MECHATRONLINK Communication Converter

COM-MY Communication Data List

IMR02E03-E2

Thank you for purchasing this RKC product. In order to achieve maximum performance and ensure proper operation of your new instrument, carefully read all the instructions in this manual. Please place this manual in a convenient location for easy reference.

This manual describes the communication data of the COM-MY. For the installation, various function settings and SRZ engineering setting data, please read if necessary the following separate manuals.

- COM-MY Installation Manual (IMR02E01-E□): Enclosed with COM-MY
- COM-MY Instruction Manual (IMR02E02-E□): Enclosed with COM-MY
- COM-MY SRZ Communication Data List (IMR02E04-E□): Separate (Download or sold separately)

The above manuals can be downloaded from our website:
URL: http://www.rkcinst.com/english/manual_load.htm

1. EXPLANATION OF DATA MAP ITEMS

The communication data map shows data which can be used for communication between the PLC/host computer and COM-MY.

Name: Name of communication data
Symbols:
❑: Data for each SRZ unit
♣: Data for each channel
On a Z-TIO module (2-channel type), the communication data of CH3 and CH4 becomes invalid.
♦: Data for each module
★: Parameters which can be used in multi-memory area function
♣: Parameters only used for heat/cool control or position proportioning control, therefore data for CH2 and CH4 of Z-TIO module are unused.
[Read is possible (0), but the result of Write is disregarded.]

RKC Identifier: Communication identifier of RKC communication

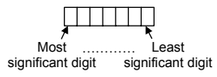
MECHATROLINK/Modbus register address:
A register address of Modbus and MECHATROLINK data item specification
HEX: Hexadecimal DEC: Decimal

Digits: The number of communication data digits in RKC communication

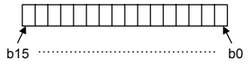
Attribute: A method of how communication data items are read or written when viewed from the PLC/host computer is described.
RO: Read only data [Host computer or PLC ← COM-MY (SRZ)]
R/W: Read and Write data [Host computer or PLC ↔ COM-MY (SRZ)]

Data range and Number of data:
Read or Write range of communication data
[ ]: Number of data
This is the maximum number per communication data that can be handled by one SRZ unit.

- ASCII code data (Example: 7 digits)



- 16-bit data



Factory set value: Factory set value of communication data

2. COMMUNICATION DATA MAP

■ Communication data of COM-MY

Name	RKC Identifier	MECHATROLINK/Modbus register address HEX	MECHATROLINK/Modbus register address DEC	Digits	Attribute	Data range and Number of data	Factory set value
Model code ♦ (COM-MY)	ID	—	—	32	RO	Model code (character) [1]	—
Model code ♦ (Function module [1])	IE	—	—	32	RO	Model code (character) [100]	—
ROM version ♦ (COM-MY)	VR	—	—	8	RO	ROM version [1]	—
ROM version ♦ (Function module [1])	VQ	—	—	8	RO	ROM version [100]	—
Integrated operating time monitor ♦ (COM-MY)	UT	—	—	7	RO	0 to 19999 hours [1]	—
Integrated operating time monitor ♦ (Function module [1])	UV	—	—	7	RO	0 to 19999 hours [100]	—
Error code ❑ (COM-MY)	ER	0000	0	7	RO	• RKC communication 1: Adjustment data error [a, b] 2: Data back-up error [a, b, c] 4: A/D conversion error [a, b] 32: Logic output data error [a] 64: Stack overflow [c] 512: MECHATROLINK monitoring error [c] • MECHATROLINK/Modbus b0: Adjustment data error [a, b] b1: Data back-up error [a, b, c] b2: A/D conversion error [a, b] b3, b4: Unused b5: Logic output data error [a] b6: Stack overflow [c] b7, b8: Unused b9: MECHATROLINK monitoring error [c] b10 to b15: Unused Data 0: OFF 1: ON [Decimal number: 0 to 39] For the identifier ER, the error condition is shown by the *OR* of each module. When multiple errors occur, the error number is the sum value. [a] Item of the Z-TIO/Z-DIO module [b] Item of the Z-CT module [c] Item of the COM-MY	—
Error code ♦ (Function module [1])	EZ	0001 ⋮ 0064	1 ⋮ 100	7	RO	[COM-MY: 1] [Z-TIO, Z-DIO and Z-CT: 100]	—
Backup memory state monitor ♦ (COM-MY)	EM	0065	101	1	RO	0: The content of the backup memory does not coincide with that of the RAM. 1: The content of the backup memory coincides with that of the RAM. [COM-MY: 1] [Z-TIO, Z-DIO and Z-CT: 100]	—
Backup memory state monitor ♦ (Function module [1])	CZ	0066 ⋮ 00C9	102 ⋮ 201	1	RO		—
Unused	—	00CA ⋮ 00CB	202 ⋮ 303	—	—	—	—
Network error code ❑	ES	00CC	204	7	RO	0: Normal 1: Initialization error 2: Device access error 3: Abnormal break [1]	—
Network state ❑	QN	00CD	205	7	RO	0: Not connected 1: Waiting for ID read 2: Connected [1]	—
Unused	—	00CE ⋮ 0131	206 ⋮ 305	—	—	—	—
Monitor for the number of connected modules ❑	QK	0132	306	7	RO	0 to 31 [1]	—
RUN/STOP transfer ❑	SR	0133	307	1	R/W	0: STOP (Control stop) 1: RUN (Control start) [1]	0
RUN/STOP transfer ♦	SW	0134 ⋮ 0197	308 ⋮ 407	1	R/W	0: STOP (Control stop) 1: RUN (Control start) [100]	0
Control RUN/STOP holding setting ♦	X1	0198 ⋮ 01FB	408 ⋮ 507	1	R/W	0: Not holding (STOP start) 1: Holding (RUN/STOP hold) [100]	1

