

AiCA Series

Communication Manual MMD-AiCAC1-V2.1_EN

Thank you for purchasing an Autonics product.

This user manual contains information about the product and its proper use, and should be kept in a place where it will be easy to access.

Autonics

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Preface

Thank you for purchasing Autonics products.

Be sure to read and follow the **Safety Precautions** thoroughly before use.

This manual contains information about the product and how to use it properly, so keep it in a place where users can easily find it.

Manual Guide

- Use the product after fully reading the contents of the manual.
- The manual explains the product functions in detail and does not guarantee the contents other than the manual.
- Any or all of the manual may not be edited or copied without permission.
- The manual is not provided with the product.
- Download and use from our website (www.autonics.com).
- The contents of the manual are subject to change without prior notice according to the improvement of the product's performance, and upgrade notices are provided through our website.
- We put a lot of effort to make the contents of the manual a little easier and more accurate. Nevertheless, if you have any corrections or questions, please feel free to comment through our website.

Common Symbols in the Manual



Failure to follow instructions may result in serious injury or death.



Failure to follow instructions may result in injury or product damage.



Supplementary explanation of the function



Example of that function



Important information about the feature

1. Modbus RTU Protocol

1.1. Modbus

The Modbus industrial protocol was developed in 1979 to make communication possible between automation devices. The protocol has expanded to include implementations over serial, TCP/IP, and the user datagram protocol (UDP). Today, it is a common protocol used by countless devices for simple, reliable, and efficient communication across a variety of modern networks.



Refer to the reference document of developer for the details.

1.2. Frame Structure of Modbus RTU

1.2.1. Read Coil Status (Func 01-01H)

Reads output (OX reference, Coil) ON/OFF status in the Slave device.

Query (Master)

Slave Address	Function	Starting Address	No. of Points	Error Check (CRC16)
1 Byte	1 Byte	2 Byte	2 Byte	2 Byte

- Calculation range of CRC16 = Slave Address to No. of Points

Response (Slave)

Slave Address	Function	Byte Count	Data	Data	Data	Error Check (CRC16)
1 Byte	1 Byte	1 Byte	1 Byte	1 Byte	1 Byte	2 Byte

- Calculation range of CRC16 = Slave Address to Data

1.2.2. Read Input Status (Func 02-02H)

Reads Input ON/OFF status (1X reference) in Slave device.

Query (Master)

Slave Address	Function	Starting Address	No. of Points	Error Check (CRC16)
1 Byte	1 Byte	2 Byte	2 Byte	2 Byte

- Calculation range of CRC16 = Slave Address to No. of Points

Response (Slave)

Slave Address	Function	Byte Count	Data	Data	Data	Error Check (CRC16)
1 Byte	1 Byte	1 Byte	1 Byte	1 Byte	1 Byte	2 Byte

- Calculation range of CRC16 = Slave Address to Data

1.2.3. Read Holding Registers (Func 03-03H)

Reads the Binary data of Holding Registers (4X reference) in Slave device.

Query (Master)

Slave Address	Function	Starting Address	No. of Points	Error Check (CRC16)
1 Byte	1 Byte	2 Byte	2 Byte	2 Byte

- Calculation range of CRC16 = Slave Address to No. of Points

Response (Slave)

Slave Address	Function	Byte Count	Data	Data	Data	Error Check (CRC16)
1 Byte	1 Byte	1 Byte	2 Byte	2 Byte	2 Byte	2 Byte

- Calculation range of CRC16 = Slave Address to Data

1.2.4. Read Input Registers (Func 04-04H)

Reads the Binary data of Input Registers (3X reference) in Slave device.

Query (Master)

Slave Address	Function	Starting Address	No. of Points	Error Check (CRC16)
1 Byte	1 Byte	2 Byte	2 Byte	2 Byte

- Calculation range of CRC16 = Slave Address to No. of Points

Response (Slave)

Slave Address	Function	Byte Count	Data	Data	Data	Error Check (CRC16)
1 Byte	1 Byte	1 Byte	1 Byte	1 Byte	1 Byte	2 Byte

- Calculation range of CRC16 = Slave Address to Data

1.2.5. Force Single Coil (Func 05-05H)

Turns ON (FF00 H) or OFF (0000 H) of single coil (0X reference) status in Slave device.

Query (Master)

Slave Address	Function	Coil Address	Preset Data	Error Check (CRC16)
1 Byte	1 Byte	2 Byte	2 Byte	2 Byte

- Calculation range of CRC16 = Slave Address to Preset Data

Response (Slave)

Slave Address	Function	Coil Address	Preset Data	Error Check (CRC16)
1 Byte	1 Byte	2 Byte	2 Byte	2 Byte

- Calculation range of CRC16 = Slave Address to Preset Data

1.2.6. Preset Single Register (Func 06-06H)

Writes the Binary data of single Holding Registers (4X reference) in Slave device.

Query (Master)

Slave Address	Function	Register Address	Preset Data	Error Check (CRC16)
1 Byte	1 Byte	2 Byte	2 Byte	2 Byte

- Calculation range of CRC16 = Slave Address to Preset Data

Response (Slave)

Slave Address	Function	Register Address	Preset Data	Error Check (CRC16)
1 Byte	1 Byte	2 Byte	2 Byte	2 Byte

- Calculation range of CRC16 = Slave Address to Preset Data

1.2.7. Preset Multiple Registers (Func 16-10H)

Writes the Binary data of Holding Registers (4X reference) consecutively in Slave device.

Query (Master)

Slave Address	Function	Starting Address	No. of Register	Byte Count	Data	Data	Error Check (CRC16)
1 Byte	1 Byte	2 Byte	2 Byte	1 Byte	2 Byte	2 Byte	2 Byte

- Calculation range of CRC16 = Slave Address to Data

Response (Slave)

Slave Address	Function	Starting Address	No. of Registers	Error Check (CRC16)
1 Byte	1 Byte	2 Byte	2 Byte	2 Byte

- Calculation range of CRC16 = Slave Address to No. of Registers



It is recommended to use the Single Register Write function rather than Multi Register Write function if you use the slave (device) connecting with external devices such as PLC, Graphic Panel, except in the case of download that presets the minimum/maximum or basic value of parameter by Input specifications in PC Loader Program.

1.2.8. Exception Response - Error Code

If occurs an error, send a response command and transmit each Exception Code after set(1) the highest level bit of received command(Function).

