M-7000 Series
Address Mapping Table

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Revision History

Date	Revision	Changes
2025/9/12	1.18	Modify default type code of M-7018Z, default type code and slew rate of M-7028
2025/6/9	1.17	Modify description of enabling channel
2025/6/3	1.16	Modify description of enabling channel and alarm limit
2025/5/29	1.15	Add data format and factory default
2022/4/18	1.14	Add register 40865 ~ 40880 to M-7005
2019/1/28	1.13	Add register 00276 to M-7018Z
2018/10/31	1.12	Add M-7028

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M-7000 Address Mapping (Base 1)

M-7002

Address	Description	Data Format	Attribute	Factory Default
00001 ~ 00004	Digital output	0: Off 1: On	R/W	-
00065 ~ 00069	Digital input latch high	0: Normal 1: Latched	R/W	-
00073 ~ 00076	Digital output latch high	0: Normal 1: Latched	R/W	-
00097~ 00101	Digital input latch low	0: Normal 1: Latched	R/W	-
00105 ~ 00108	Digital output latch low	0: Normal 1: Latched	R/W	-
00129 ~ 00132	Digital output safe value	0: Off 1: On	R/W	0
00193 ~ 00196	Digital output power-on value	0: Off 1: On	R/W	0
00257	Communication protocol	0: DCON 1:Modbus RTU	R/W	1
00259	Filter settings	0: 60 Hz rejection 1: 50 Hz rejection	R/W	0
00260	Host Watchdog mode 0: The same as I-7000 series module (old mode) 1: AO and DO commands can be used to clear the Host Watchdog timeout status (new mode)	0: Old mode 1: New mode	R/W	0
00261	Enables or disables the Host Watchdog	0: Disabled 1: Enabled	R/W	0
00262	Enables or disables the alarm function	0: Disabled 1: Enabled	R/W	0
00263	Alarm mode	0: Momentary 1: Latch	R/W	0
00264	Clear DI/O latch	1: Clear	W	-
00265	Clear all DI counters	1: Clear	W	-
00269	Modbus data format	0:Hexadecimal 1: Engineering	R/W	1
00270	Host Watchdog timeout status. Write 1 to clear the Host Watchdog timeout status	0: Normal 1: Host watchdog timeout	R/W	-
00271	AI filter format	0: Normal 1:Fast	R/W	0
00272	Write 1 to reload the factory calibration parameters	1: Reload	W	-

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00273	Reset status 0: not the first the status has been read after being powered on 1: the first time the status has been read after being powered on	0: Not reset 1: Reset	R	-
00289 ~ 00292	Low alarm status of channels 0 to 3, write 1 to clear	0: Normal 1: Alarmed	R/W	-
00305 ~ 00308	High alarm status of channels 0 to 3, write 1 to clear	0: Normal 1: Alarmed	R/W	-
00513 ~ 00517	Clear digital input counter channel 0 to 4	1: Clear	W	-
10033 ~ 10037	Digital input status for channels 0 to 4	0: Off 1: On	R	-
30001 ~ 30004	Analog input value for channels 0 to 3	-32768 to 32767 (0x8000 to 0x7FFF)	R	-
30097 ~ 30101	Digital input counter for channels 0 to 4	0 to 65535	R	-
40225 ~ 40228	High alarm value for analog input channels 0 to 3	-32768 to 32767 (0x8000 to 0x7FFF)	R/W	32767 (0x7FFF)
40233 ~ 40236	Low alarm value for analog input channels 0 to 3	-32768 to 32767 (0x8000 to 0x7FFF)	R/W	-32768 (0x8000)
40257 ~ 40260	Type code for analog input channels 0 to 3	0x07: 4 ~ 20 mA 0x08: ±10 V 0x09: ±5 V 0x0A: ±1 V 0x0B: ±500 mV 0x0C: ±150 mV 0x0D: ±20 mA 0x1A: 0 ~ 20 mA	R/W	0x08
40481	Firmware version (low word)	0x000z for xy.z	R	-
40482	Firmware version (high word)	0x0x0y for xy.z	R	-
40483	The name of the module (low word)	0x0200	R	0x0200
40484	The name of the module (high word)	0x0070	R	0x0070
40485	Module address, valid range: 0x1 ~ 0xF7	1 to 247	R/W	1
40486	Bits 5:0: baud rate Bits 7:6: parity	Bits 5:0, baud rate 03: 1200 04: 2400 05: 4800 06: 9600 07: 19200 08: 38400 09: 57600 0A: 115200 Bits 7:6, parity	R/W	6

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		00: N81 01: N82 02: E81 03: O81		
40488	Response delay time, 0~30, in ms	0 to 30	R/W	0
40489	Host Watchdog timeout value, 0 ~ 255, in 0.1s	0 to 255	R/W	255
40490	Enable/disable analog input channel, bit 0 for channel 0, bit 1 for channel 1, etc. 0 to disable and 1 to enable.	0 to 15	R/W	15
40492	Host Watchdog timeout count, write 0 to clear	0 to 65535	R/W	-

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M-7004

Address	Description	Data Format	Attribute	Factory Default
30001 ~ 30020 40001 ~ 40020	Temperature readings of port 0 in 0.01°C	-32-768 to 32767	R	-
30021 ~ 30040 40021 ~ 40040	Temperature readings of port 1 in 0.01°C	-32768 to 32767	R	-
30041 ~ 30060 40041 ~ 40060	Temperature readings of port 2 in 0.01°C	-32768 to 32767	R	-
30061 ~ 30080 40061 ~ 40080	Temperature readings of port 3 in 0.01°C	-32768 to 32767	R	-
30081 ~ 30084 40081 ~ 40084	Number of sensors of a port for port 0 to 3.	0 to 20	R	-
30097 ~ 30100 40097 ~ 40100	Number of not assigned sensors of a port for port 0 to 3.	0 to 20	R	-
30113 ~ 30116 40113 ~ 40116	Number of removed sensors of a port for port 0 to 3.	0 to 20	R	-
30129 ~ 30132 40129 ~ 40132	Number of scanned sensors of a port for port 0 to 3.	0 to 20	R	-
30145 ~ 30148 40145 ~ 40148	Number of error counts of a port for port 0 to 3.	0 to 65535	R	-
30161 ~ 30240 40161 ~ 40240	Serial number of sensors of port 0, 4 registers for a sensor	0x0000 to 0xFFFF	R	-
30241 ~ 30320 40241 ~ 40320	Serial number of sensors of port 1, 4 registers for a sensor	0x0000 to 0xFFFF	R	-

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30321 ~ 30400 40321 ~ 40400	Serial number of sensors of port 2, 4 registers for a sensor	0x0000 to 0xFFFF	R	-
30401 ~ 30480 40401 ~ 40480	Serial number of sensors of port 3, 4 registers for a sensor	0x0000 to 0xFFFF	R	-
40481	Firmware version (low word)	0x000z for xy.z	R	-
40482	Firmware version (high word)	0x0x0y for xy.z	R	-
40483	Module name (low word)	0x0400	R	0x0400
40484	Module name (high word)	0x0070	R	0x0070
40485	RS-485 module address, 1 to 247 Only for Modbus RTU protocol	1 to 247	R/W	1
40486	RS-485 baud rate and parity settings Bits 5:0 Baud rate, valid range: 3 ~ 10 Bits 7:6 00: no parity, 1 stop bit 01: no parity, 2 stop bit 02: even parity, 1 stop bit 03: odd parity , 1 stop bit	Bits 5:0, baud rate 03: 1200 04: 2400 05: 4800 06: 9600 07: 19200 08: 38400 09: 57600 0A: 115200 Bits 7:6, parity 00: N81 01: N82 02: E81 03: O81	R/W	6
40488	RS-485 response delay time in ms, valid range, 0 ~ 30	0 to 30	R/W	0
40489	RS-485 host watchdog timeout value, 0 ~ 255, in 0.1s	0 to 255	R/W	255
40492	RS-485 host watchdog timeout count, write 0 to clear	0 to 65535	R/W	-
40513 ~ 40532	Assign channel index to a new sensor in the new list of port 0	0 to 19	W	-
40533 ~ 40552	Assign channel index to a new sensor in the new list of port 1	0 to 19	W	-
40553 ~ 40572	Assign channel index to a new sensor in the new list of port 2	0 to 19	W	-
40573 ~ 40592	Assign channel index to a new sensor in the new list of port 3	0 to 19	W	-
30593 ~ 30612 40593 ~ 40612	High latched Temperature readings of port 0 in 0.01°C	-32768 to 32767	R	-

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30613 ~ 30632 40613 ~ 40632	High latched Temperature readings of port 1 in 0.01°C	-32768 to 32767	R	-
30633 ~ 30652 40633 ~ 40652	High latched Temperature readings of port 2 in 0.01°C	-32768 to 32767	R	-
30653 ~ 30672 40653 ~ 40672	High latched Temperature readings of port 3 in 0.01°C	-32768 to 32767	R	-
30673 ~ 30692 40673 ~ 40692	Low latched Temperature readings of port 0 in 0.01°C	-32768 to 32767	R	-
30693 ~ 30712 40693 ~ 40712	Low latched Temperature readings of port 1 in 0.01°C	-32768 to 32767	R	-
30713 ~ 30732 40713 ~ 40732	Low latched Temperature readings of port 2 in 0.01°C	-32768 to 32767	R	-
30733 ~ 30752 40733 ~ 40752	Low latched Temperature readings of port 3 in 0.01°C	-32768 to 32767	R	-
30753 ~ 30832 40753 ~ 40832	Serial number of not assigned sensors of port 0, 4 registers for a sensor	0x0000 to 0xFFFF	R	-
30833 ~ 30912 40833 ~ 40912	Serial number of not assigned sensors of port 1, 4 registers for a sensor	0x0000 to 0xFFFF	R	-
30913 ~ 30992 40913 ~ 40992	Serial number of not assigned sensors of port 2, 4 registers for a sensor	0x0000 to 0xFFFF	R	-
30993 ~ 31072 40993 ~ 41072	Serial number of not assigned sensors of port 3, 4 registers for a sensor	0x0000 to 0xFFFF	R	-

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31073 ~ 31152 41073 ~ 41152	Serial number of removed sensors of port 0, 4 registers for a sensor	0x0000 to 0xFFFF	R	-
31153 ~ 31232 41153 ~ 41232	Serial number of removed sensors of port 0, 4 registers for a sensor	0x0000 to 0xFFFF	R	-
31233 ~ 31312 41233 ~ 41312	Serial number of removed sensors of port 0, 4 registers for a sensor	0x0000 to 0xFFFF	R	-
31313 ~ 31392 41313 ~ 41392	Serial number of removed sensors of port 0, 4 registers for a sensor	0x0000 to 0xFFFF	R	-
00001 ~ 00004	Write 1 to rescan sensors on a port for port 0 to 3.	1: rescan	W	-
00033 ~ 00052	Write 1 to remove the channel index of a sensor for port 0	1: remove	W	-
00053 ~ 00072	Write 1 to remove the channel index of a sensor for port 1	1: remove	W	-
00073 ~ 00092	Write 1 to remove the channel index of a sensor for port 2	1: remove	W	-
00093 ~ 00112	Write 1 to remove the channel index of a sensor for port 3	1: remove	W	-
00129 ~ 00132	Write 1 to clear all high latched temperature readings of a port for port 0 to 3	1: clear	W	-
00161 ~ 00164	Write 1 to clear all low latched temperature readings of a port for port 0 to 3	1: clear	W	-
00257	RS-485 Protocol, 0: DCON, 1: Modbus RTU Only for Modbus RTU protocol	0: DCON 1:Modbus RTU	R/W	1
00260	Modbus RTU host watchdog mode 0: same as I-7000 (old mode) 1: can use AO and DO command to clear host watchdog timeout status (new mode) Only for Modbus RTU protocol	0: old mode 1: new mode	R/W	0
00261	RS-485 host watchdog mode, 1: enable, 0: disable. Only for Modbus RTU protocol	0: disable 1: enable	R/W	0
00270	Host watch dog timeout status, write 1 to clear host watch dog timeout status (Only for Modbus RTU protocol	0: normal 1: host watchdog timeout	R/W	-
00273	Reset status, 1: first read after powered on, 0: not the first read after powered on	0: not reset 1: reset	R	-
00280	Write 1 to clear all high latched temperature readings	1: clear	W	-

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00281	Write 1 to clear all low latched temperature readings	1: clear	W	-
00385 ~ 00404	Write 1 to clear high latched temperature reading of a sensor of port 0	1: clear	W	-
00405 ~ 00424	Write 1 to clear high latched temperature reading of a sensor of port 1	1: clear	W	-
00425 ~ 00444	Write 1 to clear high latched temperature reading of a sensor of port 2	1: clear	W	-
00445 ~ 00464	Write 1 to clear high latched temperature reading of a sensor of port 3	1: clear	W	-
00465 ~ 00484	Write 1 to clear low latched temperature reading of a sensor of port 0	1: clear	W	-
00485 ~ 00504	Write 1 to clear low latched temperature reading of a sensor of port 1	1: clear	W	-
00505 ~ 00524	Write 1 to clear low latched temperature reading of a sensor of port 2	1: clear	W	-
00525 ~ 00544	Write 1 to clear low latched temperature reading of a sensor of port 3	1: clear	W	-

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M-7005

Address	Description	Data Format	Attribute	Factory Default
00001 ~ 00006	Digital output value of channel 0 to 5	0: off 1: on	R/W	-
00097 ~ 00102	Safe value of digital output channel 0 to 5	0: off 1: on	R/W	0
00193 ~ 00198	Power-on value of digital output channel 0 to 5	0: off 1: on	R/W	0
00257	Protocol, 0: DCON, 1: Modbus RTU	0: DCON 1: Modbus RTU	R/W	1
00260	Modbus host watchdog mode 0: same as I-7000 (old mode) 1: can use AO and DO command to clear host watchdog timeout status (new mode)	0: old mode 1: new mode	R/W	0
00261	1: enable, 0: disable host watchdog	0: disable 1: enable	R/W	0
00267	Temperature scale, 1: Celsius, 0: Fahrenheit	0: Fahrenheit 1: Celsius	R/W	1
00269	Modbus data format, 0: hex, 1: engineering	0: hex 1: engineering	R/W	1
00270	Host watch dog timeout status, write 1 to clear host watch dog timeout status	0: normal 1: host watchdog timeout	R/W	-
00272	Write 1 to reload factory calibration parameters	1: reload	W	-
00273	Reset status, 1: first read after powered on, 0: not the first read after powered on	0: not reset 1: reset	R	-
00289 ~ 00296	Write 1 to clear low latched alarm of channel 0 to 7	1: clear	W	-
00305 ~ 00312	Write 1 to clear high latched alarm of channel 0 to 7	1: clear	W	-
00321 ~ 00328	Enable/disable high alarm of channel 0 to 7	0: disable 1: enable	R/W	0
00329 ~ 00336	Enable/disable low alarm of channel 0 to 7	0: disable 1: enable	R/W	0
00337 ~ 00344	High alarm type of channel 0 to 7	0: momentary 1: latched	R/W	0
00345 ~ 00352	Low alarm type of channel 0 to 7	0: momentary 1: latched	R/W	0
10129 ~ 10136 00129 ~ 00136	Over/under range status of channel 0 to 7	0: normal 1: over/under	R	-

