

User Manual for communication

Temperature Controllers
TR1D Series

MSO-TR1DC1-V1.0-2001US

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

Preface

Thank you for purchasing Autonics product.





Please familiarize yourself with the information contained in the **Safety Considerations** section before using this product.

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

User Manual Guide


- Please familiarize yourself with the information in this manual before using the product.
- This manual provides detailed information on the product's features. It does not offer any guarantee concerning matters beyond the scope of this manual.
- This manual may not be edited or reproduced in either part or whole without permission.
- This manual is not provided as part of the product package. Please visit our website (www.autonics.com) to download a copy.
- The manual's content may vary depending on changes to the product's software and other unforeseen developments within Autonics, and is subject to change without prior notice. Upgrade notice is provided through our homepage.
- We contrived to describe this manual more easily and correctly. However, if there are any corrections or questions, please notify us these on our website.


User Manual Symbols

Symbol	Description
 Note	Supplementary information for a particular feature.
 Warning	Failure to follow instructions can result in serious injury or death.
 Caution	Failure to follow instructions can lead to a minor injury or product damage.
 Ex.	An example of the concerned feature's use.
※	Annotation mark.

Safety Considerations

- Following these safety considerations will ensure the safe and proper use of the product and help prevent accidents, as well as minimizing possible hazards.
- Safety considerations are categorized as Warnings and Cautions, as defined below:

 Warning	Warning	Failure to follow the instructions may lead to a serious injury or accident.
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 Caution	Caution	Failure to follow the instructions may lead to a minor injury or accident.
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Warning

- Fail-safe device must be installed when using the unit with machinery that may cause serious injury or substantial economic loss. (e.g. nuclear power control, medical equipment, ships, vehicles, railways, aircraft, combustion apparatus, safety equipment, crime/disaster prevention devices, etc.)
Failure to follow this instruction may result in personal injury, economic loss or fire.
- Do not use the unit in the place where flammable/explosive/corrosive gas, high humidity, direct sunlight, radiant heat, vibration, impact, or salinity may be present.
Failure to follow this instruction may result in explosion or fire.
- Do not disassemble or modify the unit.
Failure to follow this instruction may result in fire.
- Do not connect, repair, or inspect the unit while connected to a power source.
Failure to follow this instruction may result in fire.
- Check 'Connections' before wiring. [Amplifier unit]
Failure to follow this instruction may result in fire.



Caution

- Do not stare at the laser emitter. [Sensor head]
Failure to follow this instruction may result in eye damage.
- Use the unit within the rated specifications.
Failure to follow this instruction may result in fire or product damage.
- Use dry cloth to clean the unit, and do not use water or organic solvent.
Failure to follow this instruction may result in fire.
- Mount the ferrite core to specified position before using. [Sensor head, Extension cable]
Failure to follow this instruction may result in output with noise.

Cautions during Use

- Follow instructions in 'Cautions during Use'. Otherwise, it may cause unexpected accidents.
- The power supply should be insulated and limited voltage/current or Class 2, SELV power supply device.
- Do not install where strong magnetic or electric field exist. Otherwise, the resolution may be adversely affected.
- Mutual optical interference between laser sensors and photoelectric sensors may result in malfunction.
- Mutual optical interference between laser sensors may result in malfunction.
- When connecting DC relay or other inductive load to the output, remove surge by using diode or varistor.
- Wire as short as possible and keep away from high voltage lines or power lines, to prevent surge and inductive noise. [Amplifier unit]
- For the optimized performance, it is recommended to measure after 30 minute from supplying power. [Amplifier unit]
- Since external disturbance light (sunlight, fluorescent lighting, etc.) can cause product malfunction, use the product with a light shield or slit. [Sensor head]
- When detecting with the maximum sensitivity, an error may occur depending on each characteristic deviation.
- This unit may be used in the following environments.
 - ① Indoors/Outdoors (in the environment condition rated in 'Specifications')
 - ② Altitude max. 2,000m
 - ③ Pollution degree 2
 - ④ Installation category II

The specifications are subject to change and some models may be discontinued without notice.

Be sure to follow cautions written in the instruction manual, user manual and the technical descriptions (catalog, website).