Slave Address	Function + 80H	Exception Code	Error Check (CRC16)
1 Byte	1 Byte	1 Byte	2 Byte

- Calculation range of CRC16 = Slave Address to Exception Code



- ILLEGAL FUNCTION (Exception Code: 01 H): When a command is not supported.
- ILLEGAL DATA ADDRESS (Exception Code: 02 H): When Reserved area is read.
- ILLEGAL DATA VALUE (Exception Code: 03 H): When data write to out of setting range is requested.
- SLAVE DEVICE FAILURE (Exception Code: 04 H): When the parameter is locked or communication write is disable.
- SLAVE DEVICE BUSY (Exception Code: 06 H): When the device status cannot perform the requested order.
- When the exception response situation, the device do not respond data, but send exception code only.

1.3. Autonics Modbus Address System

Parameter address structure

The parameter address is written in form 'Reference number - Decimal address (Hexadecimal address).

For example, if the parameter address is **3 0 1001 (03E8)**, it means that **3** is Reference number, **1001** is Decimal address (DEC), **03E8** is Hexadecimal address (HEX).

Reference number per each FUNC

Reference	Function
0	FUNC 01 [R], FUNC 05 [W], FUNC 15 [MW]
1	FUNC 02 [R]
3	FUNC 04 [R]
4	FUNC 03 [R], FUNC 06 [W], FUNC 16 [MW]

Correlation between decimal address and hexadecimal address

The parameter address can be somewhat different for each manufacturer because the regulation for a starting number is not defined.

Autonics Modbus address is started at '1' for decimal (DEC) address, and at '0' for hexadecimal (HEX).

So, decimal (DEC) address values are +1 for Hex (HEX) address values.



03E8 (HEX) → 1001 (DEC) (1000 + 1)

07D0 (HEX) → 2001 (DEC) (2000 + 1)

157C (HEX) → 5501 (DEC) (5500 + 1)

2. Modbus Mapping Table

2.1. Output control group

[Func: 01/05, R/W: R/W]: No. 000001 to 000010

[Func: 02, R/W: R]: No. 100029 to 100033

No (Address)	I/O Pin	Description	Set range
000001 (0000)	OUT0	General output 0	0: OFF / 1: ON
000002 (0001)	OUT1	General output 1	
000003 (0002)	OUT2	General output 2	
000004 (0003)	OUT3	General output 3	
000005 (0004)	OUT4	General output 4	
000006 (0005)	OUT5	General output 5	
000007 (0006)	OUT6	General output 6	
000008 (0007)	OUT7	General output 7	
000009 (0008)	OUT8	General output 8	
000010 (0009)	OUT9	General output 9	
100029 (001C)	-	Servo On output	
100030 (001D)	Alarm	Alarm output	
100031 (001E)	In-position	In-Position output	
100032 (001F)	Compare1	Compare output 1	
100033 (0020)	Compare2	Compare output 2	

2.2. Operation command group

[Func: 05, R/W: W]: No. 000011 to No. 000030

- Broadcast available (except move position override)

No (Address)	I/O Pin	Description	Set range
000011 (000A)	Reset	Reset	1: Run
000012 (000B)	EMG	Emergency stop	
000013 (000C)	Alarm Reset	Alarm reset	
000014 (000D)	-	Command position clear	
000015 (000E)	-	Actual position clear	
000016 (000F)	Step0/+Run/+Jog	CW operation	
000017 (0010)	Step1/-Run/-Jog	CCW operation	
000018 (0011)	-	Move absolute position	
000019 (0012)	-	Move relative position	
000020 (0013)	Start	Index mode start	
000021 (0014)		Program mode start	
000022 (0015)	Home	Home search mode start	
000023 (0016)	Stop	Immediate stop	
000024 (0017)		Decelerating stop	
000025 (0018)	Pause	Pause program mode	
000026 (0019)	-	End program mode	
000027 (001A)	-	Delete program	
000028 (001B)	-	Torque mode start	
000029 (001C)	-	Move position override	

2.3. Operation setting group 1

[Func: 01/05, R/W: R/W]: No. 000031 to No. 000100

No (Address)	I/O Pin	Description	Set range
000031 (001E)	-	Limit stop mode	0: Instant / 1: Slow
000032 (001F)	-	S curve accel/decel	0: Disable / 1: Enable
000033 (0020)	-	Input filter selection	0: 10ms / 1: 1.5ms
000034 (0021)	-	Software limit	0: Disable / 1: Enable
000035 (0022)	-	Power on home search start	0: Disable / 1: Enable
000036 (0023)	-	Power on program start	0: Disable / 1: Enable
000037 (0024)	-	Reserved	
000038 (0025)	Start	Index/Program mode start signal level setting	0: Low / 1: High
000039 (0026)	Step0/+Run/+Jog	Step0/+Run/+Jog signal level setting	0: Low / 1: High
000040 (0027)	Step1/-Run/-Jog	Step1/-Run/-Jog signal level setting	0: Low / 1: High
000041 (0028)	Step2/SSP0	Step2/SSP0 signal level setting	0: Low / 1: High
000042 (0029)	Step3/SSP1	Step3/SSP1 signal level setting	0: Low / 1: High
000043 (002A)	Step4/MSP0	Step4/MSP0 signal level setting	0: Low / 1: High
000044 (002B)	Step5/MSP1	Step5/MSP1 signal level setting	0: Low / 1: High
000045 (002C)	MD0/HMD0	Run mode 0/Home search mode 0 signal level setting	0: Low / 1: High
000046 (002D)	MD1/HMD1	Run mode 1/Home search mode 1 signal level setting	0: Low / 1: High
000047 (002E)	Pause	Pause signal level setting	0: Low / 1: High
000048 (002F)	Stop	Stop signal level setting	0: Low / 1: High
000049 (0030)	EMG	Emergency stop signal level setting	0: Low / 1: High

No (Address)	I/O Pin	Description	Set range
000050 (0031)	Home	Home search signal level setting	0: Low / 1: High
000051 (0032)	Alarm Reset	Alarm reset signal level setting	0: Low / 1: High
000052 (0033)	Servo On/Off	Servo On/Off signal level setting	0: Low / 1: High
000053 (0034)	+/- Limit	Limit signal level setting	0: Low / 1: High
000054 (0035)	IN0	General input 0 signal level setting	0: Low / 1: High
000055 (0036)	IN1	General input 1 signal level setting	0: Low / 1: High
000056 (0037)	IN2	General input 2 signal level setting	0: Low / 1: High
000057 (0038)	IN3	General input 3 signals level setting	0: Low / 1: High
000058 (0039)	IN4	General input 4 signal level setting	0: Low / 1: High
000059 (003A)	IN5	General input 5 signal level setting	0: Low / 1: High
000060 (003B)	IN6	General input 6 signal level setting	0: Low / 1: High
000061 (003C)	IN7	General input 7 signal level setting	0: Low / 1: High
000062 (003D)	IN8 / Brake ON/OFF	General input 8 / Brake signal level setting	0: Low / 1: High
000063 (003E)	SD	Decelerating stop signal level setting	0: Low / 1: High
000064 (003F)	-	Motor direction for initial setting	0: CW / 1: CCW
000065 (0040)	-	Motor direction setting	0: CW / 1: CCW
000066 (0041)	-	Output mode setting (alarm ON)	0: Maintain / 1: Reset
000067 (0042)	-	IN8 / Brake ON/OFF	0: IN8 / 1: Brake ON/OFF
000068 (0043)	-	Servo Off	0: Disable / 1: Enable
000069 (0044)	-	Brake Off	0: Disable / 1: Enable
000070 to 000100	Reserved		