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<table>
<tr><td>30001 ~
30008
40001 ~
40008</td><td>Analog input value of channel 0 to 7</td><td>-32768 to 32767</td><td>R</td><td>-</td></tr>
<tr><td>40225 ~
40232</td><td>High alarm limit of analog input channel 0 to 7</td><td>-32768 to 32767</td><td>R/W</td><td>32767</td></tr>
<tr><td>40233 ~
40240</td><td>Low alarm limit of analog input channel 0 to 7</td><td>-32768 to 32767</td><td>R/W</td><td>-32768</td></tr>
<tr><td>40257 ~
40262</td><td>Type code of channel 0 to 7
0x60: PreCon Type III 10K@25°C, -30°F ~ 240°F
0x61: Fenwell Type U 2K@25°C, -50°C ~ 150°C
0x62: Fenwell Type U 2K@25°C, 0°C ~ 150°C
0x63: YSI L Mix 100@25°C, -80°C ~ 100°C
0x64: YSI L Mix 300@25°C, -80°C ~ 100°C
0x65: YSI L Mix 1000@25°C, -70°C ~ 100°C
0x66: YSI B Mix 2252@25°C, -50°C ~ 150°C
0x67: YSI B Mix 3000@25°C, -40°C ~ 150°C
0x68: YSI B Mix 5000@25°C, -40°C ~ 150°C
0x69: YSI B Mix 6000@25°C, -30°C ~ 150°C
0x6A: YSI B Mix 10000@25°C, -30°C ~ 150°C
0x6B: YSI H Mix 10000@25°C, -30°C ~ 150°C
0x6C: YSI H Mix 30000@25°C, -10°C ~ 200°C
0x70 to 0x77: User-defined, -50°C ~ 150°C</td><td>Refer to description</td><td>R/W</td><td>0x60</td></tr>
<tr><td>40289 ~
40294</td><td>Temperature offset of analog input channel 0 to 7 in 0.1°C, valid range: -128 ~ 127</td><td>-128 to 127</td><td>R/W</td><td>0</td></tr>
<tr><td>40321 ~
40328</td><td>High alarm DO port of analog input channel 0 to 7</td><td>0 to 5</td><td>R/W</td><td>0</td></tr>
<tr><td>40329 ~
40336</td><td>Low alarm DO port of analog input channel 0 to 7</td><td>0 to 5</td><td>R/W</td><td>0</td></tr>
<tr><td>40385 ~
40390</td><td>Resistance offset of channel 0 to 7 in 0.1 ohms, valid range: 0 ~ 255</td><td>0 to 255</td><td>R/W</td><td>0</td></tr>
<tr><td>40481</td><td>Firmware version (low word)</td><td>0x000z for xy.z</td><td>R</td><td>-</td></tr>
<tr><td>40482</td><td>Firmware version (high word)</td><td>0x0x0y for xy.z</td><td>R</td><td>-</td></tr>
<tr><td>40483</td><td>Module name (low word)</td><td>0x0500</td><td>R</td><td>0x0500</td></tr>
<tr><td>40484</td><td>Module name (high word)</td><td>0x0070</td><td>R</td><td>0x0070</td></tr>
<tr><td>40485</td><td>Module address, valid range: 1 ~ 247</td><td>1 to 247</td><td>R/W</td><td>1</td></tr>
<tr><td>40486</td><td>Bits 5:0
Baud rate, 0x03 ~ 0x0A
<table><tr><td>Code</td><td>0x03</td><td>0x04</td><td>0x05</td><td>0x06</td></tr><tr><td>Baud</td><td>1200</td><td>2400</td><td>4800</td><td>9600</td></tr><tr><td>Code</td><td>0x07</td><td>0x08</td><td>0x09</td><td>0x0A</td></tr><tr><td>Baud</td><td>19200</td><td>38400</td><td>57600</td><td>115200</td></tr></table>Bits 7:6
00: no parity, 1 stop bit</td><td>Bits 5:0, baud rate
03: 1200
04: 2400
05: 4800
06: 9600
07: 19200
08: 38400</td><td>R/W</td><td>6</td></tr>
</table>

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	01: no parity, 2 stop bits 02: even parity, 1 stop bit 03: odd parity, 1 stop bit	09: 57600 0A: 115200 Bits 7:6, parity 00: N81 01: N82 02: E81 03: O81		
40488	Modbus response delay time in ms, valid range: 0 ~ 30	0 to 30	R/W	0
40489	Host watchdog timeout value, 0 ~ 255, in 0.1s	0 to 255	R/W	255
40490	Enable/disable analog input channel, bit 0 for channel 0, bit 1 for channel 1, etc. 0 to disable and 1 to enable.	0 to 255	R/W	255
40492	Host watchdog timeout count, write 0 to clear	0 to 65535	R/W	-
40513 ~ 40520	Steinhart Coefficient A of type code 70 to 77	0x0000 to 0xFFFF	R/W	-
40545 ~ 40552	Steinhart Coefficient B of type code 70 to 77	0x0000 to 0xFFFF	R/W	-
40577 ~ 40584	Steinhart Coefficient C of type code 70 to 77	0x0000 to 0xFFFF	R/W	-
30865 ~ 30880 40865 ~ 40880	Resistance value of analog input channel 0 to 7 in 0.1 ohm, two registers for each channel. For firmware version A5.3 and later.	0 to 65535	R	-

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M-7011

Address	Description	Data Format	Attribute	Factory Default
30001 40001	Analog input value of channel 0	-32768 to 32767	R	-
30129 40129	CJC temperature in 0.01C	-5000 to 10000	R	-
30097 40097	Counter value of DI 0	0 to 65535	R	-
40225 ~ 40226	Low/high analog input alarm limits	-32768 to 32767	R/W	-
40481	Firmware version (low word)	0x0000	R	0x0000
40482	Firmware version (high word)	0xab0c for ab.c	R	-
40483	Module name (low word)	0x1100	R	0x1100
40484	Module name (high word)	0x0070	R	0x0070
40485	Module address	1 to 247	R/W	1
40486	Baud rate	Bits 5:0, baud rate 03: 1200 04: 2400 05: 4800 06: 9600 07: 19200 08: 38400 09: 57600 0A: 115200 Bits 7:6, parity 00: N81 01: N82 02: E81 03: O81	R/W	6
40487	Type code 0x00: ±15 mV 0x01: ±50 mV 0x02: ±100 mV 0x03: ±500 mV 0x04: ±1 V 0x05: ±2.5 V 0x06: ±20 mA 0x0E: type J thermocouple 0x0F: type K thermocouple 0x10: type T thermocouple 0x11: type E thermocouple 0x12: type R thermocouple	Refer to description	R/W	5

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	0x13: type S thermocouple 0x14: type B thermocouple 0x15: type N thermocouple 0x16: type C thermocouple 0x17: type L thermocouple 0x18: type M thermocouple			
40488	Modbus response delay time in ms	0 to 30	R/W	0
40489	Host watchdog timeout value, 0 ~ 255, in 0.1s	0 to 255	R/W	255
40491	Module CJC offset in 0.01C	-4096 to 4096	R/W	0
40492	Host watchdog timeout count, write 0 to clear	0 to 65535	R/W	-
40495	LED mode, 1: controlled by module, 2: controlled by host (for M-7011D only)	1: by module 2: by host	R/W	1
40496	LED data for host control mode, valid ranges: -19999 ~ + 19999 (for M-7011D only)	-19999 to 19999	W	-
10001 00001	Digital input channel 0	0: off 1: on	R	-
10129 00129	1: thermocouple open wire	0: normal 1: open	R	-
00033	Digital outputs	0: off 1: on	R/W	-
00097	Safe values of digital outputs	0: off 1: on	R/W	0
00193	Power on values of digital outputs	0: off 1: on	R/W	0
00257	Protocol, 0: DCON, 1: Modbus RTU	0: DCON 1: Modbus RTU	R/W	1
00259	Filter setting, 0: 60Hz rejection, 1: 50Hz rejection	0: 60Hz rejection 1: 50Hz rejection	R/W	0
00260	Modbus host watchdog mode 0: same as I-7000 (old mode) 1: can use AO and DO command to clear host watchdog timeout status (new mode)	0: old mode 1: new mode	R/W	0
00261	1: enable, 0: disable host watchdog	0: disable 1; enable	R/W	0
00262	1: enable, 0: disable alarm	0: disable 1: enable	R/W	0
00263	1: latch, 0: momentary alarm	0: momentary 1: latch	R/W	0
00264	1: clear latch alarm	1: clear	W	-
00266	1: clear counter	1: clear	W	-
00268	1: enable, 0: disable CJC offset	0: disable 1: enable	R/W	1

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00269	Modbus data format, 0: hex, 1: engineering	0: hex 1: engineering	R/W	0
00270	Host watch dog timeout status, write 1 to clear host watch dog timeout status	0: normal 1: host watchdog timeout	R/W	-
00273	Reset status, 1: first read after power d on, 0: not the first read after powered on	0: not reset 1; reset	R	-
00276	Open wire detection, 1: enable, 0: disable	0: disable 1; enable	R/W	1

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M-7013P

Address	Description	Data Format	Attribute	Factory Default
30001	Analog input value of channel 0	-32768 to 32767 (0x8000 to 0x7FFF)	R	-
30097	Counter value of DI 0	0 to 65535	R	-
40225 ~ 40226	Low/high analog input alarm limit	-32768 to 32767 (0x8000 to 0x7FFF)	R/W	-
40481	Firmware version (low word)	0x0000	R	0x0000
40482	Firmware version (high word)	0xab0c for ab.c	R	-
40483	Module name (low word)	0x1320	R	0x1320
40484	Module name (high word)	0x0070	R	0x0070
40485	Module address	1 to247	R/W	1
40486	Baud rate	Bits 5:0, baud rate 03: 1200 04: 2400 05: 4800 06: 9600 07: 19200 08: 38400 09: 57600 0A: 115200 Bits 7:6, parity 00: N81 01: N82 02: E81 03: O81	R/W	6
40487	Type code 0x20: Pt 100, α= 0.00385, -100 ~ 100°C 0x21: Pt 100, α= 0.00385, 0 ~ 100°C 0x22: Pt 100, α= 0.00385, 0 ~ 200°C 0x23: Pt 100, α= 0.00385, 0 ~ 600°C 0x24: Pt 100, α= 0.003916, -100 ~ 100°C 0x25: Pt 100, α= 0.003916, 0 ~ 100°C 0x26: Pt 100, α= 0.003916, 0 ~ 200°C 0x27: Pt 100, α= 0.003916, 0 ~ 600°C 0x28: Ni 120, -80 ~ 100°C 0x29: Ni 120, 0 ~ 100°C 0x2A: Pt 1000, α= 0.00385, -200 ~ 600°C 0x2E: Pt 100, α= 0.00385, -200 ~ 200°C 0x2F: Pt 100, α= 0.003916, -200 ~ 200°C 0x80: Pt 100, α= 0.00385, -200 ~ 600°C 0x81: Pt 100, α= 0.003916, -200 ~ 600°C	Refer to description	R/W	020

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Address	Description	Data Format	Attribute	Factory Default
40488	Modbus response delay time in ms	0 to 30	R/W	0
40489	Host watchdog timeout value, 0 ~ 255, in 0.1s	0 to 255	R/W	255
40492	Host watchdog timeout count, write 0 to clear	0 to 65535	R/W	-
40495	LED mode, 1: controlled by module, 2: controlled by host (for M-7011D only)	1: by module 2: by host	R/W	1
40496	LED data for host control mode, valid ranges: -19999 ~ + 19999 (for M-7011D only)	-19999 to 19999	W	-
30865	Low word of resistance value of analog input channel 0 in 0.01 ohm	0 to 65535	R	-
30866	High word of resistance value of analog input channel 0 in 0.01 ohm	0 to 65535	R	-
10001	Digital input channel 0	0: off 1: on	R	-
00033 ~	Digital outputs	0: off 1: on	R/W	-
00097 ~	Safe values of digital outputs	0: off 1: on	R/W	0
00193 ~	Power on values of digital outputs	0: off 1: on	R/W	0
00257	Protocol, 0: DCON, 1: Modbus RTU	0: DCON 1: Modbus RTU	R/W	1
00259	Filter setting, 0: 60Hz rejection, 1: 50Hz rejection	0: 60Hz rejection 1: 50Hz rejection	R/W	0
00260	Modbus host watchdog mode 0: same as I-7000 (old mode) 1: can use AO and DO command to clear host watchdog timeout status (new mode)	0: old mode 1: new mode	R/W	0
00261	1: enable, 0: disable host watchdog	0: disable 1: enable	R/W	0
00262	1: enable, 0: disable analog input alarm	0: disable 1: enable	R/W	0
00263	1: latch, 0: momentary analog input alarm	0: momentary 1: latch	R/W	0
00264	1: clear latched analog input alarm	1: clear	W	-
00266	1: clear counter	1: clear	W	-
00269	Modbus data format, 0: hex, 1: engineering	0: hex 1: engineering	R/W	1
00270	Host watch dog timeout status, write 1 to clear host watch dog timeout status	0: normal 1; host watchdog timeout	R/W	-

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Address	Description	Data Format	Attribute	Factory Default
00273	Reset status, 1: first read after power d on, 0: not the first read after powered on	0: not reset 1: reset	R	-

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M-7015/M-7015P

(firmware version B202 and later)

Address	Description	Data Format	Attribute	Factory Default
10129 ~ 10134 00129 ~ 00134	Over/under range status of channel 0 to 5	0: normal 1: over/under	R	-
30001 ~ 30006 40001 ~ 40006	Analog input value of channel 0 to 5	-32768 to 32767 (0x8000 to 0x7FFF)	R	-
40257 ~ 40262	Type code of channel 0 to 5 0x20: Pt 100, α= 0.00385, -100 ~ 100°C 0x21: Pt 100, α= 0.00385, 0 ~ 100°C 0x22: Pt 100, α= 0.00385, 0 ~ 200°C 0x23: Pt 100, α= 0.00385, 0 ~ 600°C 0x24: Pt 100, α= 0.003916, -100 ~ 100°C 0x25: Pt 100, α= 0.003916, 0 ~ 100°C 0x26: Pt 100, α= 0.003916, 0 ~ 200°C 0x27: Pt 100, α= 0.003916, 0 ~ 600°C 0x28: Ni 120, -80 ~ 100°C 0x29: Ni 120, 0 ~ 100°C 0x2A: Pt 1000, α= 0.00385, -200 ~ 600°C 0x2B: Cu 100, α= 0.00421, -20 ~ 150°C 0x2C: Cu 100, α= 0.00427, 0 ~ 200°C 0x2D: Cu 1000, α= 0.00421, -20 ~ 150°C 0x2E: Pt 100, α= 0.00385, -200 ~ 200°C 0x2F: Pt 100, α= 0.003916, -200 ~ 200°C 0x80: Pt 100, α= 0.00385, -200 ~ 600°C 0x81: Pt 100, α= 0.003916, -200 ~ 600°C 0x82: Cu 50 @ 0°C, -50 ~ 150°C 0x83: Ni 100, -60 ~ 180°C 0x84: Ni 120, -80 ~ 150°C 0x85: Cu 100,α= 0.00428, 0 ~ 150°C	Refer to description	R/W	0x20
40289 ~ 40294	Temperature offset of channel 0 to 5 in 0.1°C, valid range: -128 ~ 127	-128 to 127	R/W	0
40385 ~ 40390	Resistance offset of channel 0 to 5 in 0.1 ohms, valid range: 0 ~ 255	0 to 255	R/W	0
40481	Firmware version (low word)	0x0000	R	0x0000
40482	Firmware version (high word)	0xab0c for ab.c	R	-
40483	Module name (low word)	0x1500	R	0x1500
40484	Module name (high word)	0x0070	R	0x0070

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<table>
<tr><th>Address</th><th>Description</th><th>Data Format</th><th>Attribute</th><th>Factory Default</th></tr>
<tr><td>40485</td><td>Module address, valid range: 1 ~ 247</td><td>1 to 247</td><td>R/W</td><td>1</td></tr>
<tr><td>40486</td><td>Bits 5:0
Baud rate, 0x03 ~ 0x0A
<table>
<tr><td>Code</td><td>0x03</td><td>0x04</td><td>0x05</td><td>0x06</td></tr>
<tr><td>Baud</td><td>1200</td><td>2400</td><td>4800</td><td>9600</td></tr>
<tr><td>Code</td><td>0x07</td><td>0x08</td><td>0x09</td><td>0x0A</td></tr>
<tr><td>Baud</td><td>19200</td><td>38400</td><td>57600</td><td>115200</td></tr>
</table>
Bits 7:6
00: no parity, 1 stop bit
01: no parity, 2 stop bits
02: even parity, 1 stop bit
03: odd parity, 1 stop bit</td><td>Refer to description</td><td>R/W</td><td>6</td></tr>
<tr><td>40488</td><td>Modbus response delay time in ms</td><td>0 to 30</td><td>R/W</td><td>0</td></tr>
<tr><td>40489</td><td>Host watchdog timeout value, 0 ~ 255, in 0.1s</td><td>0 to 255</td><td>R/W</td><td>255</td></tr>
<tr><td>40490</td><td>Enable/disable analog input channel, bit 0 for channel 0, bit 1 for channel 1, etc. 0 to disable and 1 to enable.</td><td>0 to 63</td><td>R/W</td><td>63</td></tr>
<tr><td>40492</td><td>Host watchdog timeout count, write 0 to clear</td><td>0 to 65535</td><td>R/W</td><td>-</td></tr>
<tr><td>00257</td><td>Protocol, 0: DCON, 1: Modbus RTU</td><td>0: DCON
1: Modbus RTU</td><td>R/W</td><td>1</td></tr>
<tr><td>00259</td><td>Filter setting, 0: 60Hz rejection, 1: 50Hz rejection</td><td>0: 60Hz rejection
1: 50Hz rejection</td><td>R/W</td><td>0</td></tr>
<tr><td>00260</td><td>Modbus host watchdog mode
0: same as I-7000 (old mode)
1: can use AO and DO command to clear host watchdog timeout status (new mode)</td><td>0: old mode
1: new mode</td><td>R/W</td><td>0</td></tr>
<tr><td>00261</td><td>1: enable, 0: disable host watchdog</td><td>0: disable
1; enable</td><td>R/W</td><td>0</td></tr>
<tr><td>00269</td><td>Modbus data format, 0: hex, 1: engineering</td><td>0: hex
1; engineering</td><td>R/W</td><td>1</td></tr>
<tr><td>00270</td><td>Host watch dog timeout status, write 1 to clear host watch dog timeout status</td><td>0: normal
1: host watchdog timeout</td><td>R/W</td><td>-</td></tr>
<tr><td>00272</td><td>Write 1 to reload factory calibration parameters</td><td>1: reload</td><td>W</td><td>-</td></tr>
<tr><td>00273</td><td>Reset status, 1: first read after powered on, 0: not the first read after powered on</td><td>0: not reset
1: reset</td><td>R</td><td>-</td></tr>
<tr><td>00275</td><td>1: force to return 32767 for wire opening</td><td>0: -32768/32767 for open
1: 32767 for open</td><td>R/W</td><td>-</td></tr>
</table>

Notes:

1. The max number of analog output registers written in a command is 11.

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2. The command of loading factory calibration parameters takes about 3 seconds. The next command should be sent after 3 seconds.