The following items are enabled when the power is turned on again or when control is changed from STOP to RUN.

Name	RKC Identifier	MECHATROLINK/Modbus register address HEX	MECHATROLINK/Modbus register address DEC	Digits	Attribute	Data range and Number of data	Factory set value
Unused	—	8000 ⋮ 8003	32768 ⋮ 32771	—	—	—	—
Communication protocol ❑	VP	8004	32772	1	R/W	0: RKC communication 1: Modbus [1]	0
Communication speed ❑	VU	8005	32773	1	R/W	0: 4800 bps 2: 19200 bps 1: 9600 bps 3: 38400 bps [1]	2
Communication data bit configuration ❑	VW	8006	32774	7	R/W	0 to 5 See table 1. [1]	0
Communication interval time ❑	VX	8007	32775	7	R/W	0 to 250 ms [1]	10
Unused	—	8008 ⋮ 8010	32776 ⋮ 32784	—	—	—	—
Method for setting the number of connected modules ❑	RY	8011	32785	7	R/W	0: No action. 1: Automatically set the maximum number of connected function modules only when power is turned on. 2: Execute automatic setting of the maximum number of connected function modules.* * After automatic setting of the number of connected function modules, the value automatically reverts to 0. [1]	1
Unused	—	8012	32786	—	—	—	—
Number of connected modules [2] (Z-TIO module) ❑	QY	8013	32787	7	R/W	0 to 16 Maximum number of Z-TIO modules connected to COM-MY. [1]	—
Number of connected modules [2] (Z-DIO module) ❑	QU	8014	32788	7	R/W	0 to 16 Maximum number of Z-DIO modules connected to COM-MY. [1]	—
Number of connected modules [2] (Z-CT module) ❑	QO	8015	32789	7	R/W	0 to 16 Maximum number of Z-CT modules connected to COM-MY. [1]	—
Unused	—	8016 ⋮ 801A	32790 ⋮ 32794	—	—	—	—
Control RUN/STOP holding setting ❑	X2	801B	32795	1	R/W	0: Not holding (STOP start) 1: Holding (RUN/STOP hold) [1]	1

[1] Function module: Z-TIO module, Z-DIO module or Z-CT module

[2] When 1 or 2 is set for the communication identifier RY (method of setting the number of connected modules), the maximum number of connected modules is set automatically. When 0 is set, the maximum number of connected modules is set manually.
Maximum number of connected modules:
Maximum address of function modules (address setting switch set value + 1)
COM-MY uses this set value to calculate the number of channels of communication data (Only for RKC communication).