2.4. External input status group

[Func: 02, R/W: R]: No. 100001 to No. 100100

No (Address)	I/O Pin	Description	Set range
100001 (0000)	Start	Drive start command	0: OFF 1: ON
100002 (0001)	Step0/+Run/+Jog	Step0/+Run/+Jog	
100003 (0002)	Step1/-Run/-Jog	Step1/-Run/-Jog	
100004 (0003)	Step2/SSP0	Step2/SSP0	
100005 (0004)	Step3/SSP1	Step3/SSP1	
100006 (0005)	Step4/MSP0	Step4/MSP0	
100007 (0006)	Step5/MSP1	Step5/MSP1	
100008 (0007)	MD0/HMD0	Run mode 0/Home search mode0	
100009 (0008)	MD1/HMD1	Run mode 1/Home search mode1	
100010 (0009)	Pause	Pause	
100011 (000A)	Stop	Stop	
100012 (000B)	EMG	Emergency stop	
100013 (000C)	Home	Home search start command	
100014 (000D)	ORG	Home signal	
100015 (000E)	Alarm Reset	Alarm reset	
100016 (000F)	Servo On/Off	Servo On/Off	
100017 (0010)	+Limit	+ direction Limit	
100018 (0011)	-Limit	- direction Limit	
100019 (0012)	IN0	General input 0	
100020 (0013)	IN1	General input 1	
100021 (0014)	IN2	General input2	
100022 (0015)	IN3	General input3	
100023 (0016)	IN4	General input4	
100024 (0017)	IN5	General input5	
100025 (0018)	IN6	General input6	
100026 (0019)	IN7	General input7	
100027 (001A)	IN8 / Brake ON/OFF	General input8 / Brake ON/OFF	
100028 (001B)	SD	Deceleration mode	
100034 to 100100	Reserved		

2.5. Product Information group

[Func: 04, R/W: R]: No.300001 to No. 300999

No (Address)	I/O Pin	Description	Set range
300001 to 300100	Reserved		
300101 (0064)	-	Serial number	-
300102 (0065)		Serial number	-
300103 (0066)		Hardware version	-
300104 (0067)		Software version	-
300105 (0068)		Model name 1	"A1"
300106 (0069)		Model name 2	"CA"
300107 (006A)		Model name 3	"-D"
300108 (006B)		Model name 4	"-8"
300109 (006C)		Model name 5	"6L"
300110 (006D)		Model name 6	"A-"
300111 (006E)		Model name 7	"B"
300112 (006F)		Reserved	-
300113 (0070)		Reserved	-
300114 (0071)		Reserved	-
300115 (0072)		Reserved	-
300116 (0073)		Reserved	-
300117 (0074)		Reserved	-
300118 (0075)		Coil Status Start Address	0 x 00
300119 (0076)		Coil Status Quantity	-
300120 (0077)		Input Status Start Address	0 x 00
300121 (0078)	Input Status Quantity	-	
300122 (0079)	Holding Register Start Address	0 x 02	
300123 (007A)	Holding Register Quantity	-	
300124 (007B)	Input Register Start Address	0 x 64	
300125 (007C)	Input Register Quantity	-	
300126 to 300999	Reserved		

2.6. Monitoring data group

[Func: 04, R/W: R]: No. 301000 to No. 301050

No (Address)	I/O Pin	Description	Set range
301000 (03E7)	-	Run mode	0: Waiting / 1: Index / 2: Jog / 3: Continuous / 4: Program / 5: Home / 6: General / 7: Torque
301001 (03E8)	-	Command position coordinate H	2 MSB (Most Significant Byte) among -2,147,483,648 to +2,147,483,647
301002 (03E9)	-	Command position coordinate L	2 LSB (Least Significant Byte) among -2,147,483,648 to +2,147,483,647
301003 (03EA)	-	Actual position coordinate H	2 MSB (Most Significant Byte) among -2,147,483,648 to +2,147,483,647
301004 (03EB)	-	Actual position coordinate L	2 LSB (Least Significant Byte) among -2,147,483,648 to +2,147,483,647
301005 (03EC)	-	Command running speed H	2 MSB (Most Significant Byte) among 1 to 600,000
301006 (03ED)	-	Command running speed L	2 LSB (Least Significant Byte) among 1 to 600,000
301007 (03EE)	-	Actual running speed H	2 MSB (Most Significant Byte) among 1 to 600,000
301008 (03EF)	-	Actual running speed L	2 LSB (Least Significant Byte) among 1 to 600,000
301009 (03F0)	-	Motor speed [RPM]	1 to 3,000
301010 (03F1)	-	The number of running program STEP	0 to 255

No (Address)	I/O Pin	Description	Set range
301011 (03F2)	-	Bit 0: Overcurrent error Bit 1: Overspeed error Bit 2: Position tracking error Bit 3: Overload error Bit 4: Overheat error Bit 5: Motor connection error Bit 6: Encoder connection error Bit 7: Overvoltage error Bit 8: Undervoltage error Bit 9: Motor misalignment Bit 10: Command pulse error Bit 11: In-Position error Bit 12: Memory error Bit 13: Emergency stop error Bit 14: Program mode error Bit 15: Index mode error	0: OFF / 1: ON
301012 (03F3)	-	Bit 0: Home search mode error Bit 1: + software limit error Bit 2: - software limit error Bit 3: + hardware limit error Bit 4: - hardware limit error Bit 5: Overload warning Bit 6: Override warning Bit 7: Brake error	0: OFF / 1: ON