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M-7016

Address	Description	Data Format	Attribute	Factory Default
30001 40001	Analog input value of channel 0	-32768 to 32767 (0x8000 to 0x7FFF)	R	-
30002 40002	Analog input value of channel 1	-32768 to 32767 (0x8000 to 0x7FFF)	R	-
30097 40097	Counter value of digital input	0 to 65535	R	-
40033	Output value of excitation voltage, 0 ~ 10000	0 to 10000	R/W	-
40193	Power on value of excitation voltage, 0 ~ 10000	0 to 10000	R/W	-
00001	Digital input value of channel 0	0: Off 1: On	R	-
00033	Digital output value of channel 0	0: Off 1: On	R/W	-
00034	Digital output value of channel 1	0: Off 1: On	R/W	-
00035	Digital output value of channel 2	0: Off 1: On	R/W	-
00036	Digital output value of channel 3	0: Off 1: On	R/W	-
00097	Safe value of digital output channel 0	0: Off 1: On	R/W	0
00098	Safe value of digital output channel 1	0: Off 1: On	R/W	0
00099	Safe value of digital output channel 2	0: Off 1: On	R/W	0
00100	Safe value of digital output channel 3	0: Off 1: On	R/W	0
00193	Power on value of digital output channel 0	0: Off 1: On	R/W	0
00194	Power on value of digital output channel 1	0: Off 1: On	R/W	0
00195	Power on value of digital output channel 2	0: Off 1: On	R/W	0
00196	Power on value of digital output channel 3	0: Off 1: On	R/W	0
40161	S1 value of linear mapping	-32768 to 32767	R/W	-
40162	S2 value of linear mapping	-32768 to 32767	R/W	-
40163	T1 value of linear mapping	-32768 to 32767	R/W	-
40164	T2 value of linear mapping	-32768 to 32767	R/W	-

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Address	Description	Data Format	Attribute	Factory Default
40225	Low limit of analog input alarm value	-32768 to 32767	R/W	-32768
40226	High limit of analog input alarm value	-32768 to 32767	R/W	32767
40481	Firmware version (low word)	0x0000	R	0x0000
40482	Firmware version (high word)	0xab0c for ab.c	R	-
40483	Module name (low word)	0x1600	R	0x1600
40484	Module name (high word)	0x0070	R	0x0070
40485	Module address (1 ~ 247)	1 to 247	R/W	1
40486	Baud rate (3 ~ 10)	Bits 5:0, baud rate 03: 1200 04: 2400 05: 4800 06: 9600 07: 19200 08: 38400 09: 57600 0A: 115200 Bits 7:6, parity 00: N81 01: N82 02: E81 03: O81	R/W	6
40487	Type code (0 ~ 6)	0x00: ±15 mV 0x01: ±50 mV 0x02: ±100 mV 0x03: ±500 mV 0x04: ±1 V 0x05: ±2.5 V 0x06: ±20 mA	R/W	5
40488	Response delay time (0 ~ 30)	0 to 30	R/W	0
40489	Host watchdog timeout time in 100ms (0 ~ 255)	0 to 255	R/W	255
40490	Analog input channel mode, 0: channel 0, 1: channel 1, 2: 2-channel mode	0: channel 0 1: channel 1 2: 2-channel	R/W	0
40492	Host watchdog timeout count, write 0 to clear	0 to 65535	R/W	-
40495	LED control mode, 1: module, 2: host	1: by module 2: by host	R/W	1
40496	LED data in host control mode, -19999 ~ +19999, read as 0	-19999 to 19999	W	-

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Address	Description	Data Format	Attribute	Factory Default
00257	Protocol selection, 0: DCON, 1: Modbus RTU	0: DCON 1: Modbus RTU	R/W	1
00259	Filter setting, 0: 60Hz rejection, 1: 50Hz rejection	0: 60Hz rejection 1: 50Hz rejection	R/W	0
00260	Modbus host watchdog mode 0: same as I-7000 (old mode) 1: can use AO and DO command to clear host watchdog timeout status (new mode)	0: old mode 1: new mode	R/W	0
00261	Host watchdog, 0: disable, 1: enable	0: disable 1: enable	R/W	0
00262	Analog input alarm, 0: disable, 1: enable	0: disable 1: enable	R/W	0
00263	Analog input alarm type, 0: momentary, 1: latched	0: momentary 1: latched	R/W	0
00264	1 to clear latched alarm	1: clear	W	-
00265	Linear mapping, 0: disable, 1: enable	0: disable 1: enable	R/W	0
00266	1 to clear counter	1: clear	W	-
00269	Modbus data format, 0: hex, 1: engineering	0: hex 1: engineering	R/W	0
00270	Host watchdog timeout status, write 1 to clear host watch dog timeout status	0: normal 1: host watchdog timeout	R/W	-
00273	Reset status, 1: first read after powered on, 0: not the first read after powered on	0: not reset 1: reset	R	-

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M-7017/M-7017R

(firmware version B300 and later)

<table>
<tr><th>Address</th><th>Description</th><th>Data Format</th><th>Attribute</th><th>Factory Default</th></tr>
<tr><td>10129 ~ 10136
00129 ~ 00136</td><td>Under range status of channel 0 to 7 for 4 ~ 20mA or 0 ~ 20mA ranges</td><td>0: normal
1: under</td><td>R</td><td>-</td></tr>
<tr><td>30001 ~ 30008
40001 ~ 40008</td><td>Analog input value of channel 0 to 7</td><td>-32768 to 32767
(0x8000 to 0x7FFF)</td><td>R</td><td>-</td></tr>
<tr><td>40481</td><td>Firmware version (low word)</td><td>0x0000</td><td>R</td><td>0x0000</td></tr>
<tr><td>40482</td><td>Firmware version (high word)</td><td>0xab0c for ab.c</td><td>R</td><td>-</td></tr>
<tr><td>40483</td><td>Module name (low word)</td><td>0x1700 for 17
0x1722 for 17R</td><td>R</td><td>-</td></tr>
<tr><td>40484</td><td>Module name (high word)</td><td>0x0070</td><td>R</td><td>0x0070</td></tr>
<tr><td>40485</td><td>Module address, valid range: 1 ~ 247</td><td>1 to 247</td><td>R/W</td><td>1</td></tr>
<tr><td>40486</td><td>Bits 5:0
Baud rate, 0x03 ~ 0x0A
<table>
<tr><td>Code</td><td>0x03</td><td>0x04</td><td>0x05</td><td>0x06</td></tr>
<tr><td>Baud</td><td>1200</td><td>2400</td><td>4800</td><td>9600</td></tr>
<tr><td>Code</td><td>0x07</td><td>0x08</td><td>0x09</td><td>0x0A</td></tr>
<tr><td>Baud</td><td>19200</td><td>38400</td><td>57600</td><td>115200</td></tr>
</table>
Bits 7:6
00: no parity, 1 stop bit
01: no parity, 2 stop bits
02: even parity, 1 stop bit
03: odd parity, 1 stop bit</td><td>Refer to description</td><td>R/W</td><td>6</td></tr>
<tr><td>40487</td><td>Type code</td><td>0x07: 4 ~ 20 mA
0x08: ±10 V
0x09: ±5 V
0x0A: ±1 V
0x0B: ±500 mV
0x0C: ±150 mV
0x0D: ±20 mA
0x1A: 0 ~ 20 mA</td><td>R/W</td><td>8</td></tr>
<tr><td>40488</td><td>Modbus response delay time in ms</td><td>0 to 30</td><td>R/W</td><td>0</td></tr>
<tr><td>40489</td><td>Host watchdog timeout value, 0 ~ 255, in 0.1s</td><td>0 to 255</td><td>R/W</td><td>255</td></tr>
<tr><td>40490</td><td>Enable/disable analog input channel, bit 0 for channel 0, bit 1 for channel 1, etc. 0 to disable and 1 to enable.</td><td>0 to 255</td><td>R/W</td><td>255</td></tr>
<tr><td>40492</td><td>Host watchdog timeout count, write 0 to clear</td><td>0 to 65535</td><td>R/W</td><td>-</td></tr>
</table>

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00257	Protocol, 0: DCON, 1: Modbus RTU	0: DCON 1: Modbus RTU	R/W	1
00259	Filter setting, 0: 60Hz rejection, 1: 50Hz rejection	0: 60Hz rejection 1: 50Hz rejection	R/W	0
00261	1: enable, 0: disable host watchdog	0: disable 1: enable	R/W	0
00269	Modbus data format, 0: hex, 1: engineering	0: hex 1: engineering	R/W	0
00270	Host watch dog timeout status, write 1 to clear host watch dog timeout status	0: normal 1: host watchdog timeout	R/W	-
00271	1: enable, 0: disable fast mode, only for M-7017R	0: disable 1: enable	R/W	0
00273	Reset status, 1: first read after powered on, 0: not the first read after powered on	0: not reset 1: reset	R	-

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M-7017C/M-7017RC

(firmware version B300 and later)

<table>
<tr><th>Address</th><th>Description</th><th>Data Format</th><th>Attribute</th><th>Factory Default</th></tr>
<tr><td>10129 ~ 10136
00129 ~ 00136</td><td>Under range status of channel 0 to 7 for 4 ~ 20mA or 0 ~ 20mA ranges</td><td>0: normal
1: under</td><td>R</td><td>-</td></tr>
<tr><td>30001 ~ 30008
40001 ~ 40008</td><td>Analog input value of channel 0 to 7</td><td>-32768 to 32767
(0x8000 to 0x7FFF)</td><td>R</td><td>-</td></tr>
<tr><td>40481</td><td>Firmware version (low word)</td><td>0x0000</td><td>R</td><td>0x0000</td></tr>
<tr><td>40482</td><td>Firmware version (high word)</td><td>0xab0c for ab.c</td><td>R</td><td>-</td></tr>
<tr><td>40483</td><td>Module name (low word)</td><td>0x1713 for 17C
0x1732 for 17RC</td><td>R</td><td>-</td></tr>
<tr><td>40484</td><td>Module name (high word)</td><td>0x0070</td><td>R</td><td>0x0070</td></tr>
<tr><td>40485</td><td>Module address, valid range: 1 ~ 247</td><td>1 to 247</td><td>R/W</td><td>1</td></tr>
<tr><td>40486</td><td>Bits 5:0
Baud rate, 0x03 ~ 0x0A
<table>
<tr><td>Code</td><td>0x03</td><td>0x04</td><td>0x05</td><td>0x06</td></tr>
<tr><td>Baud</td><td>1200</td><td>2400</td><td>4800</td><td>9600</td></tr>
<tr><td>Code</td><td>0x07</td><td>0x08</td><td>0x09</td><td>0x0A</td></tr>
<tr><td>Baud</td><td>19200</td><td>38400</td><td>57600</td><td>115200</td></tr>
</table>
Bits 7:6
00: no parity, 1 stop bit
01: no parity, 2 stop bits
02: even parity, 1 stop bit
03: odd parity, 1 stop bit</td><td>Refer to description</td><td>R/W</td><td>6</td></tr>
<tr><td>40487</td><td>Type code</td><td>0x07: 4 ~ 20 mA
0x0D: ±20 mA
0x1A: 0 ~ 20 mA</td><td>R/W</td><td>0x0D</td></tr>
<tr><td>40488</td><td>Modbus response delay time in ms</td><td>0 to 30</td><td>R/W</td><td>0</td></tr>
<tr><td>40489</td><td>Host watchdog timeout value, 0 ~ 255, in 0.1s</td><td>0 to 255</td><td>R/W</td><td>255</td></tr>
<tr><td>40490</td><td>Enable/disable analog input channel, bit 0 for channel 0, bit 1 for channel 1, etc. 0 to disable and 1 to enable.</td><td>0 to 255</td><td>R/W</td><td>255</td></tr>
<tr><td>40492</td><td>Host watchdog timeout count, write 0 to clear</td><td>0 to 65535</td><td>R/W</td><td>-</td></tr>
<tr><td>00257</td><td>Protocol, 0: DCON, 1: Modbus RTU</td><td>0: DCON
1: Modbus RTU</td><td>R/W</td><td>1</td></tr>
<tr><td>00259</td><td>Filter setting, 0: 60Hz rejection, 1: 50Hz rejection</td><td>0: 60Hz rejection
1: 50Hz rejection</td><td>R/W</td><td>0</td></tr>
</table>

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00261	1: enable, 0: disable host watchdog	0: disable 1: enable	R/W	0
00269	Modbus data format, 0: hex, 1: engineering	0: hex 1: engineering	R/W	1
00270	Host watch dog timeout status, write 1 to clear host watch dog timeout status	0: normal 1: host watchdog timeout	R/W	-
00271	1: enable, 0: disable fast mode, only for M-7017RC	0: disable 1: enable	R/W	0
00273	Reset status, 1: first read after powered on, 0: not the first read after powered on	0: not reset 1: reset	R	-

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M-7017R-A5

(firmware version B300 and later)

<table>
<tr><th>Address</th><th>Description</th><th>Data Format</th><th>Attribute</th><th>Factory Default</th></tr>
<tr><td>30001 ~ 30008
40001 ~ 40008</td><td>Analog input value of channel 0 to 7</td><td>-32768 to 32767
(0x8000 to 0x7FFF)</td><td>R</td><td>-</td></tr>
<tr><td>40481</td><td>Firmware version (low word)</td><td>0x0000</td><td>R</td><td>0x0000</td></tr>
<tr><td>40482</td><td>Firmware version (high word)</td><td>0xab0c for ab.c</td><td>R</td><td>-</td></tr>
<tr><td>40483</td><td>Module name (low word)</td><td>0x1731</td><td>R</td><td>0x1731</td></tr>
<tr><td>40484</td><td>Module name (high word)</td><td>0x0070</td><td>R</td><td>0x0070</td></tr>
<tr><td>40485</td><td>Module address, valid range: 1 ~ 247</td><td>1 to 247</td><td>R/W</td><td>1</td></tr>
<tr><td>40486</td><td>Bits 5:0
Baud rate, 0x03 ~ 0x0A
<table>
<tr><td>Code</td><td>0x03</td><td>0x04</td><td>0x05</td><td>0x06</td></tr>
<tr><td>Baud</td><td>1200</td><td>2400</td><td>4800</td><td>9600</td></tr>
<tr><td>Code</td><td>0x07</td><td>0x08</td><td>0x09</td><td>0x0A</td></tr>
<tr><td>Baud</td><td>19200</td><td>38400</td><td>57600</td><td>115200</td></tr>
</table>
Bits 7:6
00: no parity, 1 stop bit
01: no parity, 2 stop bits
02: even parity, 1 stop bit
03: odd parity, 1 stop bit</td><td>Refer to description</td><td>R/W</td><td>6</td></tr>
<tr><td>40487</td><td>Type code</td><td>0x1B: ±150V
0x1C: ±50V</td><td>R/W</td><td>0x1B</td></tr>
<tr><td>40488</td><td>Modbus response delay time in ms</td><td>0 to 30</td><td>R/W</td><td>0</td></tr>
<tr><td>40489</td><td>Host watchdog timeout value, 0 ~ 255, in 0.1s</td><td>0 to 255</td><td>R/W</td><td>255</td></tr>
<tr><td>40490</td><td>Enable/disable analog input channel, bit 0 for channel 0, bit 1 for channel 1, etc. 0 to disable and 1 to enable.</td><td>0 to 255</td><td>R/W</td><td>255</td></tr>
<tr><td>40492</td><td>Host watchdog timeout count, write 0 to clear</td><td>0 to 65535</td><td>R/W</td><td>-</td></tr>
<tr><td>00257</td><td>Protocol, 0: DCON, 1: Modbus RTU</td><td>0: DCON
1: Modbus RTU</td><td>R/W</td><td>1</td></tr>
<tr><td>00259</td><td>Filter setting, 0: 60Hz rejection, 1: 50Hz rejection</td><td>0: 60Hz rejection
1: 50Hz rejection</td><td>R/W</td><td>0</td></tr>
<tr><td>00261</td><td>1: enable, 0: disable host watchdog</td><td>0: disable
1: enable</td><td>R/W</td><td>0</td></tr>
<tr><td>00269</td><td>Modbus data format, 0: hex, 1: engineering</td><td>0: hex
1: engineering</td><td>R/W</td><td>0</td></tr>
</table>

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00270	Host watch dog timeout status, write 1 to clear host watch dog timeout status	0: normal 1: host watchdog timeout	R/W	-
00271	1: enable, 0: disable fast mode	0: disable 1: enable	R/W	0
00273	Reset status, 1: first read after powered on, 0: not the first read after powered on	0: not reset 1: reset	R	-

