

## GSV/SSV Objects

When you enter a GSV/SSV instruction, you specify the object and its attribute that you want to access. In some cases, there will be more than one instance of the same type of object, so you might also have to specify the object name. For example, there can be several tasks in your application. Each task has its own TASK object that you access by the task name.

### ATTENTION



For the GSV instruction, only the specified size of data is copied to the destination. For example, if the attribute is specified as a SINT and the destination is a DINT, only the lower 8 bits of the DINT destination are updated, leaving the remaining 24 bits unchanged.

You can access these objects:

<b>For information about this object:</b>	<b>See this page or publication:</b>
AXIS	<i>ControlLogix Motion Module Setup and Configuration Manual</i> , publication 1756-UM006
CONTROLLER	3-37
CONTROLLERDEVICE	3-37
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WALLCLOCKTIME	3-53

## Accessing the MODULE object

The MODULE object provides status information about a module. To select a particular MODULE object, set the Object Name operand of the GSV/SSV instruction to the module name. The specified module must be present in the I/O Configuration section of the controller organizer and must have a device name.

Attribute:	Data Type:	Instruction:	Description:																		
EntryStatus	INT	GSV	<p>Specifies the current state of the specified map entry. The lower 12 bits should be masked when performing a comparison operation. Only bits 12-15 are valid.</p> <table> <thead> <tr> <th>Value:</th> <th>Meaning:</th> </tr> </thead> <tbody> <tr> <td>16#0000</td> <td><b>Standby:</b> the controller is powering up.</td> </tr> <tr> <td>16#1000</td> <td><b>Faulted:</b> any of the MODULE object's connections to the associated module fail. This value should not be used to determine if the module failed because the MODULE object leaves this state periodically when trying to reconnect to the module. Instead, test for Running state (16#4000). Check for FaultCode not equal to 0 to determine if a module is faulted. When Faulted, the FaultCode and FaultInfo attributes are valid until the fault condition is corrected.</td> </tr> <tr> <td>16#2000</td> <td><b>Validating:</b> the MODULE object is verifying MODULE object integrity prior to establishing connections to the module.</td> </tr> <tr> <td>16#3000</td> <td><b>Connecting:</b> the MODULE object is initiating connections to the module.</td> </tr> <tr> <td>16#4000</td> <td><b>Running:</b> all connections to the module are established and data is successfully transferring.</td> </tr> <tr> <td>16#5000</td> <td><b>Shutting down:</b> the MODULE object is in the process of shutting down all connections to the module.</td> </tr> <tr> <td>16#6000</td> <td><b>Inhibited:</b> the MODULE object is inhibited (the inhibit bit in the Mode attribute is set).</td> </tr> <tr> <td>16#7000</td> <td><b>Waiting:</b> the parent MODULE object upon which this MODULE object depends is not running.</td> </tr> </tbody> </table>	Value:	Meaning:	16#0000	<b>Standby:</b> the controller is powering up.	16#1000	<b>Faulted:</b> any of the MODULE object's connections to the associated module fail. This value should not be used to determine if the module failed because the MODULE object leaves this state periodically when trying to reconnect to the module. Instead, test for Running state (16#4000). Check for FaultCode not equal to 0 to determine if a module is faulted. When Faulted, the FaultCode and FaultInfo attributes are valid until the fault condition is corrected.	16#2000	<b>Validating:</b> the MODULE object is verifying MODULE object integrity prior to establishing connections to the module.	16#3000	<b>Connecting:</b> the MODULE object is initiating connections to the module.	16#4000	<b>Running:</b> all connections to the module are established and data is successfully transferring.	16#5000	<b>Shutting down:</b> the MODULE object is in the process of shutting down all connections to the module.	16#6000	<b>Inhibited:</b> the MODULE object is inhibited (the inhibit bit in the Mode attribute is set).	16#7000	<b>Waiting:</b> the parent MODULE object upon which this MODULE object depends is not running.
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FaultCode	INT	GSV	A number which identifies a module fault, if one occurs.																		
FaultInfo	DINT	GSV	Provides specific information about the MODULE object fault code.																		
ForceStatus	INT	GSV	<p>Specifies the status of forces.</p> <table> <thead> <tr> <th>Bit:</th> <th>Meaning:</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>forces installed (1=yes, 0=no)</td> </tr> <tr> <td>1</td> <td>forces enabled (1=yes, 0=no)</td> </tr> <tr> <td>2-15</td> <td>not used</td> </tr> </tbody> </table>	Bit:	Meaning:	0	forces installed (1=yes, 0=no)	1	forces enabled (1=yes, 0=no)	2-15	not used										
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<b>Attribute:</b>	<b>Data Type:</b>	<b>Instruction:</b>	<b>Description:</b>
Instance	DINT	GSV	Provides the instance number of this MODULE object.
LEDStatus	INT	GSV	<p>Specifies the current state of the I/O LED on the front of the controller.</p> <p><b>Value:</b></p> <p>0</p> <p><b>Meaning:</b></p> <p><b>LED off:</b> No MODULE objects are configured for the controller (there are no modules in the I/O Configuration section of the controller organizer).</p> <p>1</p> <p>Flashing red: None of the MODULE objects are Running.</p> <p>2</p> <p>Flashing green: At least one MODULE object is not Running.</p> <p>3</p> <p>Solid green: All the Module objects are Running.</p> <p><b>Note:</b> You do not enter an object name with this attribute because this attribute applies to the entire collection of modules.</p>
Mode	INT	GSV SSV	<p>Specifies the current mode of the MODULE object.</p> <p><b>Bit:</b></p> <p>0</p> <p><b>Meaning:</b></p> <p>If set, causes a major fault to be generated if any of the MODULE object connections fault while the controller is in Run mode.</p> <p>2</p> <p>If set, causes the MODULE object to enter Inhibited state after shutting down all the connections to the module.</p>

## Accessing the MOTIONGROUP object

The MOTIONGROUP object provides status information about a group of axes for the servo module. Specify the motion-group tag name to determine which MOTIONGROUP object you want.

<b>Attribute:</b>	<b>Data Type:</b>	<b>Instruction:</b>	<b>Description:</b>
Instance	DINT	GSV	Provides the instance number of this MOTION_GROUP object.