](#)
- ▷ [Program Control Instructions](#)
- ▷ [Sequencer Instructions](#)
- ▷ [Special Instructions](#)
- ▷ [Timer and Counter Instructions](#)
- ▷ [Trigonometric Instructions](#)
- ▷ [Process Control Instructions](#)

- ▷ [Select/Limit Instructions](#)
- ▷ [Sequential Function Chart \(SFC\) Instructions](#)
- ▷ [Statistical Instructions](#)
- ▷ [Safety Instructions](#)
- ▷ [Studio 5000 Logix Designer Glossary](#)

Copyright © 2019 Rockwell Automation Technologies, Inc. All Rights Reserved.

[How are we doing?](#)