No (Address)	I/O Pin	Description	Set range
301013 (03F4)	Start	Bit 0: Drive start command	0: OFF / 1: ON
	Step0/+Run/+Jog	Bit 1: Step0/+Run/+Jog	
	Step1/-Run/-Jog	Bit 2: Step1/-Run/-Jog	
	Step2/SSP0	Bit 3: Step2/SSP0	
	Step3/SSP1	Bit 4: Step3/SSP1	
	Step4/MSP0	Bit 5: Step4/MSP0	
	Step5/MSP1	Bit 6: Step5/MSP1	
	MD0/HMD0	Bit 7: Run mode assignment 0 / Home search mode0	
	MD1/HMD1	Bit 8: Run mode assignment 1 /Home search mode1	
	Pause	Bit 9: Pause	
	Stop	Bit 10: Stop	
	EMG	Bit 11: Emergency stop	
	Home	Bit 12: Home search start command	
	Alarm Reset	Bit 13: Alarm reset	
	Servo On/Off	Bit 14: Servo On/Off	
ORG	Bit 15: Home signal		
301014 (03F5)	+Limit	Bit 0: + direction Limit	0: OFF / 1: ON
	-Limit	Bit 1: - direction Limit	
	IN 0	Bit 2: General input 0	
	IN 1	Bit 3: General input 1	
	IN 2	Bit 4: General input 2	
	IN 3	Bit 5: General input 3	
	IN 4	Bit 6: General input 4	
	IN 5	Bit 7: General input 5	
	IN 6	Bit 8: General input 6	
	IN 7	Bit 9: General input 7	
	IN 8 / Brake ON/OFF	Bit 10: General input 8 / Brake ON/OFF	
	SD	Bit 11: Deceleration mode	

No (Address)	I/O Pin	Description	Set range
301015 (03F6)	Alarm	Bit 0: Alarm output	0: OFF / 1: ON
	In-Position	Bit 1: In-Position output	
	Compare1	Bit 2: Compare output 1	
	Compare2	Bit 3: Compare output 2	
	Servo On/Off	Bit 4: Servo On output	
301016 to 301050	Reserved		

2.7. Operation status group

[Func: 03/06/16, R/W: R/W]: No. 400001 to No. 400050

No (Address)	Description	Set range
400001 to 400002	Reserved	
400003 (0002)	Start speed H	Setting initial value of resupplying power
400004 (0003)	Start speed L	
400005 (0004)	Final speed H	
400006 (0005)	Final speed L	
400007 (0006)	Acceleration time	
400008 (0007)	Deceleration time	
400009 (0008)	Position to move H	Default: 0
400010 (0009)	Position to move L	
400011 (000A)	Program starting address	0 to 255
400012 (000B)	Home search command type setting	0 to 3
400013 to 400050	Reserved	

2.8. Program mode group

[Func: 03/06/16, R/W: R/W]: No.400051 to No. 402601

No (Address)	Description	Data length
400051 (0032)	STEP0 data	20 byte
400061 (003C)	STEP1 data	20 byte
400071 (0046)	STEP2 data	20 byte
400081 (0050)	STEP3 data	20 byte
400091 (005A)	STEP4 data	20 byte
400101 (0064)	STEP5 data	20 byte
400111 (006E)	STEP6 data	20 byte
400121 (0078)	STEP7 data	20 byte
400131 (0082)	STEP8 data	20 byte
400141 (008C)	STEP9 data	20 byte
400151 (0096)	STEP10 data	20 byte
400161 (00A0)	STEP11 data	20 byte
400171 (00AA)	STEP12 data	20 byte
400181 (00B4)	STEP13 data	20 byte
400191 (00BE)	STEP14 data	20 byte
400201 (00C8)	STEP15 data	20 byte
400211 (00D2)	STEP16 data	20 byte
400221 (00DC)	STEP17 data	20 byte
400231 (00E6)	STEP18 data	20 byte
400241 (00F0)	STEP19 data	20 byte
400251 (00FA)	STEP20 data	20 byte
400261 (0104)	STEP21 data	20 byte
400271 (010E)	STEP22 data	20 byte
400281 (0118)	STEP23 data	20 byte
400291 (0122)	STEP24 data	20 byte
400301 (012C)	STEP25 data	20 byte
400311 (0136)	STEP26 data	20 byte
400321 (0140)	STEP27 data	20 byte
400331 (014A)	STEP28 data	20 byte
400341 (0154)	STEP29 data	20 byte
400351 (015E)	STEP30 data	20 byte

No (Address)	Description	Data length
400361 (0168)	STEP31 data	20 byte
400371 (0172)	STEP32 data	20 byte
400381 (017C)	STEP33 data	20 byte
400391 (0186)	STEP34 data	20 byte
400401 (0190)	STEP35 data	20 byte
400411 (019A)	STEP36 data	20 byte
400421 (01A4)	STEP37 data	20 byte
400431 (01AE)	STEP38 data	20 byte
400441 (01B8)	STEP39 data	20 byte
400451 (01C2)	STEP40 data	20 byte
400461 (01CC)	STEP41 data	20 byte
400471 (01D6)	STEP42 data	20 byte
400481 (01E0)	STEP43 data	20 byte
400491 (01EA)	STEP44 data	20 byte
400501 (01F4)	STEP45 data	20 byte
400511 (01FE)	STEP46 data	20 byte
400521 (0208)	STEP47 data	20 byte
400531 (0212)	STEP48 data	20 byte
400541 (021C)	STEP49 data	20 byte
400551 (0226)	STEP50 data	20 byte
400561 (0230)	STEP51 data	20 byte
400571 (023A)	STEP52 data	20 byte
400581 (0244)	STEP53 data	20 byte
400591 (024E)	STEP54 data	20 byte
400601 (0258)	STEP55 data	20 byte
400611 (0262)	STEP56 data	20 byte
400621 (026C)	STEP57 data	20 byte
400631 (0276)	STEP58 data	20 byte
400641 (0280)	STEP59 data	20 byte
400651 (028A)	STEP60 data	20 byte
400661 (0294)	STEP61 data	20 byte
400671 (029E)	STEP62 data	20 byte
400681 (02A8)	STEP63 data	20 byte
400691 (02B2)	STEP64 data	20 byte