Table 1: Data bit configuration

Set value	Data bit	Parity bit	Stop bit	Settable communication
0	8	Without	1	Modbus RKC communication
1	8	Even	1	
2	8	Odd	1	
3	7	Without	1	RKC communication
4	7	Even	1	
5	7	Odd	1	

Data range: Modbus: 0 to 2 RKC communication: 0 to 5

■ Communication data of Z-TIO module

Name	RKC Identifier	MECHATROLINK/Modbus register address HEX	MECHATROLINK/Modbus register address DEC	Digits	Attribute	Data range and Number of data	Factory set value
Measured value (PV) ♠	M1	01FC ⋮ 023B	508 ⋮ 571	7	RO	Input scale low to Input scale high [64]	—
Comprehensive event state ♠	AJ	023C ⋮ 027B	572 ⋮ 635	7	RO	• RKC communication Least significant digit to 4th digit: Event 1 to Event 4 5th digit: Heater break alarm 6th digit: Temperature rise completion 7th digit: Burnout Data 0: OFF 1: ON • MECHATROLINK/Modbus b0 to b3: Event 1 to Event 4 b4: Heater break alarm b5: Temperature rise completion b6: Burnout b7 to b15: Unused Data 0: OFF 1: ON [Decimal number: 0 to 127] [64]	—
Operation mode state monitor ♠	L0	027C ⋮ 02BB	636 ⋮ 699	7	RO	• RKC communication Least significant digit: Control STOP 2nd digit: Control RUN 3rd digit: Manual mode 4th digit: Remote mode 5th digit to Most significant digit: Unused Data 0: OFF 1: ON • MECHATROLINK/Modbus b0: Control STOP b1: Control RUN b2: Manual mode b3: Remote mode b4 to b15: Unused Data 0: OFF 1: ON [Decimal number: 0 to 15] [64]	—
Unused	—	02BC ⋮ 02CB	700 ⋮ 715	—	—	—	—
Manipulated output value (MV) monitor [heat-side] ♣ ♠	O1	02CC ⋮ 030B	716 ⋮ 779	7	RO	PID control or heat/cool PID control: −5.0 to +105.0 % Position proportioning control (FBR input): 0.0 to 100.0 % [64]	—
Manipulated output value (MV) monitor [cool-side] ♣ ♠	O2	030C ⋮ 034B	780 ⋮ 843	7	RO	−5.0 to +105.0 % [64]	—
Current transformer (CT) input value monitor ♠	M3	034C ⋮ 038B	844 ⋮ 907	7	RO	CTL-6-P-N: 0.0 to 30.0 A CTL-12-S56-10L-N: 0.0 to 100.0 A [64]	—
Set value (SV) monitor ♠	MS	038C ⋮ 03CB	908 ⋮ 971	7	RO	Setting limiter (low) to Setting limiter (high) [64]	—
Remote setting (RS) input value monitor ♠	S2	03CC ⋮ 040B	972 ⋮ 1035	7	RO	Setting limiter (low) to Setting limiter (high) [64]	—
Burnout state monitor ♠	B1	040C ⋮ 044B	1036 ⋮ 1099	1	RO	0: OFF 1: ON [64]	—
Event 1 state monitor ♠	AA	044C ⋮ 048B	1100 ⋮ 1163	1	RO	0: OFF 1: ON	—
Event 2 state monitor ♠	AB	048C ⋮ 04CB	1164 ⋮ 1227	1	RO	If the Event 3 type is temperature rise completion, check the temperature rise completion state in the comprehensive event state (Identifier: AJ, Register address: 023C to 027B).	—
Event 3 state monitor ♠	AC	04CC ⋮ 050B	1228 ⋮ 1291	1	RO		—
Event 4 state monitor ♠	AD	050C ⋮ 054B	1292 ⋮ 1355	1	RO	(The Event 3 state monitor does not turn ON.) [Each 64]	—
Heater break alarm (HBA) state monitor ♠	AE	054C ⋮ 058B	1356 ⋮ 1419	1	RO	0: OFF 1: ON [64]	—
Output state monitor ♦	Q1	058C ⋮ 059B	1420 ⋮ 1435	7	RO	• RKC communication Least significant digit to 4th digit: OUT1 to OUT4 5th digit to Most significant digit: Unused Data 0: OFF 1: ON • MECHATROLINK/Modbus b0 to b3: OUT1 to OUT4 b4 to b15: Unused Data 0: OFF 1: ON [Decimal number: 0 to 15] [16]	—