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M-7017RMS

<table>
<tr><th>Address</th><th>Description</th><th>Data Format</th><th>Attribute</th><th>Factory Default</th></tr>
<tr><td>30001 ~ 30008
40001 ~ 40008</td><td>Analog input value of channel 0 to 7</td><td>-32768 to 32767
(0x8000 to 0x7FFF)</td><td>R</td><td>-</td></tr>
<tr><td>40257 ~ 40264</td><td>Type code of channel 0 to 7</td><td>0x08: ±10 V
0x09: ±5 V
0x0A: ±1 V
0x0B: ±500 mV
0x0C: ±150 mV</td><td>R/W</td><td>8</td></tr>
<tr><td>40481</td><td>Firmware version (low word)</td><td>0x0000</td><td>R</td><td>0x0000</td></tr>
<tr><td>40482</td><td>Firmware version (high word)</td><td>0xab0c for ab.c</td><td>R</td><td>-</td></tr>
<tr><td>40483</td><td>Module name (low word)</td><td>0x173D</td><td>R</td><td>0x173D</td></tr>
<tr><td>40484</td><td>Module name (high word)</td><td>0x0070</td><td>R</td><td>0x0070</td></tr>
<tr><td>40485</td><td>Module address, valid range: 1 ~ 247</td><td>1 to 247</td><td>R/W</td><td>1</td></tr>
<tr><td>40486</td><td>Bits 5:0
Baud rate, 0x03 ~ 0x0A
<table>
<tr><td>Code</td><td>0x03</td><td>0x04</td><td>0x05</td><td>0x06</td></tr>
<tr><td>Baud</td><td>1200</td><td>2400</td><td>4800</td><td>9600</td></tr>
<tr><td>Code</td><td>0x07</td><td>0x08</td><td>0x09</td><td>0x0A</td></tr>
<tr><td>Baud</td><td>19200</td><td>38400</td><td>57600</td><td>115200</td></tr>
</table>
Bits 7:6
00: no parity, 1 stop bit
01: no parity, 2 stop bits
02: even parity, 1 stop bit
03: odd parity, 1 stop bit</td><td>Refer to description</td><td>R/W</td><td>6</td></tr>
<tr><td>40488</td><td>Modbus response delay time in ms, valid range: 0 ~ 30</td><td>0 to 30</td><td>R/W</td><td>0</td></tr>
<tr><td>40489</td><td>Host watchdog timeout value, 0 ~ 255, in 0.1s</td><td>0 to 255</td><td>R/W</td><td>255</td></tr>
<tr><td>40490</td><td>Enable/disable analog input channel, bit 0 for channel 0, bit 1 for channel 1, etc. 0 to disable and 1 to enable.</td><td>0 to 255</td><td>R/W</td><td>255</td></tr>
<tr><td>40492</td><td>Host watchdog timeout count, write 0 to clear</td><td>0 to 65535</td><td>R/W</td><td>-</td></tr>
</table>

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Address	Description	Data Format	Attribute	Factory Default
00257	Protocol, 0: DCON, 1: Modbus RTU	0: DCON 1: Modbus RTU	R/W	1
00259	Filter setting, 0: 60Hz rejection, 1: 50Hz rejection	0: 60Hz rejection 1: 50Hz rejection	R/W	0
00261	1: enable, 0: disable host watchdog	0: disable 1: enable	R/W	0
00269	Modbus data format, 0: hex, 1: engineering	0: hex 1: engineering	R/W	1
00270	Host watch dog timeout status, write 1 to clear host watch dog timeout status	0: normal 1: host watchdog timeout	R/W	-
00273	Reset status, 1: first read after powered on, 0: not the first read after powered on	0: not reset 1: reset	R	-

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M-7017Z

<table>
<tr><th>Address</th><th>Description</th><th>Data Format</th><th>Attribute</th><th>Factory Default</th></tr>
<tr><td>10129 ~ 10138
00129 ~ 00138</td><td>Under range status of channel 0 to 9 for 4 ~ 20mA or 0 ~ 20mA ranges</td><td>0: normal
1: under</td><td>R</td><td>-</td></tr>
<tr><td>30001 ~ 30020
40001 ~ 40020</td><td>Analog input value of channel 0 to 19</td><td>-32768 to 32767
(0x8000 to 0x7FFF)</td><td>R</td><td>-</td></tr>
<tr><td>40257 ~ 40276</td><td>Type code of channel 0 to 19</td><td>0x07: 4 ~ 20 mA
0x08: ±10 V
0x09: ±5 V
0x0A: ±1 V
0x0B: ±500 mV
0x0C: ±150 mV
0x0D: ±20 mA
0x1A: 0 ~ 20 mA</td><td>R/W</td><td>8</td></tr>
<tr><td>40481</td><td>Firmware version (low word)</td><td>0x0000</td><td>R</td><td>0x0000</td></tr>
<tr><td>40482</td><td>Firmware version (high word)</td><td>0xab0c for ab.c</td><td>R</td><td>-</td></tr>
<tr><td>40483</td><td>Module name (low word)</td><td>0x172A</td><td>R</td><td>0x172A</td></tr>
<tr><td>40484</td><td>Module name (high word)</td><td>0x0070</td><td>R</td><td>0x0070</td></tr>
<tr><td>40485</td><td>Module address, valid range: 1 ~ 247</td><td>1 to 247</td><td>R/W</td><td>1</td></tr>
<tr><td>40486</td><td>Bits 5:0
Baud rate, 0x03 ~ 0x0A
<table>
<tr><td>Code</td><td>0x03</td><td>0x04</td><td>0x05</td><td>0x06</td></tr>
<tr><td>Baud</td><td>1200</td><td>2400</td><td>4800</td><td>9600</td></tr>
<tr><td>Code</td><td>0x07</td><td>0x08</td><td>0x09</td><td>0x0A</td></tr>
<tr><td>Baud</td><td>19200</td><td>38400</td><td>57600</td><td>115200</td></tr>
</table>
Bits 7:6
00: no parity, 1 stop bit
01: no parity, 2 stop bits
02: even parity, 1 stop bit
03: odd parity, 1 stop bit</td><td>Refer to description</td><td>R/W</td><td>6</td></tr>
<tr><td>40488</td><td>Modbus response delay time in ms</td><td>0 to 30</td><td>R/W</td><td>0</td></tr>
<tr><td>40489</td><td>Host watchdog timeout value, 0 ~ 255, in 0.1s</td><td>0 to 255</td><td>R/W</td><td>255</td></tr>
<tr><td>40490</td><td>Enable/disable analog input channel, bit 0 for channel 0, bit 1 for channel 1, etc. 0 to disable and 1 to enable.</td><td>0 to 65535</td><td>R/W</td><td>1023</td></tr>
<tr><td>40492</td><td>Host watchdog timeout count, write 0 to clear</td><td>0 to 65535</td><td>R/W</td><td>-</td></tr>
</table>

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Address	Description	Data Format	Attribute	Factory Default
40497	Channel enable/disable, high word, LSB for channel 16 and MSB for channel 19.	0 to 15	R/W	0
00257	Protocol, 0: DCON, 1: Modbus RTU	0: DCON 1: Modbus RTU	R/W	1
00259	Filter setting, 0: 60Hz rejection, 1: 50Hz rejection	0: 60Hz rejection 1: 50Hz rejection	R/W	0
00260	Modbus host watchdog mode 0: same as I-7000 (old mode) 1: can use AO and DO command to clear host watchdog timeout status (new mode)	0: old mode 1: new mode	R/W	0
00261	1: enable, 0: disable host watchdog	0: disable 1: enable	R/W	0
00269	Modbus data format, 0: hex, 1: engineering	0: hex 1: engineering	R/W	0
00270	Host watch dog timeout status, write 1 to clear host watch dog timeout status	0: normal 1: host watchdog timeout	R/W	-
00271	1: enable, 0: disable fast mode	0: disable 1: enable	R/W	0
00273	Reset status, 1: first read after powered on, 0: not the first read after powered on	0: not reset 1: reset	R	-
00277	1: single-ended mode, 0: differential mode	0: differential 1: single-ended	R/W	-

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M-7018/M-7018R

(firmware version B305 and later)

<table>
<tr><th>Address</th><th>Description</th><th>Data Format</th><th>Attribute</th><th>Factory Default</th></tr>
<tr><td>30001 ~
30008
40001 ~
40008</td><td>Analog input value of channel 0 to 7</td><td>-32768 to 32767
(0x8000 to 0x7FFF)</td><td>R</td><td>-</td></tr>
<tr><td>30129
40129</td><td>CJC temperature in 0.01°C</td><td>-5000 to 10000</td><td>R</td><td>-</td></tr>
<tr><td>40353 ~
40360</td><td>CJC offset of channel 0 to 7 in 0.1°C. 1 for 0.1, 127 for 12.7, 255 for –0.1, 128 for –12.8</td><td>0 to 255</td><td>R/W</td><td>0</td></tr>
<tr><td>40481</td><td>Firmware version (low word)</td><td>0x0000</td><td>R</td><td>0x0000</td></tr>
<tr><td>40482</td><td>Firmware version (high word)</td><td></td><td>R</td><td>-</td></tr>
<tr><td>40483</td><td>Module name (low word)</td><td>0x1800 for 18
0x1822 for 18R</td><td>R</td><td>-</td></tr>
<tr><td>40484</td><td>Module name (high word)</td><td>0x0070</td><td>R</td><td>0x0070</td></tr>
<tr><td>40485</td><td>Module address, valid range: 1 ~ 247</td><td>1 to 247</td><td>R/W</td><td>1</td></tr>
<tr><td>40486</td><td>Bits 5:0
Baud rate, 0x03 ~ 0x0A
<table>
<tr><td>Code</td><td>0x03</td><td>0x04</td><td>0x05</td><td>0x06</td></tr>
<tr><td>Baud</td><td>1200</td><td>2400</td><td>4800</td><td>9600</td></tr>
<tr><td>Code</td><td>0x07</td><td>0x08</td><td>0x09</td><td>0x0A</td></tr>
<tr><td>Baud</td><td>19200</td><td>38400</td><td>57600</td><td>115200</td></tr>
</table>
Bits 7:6
00: no parity, 1 stop bit
01: no parity, 2 stop bits
02: even parity, 1 stop bit
03: odd parity, 1 stop bit</td><td>Refer to description</td><td>R/W</td><td>6</td></tr>
<tr><td>40487</td><td>Type code
0x00: ±15 mV
0x01: ±50 mV
0x02: ±100 mV
0x03: ±500 mV
0x04: ±1 V
0x05: ±2.5 V
0x06: ±20 mA
0x0E: type J thermocouple
0x0F: type K thermocouple
0x10: type T thermocouple
0x11: type E thermocouple
0x12: type R thermocouple
0x13: type S thermocouple</td><td>Refer to description</td><td>R/W</td><td>5</td></tr>
</table>

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	0x14: type B thermocouple 0x15: type N thermocouple 0x16: type C thermocouple 0x17: type L thermocouple 0x18: type M thermocouple 0x19: type L thermocouple			
40488	Modbus response delay time in ms, valid range: 0 ~ 30	0 to 30	R/W	0
40489	Host watchdog timeout value, 0 ~ 255, in 0.1s	0 to 255	R/W	255
40490	Enable/disable analog input channel, bit 0 for channel 0, bit 1 for channel 1, etc. 0 to disable and 1 to enable.	0 to 255	R/W	255
40491	Module CJC offset in 0.01°C	-4096 to 4096	R/W	0
40492	Host watchdog timeout count, write 0 to clear	0 to 65535	R/W	-
00257	Protocol, 0: DCON, 1: Modbus RTU	0: DCON 1: Modbus RTU	R/W	1
00259	Filter setting, 0: 60Hz rejection, 1: 50Hz rejection	0: 60Hz rejection 1: 50Hz rejection	R/W	0
00260	Modbus host watchdog mode 0: same as I-7000 (old mode) 1: can use AO and DO command to clear host watchdog timeout status (new mode)	0: old mode 1: new mode	R/W	0
00261	1: enable, 0: disable host watchdog	0: disable 1; enable	R/W	0
00268	1: enable, 0: disable CJC	0: disable 1; enable	R/W	1
00269	Modbus data format, 0: hex, 1: engineering	0: hex 1: engineering	R/W	0
00270	Host watch dog timeout status, write 1 to clear host watch dog timeout status	0: normal 1: host watchdog timeout	R/W	-
00273	Reset status, 1: first read after powered on, 0: not the first read after powered on	0: not reset 1: reset	R	-

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M-7018Z

<table>
<tr><th>Address</th><th>Description</th><th>Data Format</th><th>Attribute</th><th>Factory Default</th></tr>
<tr><td>30001 ~ 30010
40001 ~ 40010</td><td>Analog input value of channel 0 to 9</td><td>-32768 to 32767 (0x8000 to 0x7FFF)</td><td>R</td><td>-</td></tr>
<tr><td>30129
40129</td><td>CJC temperature in 0.01°C</td><td>-5000 to 10000</td><td>R</td><td>-</td></tr>
<tr><td>40257 ~ 40266</td><td>Type code of channel 0 to 9
0x00: ±15 mV
0x01: ±50 mV
0x02: ±100 mV
0x03: ±500 mV
0x04: ±1 V
0x05: ±2.5 V
0x06: ±20 mA
0x0E: type J thermocouple
0x0F: type K thermocouple
0x10: type T thermocouple
0x11: type E thermocouple
0x12: type R thermocouple
0x13: type S thermocouple
0x14: type B thermocouple
0x15: type N thermocouple
0x16: type C thermocouple
0x17: type L thermocouple
0x18: type M thermocouple
0x19: type L thermocouple</td><td>Refer to description</td><td>R/W</td><td>5</td></tr>
<tr><td>40353 ~ 40362</td><td>CJC offset of channel 0 to 9 in 0.1°C. 1 for 0.1, 127 for 12.7, 255 for –0.1, 128 for –12.8</td><td>0 to 255</td><td>R/W</td><td>0</td></tr>
<tr><td>40481</td><td>Firmware version (low word)</td><td>0x0000</td><td>R</td><td>0x0000</td></tr>
<tr><td>40482</td><td>Firmware version (high word)</td><td>0xab0c for ab.c</td><td>R</td><td>-</td></tr>
<tr><td>40483</td><td>Module name (low word)</td><td>0x182A</td><td>R</td><td>0x182A</td></tr>
<tr><td>40484</td><td>Module name (high word)</td><td>0x0070</td><td>R</td><td>0x0070</td></tr>
<tr><td>40485</td><td>Module address, valid range: 1 ~ 247</td><td>1 to 247</td><td>R/W</td><td>1</td></tr>
<tr><td>40486</td><td>Bits 5:0
Baud rate, 0x03 ~ 0x0A
<table>
<tr><td>Code</td><td>0x03</td><td>0x04</td><td>0x05</td><td>0x06</td></tr>
<tr><td>Baud</td><td>1200</td><td>2400</td><td>4800</td><td>9600</td></tr>
<tr><td>Code</td><td>0x07</td><td>0x08</td><td>0x09</td><td>0x0A</td></tr>
<tr><td>Baud</td><td>19200</td><td>38400</td><td>57600</td><td>115200</td></tr>
</table>
Bits 7:6
00: no parity, 1 stop bit</td><td>Refer to description</td><td>R/W</td><td>6</td></tr>
</table>

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	01: no parity, 2 stop bits 02: even parity, 1 stop bit 03: odd parity, 1 stop bit			
40488	Modbus response delay time in ms, valid range: 0 ~ 30	0 to 30	R/W	0
40489	Host watchdog timeout value, 0 ~ 255, in 0.1s	0 to 255	R/W	255
40490	Enable/disable analog input channel, bit 0 for channel 0, bit 1 for channel 1, etc. 0 to disable and 1 to enable.	0 to 1023	R/W	1023
40491	Module CJC offset in 0.01°C	-4096 to 4096	R/W	0
40492	Host watchdog timeout count, write 0 to clear	0 to 65535	R/W	-
00257	Protocol, 0: DCON, 1: Modbus RTU	0: DCON 1: Modbus RtU	R/W	1
00259	Filter setting, 0: 60Hz rejection, 1: 50Hz rejection	0: 60Hz rejection 1: 50Hz rejection	R/W	0
00260	Modbus host watchdog mode 0: same as I-7000 (old mode) 1: can use AO and DO command to clear host watchdog timeout status (new mode)	0: old mode 1: new mode	R/W	0
00261	1: enable, 0: disable host watchdog	0: disable 1: enable	R/W	0
00268	1: enable, 0: disable CJC	0: disable 1: enable	R/W	1
00269	Modbus data format, 0: hex, 1: engineering	0: hex 1: engineering	R/W	0
00270	Host watch dog timeout status, write 1 to clear host watch dog timeout status	0: normal 1: host watchdog timeout	R/W	-
00273	Reset status, 1: first read after powered on, 0: not the first read after powered on	0: not reset 1: reset	R	-
00276	Open thermocouple detection, 1: enable, 0: disable (for firmware version B404 and later)	0: disable 1: enable	R/W	1