No (Address)	Description	Data length
400701 (02BC)	STEP65 data	20 byte
400711 (02C6)	STEP66 data	20 byte
400721 (02D0)	STEP67 data	20 byte
400731 (02DA)	STEP68 data	20 byte
400741 (02E4)	STEP69 data	20 byte
400751 (02EE)	STEP70 data	20 byte
400761 (02F8)	STEP71 data	20 byte
400771 (0302)	STEP72 data	20 byte
400781 (030C)	STEP73 data	20 byte
400791 (0316)	STEP74 data	20 byte
400801 (0320)	STEP75 data	20 byte
400811 (032A)	STEP76 data	20 byte
400821 (0334)	STEP77 data	20 byte
400831 (033E)	STEP78 data	20 byte
400841 (0348)	STEP79 data	20 byte
400851 (0352)	STEP80 data	20 byte
400861 (035C)	STEP81 data	20 byte
400871 (0366)	STEP82 data	20 byte
400881 (0370)	STEP83 data	20 byte
400891 (037A)	STEP84 data	20 byte
400901 (0384)	STEP85 data	20 byte
400911 (038E)	STEP86 data	20 byte
400921 (0398)	STEP87 data	20 byte
400931 (03A2)	STEP88 data	20 byte
400941 (03AC)	STEP89 data	20 byte
400951 (03B6)	STEP90 data	20 byte
400961 (03C0)	STEP91 data	20 byte
400971 (03CA)	STEP92 data	20 byte
400981 (03D4)	STEP93 data	20 byte
400991 (03DE)	STEP94 data	20 byte
401001 (03E8)	STEP95 data	20 byte
401011 (03F2)	STEP96 data	20 byte
401021 (03FC)	STEP97 data	20 byte
401031 (0406)	STEP98 data	20 byte

No (Address)	Description	Data length
401041 (0410)	STEP99 data	20 byte
401051 (041A)	STEP100 data	20 byte
401061 (0424)	STEP101 data	20 byte
401071 (042E)	STEP102 data	20 byte
401081 (0438)	STEP103 data	20 byte
401091 (0442)	STEP104 data	20 byte
401101 (044C)	STEP105 data	20 byte
401111 (0456)	STEP106 data	20 byte
401121 (0460)	STEP107 data	20 byte
401131 (046A)	STEP108 data	20 byte
401141 (0474)	STEP109 data	20 byte
401151 (047E)	STEP110 data	20 byte
401161 (0488)	STEP111 data	20 byte
401171 (0492)	STEP112 data	20 byte
401181 (049C)	STEP113 data	20 byte
401191 (04A6)	STEP114 data	20 byte
401201 (04B0)	STEP115 data	20 byte
401211 (04BA)	STEP116 data	20 byte
401221 (04C4)	STEP117 data	20 byte
401231 (04CE)	STEP118 data	20 byte
401241 (04D8)	STEP119 data	20 byte
401251 (04E2)	STEP120 data	20 byte
401261 (04EC)	STEP121 data	20 byte
401271 (04F6)	STEP122 data	20 byte
401281 (0500)	STEP123 data	20 byte
401291 (050A)	STEP124 data	20 byte
401301 (0514)	STEP125 data	20 byte
401311 (051E)	STEP126 data	20 byte
401321 (0528)	STEP127 data	20 byte
401331 (0532)	STEP128 data	20 byte
401341 (053C)	STEP129 data	20 byte
401351 (0546)	STEP130 data	20 byte
401361 (0550)	STEP131 data	20 byte
401371 (055A)	STEP132 data	20 byte

No (Address)	Description	Data length
401381 (0564)	STEP133 data	20 byte
401391 (056E)	STEP134 data	20 byte
401401 (0578)	STEP135 data	20 byte
401411 (0582)	STEP136 data	20 byte
401421 (058C)	STEP137 data	20 byte
401431 (0596)	STEP138 data	20 byte
401441 (05A0)	STEP139 data	20 byte
401451 (05AA)	STEP140 data	20 byte
401461 (05B4)	STEP141 data	20 byte
401471 (05BE)	STEP142 data	20 byte
401481 (05C8)	STEP143 data	20 byte
401491 (05D2)	STEP144 data	20 byte
401501 (05DC)	STEP145 data	20 byte
401511 (05E6)	STEP146 data	20 byte
401521 (05F0)	STEP147 data	20 byte
401531 (05FA)	STEP148 data	20 byte
401541 (0604)	STEP149 data	20 byte
401551 (060E)	STEP150 data	20 byte
401561 (0618)	STEP151 data	20 byte
401571 (0622)	STEP152 data	20 byte
401581 (062C)	STEP153 data	20 byte
401591 (0636)	STEP154 data	20 byte
401601 (0640)	STEP155 data	20 byte
401611 (064A)	STEP156 data	20 byte
401621 (0654)	STEP157 data	20 byte
401631 (065E)	STEP158 data	20 byte
401641 (0668)	STEP159 data	20 byte
401651 (0672)	STEP160 data	20 byte
401661 (067C)	STEP161 data	20 byte
401671 (0686)	STEP162 data	20 byte
401681 (0690)	STEP163 data	20 byte
401691 (069A)	STEP164 data	20 byte
401701 (06A4)	STEP165 data	20 byte
401711 (06AE)	STEP166 data	20 byte

No (Address)	Description	Data length
401721 (06B8)	STEP167 data	20 byte
401731 (06C2)	STEP168 data	20 byte
401741 (06CC)	STEP169 data	20 byte
401751 (06D6)	STEP170 data	20 byte
401761 (06E0)	STEP171 data	20 byte
401771 (06EA)	STEP172 data	20 byte
401781 (06F4)	STEP173 data	20 byte
401791 (06FE)	STEP174 data	20 byte
401801 (0708)	STEP175 data	20 byte
401811 (0712)	STEP176 data	20 byte
401821 (071C)	STEP177 data	20 byte
401831 (0726)	STEP178 data	20 byte
401841 (0730)	STEP179 data	20 byte
401851 (073A)	STEP180 data	20 byte
401861 (0744)	STEP181 data	20 byte
401871 (074E)	STEP182 data	20 byte
401881 (0758)	STEP183 data	20 byte
401891 (0762)	STEP184 data	20 byte
401901 (076C)	STEP185 data	20 byte
401911 (0776)	STEP186 data	20 byte
401921 (0780)	STEP187 data	20 byte
401931 (078A)	STEP188 data	20 byte
401941 (0794)	STEP189 data	20 byte
401951 (079E)	STEP190 data	20 byte
401961 (07A8)	STEP191 data	20 byte
401971 (07B2)	STEP192 data	20 byte
401981 (07BC)	STEP193 data	20 byte
401991 (07C6)	STEP194 data	20 byte
402001 (07D0)	STEP195 data	20 byte
402011 (07DA)	STEP196 data	20 byte
402021 (07E4)	STEP197 data	20 byte
402031 (07EE)	STEP198 data	20 byte
402041 (07F8)	STEP199 data	20 byte
402051 (0802)	STEP200 data	20 byte