Memory area soak time monitor ♠	TR	059C ⋮ 05DB	1436 ⋮ 1499	7	RO	0 minutes 00 seconds to 199 minutes 59 seconds: RKC communication: 0:00 to 199:59 (min:sec) MECHATROLINK/Modbus: 0 to 11999 seconds 0 hours 00 minutes to 99 hours 59 minutes: RKC communication: 0:00 to 99:59 (hrs:min) MECHATROLINK/Modbus: 0 to 5999 minutes [64]	—
Unused	—	05DC ⋮ 05EB	1500 ⋮ 1515	—	—	—	—
Holding peak value ambient temperature monitor ♣	Hp	05EC ⋮ 062B	1516 ⋮ 1579	7	RO	−10.0 to +100.0 °C or 14.0 to 212.0 °F [64]	—
Unused	—	062C ⋮ 063B	1580 ⋮ 1595	—	—	—	—
Logic output monitor 1 ♦	ED	063C ⋮ 064B	1596 ⋮ 1611	7	RO	• RKC communication Least significant digit to 4th digit: Logic output 1 to 4 5th digit to Most significant digit: Unused Data 0: OFF 1: ON • MECHATROLINK/Modbus b0 to b7: Logic output 1 to 8 b8 to b15: Unused Data 0: OFF 1: ON [Decimal number: 0 to 255] [16]	—
Logic output monitor 2 ♦	EE	—	—	7	RO	Only for RKC communication Least significant digit to 4th digit: Logic output 5 to 8 5th digit to Most significant digit: Unused Data 0: OFF 1: ON [16]	—
Unused	—	064C ⋮ 080B	1612 ⋮ 2059	—	—	—	—
PID/AT transfer ♠	G1	080C ⋮ 084B	2060 ⋮ 2123	1	R/W	0: PID control 1: Autotuning (AT) * * Automatically reverts to 0 after auto-tuning ends. [64]	0
Auto/Manual transfer ♣	J1	084C ⋮ 088B	2124 ⋮ 2187	1	R/W	0: Auto mode 1: Manual mode [64]	0
Remote/Local transfer ♣	C1	088C ⋮ 08CB	2188 ⋮ 2251	1	R/W	0: Local mode 1: Remote mode [64]	0
Unused	—	08CC ⋮ 08DB	2252 ⋮ 2267	—	—	—	—
Memory area transfer ♣	ZA	08DC ⋮ 091B	2268 ⋮ 2331	7	R/W	1 to 8 [64]	1
Interlock release ♠	AR	091C ⋮ 095B	2332 ⋮ 2395	1	R/W	0: Normal state 1: Interlock release execution [64]	0
Event 1 set value (EV1) ★ ♣	A1	095C ⋮ 099B	2396 ⋮ 2459	7	R/W	Deviation action, Deviation action between channels, Temperature rise completion range *: −Input span to +Input span Process action, SV action: Input scale low to Input scale high MV action: −5.0 to +105.0 % * When temperature rise completion is selected at Event 3 action type. [Each 64]	50
Event 2 set value (EV2) ★ ♣	A2	099C ⋮ 09DB	2460 ⋮ 2523	7	R/W		50
Event 3 set value (EV3) ★ ♣	A3	09DC ⋮ 0A1B	2524 ⋮ 2587	7	R/W		50
Event 4 set value (EV4) ★ ♣	A4	0A1C ⋮ 0A5B	2588 ⋮ 2651	7	R/W		50
Control loop break alarm (LBA) time ★ ♣	A5	0A5C ⋮ 0A9B	2652 ⋮ 2715	7	R/W	0 to 7200 seconds (0: Unused) [64]	480
LBA deadband ★ ♣	N1	0A9C ⋮ 0ADB	2716 ⋮ 2779	7	R/W	0 (0.0) to Input span [64]	0 (0.0)
Set value (SV) ★ ♣	S1	0ADC ⋮ 0B1B	2780 ⋮ 2843	7	R/W	Setting limiter (low) to Setting limiter (high) [64]	TC/RTD: 0 V/I: 0.0
Proportional band [heat-side] ♣ ★ ♠	P1	0B1C ⋮ 0B5B	2844 ⋮ 2907	7	R/W	TC/RTD inputs: 0 (0.0) to Input span (Unit: °C [°F]) Voltage (V)/current (I) inputs: 0.0 to 1000.0 % of input span 0 (0.0): ON/OFF action ON/OFF action for both heat and cool actions in case of a heat/cool control type. [64]	TC/RTD: 30 (30.0) V/I: 30.0
Integral time [heat-side] ♣ ★ ♠	I1	0B5C ⋮ 0B9B	2908 ⋮ 2971	7	R/W	PID control or heat/cool PID control: 0 to 3600 seconds or 0.0 to 1999.9 seconds (0, 0.0: PD action) Position proportioning control: 1 to 3600 seconds or 0.1 to 1999.9 seconds [64]	240