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1 Communication Overview

1.1 Modbus

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

※ Refer to the reference document of developer for the details

1.2 Frame Structure of Modbus RTU

1.2.1 Read Coil Status (Func 01-01H)

Read output (OX reference, Coil) ON/OFF status in the slave device.

▪ Query (Master)

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

← CRC16 →

▪ Response (Slave)

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

← CRC16 →

1.2.2 Read Input Status (Func 02–02H)

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

▪ **Query (Master)**

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

CRC16

▪ **Response (Slave)**

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

CRC16

1.2.3 Read Holding Register (Func 03–03H)

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

▪ **Query (Master)**

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

CRC16

▪ **Response (Slave)**

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

CRC16

1.2.4 Read Input Register (Func 04–04H)

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

- **Query (Master)**

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

← CRC16 →

- **Response (Slave)**

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

← CRC16 →

1.2.5 Force Single Coil (Func 05–05 H)

Turns ON (FF00 H) or OFF (0000 H) of single coil (0X reference) status within slave.

- **Query (Master)**

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

← CRC16 →

- **Response (Slave)**

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

← CRC16 →

1.2.6 Preset Single Register (Func 06–06H)

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

▪ **Query (Master)**

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

← CRC16 →

▪ **Response (Slave)**

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

← CRC16 →

1.2.7 Preset Multiple Register (Func 16–10H)

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

▪ **Query (Master)**

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

← CRC16 →

▪ **Response (Slave)**

Slave Address	Function	Starting Address		No. of Register		Error Check (CRC16)	
		High	Low	High	Low	Low	High
1Byte	1Byte	1Byte	1Byte	1Byte	1Byte	1Byte	1Byte

← CRC16 →

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

1.2.8 Exception Response-Error Code

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

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

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

1.3 Autonics Modbus Address System

- **Parameter address structure**

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

For example, if the parameter address is **301001(03E8)**, it means that **3** is Reference number, **01001** is Decimal address (DEC), **03E8** is Hexadecimal address (HEX).

- **Reference number per each FUNC**

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

- **Correlation between decimal address and hexadecimal address**

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

Autonics Modbus address is started at '1' for decimal (DEC) address, and at '0' for hexadecimal (HEX). So, decimal (DEC) address values are +1 for Hex (HEX) address values.



Ex.

03E8(HEX) → 1001(DEC) (1000 + 1)

07D0(HEX) → 2001(DEC) (2000 + 1)

157C(HEX) → 5501(DEC) (5500 + 1)

2 Modbus Mapping Table

- **The meaning of HI/LO address**

Some parameters divide the value into two addresses (HI/LO) because it exceeds the maximum value (2^{16} , 16 bit) that can be sent from one address.

When inputting value greater than the maximum (2^{16} , 16 bit), convert it to hexadecimal (HEX), enter up to 4 digits (low 16bit) into the LO address and over 5 digits (high 16 bit) into the HI address.

For example, when inputting a value '99999' into 'Output hysteresis' parameter, convert '99999' into the hexadecimal value, '**1869F**'. Input '**1**'(0x0001) into HI address (OUT HYS HI [Output hysteresis], 400065(0040)) and '**869F**'(0x869F) into LO address (OUT HYS LO [Output hysteresis], 400066(0041)), and send them.

If under the maximum (2^{16} , 16 bit) is needed to be set, input '0'(0x0000) into HI address and the hexadecimal value (HEX) into LO address.

2.1 Read Coil Status.(Func 01) / Force Single Coil(Func 05)

[Func:01/05, R/W : R/W]

No.(Address)	Type	Description	Setting/Display range	Unit	Default	Note
000001(0000)	RUN/STOP	Control output run/stop Auto tuning run/stop Alarm reset	0 : RUN 1 : STOP	-	STOP	-
000002(0001)	AT		0 : OFF 1 : ON	-	OFF	-
000003(0003)	Alarm Reset		0 : OFF 1 : ON	-	OFF	-
000004 to 000050	Reserved					

