

[Instruction Set](#) > [Motion Event Instructions](#) > Motion Disarm Registration (MDR)

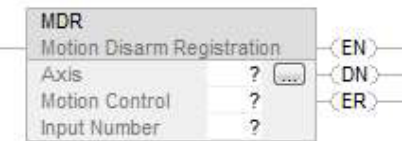
Motion Disarm Registration (MDR)

This information applies to the CompactLogix 5370, ControlLogix 5570, Compact GuardLogix 5370, GuardLogix 5570, Compact GuardLogix 5380, CompactLogix 5380, CompactLogix 5480, ControlLogix 5580, and GuardLogix 5580 controllers. Controller differences are noted where applicable.

Use the Motion Disarm Registration (MDR) instruction to disarm the specified motion module registration input event checking for the specified axis. This instruction has the effect of clearing both the RegEventStatus and the RegArmedEventStatus bits. The In Process bit of the controlling Motion Arm Registration instruction, if any, is cleared as a result of executing the MDR instruction.

Available Languages

Ladder Diagram



Function Block

This instruction is not available in function block.

Structured Text

MDR(Axis,MotionControl, InputNumber);

Operands

Ladder Diagram and Structured Text

Operand	Type	Type	Format	Description
	CompactLogix 5370, Compact GuardLogix 5370, Compact GuardLogix 5380, CompactLogix 5380, CompactLogix 5480	ControlLogix 5570, GuardLogix 5570, ControlLogix 5580, and GuardLogix 5580 controllers		
Axis	AXIS_CIP_DRIVE	AXIS_CIP_DRIVE AXIS_SERVO AXIS_SERVO_DRIVE AXIS_GENERIC_DRIVE AXIS_GENERIC Tip: AXIS_GENERIC is supported by the ControlLogix 5570 and the GuardLogix 5570 controllers only.	Tag	Name of the axis to perform operation on
Motion Control	MOTION_INSTRUCTION	MOTION_INSTRUCTION	Tag	Structure used to access instruction status parameters.

Search



- [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](#)
- [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](#)

Input Number	UINT32	UINT32	1 or 2	Specifies the Registration Input to select. 1 = Registration 1 Position 2 = Registration 2 Position
--------------	--------	--------	--------	---

See *Structured Text Syntax* for more information on the syntax of expressions within structured text.

MOTION_INSTRUCTION Structure

Mnemonic	Description
.EN (Enable) Bit 31	It is set to true when the rung makes a false-to-true transition and remains set to true until the servo message transaction is completed and the rung goes false.
.DN (Done) Bit 29	It is set to true when axis watch event checking has been successfully disarmed.
.ER (Error) Bit 28	It is set to true to indicate that the instruction detected an error, such as if you specified an unconfigured axis.

Description

The MDR instruction cancels registration event checking established by a previous Motion Arm Registration instruction. Only the registration checking associated with the specified registration input is disabled.

If the targeted axis does not appear in the list of available axes, the axis has not been configured for operation. Use the Tag Editor to create and configure a new axis.

To successfully execute a MDR instruction, the targeted axis must be configured as either a Servo or Feedback Only axis. Otherwise, the instruction errors.

Important:

The instruction execution may take multiple scans to execute because it requires multiple coarse updates to complete the request. The Done (.DN) bit is not set immediately, but only after the request is completed.

In this transitional instruction, the relay ladder, toggle the Rung-condition-in from cleared to set each time the instruction should execute.

Affects Math Status Flags

No

Major/Minor Faults

None specific to this instruction. See *Common Attributes* for operand-related faults.

Execution

Ladder Diagram

Instructions

- Motion Event Instructions
- Motion Arm Output Cam (MAOC)

Understand a Programming example MAOC Flow Chart (True)

Motion Arm Registration (MAR)

MAR Flow Chart (True)

Motion Arm Watch (MAW)

MAW Flow Chart (True)

Motion Disarm Output Cam (MDOC)

MDOC Flow Chart (True)

Motion Disarm Registration (MDR)

Motion Disarm Watch (MDW)

MDW Flow Chart (True)

Scheduled Output Module Specifying Output Compensation

Specifying the Output Cam
- 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

Condition/State	Action Taken
Prescan	The .EN, .DN, .ER, and .IP bits are cleared to false.
Rung-condition-in is false	The .EN bit is cleared to false if either the .DN or .ER bit is true.
Rung-condition-in is true	The .EN bit is set to true and the instruction executes.
Postscan	N/A

Structured Text

Condition/State	Action Taken
Prescan	See Prescan in the Ladder Diagram table.
Normal execution	See Rung-condition-in is false, followed by rung is true in the Ladder Diagram table.
Postscan	See Postscan in the Ladder Diagram table.

Error Codes

See *Motion Error Codes (.ERR)* for Motion Instructions.

Extended Error Codes

Extended Error Codes provide additional instruction specific information for the Error Codes that are generic to many instructions. The following Extended Error codes help to pinpoint the problem when the MDR instruction receives a Servo Message Failure (12) error message. See *Motion Error Codes (.ERR)* for Motion Instructions.

Associated Error Code (decimal)	Extended Error Code (decimal)	Meaning
SERVO_MESSAGE_FAILURE (12)	Invalid value (3)	Registration input provided is out of range.

Extended Error codes for the Parameter Out of Range (13) error code work a little differently. Rather than having a standard enumeration, the number that appears for the Extended Error code refers to the number of the operand as they are listed in the faceplate from top to bottom with the first operand being counted as zero. Therefore for the MDR instruction, an extended error code of 2 would refer to the Input Number operand’s value. Input number is limited by the accepted range of values for the instruction and by the drive type. Some CIP drives allow 1 and 2, while other CIP drives will only allow 1.

Status Bits

MDR Changes to Status Bits

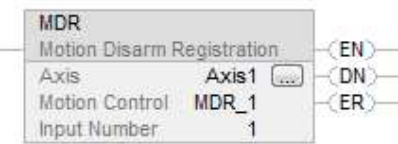
Bit Name	State	Meaning
RegEventArmedStatus	FALSE	The axis is not looking for a registration event.

RegEventStatus FALSE The previous registration event is cleared.

Example

When the input conditions are true, the controller disarms registration-event checking for axis2.

Ladder Diagram



Structured Text

```
MDR(Axis1, MDR_1, 1);
```

See also

[Motion Event Instructions](#)

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

[Common Attributes](#)

[Structured Text Syntax](#)