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M-7018-16

<table>
<tr><th>Address</th><th>Description</th><th>Data Format</th><th>Attribute</th><th>Factory Default</th></tr>
<tr><td>30001 ~ 30016
40001 ~ 40016</td><td>Analog input value of channel 0 to 15</td><td>-32768 to 32767
(0x8000 to 0x7FFF)</td><td>R</td><td>-</td></tr>
<tr><td>30033 ~ 30048
40033 ~ 40048</td><td>Temperature reading of channel 0 to 15 in 1°C</td><td>-32768 to 32767
(0x8000 to 0x7FFF)</td><td>R</td><td>-</td></tr>
<tr><td>30129
40129</td><td>CJC temperature in 0.01°C</td><td>-5000 to 10000</td><td>R</td><td>-</td></tr>
<tr><td>40353 ~ 40368</td><td>CJC offset of channel 0 to 15 in 0.1°C. 1 for 0.1, 127 for 12.7, 255 for –0.1, 128 for –12.8</td><td>0 to 255</td><td>R/W</td><td>0</td></tr>
<tr><td>40481</td><td>Firmware version (low word)</td><td>0x0000</td><td>R</td><td>0x0000</td></tr>
<tr><td>40482</td><td>Firmware version (high word)</td><td>0xab0c for ab.c</td><td>R</td><td>-</td></tr>
<tr><td>40483</td><td>Module name (low word)</td><td>0x1810</td><td>R</td><td>0x1810</td></tr>
<tr><td>40484</td><td>Module name (high word)</td><td>0x0070</td><td>R</td><td>0x0070</td></tr>
<tr><td>40485</td><td>Module address, valid range: 1 ~ 247</td><td>1 to 247</td><td>R/W</td><td>1</td></tr>
<tr><td>40486</td><td>Bits 5:0
Baud rate, 0x03 ~ 0x0A
<table>
<tr><td>Code</td><td>0x03</td><td>0x04</td><td>0x05</td><td>0x06</td></tr>
<tr><td>Baud</td><td>1200</td><td>2400</td><td>4800</td><td>9600</td></tr>
<tr><td>Code</td><td>0x07</td><td>0x08</td><td>0x09</td><td>0x0A</td></tr>
<tr><td>Baud</td><td>19200</td><td>38400</td><td>57600</td><td>115200</td></tr>
</table>
Bits 7:6
00: no parity, 1 stop bit
01: no parity, 2 stop bits
10: even parity, 1 stop bit
11: odd parity, 1 stop bit</td><td>Refer to description</td><td>R/W</td><td>6</td></tr>
<tr><td>40487</td><td>Type code
0x00: ±15 mV
0x01: ±50 mV
0x02: ±100 mV
0x03: ±500 mV
0x04: ±1 V
0x05: ±2.5 V
0x06: ±20 mA
0x0E: type J thermocouple
0x0F: type K thermocouple
0x10: type T thermocouple
0x11: type E thermocouple
0x12: type R thermocouple</td><td>Refer to description</td><td>R/W</td><td>5</td></tr>
</table>

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	0x13: type S thermocouple 0x14: type B thermocouple 0x15: type N thermocouple 0x16: type C thermocouple 0x17: type L thermocouple 0x18: type M thermocouple 0x19: type L thermocouple			
40488	Modbus response delay time in ms, valid range: 0 ~ 30	0 to 30	R/W	0
40489	Host watchdog timeout value, 0 ~ 255, in 0.1s	0 to 255	R/W	255
40490	Enable/disable analog input channel, bit 0 for channel 0, bit 1 for channel 1, etc. 0 to disable and 1 to enable.	0 to 65535	R/W	65535
40491	Module CJC offset in 0.01°C	-4096 to 4096	R/W	0
40492	Host watchdog timeout count, write 0 to clear	0 to 65535	R/W	-
00257	Protocol, 0: DCON, 1: Modbus RTU	0: DCON 1: Modbus RTU	R/W	1
00259	Filter setting, 0: 60Hz rejection, 1: 50Hz rejection	0: 60Hz rejection 1: 50Hz rejection	R/W	0
00260	Modbus host watchdog mode 0: same as I-7000 (old mode) 1: can use AO and DO command to clear host watchdog timeout status (new mode)	0: old mode 1: new mode	R/W	0
00261	1: enable, 0: disable host watchdog	0: disable 1: enable	R/W	0
00268	1: enable, 0: disable CJC	0: disable 1: enable	R/W	1
00269	Modbus data format, 0: hex, 1: engineering	0: hex 1: engineering	R/W	0
00270	Host watch dog timeout status, write 1 to clear host watch dog timeout status	0: normal 1: host watchdog timeout	R/W	-
00273	Reset status, 1: first read after powered on, 0: not the first read after powered on	0: not reset 1; reset	R	-

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M-7019R

(firmware version B300 and later)

Address	Description	Data Format	Attribute	Factory Default
10129 ~ 10136 00129 ~ 00136	Over/under range status of channel 0 to 7	0: normal 1: over/under	R	-
30001 ~ 30008 40001 ~ 40008	Analog input value of channel 0 to 7	-32768 to 32767 (0x8000 to 0x7FFF)	R	-
30129 40129	CJC temperature in 0.01°C	-5000 to 10000	R	-
40257 ~ 40264	Type code of channel 0 to 7 0x00: ±15 mV 0x01: ±50 mV 0x02: ±100 mV 0x03: ±500 mV 0x04: ±1 V 0x05: ±2.5 V 0x06: ±20 mA 0x07: 4 ~ 20 mA 0x08: ±10 V 0x09: ±5 V 0x0A: ±1 V 0x0B: ±500 mV 0x0C: ±150 mV 0x0D: ±20 mA 0x0E: type J thermocouple 0x0F: type K thermocouple 0x10: type T thermocouple 0x11: type E thermocouple 0x12: type R thermocouple 0x13: type S thermocouple 0x14: type B thermocouple 0x15: type N thermocouple 0x16: type C thermocouple 0x17: type L thermocouple 0x18: type M thermocouple 0x19: type L thermocouple 0x1A: 0 ~ 20 mA	Refer to description	R/W	8
40289 ~ 40296	Temperature offset of channel 0 to 7 in 0.1°C, valid range: -128 ~ 127	-128 to 127	R/W	0
40353 ~ 40360	CJC offset of channel 0 to 7 in 0.01°C, valid range: -4096 ~ 4096	-4096 to 4096	R/W	0

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<table>
<tr><td>40481</td><td>Firmware version (low word)</td><td>0x0000</td><td>R</td><td>0x0000</td></tr>
<tr><td>40482</td><td>Firmware version (high word)</td><td>0xab0c for ab.c</td><td>R</td><td>-</td></tr>
<tr><td>40483</td><td>Module name (low word)</td><td>0x1922</td><td>R</td><td>0x1922</td></tr>
<tr><td>40484</td><td>Module name (high word)</td><td>0x0070</td><td>R</td><td>0x0070</td></tr>
<tr><td>40485</td><td>Module address, valid range: 1 ~ 247</td><td>1 to 247</td><td>R/W</td><td>1</td></tr>
<tr><td>40486</td><td>Bits 5:0
Baud rate, 0x03 ~ 0x0A
<table><tr><td>Code</td><td>0x03</td><td>0x04</td><td>0x05</td><td>0x06</td></tr><tr><td>Baud</td><td>1200</td><td>2400</td><td>4800</td><td>9600</td></tr><tr><td>Code</td><td>0x07</td><td>0x08</td><td>0x09</td><td>0x0A</td></tr><tr><td>Baud</td><td>19200</td><td>38400</td><td>57600</td><td>115200</td></tr></table>Bits 7:6
00: no parity, 1 stop bit
01: no parity, 2 stop bits
02: even parity, 1 stop bit
03: odd parity, 1 stop bit</td><td>Refer to description</td><td>R/W</td><td>6</td></tr>
<tr><td>40488</td><td>Modbus response delay time in ms, valid range: 0 ~ 30</td><td>0 to 30</td><td>R/W</td><td>0</td></tr>
<tr><td>40489</td><td>Host watchdog timeout value, 0 ~ 255, in 0.1s</td><td>0 to 255</td><td>R/W</td><td>255</td></tr>
<tr><td>40490</td><td>Enable/disable analog input channel, bit 0 for channel 0, bit 1 for channel 1, etc. 0 to disable and 1 to enable.</td><td>0 to 255</td><td>R/W</td><td>255</td></tr>
<tr><td>40491</td><td>Module CJC offset in 0.01°C</td><td>-4096 to 4096</td><td>R/W</td><td>0</td></tr>
<tr><td>40492</td><td>Host watchdog timeout count, write 0 to clear</td><td>0 to 65535</td><td>R/W</td><td>-</td></tr>
<tr><td>40493</td><td>CJC update setting, 0 ~ 2</td><td>0: stop
1: start
2: once</td><td>R/W</td><td>1</td></tr>
<tr><td>00257</td><td>Protocol, 0: DCON, 1: Modbus RTU</td><td>0: DCON
1: Modbus RTU</td><td>R/W</td><td>1</td></tr>
<tr><td>00259</td><td>Filter setting, 0: 60Hz rejection, 1: 50Hz rejection</td><td>0: 60Hz rejection
1: 50Hz rejection</td><td>R/W</td><td>0</td></tr>
<tr><td>00260</td><td>Modbus host watchdog mode
0: same as I-7000 (old mode)
1: can use AO and DO command to clear host watchdog timeout status (new mode)</td><td>0: old mode
1: new mode</td><td>R/W</td><td>0</td></tr>
<tr><td>00261</td><td>1: enable, 0: disable host watchdog</td><td>0: disable
1: enable</td><td>R/W</td><td>0</td></tr>
<tr><td>00268</td><td>1: enable, 0: disable CJC</td><td>0: disable
1: enable</td><td>R/W</td><td>1</td></tr>
<tr><td>00269</td><td>Modbus data format, 0: hex, 1: engineering</td><td>0: hex
1: engineering</td><td>R/W</td><td>1</td></tr>
</table>

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00270	Host watch dog timeout status, write 1 to clear host watch dog timeout status	0: normal 1; host watchdog timeout	R/W	-
00273	Reset status, 1: first read after powered on, 0: not the first read after powered on	0: not reset 1: reset	R	-
00274	Sampling rate, 1: 8Hz, 0: 10Hz	0: 10Hz 1: 8Hz	R/W	0
00276	Open thermocouple detection (for firmware version B307 and later)	0: disable 1: enable	R/W	1

Notes:

1. The max number of analog output registers written in a command is 11.
2. The command of loading factory calibration parameters takes about 3 seconds.
   The next command should be sent after 3 seconds.

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M-7019Z

Address	Description	Data Format	Attribute	Factory Default
10129 ~ 10138 00129 ~ 00138	Over/under range status of channel 0 to 9	0: normal 1: over/under	R	-
30001 ~ 30010 40001 ~ 40010	Analog input value of channel 0 to 9	-32768 to 32767 (0x8000 to 0x7FFF)	R	-
30129 40129	CJC temperature in 0.01°C	-5000 to 10000	R	-
40257 ~ 40266	Type code of channel 0 to 9 0x00: ±15 mV 0x01: ±50 mV 0x02: ±100 mV 0x03: ±500 mV 0x04: ±1 V 0x05: ±2.5 V 0x06: ±20 mA 0x07: 4 ~ 20 mA 0x08: ±10 V 0x09: ±5 V 0x0A: ±1 V 0x0B: ±500 mV 0x0C: ±150 mV 0x0D: ±20 mA 0x0E: type J thermocouple 0x0F: type K thermocouple 0x10: type T thermocouple 0x11: type E thermocouple 0x12: type R thermocouple 0x13: type S thermocouple 0x14: type B thermocouple 0x15: type N thermocouple 0x16: type C thermocouple 0x17: type L thermocouple 0x18: type M thermocouple 0x19: type L thermocouple 0x1A: 0 ~ 20 mA	Refer to description	R/W	8
40289 ~ 40298	Temperature offset of channel 0 to 9 in 0.1°C, valid range: -128 ~ 127	-128 to 127	R/W	0
40353 ~ 40362	CJC offset of channel 0 to 9 in 0.01°C, valid range: -4096 ~ 4096	-4096 to 4096	R/W	0
40481	Firmware version (low word)	0x0000	R	0x0000

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<table>
<tr><td>40482</td><td>Firmware version (high word)</td><td>0xab0c for ab.c</td><td>R</td><td>-</td></tr>
<tr><td>40483</td><td>Module name (low word)</td><td>0x192A</td><td>R</td><td>0x192A</td></tr>
<tr><td>40484</td><td>Module name (high word)</td><td>0x0070</td><td>R</td><td>0x0070</td></tr>
<tr><td>40485</td><td>Module address, valid range: 1 ~ 247</td><td>1 to 247</td><td>R/W</td><td>1</td></tr>
<tr><td>40486</td><td>Bits 5:0
Baud rate, 0x03 ~ 0x0A
<table><tr><td>Code</td><td>0x03</td><td>0x04</td><td>0x05</td><td>0x06</td></tr><tr><td>Baud</td><td>1200</td><td>2400</td><td>4800</td><td>9600</td></tr><tr><td>Code</td><td>0x07</td><td>0x08</td><td>0x09</td><td>0x0A</td></tr><tr><td>Baud</td><td>19200</td><td>38400</td><td>57600</td><td>115200</td></tr></table>Bits 7:6
00: no parity, 1 stop bit
01: no parity, 2 stop bits
02: even parity, 1 stop bit
03: odd parity, 1 stop bit</td><td>Refer to description</td><td>R/W</td><td>6</td></tr>
<tr><td>40488</td><td>Modbus response delay time in ms, valid range: 0 ~ 30</td><td>0 to 30</td><td>R/W</td><td>0</td></tr>
<tr><td>40489</td><td>Host watchdog timeout value, 0 ~ 255, in 0.1s</td><td>0 to 255</td><td>R/W</td><td>255</td></tr>
<tr><td>40490</td><td>Enable/disable analog input channel, bit 0 for channel 0, bit 1 for channel 1, etc. 0 to disable and 1 to enable.</td><td>0 to 1023</td><td>R/W</td><td>1023</td></tr>
<tr><td>40491</td><td>Module CJC offset in 0.01°C</td><td>-4096 to 4096</td><td>R/W</td><td>0</td></tr>
<tr><td>40492</td><td>Host watchdog timeout count, write 0 to clear</td><td>0 to 65535</td><td>R/W</td><td>-</td></tr>
<tr><td>40493</td><td>CJC update setting, 0 ~ 2</td><td>0: stop
1: start
2: once</td><td>R/W</td><td>1</td></tr>
<tr><td>00257</td><td>Protocol, 0: DCON, 1: Modbus RTU</td><td>0: DCON
1: Modbus RTU</td><td>R/W</td><td>1</td></tr>
<tr><td>00259</td><td>Filter setting, 0: 60Hz rejection, 1: 50Hz rejection</td><td>0: 60Hz rejection
1: 50Hz rejection</td><td>R/W</td><td>0</td></tr>
<tr><td>00260</td><td>Modbus host watchdog mode
0: same as I-7000 (old mode)
1: can use AO and DO command to clear host watchdog timeout status (new mode)</td><td>0: old mode
1: new mode</td><td>R/W</td><td>0</td></tr>
<tr><td>00261</td><td>1: enable, 0: disable host watchdog</td><td>0: disable
1: enable</td><td>R/W</td><td>0</td></tr>
<tr><td>00268</td><td>1: enable, 0: disable CJC</td><td>0: disable
1: enable</td><td>R/W</td><td>1</td></tr>
<tr><td>00269</td><td>Modbus data format, 0: hex, 1: engineering</td><td>0: hex
1: engineering</td><td>R/W</td><td>1</td></tr>
</table>

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00270	Host watch dog timeout status, write 1 to clear host watch dog timeout status	0: normal 1: host watchdog timeout	R/W	
00272	Write 1 to reload factory calibration parameters	1: reload	W	-
00273	Reset status, 1: first read after powered on, 0: not the first read after powered on	0: not reset 1: reset	R	-
00276	Open thermocouple detection, 1: enable, 0: disable	0: disable 1: enable	R/W	1

Notes:

1. The max number of analog output registers written in a command is 11.
2. The command of loading factory calibration parameters takes about 3 seconds. The next command should be sent after 3 seconds.