2.2 Read Discrete Inputs.(Func 02) [Func:02, R/W : R]

No.(Address)	Type	Description	Setting/Display range	Unit	Default	Note
100001(0000)	SV	Front display	SV indicator	0: OFF 1: ON	-	-
100002(0001)	°F	Front display	Unit indicator	0: OFF 1: ON	-	-
100003(0002)	°C	Front display	Unit indicator	0: OFF 1: ON	-	-
100004(0003)	OUT1	Front display	Control output1 indicator	0: OFF 1: ON	-	-
100005(0004)	OUT2 / Transmission output2	Front display	Control output2 / Transmission output 2 indicator	0: OFF 1: ON	-	-
100006(0005)	AL1	Front display	Alarm output1 indicator	0: OFF 1: ON	-	-
100007(0006)	AL2	-	Alarm output2	0: OFF 1: ON	-	-
100008(0007)	UP	Front display	Deviation high limit indicator	0: OFF 1: ON	-	-
100009(0008)	MID	Front display	-	0: OFF 1: ON	-	-
100010(0009)	DOWN	Front display	Deviation low limit indicator	0: OFF 1: ON	-	-
100010 to 100050	Reserved					

2.3 Read Input Registers (Func 04)[Func:02, R/W : R]

No.(Address)	Type	Description	Setting/Display range	Unit	Default	Note
300001 to 300100	Reserved					
300101(0064)	-	Product number H	-	-	1	-
300102(0065)	-	Product number L	-	-	5160	-
300103(0066)	-	Hardware version	-	-	<input type="checkbox"/>	-
300104(0067)	-	Software version	-	-	<input type="checkbox"/>	-
300105(0068)	-	Model 1	-	-	“TR”	-
300106(0069)	-	Model 2	-	-	“ 1D”	-
300107(006A)	-	Model 3	-	-	“- <input type="checkbox"/> ”	“-1”
300108(006B)	-	Model 4	-	-	“ <input type="checkbox"/> <input type="checkbox"/> ”	“4R”
300109(006C)	-	Model 5	-	-	“ <input type="checkbox"/> ”	“N ”
300110(006D)	-	Model 6	-	-	“ “	-
300111(006E)	-	Model 7	-	-	“ “	-
300112(006F)	-	Model 8	-	-	“ “	-
300113(0070)	-	Model 9	-	-	“ “	-
300114(0071)	-	Model 10	-	-	“ “	-
300115(0072)	-	Reserved	-	-	-	-
300116(0073)	-	Reserved	-	-	-	-
300117(0074)	-	Reserved	-	-	-	-
300118(0075)	-	Coil status Start Address	-	-	0001	-
300119(0076)	-	Coil status Quantity	-	-	3	-
300120(0077)	-	Input status Start Address	-	-	0001	-
300121(0078)	-	Input status Quantity	-	-	10	-
300122(0079)	-	Holding Register Start Address	-	-	0001	-
300123(007A)	-	Holding Register Quantity	-	-	351	-
300124(007B)	-	Input Register Start Address	-	-	0001	-
300125(007C)	-	Input Register Quantity	-	-	1008	-
300127 to 300200	Reserved					

No.(Address)	Type	Description	Setting/Display range	Unit	Default	Note
301001(03E8)	PV	Present value	-1999 to 9999	°C/°F	-	-
301002(03E9)	DOT	Decimal point	0: 0 1: 0.0	-	0	-
301003(03EA)	UNIT	Display unit	0: °C 1: °F	-	°C	-
301004(03EB)	SV	Setting value	Within L-SV to H-SV	°C/°F	0	-
301005(03EC)	Heater Current Monitoring	Heater Current Monitoring	0.0 to 50.0	A	0.0	-
301006(03ED)	SV	Front display SV indicator	0: OFF 1: ON	-	-	Bit 0
	°F	Front display Unit indicator	0: OFF 1: ON	-	-	Bit 1
	°C	Front display Unit indicator	0: OFF 1: ON	-	-	Bit 2
	OUT1	Front display Control output1 indicator	0: OFF 1: ON	-	-	Bit 3
	OUT2/ Transmission output2	Front display Control output2 / Transmission output2 indicator	0: OFF 1: ON	-	-	Bit 4
	AL1	Front display Alarm output1 indicator	0: OFF 1: ON	-	-	Bit 5
	AL2	- Alarm output2	0: OFF 1: ON	-	-	Bit 6
	UP	Front display Deviation high limit indicator	0: OFF 1: ON	-	-	Bit 7
	MID	Front display -	0: OFF 1: ON	-	-	Bit 8
DOWN	Front display Deviation low limit indicator	0: OFF 1: ON	-	-	Bit 9	
301007(03EE)	HEATING MV	HEATING MV	0.0 to 100.0%	%	-	-
301008(03EF)	COOLING MV	COOLING MV	0.0 to 100.0%	%	-	-
310009 to 310050	Reserved					