(Continued on the next page ➔)

Name	RKC Identifier	MECHATROLINK/Modbus register address HEX	MECHATROLINK/Modbus register address DEC	Digits	Attribute	Data range and Number of data	Factory set value
Derivative time [heat-side] ♣ ★ ♠	D1	0B9C ⋮ 0BDB	2972 ⋮ 3035	7	R/W	0 to 3600 seconds or 0.0 to 1999.9 seconds (0, 0.0: PI action) [64]	60
Control response parameter ♣ ★ ♠	CA	0BDC ⋮ 0C1B	3036 ⋮ 3099	1	R/W	0: Slow 2: Fast 1: Medium When the P or PD action is selected, this setting becomes invalid. [64]	PID control, Position proportioning control: 0 Heat/cool PID control: 2
Proportional band [cool-side] ♣ ★ ♠	P2	0C1C ⋮ 0C5B	3100 ⋮ 3163	7	R/W	TC/RTD inputs: 1 (0.1) to Input span (Unit: °C [°F]) Voltage (V)/current (I) inputs: 0.1 to 1000.0 % of input span [64]	TC/RTD: 30 (30.0) V/I: 30.0
Integral time [cool-side] ♣ ★ ♠	I2	0C5C ⋮ 0C9B	3164 ⋮ 3227	7	R/W	0 to 3600 seconds or 0.0 to 1999.9 seconds (0, 0.0: PD action) [64]	240
Derivative time [cool-side] ♣ ★ ♠	D2	0C9C ⋮ 0CDB	3228 ⋮ 3291	7	R/W	0 to 3600 seconds or 0.0 to 1999.9 seconds (0, 0.0: PI action) [64]	60
Overlap/ Deadband ♣ ★ ♠	V1	0CDC ⋮ 0D1B	3292 ⋮ 3355	7	R/W	TC/RTD inputs: −Input span to +Input span (Unit: °C [°F]) Voltage (V)/current (I) inputs: −100.0 to +100.0 % of input span [64]	0
Manual reset ★ ♠	MR	0D1C ⋮ 0D5B	3356 ⋮ 3419	7	R/W	−100.0 to +100.0 % [64]	0.0
Setting change rate limiter (up) ★ ♠	HH	0D5C ⋮ 0D9B	3420 ⋮ 3483	7	R/W	0 (0.0) to Input span/unit time 0 (0.0): Unused Unit time: 60 seconds (factory set value) [64]	0 (0.0)
Setting change rate limiter (down) ★ ♠	HL	0D9C ⋮ 0DDB	3484 ⋮ 3547	7	R/W	0 (0.0) to Input span/unit time 0 (0.0): Unused Unit time: 60 seconds (factory set value) [64]	0 (0.0)
Area soak time ★ ♠	TM	0DDC ⋮ 0E1B	3548 ⋮ 3611	7	R/W	0 minutes 00 seconds to 199 minutes 59 seconds: RKC communication: 0:00 to 199:59 (min:sec) MECHATROLINK/Modbus: 0 to 11999 seconds 0 hours 00 minutes to 99 hours 59 minutes: RKC communication: 0:00 to 99:59 (hrs:min) MECHATROLINK/Modbus: 0 to 5999 minutes [64]	RKC communication: 0:00 MECHATROLINK/Modbus: 0
Link area number ★ ♠	LP	0E1C ⋮ 0E5B	3612 ⋮ 3675	7	R/W	0 to 8 (0: No link) [64]	0
Heater break alarm (HBA) set value ♠	A7	0E5C ⋮ 0E9B	3676 ⋮ 3739	7	R/W	When CT is CTL-6-P-N: 0.0 to 30.0 A (0.0: Not used) When CT is CTL-12-S56-10L-N: 0.0 to 100.0 A (0.0: Not used) [64]	0.0