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M-7022

(firmware version B102 and later)

Address	Description	Data Format	Attribute	Factory Default
40001 ~ 40002	Analog output value	Refer to M-7022 Data Format table below	R/W	-
40065 ~ 40066	Analog output read back	Refer to M-7022 Data Format table below	R	-
40097 ~ 40098	Safe output value	Refer to M-7022 Data Format table below	R/W	0
40193 ~ 40194	Power on output value	Refer to M-7022 Data Format table below	R/W	0
40257 ~ 40258	Type code	0: 0 ~ 20 mA 1: 4 ~ 20 mA 2: 0 ~ 10 V 4: 0 ~ 5 V	R/W	2
40289 ~ 40290	Slew rate 0x0: Immediate 0x1: 0.0625V/s or 0.125mA/s 0x2: 0.125V/s or 0.25mA/s 0x3: 0.25V/s or 0.5mA/s 0x4: 0.5V/s or 1.0mA/s 0x5: 1.0V/s or 2.0mA/s 0x6: 2.0V/s or 4.0mA/s 0x7: 4.0V/s or 8.0mA/s 0x8: 8.0V/s or 16.0mA/s 0x9: 16.0V/s or 32.0mA/s 0xA: 32.0V/s or 64.0mA/s 0xB: 64.0V/s or 128.0mA/s 0xC: 128.0V/s or 256.0mA/s 0xD: 256.0V/s or 512.0mA/s 0xE: 512.0V/s or 1024.0mA/s	Refer to description	R/W	0
40481	Firmware version (low word)	0x0000	R	0x0000
40482	Firmware version (high word)	0xab0c for ab.c	R	-
40483	Module name (low word)	0x2200	R	0x2200
40484	Module name (high word)	0x0070	R	0x0070
40485	Module address	1 to 247	R/W	1

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40486	Baud rate	Bits 5:0, baud rate 03: 1200 04: 2400 05: 4800 06: 9600 07: 19200 08: 38400 09: 57600 0A: 115200 Bits 7:6, parity 00: N81 01: N82 02: E81 03: O81	R/W	6
40488	Modbus response delay time in ms	0 to 30	R/W	0
40489	Host watchdog timeout in 0.1s	0 to 255	R/W	255
40492	Host watchdog timeout count, write 0 to clear	0 to 65535	R/W	-
00257	Protocol, 0:DCON, 1:Modbus	0: DCON 1: Modbus	R/W	1
00258	Modbus Protocol, 0:RTU. 1:ASCII	0: Modbus RTU 1: Modbus ASCII	R/W	0
00260	Modbus host watchdog mode 0: same as I-7000 (old mode) 1: can use AO and DO command to clear host watchdog timeout (new mode)	0: old mode 1: new mode	R/W	0
00261	1: enable, 0:disable host watchdog	0: disable 1: enable	R/W	0
00269	Modbus data format, 0: hex, 1: engineering	0: hex 1: engineering	R/W	1
00270	Host watch dog timeout status, write 1 to clear host watch dog timeout status	0: normal 1: host watchdog timeout	R/W	-
00273	Reset status, 1: first read after powered on, 0: not the first read after powered on	0: not reset 1: reset	R	-

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M-7022 Data Format

Type Code	Output Range	Data Format	Max	Min
0	0 ~ 20 mA	Engineering	20000	0
		Hexadecimal	0FFFh	0000h
1	4 ~ 20 mA	Engineering	20000	4000
		Hexadecimal	0FFFh	0000h
2	0 ~ 10 V	Engineering	10000	0
		Hexadecimal	0FFFh	0000h
4	0 ~ 5 V	Engineering	5000	0
		Hexadecimal	0FFFh	0000h

Note:
Engineering data format and type code 4 are supported by firmware version B102 and later.

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M-7024

(firmware version A201 and later)

Address	Description	Data Format	Attribute	Factory Default
40001 ~ 40004	Analog output value	Refer to M-7024 Data Format table below	R/W	-
40065 ~ 40068	Analog output read back	Refer to M-7024 Data Format table below	R	-
40097 ~ 40100	Safe output value	Refer to M-7024 Data Format table below	R/W	0
40193 ~ 40196	Power on output value	Refer to M-7024 Data Format table below	R/W	0
40481	Firmware version (low word)	0x0000	R	0x0000
40482	Firmware version (high word)	0xab0c for ab.c	R	-
40483	Module name (low word)	0x2400	R	0x2400
40484	Module name (high word)	0x0070	R	0x0070
40485	Module address	1 to 247	R/W	1
40486	Baud rate	Bits 5:0, baud rate 03: 1200 04: 2400 05: 4800 06: 9600 07: 19200 08: 38400 09: 57600 0A: 115200 Bits 7:6, parity 00: N81 01: N82 02: E81 03: O81	R/W	6
40487	Type code	0x30: 0 ~ 20 mA 0x31: 4 ~ 20 mA 0x32: 0 ~ 10 V 0x33: -10 ~ +10 V 0x34: 0 ~ 5 V 0x35: -5 ~ +5 V	R/W	0x32
40488	Modbus response delay time in ms	0 to 30	R/W	0

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40489	Host watchdog timeout in 0.1s	0 to 255	R/W	255
40492	Host watchdog timeout count, write 0 to clear	0 to 65535	R/W	-
40494	Slew rate	0x0: Immediate 0x1: 0.0625V/s or 0.125mA/s 0x2: 0.125V/s or 0.25mA/s 0x3: 0.25V/s or 0.5mA/s 0x4: 0.5V/s or 1.0mA/s 0x5: 1.0V/s or 2.0mA/s 0x6: 2.0V/s or 4.0mA/s 0x7: 4.0V/s or 8.0mA/s 0x8: 8.0V/s or 16.0mA/s 0x9: 16.0V/s or 32.0mA/s 0xA: 32.0V/s or 64.0mA/s 0xB: 64.0V/s or 128.0mA/s 0xC: 128.0V/s or 256.0mA/s 0xD: 256.0V/s or 512.0mA/s 0xE: 512.0V/s or 1024.0mA/s 0xF: 1024.0V/s or 2048.0mA/s	R/W	0
00257	Protocol, 0:DCON, 1:Modbus		R/W	
00260	Modbus host watchdog mode 0: same as I-7000 1: can use AO and DO command to clear host watchdog timeout		R/W	
00261	1: enable, 0:disable host watchdog		R/W	
00269	Modbus data format, 0: hex, 1: engineering		R/W	
00270	Host watch dog timeout status, write 1 to clear host watch dog timeout status		R/W	
00273	Reset status, 1: first read after powered on, 0: not the first read after powered on		R	

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M-7024 Data Format

Type Code	Output Range	Data Format	+F.S.	-F.S.
30	0 to 20 mA	Engineering	20000	0
		Hexadecimal	3FFF	0000
31	4 to 20 mA	Engineering	20000	04000
		Hexadecimal	3FFF	0000
32	0 to +10 V	Engineering	10000	0
		Hexadecimal	3FFF	0000
33	-10 to +10 V	Engineering	+10000	-10000
		Hexadecimal	3FFF	C000
34	0 to +5 V	Engineering	+5000	0
		Hexadecimal	3FFF	0000
35	-5 to +5 V	Engineering	+5000	-5000
		Hexadecimal	3FFF	C000

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M-7024R

Address	Description	Data Format	Attribute	Factory Default
40001 ~ 40004	Analog output value	Refer to M-7024R Data Format table below	R/W	-
40065 ~ 40068	Analog output read back	Refer to M-7024R Data Format table below	R	-
40097 ~ 40100	Safe output value	Refer to M-7024R Data Format table below	R/W	0
40129 ~ 40133	Counter value of digital input	0 to 65535	R	-
40193 ~ 40196	Power on output value	Refer to M-7024R Data Format table below	R/W	0
00033 ~ 00037	Digital input value	0: off 1: on	R	-
00065 ~ 00069	High latched value of DI	0: normal 1: latched	R	-
00097 ~ 00101	Low latched value of DI	0: normal 1: latched	R	-
40481	Firmware version (low word)	0x0000	R	0x0000
40482	Firmware version (high word)	0xab0c for ab.c	R	-
40483	Module name (low word)	0x2422	R	0x2422
40484	Module name (high word)	0x0070	R	0x0070
40485	Module address	1 to 247	R/W	1
40486	Baud rate	Bits 5:0, baud rate 03: 1200 04: 2400 05: 4800 06: 9600 07: 19200 08: 38400 09: 57600 0A: 115200 Bits 7:6, parity 00: N81 01: N82 02: E81 03: O81	R/W	6

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40487	Type code	0x30: 0 ~ 20 mA 0x31: 4 ~ 20 mA 0x32: 0 ~ 10 V 0x33: -10 ~ +10 V 0x34: 0 ~ 5 V 0x35: -5 ~ +5 V	R/W	0x32
40488	Modbus response delay time in ms	0 to 30	R/W	0
40489	Host watchdog timeout in 0.1s	0 to 255	R/W	255
40492	Host watchdog timeout count, write 0 to clear	0 to 65535	R/W	-
40494	Slew rate	0x0: Immediate 0x1: 0.0625V/s or 0.125mA/s 0x2: 0.125V/s or 0.25mA/s 0x3: 0.25V/s or 0.5mA/s 0x4: 0.5V/s or 1.0mA/s 0x5: 1.0V/s or 2.0mA/s 0x6: 2.0V/s or 4.0mA/s 0x7: 4.0V/s or 8.0mA/s 0x8: 8.0V/s or 16.0mA/s 0x9: 16.0V/s or 32.0mA/s 0xA: 32.0V/s or 64.0mA/s 0xB: 64.0V/s or 128.0mA/s 0xC: 128.0V/s or 256.0mA/s 0xD: 256.0V/s or 512.0mA/s 0xE: 512.0V/s or 1024.0mA/s 0xF: 1024.0V/s or 2048.0mA/s	R/W	0
00257	Protocol, 0:DCON, 1:Modbus	0: DCON 1: Modbus RTU	R/W	1
00260	Modbus host watchdog mode 0: same as I-7000 (old mode) 1: can use AO and DO command to clear host watchdog timeout (new mode)	0: old mode 1: new mode	R/W	0

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00261	1: enable, 0:disable host watchdog	0: disable 1: enable	R/W	0
00264	Write 1 to clear latched DI	1: clear	W	-
00269	Modbus data format, 0: hex, 1: engineering	0: hex 1: engineering	R/W	1
00270	Host watch dog timeout status, write 1 to clear host watch dog timeout status	0: normal 1: host watchdog timeout	R/W	-
00273	Reset status, 1: first read after powered on, 0: not the first read after powered on	0: not reset 1: reset	R	-
00513 ~ 00517	Write 1 to clear DI counter value	1: clear	W	-

M-7024R Data Format

Type Code	Output Range	Data Format	+F.S.	-F.S.
30	0 to 20 mA	Engineering	20000	0
		Hexadecimal	3FFF	0000
31	4 to 20 mA	Engineering	20000	04000
		Hexadecimal	3FFF	0000
32	0 to +10 V	Engineering	10000	0
		Hexadecimal	3FFF	0000
33	-10 to +10 V	Engineering	+10000	-10000
		Hexadecimal	3FFF	C000
34	0 to +5 V	Engineering	+5000	0
		Hexadecimal	3FFF	0000
35	-5 to +5 V	Engineering	+5000	-5000
		Hexadecimal	3FFF	C000

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M-7024U

Address	Description	Data Format	Attribute	Factory Default
30065 ~ 30068 40065 ~ 40068	Analog output read back of channel 0 to 3	Refer to M-7024U Data Format table below	R	-
30129 ~ 30132 40129 ~ 40132	Counter value of digital input channel 0 to 3	0 to 65535	R	-
40001 ~ 40004	Analog output value of channel 0 to 3	Refer to M-7024U Data Format table below	R/W	-
40097 ~ 40100	Safe analog output value of channel 0 to 3	Refer to M-7024U Data Format table below	R/W	-
40193 ~ 40196	Power on analog output value of channel 0 to 3	Refer to M-7024U Data Format table below	R/W	-
40257 ~ 40260	Analog output type code of channel 0 to 3	0: 0 ~ 20 mA 1: 4 ~ 20 mA 2: 0 ~ 10 V 3: -10 ~ +10 V 4: 0 ~ 5 V 5: -5 ~ +5 V	R/W	2
40289 ~ 40292	Analog output slew rate of channel 0 to 3	0x0: Immediate 0x1: 0.0625V/s or 0.125mA/s 0x2: 0.125V/s or 0.25mA/s 0x3: 0.25V/s or 0.5mA/s 0x4: 0.5V/s or 1.0mA/s 0x5: 1.0V/s or 2.0mA/s 0x6: 2.0V/s or 4.0mA/s 0x7: 4.0V/s or 8.0mA/s 0x8: 8.0V/s or 16.0mA/s 0x9: 16.0V/s or 32.0mA/s 0xA: 32.0V/s or 64.0mA/s	R/W	0

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<table>
<tr><td></td><td></td><td>0xB: 64.0V/s or 128.0mA/s
0xC: 128.0V/s or 256.0mA/s
0xD: 256.0V/s or 512.0mA/s
0xE: 512.0V/s or 1024.0mA/s
0xF: 1024.0V/s or 2048.0mA/s</td><td></td><td></td></tr>
<tr><td>40481</td><td>Firmware version (low word)</td><td>0x0000</td><td>R</td><td>0x0000</td></tr>
<tr><td>40482</td><td>Firmware version (high word)</td><td>0xab0c for ab.c</td><td>R</td><td>-</td></tr>
<tr><td>40483</td><td>Module name (low word), 0x0070</td><td>0x2425</td><td>R</td><td>0x2425</td></tr>
<tr><td>40484</td><td>Module name (high word), 0x2425</td><td>0x0070</td><td>R</td><td>0x0070</td></tr>
<tr><td>40485</td><td>Module address, valid range: 1 ~ 247</td><td>1 to 247</td><td>R/W</td><td>1</td></tr>
<tr><td>40486</td><td>Bits 5:0
Baud rate, 0x03 ~ 0x0A
<table><tr><td>Code</td><td>0x03</td><td>0x04</td><td>0x05</td><td>0x06</td></tr><tr><td>Baud</td><td>1200</td><td>2400</td><td>4800</td><td>9600</td></tr><tr><td>Code</td><td>0x07</td><td>0x08</td><td>0x09</td><td>0x0A</td></tr><tr><td>Baud</td><td>19200</td><td>38400</td><td>57600</td><td>115200</td></tr></table>Bits 7:6
00: no parity, 1 stop bit
01: no parity, 2 stop bits
02: even parity, 1 stop bit
03: odd parity, 1 stop bit</td><td>Refer to description</td><td>R/W</td><td>6</td></tr>
<tr><td>40488</td><td>Modbus response delay time in ms</td><td>0 to 30</td><td>R/W</td><td>0</td></tr>
<tr><td>40489</td><td>Host watchdog timeout value, 0 ~ 255, in 0.1s</td><td>0 to 255</td><td>R/W</td><td>255</td></tr>
<tr><td>40492</td><td>Host watchdog timeout count, write 0 to clear</td><td>0 to 65535</td><td>R/W</td><td>-</td></tr>
<tr><td>00033 ~ 00046
10033 ~ 10046</td><td>Digital input value of channel 0 to 3</td><td>0: off
1: on</td><td>R</td><td>-</td></tr>
<tr><td>00065 ~ 00068
10065 ~ 10068</td><td>High latched value of DI</td><td>0: normal
1: latched</td><td>R</td><td>-</td></tr>
<tr><td>00073 ~ 00076
10073 ~ 10076</td><td>High latched value of DO</td><td>0: normal
1: latched</td><td>R</td><td>-</td></tr>
<tr><td>00097 ~ 00100</td><td>Low latched value of DI</td><td>0: normal
1: latched</td><td>R</td><td>-</td></tr>
</table>

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10097 ~ 10100				
00105 ~ 00108 10105 ~ 10108	Low latched value of DO	0: normal 1: latched	R	-
00225 ~ 00228 10225 ~ 10228	Status of current output open wire or voltage output short circuit	0: normal 1: open/short	R	-
00001 ~ 00004	Digital output value of channel 0 to 3	0: off 1: on	R/W	-
00129 ~ 00132	Safe value of digital output channel 0 to 3	0: off 1: on	R/W	0
00161 ~ 00164	Power on value of digital output channel 0 to 3	0: off 1: on	R/W	0
00193 ~ 00196	Counter update trigger edge of digital input channel 0 to 3	0: falling edge 1; rising edge	R/W	0
00257	Protocol, 0: DCON, 1: Modbus	0: DCON 1: Modbus RTU	R/W	1
00260	Modbus host watchdog mode 0: same as I-7000 (old mode) 1: can use AO and DO command to clear host watchdog timeout status (new mode)	0: old mode 1: new mode	R/W	0
00261	1: enable, 0: disable host watchdog	0: disable 1: enable	R/W	0
00264	Write 1 to clear latched DIO states	1: clear	W	-
00265	DI active state	0: normal 1: inversed	R/W	0
00266	DO active state	0: normal 1: inversed	R/W	0
00269	Modbus data format, 0: hex, 1: engineering	0: hex 1; engineering	R/W	1
00270	Host watch dog timeout status, write 1 to clear host watch dog timeout status	0: normal 1: host watchdog timeout	R/W	-
00272	Write 1 to reload factory default calibration parameters	1: reload	W	-
00273	Reset status, 1: first read after powered on, 0: not the first read after powered on	0: not reset 1: reset	R	-
00513 ~ 00516	Write 1 to clear counter value of digital input channel 0 to 3	1: clear	W	-
00769 ~ 00772	Enable retained analog output for channel 0 to 3	0: disable 1: enable	R/W	0