2.4 Read Holding Register(Func 03) / Preset Single Register(Func 06) / Preset Multiple Registers(Func 16). [Func:03/06/16, R/W : R/W]

2.4.1 SV setting group

No.(Address)	Parameter	Description	Setting/Display range	Unit	Default	Note
400001(0000)	Set Value	SV setting value	Within L-SV to H-SV	°C/°F	0	-
400002 to 400050	Reserved					

2.4.2 Parameter 1group

No.(Address)	Parameter	Description	Setting/Display range	Unit	Default	Note
400051(0032)	LOCK	Lock	0: OFF 1: LOC1 2: LOC2 3: LOC3	-	OFF	-
400052(0033)	CT-A	Heater current monitoring	0 to 500 : 00.0 to 50.0 (display range)	A		-
400053(0034)	AT	Auto tuning	0: OFF 1: ON	-	OFF	-
400054(0035)	AL1	AL1 alarm temperature	Deviation alarm: -F.S to F.S	°C/°F	1250	-
400055(0036)	AL2	AL2 alarm temperature	Absolute value alarm: Within input specification			-
400056(0037)	H-P	Heating proportional band	0.1 to 999.9	°C/°F	10.0	-
400057(0038)	H-I	Heating integral time	0 to 9999	sec	240	-
400058(0039)	H-D	Heating derivative time	0 to 9999	sec	49	-
400059(003A)	C-P	Cooling proportional band	0.1 to 999.9	°C/°F	10.0	-
400060(003B)	C-I	Cooling integral time	0 to 9999	sec	240	-
400061(003C)	C-D	Cooling derivative time	0 to 9999	sec	49	-
400062(003D)	DB	Dead band	When control type is P.P, P.ON, ON.P: - Proportional band to 0.0 to + proportional band	°C/°F	0	-

No.(Address)	Parameter	Description	Setting/Display range	Unit	Default	Note
			When control type is ON.ON: -999 to 999 (-199.9 to 999.9) °C/°F			
400063(003E)	REST	Manual reset	0.0 to 100.0	%	50.0	-
400064(003F)	H.HYS	Heating hysteresis	1 to 100 (0.1 to 100.0)	-	2	-
400065(0040)	H.OST	Heating OFF offset	1 to 100 (0.1 to 100.0)	-	0	-
400066(0041)	C.HYS	Cooling hysteresis	1 to 100 (0.1 to 100.0)	-	2	-
400067(0042)	C.OST	Cooling OFF offset	1 to 100 (0.1 to 100.0)	-	0	-
400068 to 400100	Reserved					

2.4.3 Parameter 2group

No.(Address)	Parameter	Description	Setting/Display range	Unit	Default	Note
400101(0064)	IN-T	Input specification	Refer to 'Input specification'	-	KCA.H	-
400102(0065)	UNIT	Temperature unit	0: °C 1: °F	-	°C	-
400103(0066)	SPL.T	Sampling period	0: 50 1: 100 2: 250	ms	50	-
400104(0067)	IN-B	Input correction	-999 to 999 (-199.9 to 999.9)	Digit	0	-
400105(0068)	MAV.F	Input digital filter	0.1 to 120.0	sec	0.1	-
400106(0069)	L-SV	SV low limit value	Within 'Input specification' $L-Sv \leq (H-Sv - 1digit)$	°C/ °F	-50	-
400107(006A)	H-SV	SV high limit value	Within 'Input specification' $H-Sv \geq (L-Sv + 1digit)$	°C/ °F	1200	-
400108(006B)	O-FT	Control output mode	0: HEAT 1: COOL 2: H-C	-	H-C	-
400109(006C)	C-MD	Control type	Heating, Cooling	-	PP	-
			Heating & Cooling			
400110(006D)	OUT1	Control output1	0: CURR 1: SSR	-	CURR	-
400111(006E)	OUT2	Control output1 range	0: 4-20 1: 0-20	mA	4-20	-
400112(006F)	O1.MA	Control output2	0: CURR 1: SSR	-	CURR	-
400113(0070)	O2.MA	Control output2 range	0: 4-20 1: 0-20	mA	4-20	-