No (Address)	Description	Data length
402061 (080C)	STEP201 data	20 byte
402071 (0816)	STEP202 data	20 byte
402081 (0820)	STEP203 data	20 byte
402091 (082A)	STEP204 data	20 byte
402101 (0834)	STEP205 data	20 byte
402111 (083E)	STEP206 data	20 byte
402121 (0848)	STEP207 data	20 byte
402131 (0852)	STEP208 data	20 byte
402141 (085C)	STEP209 data	20 byte
402151 (0866)	STEP210 data	20 byte
402161 (0870)	STEP211 data	20 byte
402171 (087A)	STEP212 data	20 byte
402181 (0884)	STEP213 data	20 byte
402191 (088E)	STEP214 data	20 byte
402201 (0898)	STEP215 data	20 byte
402211 (08A2)	STEP216 data	20 byte
402221 (08AC)	STEP217 data	20 byte
402231 (08B6)	STEP218 data	20 byte
402241 (08C0)	STEP219 data	20 byte
402251 (08CA)	STEP220 data	20 byte
402261 (08D4)	STEP221 data	20 byte
402271 (08DE)	STEP222 data	20 byte
402281 (08E8)	STEP223 data	20 byte
402291 (08F2)	STEP224 data	20 byte
402301 (08FC)	STEP225 data	20 byte
402311 (0906)	STEP226 data	20 byte
402321 (0910)	STEP227 data	20 byte
402331 (091A)	STEP228 data	20 byte
402341 (0924)	STEP229 data	20 byte
402351 (092E)	STEP230 data	20 byte
402361 (0938)	STEP231Data	20 byte
402371 (0942)	STEP232 data	20 byte
402381 (094C)	STEP233 data	20 byte
402391 (0956)	STEP234 data	20 byte

No (Address)	Description	Data length
402401 (0960)	STEP235 data	20 byte
402411 (096A)	STEP236 data	20 byte
402421 (0974)	STEP237 data	20 byte
402431 (097E)	STEP238 data	20 byte
402441 (0988)	STEP239 data	20 byte
402451 (0992)	STEP240 data	20 byte
402461 (099C)	STEP241 data	20 byte
402471 (09A6)	STEP242 data	20 byte
402481 (09B0)	STEP243 data	20 byte
402491 (09BA)	STEP244 data	20 byte
402501 (09C4)	STEP245 data	20 byte
402511 (09CE)	STEP246 data	20 byte
402521 (09D8)	STEP247 data	20 byte
402531 (09E2)	STEP248 data	20 byte
402541 (09EC)	STEP249 data	20 byte
402551 (09F6)	STEP250 data	20 byte
402561 (0A00)	STEP251 data	20 byte
402571 (0A0A)	STEP252 data	20 byte
402581 (0A14)	STEP253 data	20 byte
402591 (0A1E)	STEP254 data	20 byte
402601 (0A28)	STEP255 data	20 byte

2.8.1. Program command packet structure

(1) ABS

1 Byte	0001 [0 to 3]
2 Byte	Start speed [4 to 7] + Final speed [0 to 3]
3 Byte	Acceleration time [4 to 7] + Deceleration time [0 to 3]
4 Byte	Continuation [1] + S curve accel/decel [0]
5 to 7 Byte	Start speed (1 to 600,000)
8 to 10 Byte	Final speed (1 to 600,000)
11 to 12 Byte	Acceleration time (1 to 10,000)
13 to 14 Byte	Deceleration time (1 to 10,000)
15 to 16 Byte	S accel/decel time (1 to 5,000)
17 to 20 Byte	Setting range (-2,147,483,648 to +2,147,483,647)

(2) INC

1 Byte	0010[0 to 3]
2 Byte	Start speed [4 to 7] + Final speed [0 to 3]
3 Byte	Acceleration time [4 to 7] + Deceleration time [0 to 3]
4 Byte	Continuation [1] + S curve accel/decel [0]
5 to 7 Byte	Start speed (1 to 600,000)
8 to 10 Byte	Final speed (1 to 600,000)
11 to 12 Byte	Acceleration time (1 to 10,000)
13 to 14 Byte	Deceleration time (1 to 10,000)
15 to 16 Byte	S curve accel/decel time (1 to 5,000)
17 to 20 Byte	Setting range (-2,147,483,648 to +2,147,483,647)

(3) HOM

1 Byte	0100[0 to 3]
2 to 4 Byte	-
5 Byte	Home search mode (0 to 3)
6 to 20 Byte	-

(4) ICJ

1 Byte	1000[0 to 3]
2 to 4 Byte	-
5 Byte	Input port number
6 Byte	Step to jump
7 to 20 Byte	-

(5) IRD

1 Byte	0011[0 to 3]
2 to 4 Byte	-
5 Byte	Input port number
6 to 20 Byte	-

(6) OPC

1 Byte	0101[0 to 3]
2 to 4 Byte	-
5 Byte	Output port number
6 Byte	ON
7 to 20 Byte	-

(7) OPT

1 Byte	0111 [0 to 3]
2 Byte	ON time [0 to 3]
3 to 4 Byte	-
5 Byte	Output port number
6 Byte	Next step
7 to 8 Byte	ON time (1 to 10,000)
9 to 20 Byte	-

(8) JMP

1 Byte	1001[0 to 3]
2 to 4 Byte	-
5 Byte	Step to jump
6 to 20 Byte	-

(9) REP

1 Byte	1010 [0 to 3]
2 to 4 Byte	-
5 Byte	The number of repetition (1 to 255)
6 to 20 Byte	-

(10) RPE

1 Byte	1011 [0 to 3]
2 to 20 Byte	-

(11) END

1 Byte	1100 [0 to 3]
2 to 20 Byte	-

(12) POS

1 Byte	1101[0 to 3]
2 to 4 Byte	-
5 to 8 Byte	Setting range (-2,147,483,648 to +2,147,483,647)
9 to 20 Byte	-

(13) TIM

1 Byte	1110 [0 to 3]
2 Byte	Delay time [0 to 3]
3 to 4 Byte	-
5 to 6 Byte	Waiting time (1 to 10,000)
7 to 20 Byte	-

(14) CMP

1 Byte	0110 [0 to 3]
2 to 4 Byte	-
5 Byte	Compare port number
6 Byte	Compare mode (0 to 3)
7 to 8 Byte	Pulse range (1 to 1,000)
9 to 10 Byte	-
11 to 14 Byte	Pulse period
15 to 18 Byte	Setting range (-2,147,483,648 to +2,147,483,647)
19 to 20 Byte	-

(15) TOQ

1 Byte	0000 [0 to 3]
2 Byte	Start speed [4 to 7] + Final speed [0 to 3]
3 Byte	Acceleration time [4 to 7]+ Deceleration time [0 to 3]
4 to 6 Byte	-
7 Byte	Start speed (1)
8 Byte	-
9 to 10 Byte	Final speed (25,000)
11 to 12 Byte	Acceleration time (1 to 10,000)
13 to 14 Byte	Deceleration time (1 to 10,000)
15 to 16 Byte	-
17 to 20 Byte	Setting range (-100.00 to +100.00%)



