

Modbus RTU Function Codes Supported:

"03"	Read Holding Registers
"06"	Preset (Write) Single Register

Reading (03) and Writing (06) Parameters

The Register address equals the Parameter number. For example, a decimal "1" is used for Parameter 1, a decimal "39" is used for Parameter 39, etc.

Writing (06) Logic Command Data		
Address (decimal)	Bit(s)	Description
8192	0	1 = Stop, 0 = Not Stop
	1	1 = Start, 0 = Not Start
	2	1 = Jog, 0 = No Jog
	3	1 = Clear Faults, 0 = Not Clear Faults
	5,4	00 = No Command 01 = Forward Command 10 = Reverse Command 11 = Change Direction (toggle)
	6	Not used
	7	Not used
	9,8	00 = No Command 01 = Accel Rate 1 Enable 10 = Accel Rate 2 Enable 11 = Hold Accel Rate Selected
	11,10	00 = No Command 01 = Decel Rate 1 Enable 10 = Decel Rate 2 Enable 11 = Hold Decel Rate Selected
	14,13,12	000 = No Command 001 = Freq. Source = P036 [Start Source] 010 = Freq. Source = A069 [Internal Freq] 011 = Freq. Source = Comms (Addr 8193) 100 = A070 [Preset Freq 0] 101 = A071 [Preset Freq 1] 110 = A072 [Preset Freq 2] 111 = A073 [Preset Freq 3]
15	Not used	

Writing (06) Reference	
Address (decimal)	Description
8193	A decimal value entered as xxx.x where the decimal point is fixed. For example, a decimal "100" equals 10.0 Hz, "543" equals 54.3 Hz, etc.

Reading (03) Logic Status Data		
Address (decimal)	Bit(s)	Description
8448	0	1 = Ready, 0 = Not Ready
	1	1 = Active (running), 0 = Not Active
	2	1 = Cmd Forward, 0 = Cmd Reverse
	3	1 = Rotating Forward, 0 = Rotating Reverse
	4	1 = Accelerating, 0 = Not Accelerating
	5	1 = Decelerating, 0 = Not Decelerating
	6	1 = Alarm, 0 = No Alarm
	7	1 = Faulted, 0 = Not Faulted
	8	1 = At Reference, 0 = Not At Reference
	9	1 = Reference Controlled by Comm
	10	1 = Operation Cmd Controlled by Comm
	11	1 = Parameters have been locked
	12	Digital Input 1 Status
	13	Digital Input 2 Status
	14	Not Used
15	Not Used	

Reading (03) Drive Error Codes		
Address (decimal)	Value (decimal)	Description
8449	0	No Fault
	2	Auxiliary Input
	3	Power Loss
	4	Undervoltage
	5	Overvoltage
	6	Motor Stalled
	7	Motor Overload
	8	Heatsink Overtemperature
	12	HW Overcurrent (300%)
	13	Ground Fault
	29	Analog Input Loss
	33	Auto Restart Tries
	38	Phase U to Ground Short
	39	Phase V to Ground Short
	40	Phase W to Ground Short
	41	Phase U/V Short
	42	Phase U/W Short
	43	Phase V/W Short
	63	Software Overcurrent
	64	Drive Overload
70	Power Unit Fail	
80	AutoTune Fail	
81	Communication Loss	
100	Parameter Checksum Error	
122	I/O Board Fail	

Reading (03) the Frequency Command ⁽¹⁾	
Address (decimal)	Description
8450	A xxx.x decimal value where the decimal point is fixed. For example, a decimal "123" equals 12.3 Hz, "300" equals 30.0 Hz, etc.

Note: Returns the same data as Reading (03) Parameter d002 [Commanded Freq]

Reading (03) Output Frequency (Feedback) ⁽¹⁾	
Address (decimal)	Description
8451	A xxx.x decimal value where the decimal point is fixed. For example, a decimal "123" equals 12.3 Hz, "300" equals 30.0 Hz, etc.

Note: Returns the same data as Reading (03) Parameter d001 [Output Freq]

Reading (03) Output Current ⁽¹⁾	
Address (decimal)	Description
8452	A xx.xx decimal value where the decimal point is fixed. For example, a decimal "50" equals 0.50 Amps, "123" equals 1.23 Amps, etc.

Note: Returns the same data as Reading (03) Parameter d003 [Output Current]

Reading (03) DC Bus Voltage ⁽¹⁾	
Address (decimal)	Description
8453	A xxx.x decimal value where the decimal point is fixed. For example, a decimal "3124" equals 312.4 Volts,

Note: Returns the same data as Reading (03) Parameter d005 [DC Bus Voltage]

Reading (03) Output Voltage ⁽¹⁾	
Address (decimal)	Description
8454	A xxx.x decimal value where the decimal point is fixed. For example, a decimal "1234" equals 123.4 Volts, "2000" equals 200.0 Volts, etc.

Note: Returns the same data as Reading (03) Parameter d004 [Output Voltage]

⁽¹⁾ The benefit of reading the data here, as opposed to reading the parameters directly, is a **single** Read (03) can be performed starting with the Logic Status word (8448d) for a length of 7 words.