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M-7024U Data Format

Type Code	Range	Data Format	Minimum	Maximum
0	0 mA ~ +20 mA	Engineering	0	+20000
		Hexadecimal	0000h	FFFFh
1	+4 mA ~+20 mA	Engineering	+4000	+20000
		Hexadecimal	0000h	FFFFh
2	0V ~ +10 V	Engineering	0	+10000
		Hexadecimal	0000h	FFFFh
3	+/-10 V	Engineering	-10000	+10000
		Hexadecimal	8000h	7FFFh
4	0 V ~ +5 V	Engineering	0	+5000
		Hexadecimal	0000h	FFFFh
5	+/-5 V	Engineering	-5000	+5000
		Hexadecimal	8000h	7FFFh

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M-7026

Address	Description	Data Format	Attribute	Factory Default
00001 ~ 00003	Reads the current status of the Digital Output or sets the Digital Output to either active or inactive	0: on 1: off	R/W	-
00129 ~ 00131	Reads/sets the Digital Output Safe Value	0: on 1: off	R/W	0
00161 ~ 00163	Reads/sets the Digital Output Power-on Value	0: on 1: off	R/W	0
00193 ~ 00195	Reads/sets the status of the Digital Input Edge	0: Falling Edge 1: Rising Edge	R/W	0
00257	Reads/sets the Communication Protocol	0: DCON 1: Modbus RTU	R/W	1
00259	Reads/sets the Filter Settings	0: 60Hz rejection 1: 50Hz rejection	R/W	0
00260	Reads/sets the Host Watchdog Mode 0: The same as for I-7000 series modules (old mode) 1: Analog Output and Digital Output commands can be used to clear the status of the Host Watchdog timeout (new mode)	0: old mode 1: new mode	R/W	0
00261	Enables or disables the Host Watchdog, or reads the status of the Host Watchdog	0: disable 1: enable	R/W	0
00264	Clears the latched Digital Input and Digital Output channels. Write 1 to clear	1: clear	W	-
00265	Sets the active Digital Input mode:	0: normal 1: inverse	W	0
00266	Sets the active Digital Output mode:	0: normal 1: inverse	W	0
00269	Reads/sets the Modbus Data Format	0: hex 1: engineering	R/W	1
00270	Reads the status of the Host Watchdog timeout. Write 1 to clear.	0: normal 1: host watchdog timeout	R/W	-
00271	Reads/sets the Analog Input Filter Format	0: normal 1: fast	R/W	0
00272	Reloads the factory calibration parameters.	1: reload	W	-
00273	Reads the Reset status 0: This is NOT the first time the module has been read since being powered on 1: This is the first time the module has been read since being powered on	0: not reset 1: reset	R	-
00280	Clears the high latch values for all Analog Input channels. Write 1 to clear.	1: clear	W	-
00281	Clears the low latch values for all Analog Input channels. Write 1 to clear.	1: clear	W	-

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00284	Enables or disables calibration, or reads the status of the calibration function	0: disable 1; enable	R/W	-
00285	Sets the Analog Input zero calibration.	1: zero calibration	W	-
00286	Sets the Analog Input span calibration.	1: span calibration	W	-
00289 ~ 00294	Reads/clears the status of the low alarm for channels 0 to 5. Write 1 to clear.	0: normal 1: alarmed	R/W	-
00305 ~ 00310	Reads/clears the status of the high alarm for channels 0 to 5. Write 1 to clear.	0: normal 1: alarmed	R/W	-
00321 ~ 00326	Enables or disables the Analog Input Alarm, or reads the status of the Analog Input Alarm	0: disable 1: enable	R/W	0
00337 ~ 00342	Reads/sets the Analog Input Alarm mode	0: momentary 1: latched	R/W	0
00385 ~ 00390	Clears the high latched Analog Input for channels 0 to 5. Write 1 to clear.	1: clear	W	-
00417 ~ 00422	Clears the low latched Analog Input for channels 0 to 5. Write 1 to clear.	1: clear	W	-
00513 ~ 00515	Resets the Digital Input counter for channels 0 to 2. Write 1 to reset.	1: reset	W	-
10033 ~ 10035	Reads the status of the Digital Input for channels 0 to 2	0: on 1: off	R	-
10065 ~ 10067	Reads the status of the high latched Digital Input channels	0: normal 1: latched	R	-
10073 ~ 10075	Reads the status of the high latched Digital Output channels	0: normal 1: latched	R	-
10097~ 10099	Reads the status of the low latched Digital Input channels	0: normal 1: latched	R	-
10105 ~ 10107	Reads the status of the low latched Digital Output channels	0: normal 1: latched	R	-
10225 ~ 10230	Reads whether or not Analog Input channels 0 to 5 are under range	0: normal 1: under	R	-
10241 ~ 10242	Reads the status of the wire connection for Analog Output channels 0 to 1	0: normal 1: open	R	-
30001 ~ 30006	Reads the Analog Input value for channels 0 to 5	-32768 to 32767 (0x8000 to 0x7FFF)	R	-
30065 ~ 30066	Reads the current output value for Analog Output channels 0 to 1	-32768 to 32767 (0x8000 to 0x7FFF)	R	-
30129 ~ 30131	Reads the Digital Input counter for channels 0 to 2	0 to 65535	R	-
30513 ~ 30518	Reads the high latch value for Analog Input channels 0 to 5	-32768 to 32767 (0x8000 to 0x7FFF)	R	-
30545 ~ 30550	Reads the low latch value for Analog Input channels 0 to 5	-32768 to 32767 (0x8000 to 0x7FFF)	R	-
40033 ~ 40034	Reads/writes the Analog Output value for channels 0 to 1	-32768 to 32767 (0x8000 to 0x7FFF)	R/W	-
40097 ~ 40098	Reads/writes the safe value for Analog Output channels 0 to 1	-32768 to 32767 (0x8000 to 0x7FFF)	R/W	0

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40193 ~ 40194	Reads/writes the power-on value for Analog Output channels 0 to 1	-32768 to 32767 (0x8000 to 0x7FFF)	R/W	0
40225 ~ 40230	Reads/writes the Analog Input high alarm value	-32768 to 32767 (0x8000 to 0x7FFF)	R/W	32767
40233 ~ 40238	Reads/writes the Analog Input low alarm value	-32768 to 32767 (0x8000 to 0x7FFF)	R/W	-32768
40257 ~ 40262	Reads/writes the Type Code for Analog Input channels 0 to 5	0x07: 4 ~ 20 mA 0x08: ±10 V 0x09: ±5 V 0x0A: ±1 V 0x0B: ±500 mV 0x0C: ±150 mV 0x0D: ±20 mA 0x1A: 0 ~ 20 mA	R/W	8
40289 ~ 40290	Reads/writes the Analog Output Slew Rate for channels 0 to 1	0x0: Immediate 0x1: 0.0625V/s or 0.125mA/s 0x2: 0.125V/s or 0.25mA/s 0x3: 0.25V/s or 0.5mA/s 0x4: 0.5V/s or 1.0mA/s 0x5: 1.0V/s or 2.0mA/s 0x6: 2.0V/s or 4.0mA/s 0x7: 4.0V/s or 8.0mA/s 0x8: 8.0V/s or 16.0mA/s 0x9: 16.0V/s or 32.0mA/s 0xA: 32.0V/s or 64.0mA/s 0xB: 64.0V/s or 128.0mA/s 0xC: 128.0V/s or 256.0mA/s 0xD: 256.0V/s or 512.0mA/s 0xE: 512.0V/s or 1024.0mA/s 0xF: 1024.0V/s or 2048.0mA/s	R/W	0
40417 ~ 40418	Reads/writes the Type Code for Analog Output channels 0 to 1	0: 0 ~ 20 mA 1: 4 ~ 20 mA 2: 0 ~ 10 V	R/W	2

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		3: -10 ~ +10 V 4: 0 ~ 5 V 5: -5 ~ +5 V		
40481	Reads the Firmware Version (high word)	0x0000	R	0x0000
40482	Reads the Firmware Version (low word)	0xab0c for ab.c	R	-
40483	Reads the Name of the Module (high word)	0x2600	R	0x2600
40484	Reads the Name of the Module (low word)	0x0070	R	0x0070
40485	Reads the Module address. The valid range is 0x1 to 0xF7	1 to 247	R	1
40486	Reads/writes the Baud Rate Bits 5:0 Baud Rate Bits 7:6 Reserved	Bits 5:0, baud rate 03: 1200 04: 2400 05: 4800 06: 9600 07: 19200 08: 38400 09: 57600 0A: 115200 Bits 7:6, parity 00: N81 01: N82 02: E81 03: O81	R/W	6
40488	Reads/writes the Response Delay Time in ms. The valid range is 0 to 30ms.	0 to 30	R/W	0
40489	Reads/writes the Host Watchdog Timeout value in 0.1s increments. The valid range is 0 to 255.	0 to 255	R/W	255
40490	Enable/disable analog input channel, bit 0 for channel 0, bit 1 for channel 1, etc. 0 to disable and 1 to enable.	0 to 63	R/W	63
40492	Reads/clears the Host Watchdog Timeout count. Write 0 to clear.	0 to 65535	R/W	-

Note:

The command to load the factory calibration parameters (00272) takes about 3 seconds to be processed. Subsequent commands should not be sent before this time has elapsed.

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M-7028

Address	Description	Data Format	Attribute	Factory Default
30065 ~ 30072 40065 ~ 40072	Analog output read back of channel 0 to 7	Refer to M-7028 Data Table below	R	-
40001 ~ 40008	Analog output value of channel 0 to 7	Refer to M-7028 Data Table below	R/W	-
40097 ~ 40104	Safe analog output value of channel 0 to 7	Refer to M-7028 Data Table below	R/W	0
40193 ~ 40200	Power on analog output value of channel 0 to 7	Refer to M-7028 Data Table below	R/W	0
40257 ~ 40264	Analog output type code of channel 0 to 7	0: 0 ~ 20 mA 1: 4 ~ 20 mA 2: 0 ~ 10 V 3: -10 ~ +10 V 4: 0 ~ 5 V 5: -5 ~ +5 V	R/W	2
40289 ~ 40296	Analog output slew rate of channel 0 to 7	0x0: Immediate 0x1: 0.0625V/s or 0.125mA/s 0x2: 0.125V/s or 0.25mA/s 0x3: 0.25V/s or 0.5mA/s 0x4: 0.5V/s or 1.0mA/s 0x5: 1.0V/s or 2.0mA/s 0x6: 2.0V/s or 4.0mA/s 0x7: 4.0V/s or 8.0mA/s 0x8: 8.0V/s or 16.0mA/s 0x9: 16.0V/s or 32.0mA/s 0xA: 32.0V/s or 64.0mA/s 0xB: 64.0V/s or 128.0mA/s 0xC: 128.0V/s or 256.0mA/s 0xD: 256.0V/s or 512.0mA/s 0xE: 512.0V/s or	R/W	0

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<table>
<tr><td></td><td></td><td>1024.0mA/s
0xF: 1024.0V/s or 2048.0mA/s</td><td></td><td></td></tr>
<tr><td>40481</td><td>Firmware version (low word)</td><td>0x0000</td><td>R</td><td>0x0000</td></tr>
<tr><td>40482</td><td>Firmware version (high word)</td><td>0xab0c for ab.c</td><td>R</td><td>-</td></tr>
<tr><td>40483</td><td>Module name (low word), 0x2800</td><td>0x2800</td><td>R</td><td>0x2800</td></tr>
<tr><td>40484</td><td>Module name (high word), 0x0070</td><td>0x0070</td><td>R</td><td>0x0070</td></tr>
<tr><td>40485</td><td>Module address, valid range: 1 ~ 247</td><td>1 to 247</td><td>R/W</td><td>1</td></tr>
<tr><td>40486</td><td>Bits 5:0
Baud rate, 0x03 ~ 0x0A
<table>
<tr><td>Code</td><td>0x03</td><td>0x04</td><td>0x05</td><td>0x06</td></tr>
<tr><td>Baud</td><td>1200</td><td>2400</td><td>4800</td><td>9600</td></tr>
<tr><td>Code</td><td>0x07</td><td>0x08</td><td>0x09</td><td>0x0A</td></tr>
<tr><td>Baud</td><td>19200</td><td>38400</td><td>57600</td><td>115200</td></tr>
</table>
Bits 7:6
00: no parity, 1 stop bit
01: no parity, 2 stop bits
02: even parity, 1 stop bit
03: odd parity, 1 stop bit</td><td>Refer to description</td><td>R/W</td><td>6</td></tr>
<tr><td>40488</td><td>Modbus response delay time in ms</td><td>0 to 30</td><td>R/W</td><td>0</td></tr>
<tr><td>40489</td><td>Host watchdog timeout value, 0 ~ 255, in 0.1s</td><td>0 to 255</td><td>R/W</td><td>255</td></tr>
<tr><td>40492</td><td>Host watchdog timeout count, write 0 to clear</td><td>0 to 65535</td><td>R/W</td><td>-</td></tr>
<tr><td>00225 ~ 00232
10225 ~ 10232</td><td>Status of current output open wire</td><td>0: normal
1: open</td><td>R</td><td>-</td></tr>
<tr><td>00257</td><td>Protocol, 0: DCON, 1: Modbus</td><td>0: DCON
1: Modbus RTU</td><td>R/W</td><td>1</td></tr>
<tr><td>00260</td><td>Modbus host watchdog mode
0: same as I-7000 (old mode)
1: can use AO and DO command to clear host watchdog timeout status (new mode)</td><td>0: old mode
1: new mode</td><td>R/W</td><td>0</td></tr>
<tr><td>00261</td><td>1: enable, 0: disable host watchdog</td><td>0: disable
1: enable</td><td>R/W</td><td>0</td></tr>
<tr><td>00269</td><td>Modbus data format, 0: hex, 1: engineering</td><td>0: hex
1: engineering</td><td>R/W</td><td>1</td></tr>
<tr><td>00270</td><td>Host watch dog timeout status, write 1 to clear host watch dog timeout status</td><td>0: normal
1: host watchdog timeout</td><td>R/W</td><td>-</td></tr>
<tr><td>00272</td><td>Write 1 to reload factory default calibration parameters</td><td>1: reload</td><td>W</td><td>-</td></tr>
<tr><td>00273</td><td>Reset status, 1: first read after powered on, 0: not the first read after powered on</td><td>0: not reset
1: reset</td><td>R</td><td>-</td></tr>
</table>

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M-7028 Data Format

Type Code	Range	Data Format	Minimum	Maximum
0	0 mA ~ +20 mA	Engineering	0	+20000
		Hexadecimal	0000h	FFFFh
1	+4 mA ~+20 mA	Engineering	+4000	+20000
		Hexadecimal	0000h	FFFFh
2	0V ~ +10 V	Engineering	0	+10000
		Hexadecimal	0000h	FFFFh
3	+/-10 V	Engineering	-10000	+10000
		Hexadecimal	8000h	7FFFh
4	0 V ~ +5 V	Engineering	0	+5000
		Hexadecimal	0000h	FFFFh
5	+/-5 V	Engineering	-5000	+5000
		Hexadecimal	8000h	7FFFh

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M-7033

Address	Description	Data Format	Attribute	Factory Default
30001 40001	Analog input value of channel 0	0x8000 to 0x7FFF	R	-
30002 40002	Analog input value of channel 1	0x8000 to 0x7FFF	R	-
30003 40003	Analog input value of channel 2	0x8000 to 0x7FFF	R	-

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M-7000 DIO

<table>
<tr><th>Address</th><th>Description</th><th>Data Format</th><th>Attribute</th><th>Factory Default</th></tr>
<tr><td>30001 ~ 30016</td><td>Counter value of digital input</td><td>0 to 65535</td><td>R</td><td>-</td></tr>
<tr><td>40001 ~ 40016</td><td>Counter value of digital input</td><td>0 to 65535</td><td>R</td><td>-</td></tr>
<tr><td>40481*1</td><td>Firmware version (low word)</td><td>0x0000 to 0xFFFF</td><td>R</td><td>-</td></tr>
<tr><td>40482*1</td><td>Firmware version (high word)</td><td>0x0000 to 0xFFFF</td><td>R</td><td>-</td></tr>
<tr><td>40483*1</td><td>Module name (low word)</td><td>0x0000 to 0xFFFF</td><td>R</td><td>-</td></tr>
<tr><td>40484*1</td><td>Module name (high word)</td><td>0x0000 to 0xFFFF</td><td>R</td><td>-</td></tr>
<tr><td>40485*1</td><td>Module address, valid range: 1 ~ 247</td><td>1 to 247</td><td>R/W</td><td>1</td></tr>
<tr><td>40486*1</td><td>Bits 5:0
Baud rate, 0x03 ~ 0x0A
<table><tr><td>Code</td><td>0x03</td><td>0x04</td><td>0x05</td><td>0x06</td></tr><tr><td>Baud</td><td>1200</td><td>2400</td><td>4800</td><td>9600</td></tr><tr><td>Code</td><td>0x07</td><td>0x08</td><td>0x09</td><td>0x0A</td></tr><tr><td>Baud</td><td>19200</td><td>38400</td><td>57600</td><td>115200</td></tr></table>Bits 7:6
00: no parity, 1 stop bit
01: no parity, 2 stop bits
02: even parity, 1 stop bit
03: odd parity, 1 stop bit</td><td>Refer to description</td><td>R/W</td><td>6</td></tr>
<tr><td>40488*1</td><td>Modbus response delay time in ms, valid range: 0 ~ 30</td><td>0 to 30</td><td>R/W</td><td>0</td></tr>
<tr><td>40489*1</td><td>Host watchdog timeout value, 0 ~ 255, in 0.1s</td><td>0 to 255</td><td>R/W</td><td>255</td></tr>
<tr><td>40492*1</td><td>Host watchdog timeout count, write 0 to clear</td><td>0 to 65535</td><td>R/W</td><td>-</td></tr>
<tr><td>10001 ~ 10016</td><td>Digital input value</td><td>0: off
1: on</td><td>R</td><td>-</td></tr>
<tr><td>00001 ~ 00016</td><td>Digital output value</td><td>0: off
1: on</td><td>R/W</td><td>-</td></tr>
<tr><td>00033 ~ 00048</td><td>Digital input value of channel 0 ~ 7</td><td>0: off
1: on</td><td>R</td><td>-</td></tr>
<tr><td>00065 ~ 00096</td><td>High latched values of DIO</td><td>0: normal
1: latched</td><td>R</td><td>-</td></tr>
<tr><td>00097 ~ 00128</td><td>Low latched values of DIO</td><td>0: normal
1: latched</td><td>R</td><td>-</td></tr>
<tr><td>00129 ~ 00144</td><td>Safe value of digital output channel</td><td>0: off
1: on</td><td>R/W</td><td>0</td></tr>
<tr><td>00161 ~ 00176</td><td>Power on value of digital output channel</td><td>0: off
1: on</td><td>R/W</td><td>0</td></tr>
</table>