- The number of parentheses [] is bit position of the data.
- Bit position per byte is as below.

n Byte							
7 bit	6 bit	5 bit	4 bit	3 bit	2 bit	1 bit	0 bit

2.9. Operation setting group2

[Func: 03/06/16, R/W: R/W]: No. 405001 to No. 405050

No (Address)	Description	Setting range
405001 (1388)	Bit 0: Limit Stop mode	0: Instant / 1: Slow
	Bit 1: S curve accel/decel	0: Disable / 1: Enable
	Bit 2: Input filter selection	0: 10ms / 1: 1.5ms
	Bit 3: Software Limit	0: Disable / 1: Enable
	Bit 4: Power on home search start	0: Disable / 1: Enable
	Bit 5: Power on program start	0: Disable / 1: Enable
	Bit 6: Stop current fixing method	0: Disable / 1: Enable
	Bit 7: Index/Program mode start signal level setting	0: Low / 1: High
	Bit 8: Step0/+Run/+Jog signal level setting	0: Low / 1: High
	Bit 9: Step1/-Run/-Jog signal level setting	0: Low / 1: High
	Bit 10: Step2/SSP0 signal level setting	0: Low / 1: High
	Bit 11: Step3/SSP1 signal level setting	0: Low / 1: High
	Bit 12: Step4/MSP0 signal level setting	0: Low / 1: High
	Bit 13: Step5/MSP1 signal level setting	0: Low / 1: High
	Bit 14: Run mode 0/Home search mode0 signal level setting	0: Low / 1: High
Bit 15: Run mode 1/Home search mode1 signal level setting	0: Low / 1: High	

No (Address)	Description	Setting range
405002 (1389)	Bit 0: Pause signal level setting	0: Low / 1: High
	Bit 1: Stop signal level setting	0: Low / 1: High
	Bit 2: Emergency stop signal level setting	0: Low / 1: High
	Bit 3: Home search start command signal level setting	0: Low / 1: High
	Bit 4: Alarm reset signal level setting	0: Low / 1: High
	Bit 5: Servo On/Off signal level setting	0: Low / 1: High
	Bit 6: Limit signal level setting	0: Low / 1: High
	Bit 7: General input 0 signal level setting	0: Low / 1: High
	Bit 8: General input 1 signal level setting	0: Low / 1: High
	Bit 9: General input 2 signal level setting	0: Low / 1: High
	Bit 10: General input 3 signal level setting	0: Low / 1: High
	Bit 11: General input 4 signal level setting	0: Low / 1: High
	Bit 12: General input 5 signal level setting	0: Low / 1: High
	Bit 13: General input 6 signal level setting	0: Low / 1: High
	Bit 14: General input 7 signal level setting	0: Low / 1: High
Bit 15: General input 8 / Brake signal level setting	0: Low / 1: High	
405003 (138A)	Bit 0: Deceleration mode signal level setting	0: Low / 1: High
	Bit 1: Motor direction for initial setting	0: CW / 1: CCW
	Bit 2: Motor direction setting	0: CW / 1: CCW
	Bit 3: Output mode setting (alarm ON)	0: Maintain / 1: Reset
	Bit 4: IN8 / Brake ON/OFF	0: IN8 / 1: Brake ON/OFF
	Bit 5: Servo Off	0: Disable / 1: Enable
	Bit 6: Brake Off	0: Disable / 1: Enable
405004 to 405050	Reserved	

2.10. Home search parameter group

[Func: 03/06/16, R/W: R/W]: No. 405051 to No. 405100

No (Address)	Description	Setting range	Unit
405051 (13BA)	Home search max. running speed	2 MSB (Most Significant Byte)	pps
405052 (13BB)	Home search max. running speed	2 LSB (Least Significant Byte)	pps
405053 (13BC)	Home search initial running speed	2 MSB (Most Significant Byte)	pps
405054 (13BD)	Home search initial running speed	2 LSB (Least Significant Byte)	pps
405055 (13BE)	Home search acceleration time setting	1 to 10,000	msec
405056 (13BF)	Home search deceleration time setting	1 to 10,000	msec
405057 (13C0)	Home search motor rotation direction	0: CW, 1: CCW	-
405058 (13C1)	Home search offset	2 MSB (Most Significant Byte)	pulse
405059 (13C2)	Home search offset	2 LSB (Least Significant Byte)	pulse
405060 (13C3)	Zero setting after home search	2 MSB (Most Significant Byte)	pulse
405061 (13C4)	Zero setting after home search	2 LSB (Least Significant Byte)	pulse
405062 (13C5)	Home signal signal level setting	Low / High	-
405063 (13C6)	Home search torque setting	20 to 100	%
405064 (13C7)	General home search complete method	0: OFF complete (default) / 1: ON complete	-
405065 to 405100	Reserved		

2.11. Operation parameter group

[Func: 03/06/16, R/W: R/W]: No. 405101 to No. 405200

No (Address)	Description	Setting range	Unit
405101 to 405102	Reserved		
405103 (13EE)	Start speed 1	2 MSB (Most Significant Byte)	pps
405104 (13EF)	Start speed 1	2 LSB (Least Significant Byte)	pps
405105 (13F0)	Start speed 2	2 MSB (Most Significant Byte)	pps
405106 (13F1)	Start speed 2	2 LSB (Least Significant Byte)	pps
405107 (13F2)	Start speed 3	2 MSB (Most Significant Byte)	pps
405108 (13F3)	Start speed 3	2 LSB (Least Significant Byte)	pps
405109 (13F4)	Start speed 4	2 MSB (Most Significant Byte)	pps
405110 (13F5)	Start speed 4	2 LSB (Least Significant Byte)	pps
405111 (13F6)	Start speed 5	2 MSB (Most Significant Byte)	pps
405112 (13F7)	Start speed 5	2 LSB (Least Significant Byte)	pps
405113 (13F8)	Final speed 1	2 MSB (Most Significant Byte)	pps
405114 (13F9)	Final speed 1	2 LSB (Least Significant Byte)	pps
405115 (13FA)	Final speed 2	2 MSB (Most Significant Byte)	pps
405116 (13FB)	Final speed 2	2 LSB (Least Significant Byte)	pps
405117 (13FC)	Final speed 3	2 MSB (Most Significant Byte)	pps
405118 (13FD)	Final speed 3	2 LSB (Least Significant Byte)	pps
405119 (13FE)	Final speed 4	2 MSB (Most Significant Byte)	pps
405120 (13FF)	Final speed 4	2 LSB (Least Significant Byte)	pps
405121 (1400)	Final speed 5	2 MSB (Most Significant Byte)	pps
405122 (1401)	Final speed 5	2 LSB (Least Significant Byte)	pps
405123 (1402)	Waiting time setting 1	1 to 10,000	msec
405124 (1403)	Waiting time setting 2	1 to 10,000	msec
405125 (1404)	Waiting time setting 3	1 to 10,000	msec
405126 (1405)	Waiting time setting 4	1 to 10,000	msec
405127 (1406)	Waiting time setting 5	1 to 10,000	msec
405128 (1407)	Acceleration time setting 1	0 to 10,000	msec
405129 (1408)	Acceleration time setting 2	0 to 10,000	msec
405130 (1409)	Acceleration time setting 3	0 to 10,000	msec
405131 (140A)	Acceleration time setting 4	0 to 10,000	msec
405132 (140B)	Acceleration time setting 5	0 to 10,000	msec