No.(Address)	Parameter	Description	Setting/Display range	Unit	Default	Note	
400114(0071)	H-T	Heating control cycle	Relay	0.5 to 120.0	sec	20.0	-
			SSR			2.0	
400115(0072)	C-T	Cooling control cycle	Relay	0.5 to 120.0	sec	20.0	-
			SSR			2.0	
400116(0073)	AL-1	AL1 Alarm operation	00: AM0._ 10: AM1.A 11:AM1.B 12: AM1.C 13: AM1.D 14: AM1.E 15: AM1.F 20: AM2.A 21: AM2.B 22: AM2.C 23: AM2.D 24: AM2.E 25: AM2.F 30: AM3.A 31: AM3.B 32: AM3.C 33: AM3.D 34: AM3.E 35: AM3.F 40: AM4.A 41 :AM4.B 42: AM4.C 43: AM4.D 44: AM4.E 45: AM4.F 50: AM5.A 51: AM5.B 52: AM5.C 53: AM5.D 54: AM5.E 55: AM5.F 60: AM6.A 61: AM6.B 62: AM6.C 63: AM6.D 64: AM6.E 65: AM6.F 70: SBA.A 71: SBA.B 80: LBA.A 81: LBA.B 90: HBA.A 91: HBA.B	-	AM1.A	-	
400117(0074)	A1.HY	AL1 Hysteresis	1 to 100	°C/ °F	1	-	
400118(0075)	AL-2	AL2 Alarm operation	Same as 'AL1 Alarm operation'	-	AM2.A	-	
400119(0076)	A2.HY	AL2 Hysteresis	1 to 100	°C/ °F	1	-	
400120(0077)	LBA.T	LBA time	0 to 9999	sec	0	-	
400121(0078)	LBA.B	LBA band	0 to 999 (0 to 999.9)	°C/ °F	2	-	
400122(0079)	AO.M1	Transmission output1 mode	0: PV 1: SV 2: H-MV 3: C-MV	-	PV	-	

No.(Address)	Parameter	Description	Setting/Display range	Unit	Default	Note
400123(007A)	FS1.L	Transmission output1 low limit	Within 'Input specification'	-	-50	-
400124(007B)	FS1.H	Transmission output1 high limit	Within 'Input specification'	-	1200	-
400125(007C)	AO.M2	Transmission output2 mode	0: PV 1: SV 2: H-MV 3: C-MV	-	PV	-
400126(007D)	FS2.L	Transmission output2 low limit	Within 'Input specification'	-	-50	-
400127(007E)	FS2.H	Transmission output2 high limit	Within 'Input specification'	-	1200	-
400128(007F)	DI-K	Digital input key	0: OFF 1: STOP 2: AT 3: AL.RE	-	STOP	-
400129(0080)	ER.MV	Sensor error, MV	Heating, Cooling: 0.0(OFF) to 100.0(ON) Heating & Cooling: -100.0 (Cooling ON) to 0.0 (OFF) to 100.0 (Heating ON)	%	0.0	-
400130(0081)	DSP	Screen protection	0: OFF 1: 1 2: 30 3: 60	min	OFF	-
400131(0082)	PRCL	Comm. protocol	0: RTU, 1: ASCI	-	RTU	-
400132(0083)	ADRS	Comm. address	1 to 99	-	1	-
400133(0084)	BPS	Comm. speed	0: 48 1: 96 2: 192 3: 384 4: 576 5: 1152	-	96	-
400134(0085)	PRTY	Comm. parity bit	0: NONE 1: EVEN 2: ODD	-	NONE	-
400135(0086)	STP	Comm. stop bit	0: 1 1: 2	-	2	-
400136(0087)	RSW.T	Response time	5 to 99	ms	20	-
400137(0088)	COMW	Comm. write	0: EN.A 1: DIS.A	-	EnA	-
400138(0089)	INIT	Parameter reset	0: OFF 1: ON	-	OFF	-
400138 to 400150	Reserved					

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