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00193*1 ~ 00208	Counter update trigger edge of digital input channel	0: falling edge 1: rising edge	R/W	0
00257*2	Write 1 to clear latch values	1: clear	W	-
00257*1	Protocol, 0: DCON, 1: Modbus RTU	0: DCON 1: Modbus	R/W	1
00258*1	0: Modbus RTU, 1: Modbus ASCII	0: Modbus RTU 1: Modbus ASCII	R/W	0
00260*1	Modbus host watchdog mode 0: same as I-7000 (old mode) 1: can use write DO command to clear host watchdog timeout status (new mode)	0: old mode 1: new mode	R/W	0
00261*1	1: enable, 0: disable host watchdog	0: disable 1: enable	R/W	0
00264*1	Write 1 to clear latched DIO	1: clear	W	-
00265*1	DI active state, 0: normal, 1: inverse	0: normal 1: inverse	R/W	0
00266*1	DO active state, 0: normal, 1:inverse	0: normal 1: inverse	R/W	0
00270*1	Host watch dog timeout status, write 1 to clear host watch dog timeout status	0: normal 1: host watchdog timeout	R/W	-
00273*1	Reset status, 1: first read after powered on, 0: not the first read after powered on	0: not reset 1: reset	R	-
00513 ~ 00528	Write 1 to clear counter value of digital input channel	1: clear	W	-

Note:

*1: only available with firmware version 200 and later

*2: only available with firmware version 199 and earlier

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M-7080

Address	Description	Data Format	Attribute	Factory Default
40001	Counter/frequency value of channel 0 (low word)	0 to 65535	R	-
40002	Counter/frequency value of channel 0 (high word)	0 to 65535	R	-
40003	Counter/frequency value of channel 1 (low word)	0 to 65535	R	-
40004	Counter/frequency value of channel 1 (high word)	0 to 65535	R	-
40065	Max. value of counter 0 (low word)	0 to 65535	R/W	65535
40066	Max. value of counter 0 (high word)	0 to 65535	R/W	65535
40067	Max. value of counter 1 (low word)	0 to 65535	R/W	65535
40068	Max. value of counter 1 (high word)	0 to 65535	R/W	65535
40097	Preset value of counter 0 (low word)	0 to 65535	R/W	0
40098	Preset value of counter 0 (high word)	0 to 65535	R/W	0
40099	Preset value of counter 1 (low word)	0 to 65535	R/W	0
40100	Preset value of counter 1 (high word)	0 to 65535	R/W	0
40161	Low level width threshold in us	2 to 65535	R/W	2
40162	High level width threshold in us	2 to 65535	R/W	2
40163	Low voltage trigger value in 0.1V	0 to 50	R/W	8
40164	High voltage trigger value in 0.1V	0 to 50	R/W	24
00001	DO 0	0: off 1: on	R/W	-
00002	DO 1	0: off 1: on	R/W	-
00065	Overflow flag of counter 0	0: normal 1: overflow	R	-
00066	Overflow flag of counter 1	0: normal 1: overflow	R	-
00129	Input mode of channel 0, 0:non-isolated, 1:isolated	0:non-isolated 1:isolated	R/W	0
00130	Input mode of channel 1, 0:non-isolated, 1:isolated	0:non-isolated 1:isolated	R/W	0
00131	0: gate is low active, 1: gate is high active, when gate control is enabled	0: low active 1: high active	R/W	0
00132	Gate control, 0: enable, 1:disable	0: disable 1: enable	R/W	0
00133	Set counter 0 to preset value	1: preset	W	-

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00134	Set counter 1 to preset value	1: preset	W	-
00135	Start(1)/Stop(0) counter 0	0: stop 1: start	R/W	1
00136	Start(1)/Stop(0) counter 1	0: stop 1: start	R/W	1
00139	Enable(1)/disable(0) digital filter	0: disable 1: enable	R/W	0
00142	Frequency gate time, 0:0.1second, 1: 1.0seccond	0: 0.1s 1: 1.0s	R/W	0
00143	LED configuration, 0:ch0, 1: ch1	0: ch0 1: ch1	R/W	0
00145*1	Counter mode of channel 0, 1: stop counting on overflow, 0: continuous	0: continuous 1: stop counting	R/W	-
00146*1	Counter mode of channel 1, 1: stop counting on overflow, 0: continuous	0: continuous 1: stop counting	R/W	-

***1:**

Only available with firmware version 0A24 and later. In continuous counting mode, the maximum value is ignored. When the count reaches FFFFFFFFh, it restarts from 0 and the overflag is set. In this mode, the overflow flag can be cleared by writing zero to the overflow flag register. The default mode is stop counting on overflow.

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M-7080B

Address	Description	Data Format	Attribute	Factory Default
40001	Counter/frequency value of channel 0 (low word)	0 to 65535	R	-
40002	Counter/frequency value of channel 0 (high word)	0 to 65535	R	-
40003	Counter/frequency value of channel 1 (low word)	0 to 65535	R	-
40004	Counter/frequency value of channel 1 (high word)	0 to 65535	R	-
40065	Max. value of counter 0 (low word)	0 to 65535	R/W	65535
40066	Max. value of counter 0 (high word)	0 to 65535	R/W	65535
40067	Max. value of counter 1 (low word)	0 to 65535	R/W	65535
40068	Max. value of counter 1 (high word)	0 to 65535	R/W	65535
40097	Preset value of counter 0 (low word)	0 to 65535	R/W	0
40098	Preset value of counter 0 (high word)	0 to 65535	R/W	0
40099	Preset value of counter 1 (low word)	0 to 65535	R/W	0
40100	Preset value of counter 1 (high word)	0 to 65535	R/W	0
40161	Low level width threshold in us	2 to 65535	R/W	2
40162	High level width threshold in us	2 to 65535	R/W	2
40163	Low voltage trigger value in 0.1V	0 to 50	R/W	8
40164	High voltage trigger value in 0.1V	0 to 50	R/W	24
00001	DO 0	0: off 1: on	R/W	-
00002	DO 1	0: off 1: on	R/W	-
00065	Overflow flag of counter 0	0: normal 1: overflow	R	-
00066	Overflow flag of counter 1	0: normal 1: overflow	R	-
00129	Input mode of channel 0, 0:non-isolated, 1:isolated	0:non-isolated 1:isolated	R/W	0
00130	Input mode of channel 1, 0:non-isolated, 1:isolated	0:non-isolated 1:isolated	R/W	0
00131	0: gate is low active, 1: gate is high active, when gate control is enabled	0: low active 1: high active	R/W	0
00132	Gate control, 0: enable, 1:disable	0: disable 1: enable	R/W	0
00135	Start(1)/Stop(0) counter 0	0: stop 1: start	R/W	1
00136	Start(1)/Stop(0) counter 1	0: stop 1: start	R/W	1

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00139	Enable(1)/disable(0) digital filter	0: disable 1: enable	R/W	0
00142	Frequency gate time, 0:0.1second, 1: 1.0seccond	0: 0.1s 1: 1.0s	R/W	0
00143	LED configuration, 0:ch0, 1: ch1	0: ch0 1: ch1	R/W	0

NOTE:
When the type code is 52 and registers 40097 ~ 40100 are set, the current counter values are set to the preset values, too.

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M-7084

Address	Description	Data Format	Attribute	Factory Default
30001 ~ 30016	Counter/frequency value of channel 0 to 7, two registers for each channel	0 to 65535	R	-
40065 ~ 40080	Maximum value for up counter 0 to 7, two registers for each channel	0 to 65535	R/W	65535
40097 ~ 40112	Preset value of counter 0 to 7, two registers for each channel	0 to 65535	R/W	0
40161	Frequency measurement timeout in 100ms, 1 ~ 255	1 to 255	R/W	1
40162	Low-pass filter time for channel 0 and 1 in us, 1 ~ 32767	1 to 32767	R/W	1
40163	Low-pass filter time for channel 2 and 3 in us, 1 ~ 32767	1 to 32767	R/W	1
40164	Low-pass filter time for channel 4 to 7 in us, 1 ~ 32767	1 to 32767	R/W	1
40257 ~ 40264	Type code of channel 0 to 7 0x50: Up counter 0x51: Frequency 0x54: Up/down counter 0x55: Pulse/direction counter 0x56: Quadrature counter	Refer to description	R/W	0x50
40481	Firmware version (low word)	0x0000	R	0x0000
40482	Firmware version (high word)	0xab0c for ab.c	R	-
40483	Module name (low word)	0x8400	R	0x8400
40484	Module name (high word)	0x0070	R	0x0070
40485	Module address, valid range: 1 ~ 247	1 to 247	R/W	1
40486	Bits 5:0 Baud rate, valid range: 3 ~ 10 Bits 7:6 00: no parity, 1 stop bit 01: no parity, 2 stop bit 02: even parity, 1 stop bit 03: odd parity , 1 stop bit	Bits 5:0, baud rate 03: 1200 04: 2400 05: 4800 06: 9600 07: 19200 08: 38400 09: 57600 0A: 115200 Bits 7:6, parity 00: N81 01: N82 02: E81 03: O81	R/W	6
40488	Modbus response delay time in ms	0 to 30	R/W	0
40489	Host watchdog timeout value, 0 ~ 255, in 0.1s	0 to 255	R/W	255

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40490	Start/stop counting, bit 0 for ch0, bit 1 for ch1,etc, 0 to stop and 1 to start	0 to 255	R/W	255
40492	Host watchdog timeout count, write 0 to clear	0 to 65535	R/W	-
00033 ~ 00040	Input status after XOR mask for channel 0 to 7	0: off 1: on	R	-
00041 ~ 00048	Input status after low-pass filter for channel 0 to 7	0: off 1: on	R	-
00065 ~ 00072	Counter overflow status for channel 0 to 7. Write 1 to clear	0: normal 1; overflow	R/W	-
00257	Protocol, 0: DCON, 1: Modbus RTU	0: DCON 1: Modbus RTU	R/W	1
00261	1: enable, 0: disable host watchdog	0: disable 1: enable	R/W	0
00269	Data format for frequency type, 0: hex, 1: float	0: hex 1: float	R/W	0
00270	Host watch dog timeout status, write 1 to clear host watch dog timeout status	0: normal 1: host watchdog timeout	R/W	-
00273	Reset status, 1: first read after powered on, 0: not the first read after powered on	0: not reset 1: reset	R	-
00513 ~ 00520	Write 1 to clear counter 0 ~ 7	1: clear	W	-
00769 ~ 00776	Enable battery backup for counter 0 to 7	0: disable 1: enable	R/W	0
00801 ~ 00808	Automatic switching between high/low frequency mode for frequency measurement of channel 0 to 7	0: disable 1: enable	R/W	1
00833 ~ 00840	High/low frequency mode for frequency measurement of channel 0 to 7	0: low 1: high	R/W	-
00865 ~ 00872	Stop counting on counter overflow for channel 0 to 7	0: disable 1: enable	R/W	0
00897 ~ 00904	Enable low pass filter for channel 0 to 7	0: disable 1: enable	R/W	0
00929 ~ 00936	XOR mask for channel 0 to 7	0: disable 1: enable	R/W	0

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M-7088

Address	Description	Data Format	Attribute	Factory Default
00001 ~ 00008	PWM status 0: Stopped 1: Started	0: stopped 1: started	R/W	0
00065 ~ 00072	Overflow of DI counter, write 1 to clear	0: normal 1: overflow	R/W	-
00225 ~ 00232	DI counter status 0: Disabled 1: Enabled	0: disable 1: enable	R/W	1
00257	Protocol 0: DCON 1: Modbus RTU	0: DCON 1: Modbus RTU	R/W	1
00260	Modbus Host Watchdog mode 0: The same as I-7000 series modules (old mode) 1: The AO and DO command will clear Host Watchdog timeout status (new mode)	0: old mode 1: new mode	R/W	0
00261	Host Watchdog 0: Disabled 1: Enabled	0: disable 1: enable	R/W	0
00266	Clear all DI counters	1: clear	W	-
00270	Host Watchdog timeout status, write 1 to clear the Host Watchdog timeout status	0: normal 1: host watchdog timeout	R/W	-
00278	Inverse DI	0: normal 1: inverse	R/W	0
00289	Save all PWM configurations into EEPROM, write 1 to save	1: save	W	-
00865 ~ 00872	PWM mode 0: Burst mode 1: Continuous mode	0: burst 1: continuous	R/W	1
00897 ~ 00904	PWM trigger status 0: Disabled 1: Enabled	0: disable 1: enable	R/W	-

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00929 ~ 00936	PWM trigger start 0: Trigger stop 1: Trigger start	0: stop 1: start	R/W	-
00961 ~ 00968	PWM synchronized	0: disable 1: enable	R/W	0
10033 ~ 10040	DI status	0: off 1: on	R	-
10273	Reset status 0: Not the first read after power-on 1: First read after power-on	0: not reset 1: reset	R	-
30001 ~ 30016	DI count 30001=low word of channel 0, 30002=high word of channel 0, etc.	0 to 65535	R	-
30769 ~ 30776	PWM burst count Condition: PWM mode = burst, PWM status = stop	0 to 65535	R	-
30481	Firmware version (low word)	0x0000	R	0x0000
30482	Firmware version (high word)	0xab0c for ab.c	R	-
30483	Module name (low word)	0x8800	R	0x8800
30484	Module name (high word)	0x0070	R	0x0070
40065 ~ 40080	Max DI count value 40065=low word of channel 0, 40066=high word of channel 0, etc.	0 to 65535	R/W	65535
40097 ~ 40112	Preset value of DI count 40097=low word of channel 0, 40104=high word of channel 0, etc.	0 to 65535	R/W	0
40485	The module address, valid range: 1 ~ 247	1 to 247	R/W	1
40705 ~ 40712	PWM duty cycle in 0.1%	1 to 999	R/W	500
40737 ~ 40752	PWM frequency 40737=low word of channel 0, 40738=high word of channel 0, etc.	1 to 500000	R/W	10000
40801 ~ 40808	PWM burst steps	1 to 65535	R/W	1

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<table>
<tr><td>40486</td><td>Bits 5:0
Baud Rate, 0x03 ~ 0x0A
<table><tr><td>Code</td><td>0x03</td><td>0x04</td><td>0x05</td><td>0x06</td></tr><tr><td>Baud</td><td>1200</td><td>2400</td><td>4800</td><td>9600</td></tr><tr><td>Code</td><td>0x07</td><td>0x08</td><td>0x09</td><td>0x0A</td></tr><tr><td>Baud</td><td>19200</td><td>38400</td><td>57600</td><td>115200</td></tr></table>
Bits 7:6
00: No parity, 1 stop bit
01: No parity, 2 stop bits
02: Even parity, 1 stop bit
03: Odd parity, 1 stop bit</td><td>Refer to description</td><td>R/W</td><td>6</td></tr>
<tr><td>40488</td><td>Modbus response delay time in ms, valid range: 0 ~ 30</td><td>0 to 30</td><td>R/W</td><td>0</td></tr>
<tr><td>40489</td><td>Host Watchdog timeout value, 0 ~ 255, in 0.1s</td><td>0 to 255</td><td>R/W</td><td>255</td></tr>
<tr><td>40495</td><td>LED configuration</td><td>0-7: channel
8: rotate mode
9: by host</td><td>R/W</td><td>-</td></tr>
<tr><td>40496</td><td>LED data for host mode</td><td>0 to 65535</td><td>R/W</td><td>-</td></tr>
<tr><td>40498</td><td>Power-down count</td><td>0 to 65535</td><td>R/W</td><td>-</td></tr>
</table>

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