No (Address)	Description	Setting range	Unit
405133 (140C)	Deceleration time setting 1	0 to 10,000	msec
405134 (140D)	Deceleration time setting 2	0 to 10,000	msec
405135 (140E)	Deceleration time setting 3	0 to 10,000	msec
405136 (140F)	Deceleration time setting 4	0 to 10,000	msec
405137 (1410)	Deceleration time setting 5	0 to 10,000	msec
405138 (1411)	S curve accel/decel time setting	1 to 5,000	msec
405139 (1412)	+ software limit setting	2 MSB (Most Significant Byte)	pulse
405140 (1413)	+ software limit setting	2 LSB (Least Significant Byte)	pulse
405141 (1414)	- software limit setting	2 MSB (Most Significant Byte)	pulse
405142 (1415)	- software limit setting	2 LSB (Least Significant Byte)	pulse
405143 (1416)	ON time setting 1	1 to 10,000	msec
405144 (1417)	ON time setting 2	1 to 10,000	msec
405145 (1418)	ON time setting 3	1 to 10,000	msec
405146 (1419)	ON time setting 4	1 to 10,000	msec
405147 (141A)	ON time setting 5	1 to 10,000	msec
405148 (141B)	Compare1 mode	Disable	-
405149 (141C)	Compare1 pulse width	1 to 1,000	msec
405150 (141D)	Compare1 interval	2 MSB (Most Significant Byte)	pulse
405151 (141E)	Compare1 interval	2 LSB (Least Significant Byte)	pulse
405152 (141F)	Compare1 position	2 MSB (Most Significant Byte)	pulse
405153 (1420)	Compare1 position	2 LSB (Least Significant Byte)	pulse
405154 (1421)	Compare2 mode	Disable	-
405155 (1422)	Compare2 pulse width	1 to 1,000	msec
405156 (1423)	Compare2 interval	2 MSB (Most Significant Byte)	pulse
405157 (1424)	Compare2 interval	2 LSB (Least Significant Byte)	pulse
405158 (1425)	Compare2 position	2 MSB (Most Significant Byte)	pulse
405159 (1426)	Compare2 position	2 LSB (Least Significant Byte)	pulse
405160 (1427)	The number of pulses per 1 motor rotation	0 to 9 500 (default) / 1000 / 1600 / 2000 / 3200 / 3600 / 5000 / 6400 / 7200 / 10000	PPR
405161 (1428)	Speed Filter	0 to 15 not used, 2, 4, 6, 8 (default), 10, 20, 40, 60, 80, 100, 120, 140, 160, 180, 200	msec

No (Address)	Description	Setting range	Unit
405162 (1429)	Torque limit speed	10 to 700	rpm
405163 (142A)	Motor gain setting	0 to 30, Fine Gain	-
405164 (142B)	In-position range setting	0 to 15 Fast Response: 0 to 7 Accurate Response: 0 to 7	-
405165 (142C)	P Gain setting	0 to 32.000 (0.001 unit setting)	-
405166 (142D)	I Gain setting	0 to 32.000 (0.001 unit setting)	-
405167 to 405200	Reserved		

2.12. Communication group

[Func: 03/06/16, R/W: R/W]: Broadcast available

No (Address)	Description	Setting range	Unit
405201 (1450)	Communication speed	00: 9,600 / 01: 19,200 / 02: 38,400 / 03: 57,600 / 04: 115,200	bps
405202 (1451)	Communication parity	0: None / 1: Even / 2: odd	-
405203 (1452)	Stop bit	0: 1 / 1: 2	-
405204 (1453)	Response waiting time	1 to 99	msec

2.13. Other Communication Rules

When to perform Broadcast command, reserve separate broadcast addresses by the product family to be used for slave addresses. OR the 80H to use function. Slave addresses that are different to other in-house models must be assigned.

- Support broadcast command only for force single coil (Func 05 – 05 H), preset single registers (Func 06 – 06 H) and preset multiple registers (Func 16 – 10 H), and you need to OR the 80H to use each of these functions.
- When writing broadcast command of preset multiple registers, you cannot use more than two commands.

Slave address	Description
1 to 31	Unicast Slave address
129	Broadcast AiCA Series

A list of AiCA series broadcast commands is as below.

Item	Function	No (Address)
Reset	Force Single Coil	000011 (000A)
Emergency stop		000012 (000B)
Alarm reset		000013 (000C)
Command position clear		000014 (000D)
Actual position clear		000015 (000E)
CW operation		000016 (000F)
CCW operation		000017 (0010)
Move absolute position		000018 (0011)
Move relative position		000019 (0012)
Index mode start		000020 (0013)
Program mode start		000021 (0014)
Home search mode start		000022 (0015)
Immediate stop		000023 (0016)
Decelerating stop		000024 (0017)
Pause program mode		000025 (0018)
End program mode		000026 (0019)
Delete program		000027 (001A)
Communication speed	Preset Single Register	405201 (1450)
Communication parity	Preset Multiple Register	405202 (1451)
Stop bit		405203 (1452)
Response waiting time		405204 (1453)

- When requesting data successively, up to 123 data (246 bytes) are available.
- Only in the same parameter setting group, it is available to read/write more than 2 successive data. It is not available to read/write more than 2 parameter setting group data. (Error process: It processes as Error Code “03”.)
- If CRC16 error occurs, you need to resend the relevant frame from the beginning.



If master sends commands with broadcast to slave, there is no individual response from slave. Be careful to use broadcast command.

Autonics

Dimensions or specifications on this manual are subject to change and some models may be discontinued without notice.

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