Heater break determination point ♠	NE	0E9C ⋮ 0EDB	3740 ⋮ 3803	7	R/W	0.0 to 100.0 % of HBA set value (0.0: Heater break determination is invalid) [64]	30.0
Heater melting determination point ♠	NF	0EDC ⋮ 0F1B	3804 ⋮ 3867	7	R/W	0.0 to 100.0 % of HBA set value (0.0: Heater melting determination is invalid) [64]	30.0
PV bias ♠	PB	0F1C ⋮ 0F5B	3868 ⋮ 3931	7	R/W	−Input span to +Input span [64]	0
PV digital filter ♠	F1	0F5C ⋮ 0F9B	3932 ⋮ 3995	7	R/W	0.0 to 100.0 seconds (0.0: Unused) [64]	0.0
PV ratio ♠	PR	0F9C ⋮ 0FDB	3996 ⋮ 4059	7	R/W	0.500 to 1.500 [64]	1.000
PV low input cut-off ♠	DP	0FDC ⋮ 101B	4060 ⋮ 4123	7	R/W	0.00 to 25.00 % of input span [64]	0.00
RS bias * ♠	RB	101C ⋮ 105B	4124 ⋮ 4187	7	R/W	−Input span to +Input span [64]	0
RS digital filter * ♠	F2	105C ⋮ 109B	4188 ⋮ 4251	7	R/W	0.0 to 100.0 seconds (0.0: Unused) [64]	0.0
RS ratio * ♠	RR	109C ⋮ 10DB	4252 ⋮ 4315	7	R/W	0.001 to 9.999 [64]	1.000
Output distribution selection ♠	DV	10DC ⋮ 111B	4316 ⋮ 4379	1	R/W	0: Control output 1: Distribution output [64]	0
Output distribution bias ♠	DW	111C ⋮ 115B	4380 ⋮ 4443	7	R/W	−100.0 to +100.0 % [64]	0.0
Output distribution ratio ♠	DQ	115C ⋮ 119B	4444 ⋮ 4507	7	R/W	−9.999 to +9.999 [64]	1.000
Proportional cycle time ♠	T0	119C ⋮ 11DB	4508 ⋮ 4571	7	R/W	0.1 to 100.0 seconds M: Relay contact output T: Triac output V: Voltage pulse output D: Open collector output [64]	M output: 20.0 V, T, D output: 2.0
Minimum ON/OFF time of proportioning cycle ♠	VI	11DC ⋮ 121B	4572 ⋮ 4635	7	R/W	0 to 1000 ms [64]	0

* Data on RS bias, RS ratio and RS digital filter is that in cascade control or ratio setting.

Name	RKC Identifier	MECHATROLINK/Modbus register address HEX	MECHATROLINK/Modbus register address DEC	Digits	Attribute	Data range and Number of data	Factory set value
Manual manipulated output value ♣ ♠	ON	121C ⋮ 125B	4636 ⋮ 4699	7	R/W	PID control: Output limiter (low) to Output limiter (high) Heat/cool PID control: −Cool-side output limiter (high) to +Heat-side output limiter (high) Position proportioning control (with FBR input): Output limiter (low) to Output limiter (high) Position proportioning control (without FBR input): 0: Close-side output OFF, Open-side output OFF 1: Close-side output ON, Open-side output OFF 2: Close-side output OFF, Open-side output ON [64]	0.0
Area soak time stop function ♠	RV	125C ⋮ 129B	4700 ⋮ 4763	1	R/W	0: No function 3: Event 3 1: Event 1 4: Event 4 2: Event 2 [64]	0
EDS mode (for disturbance 1) ♠	NG	129C ⋮ 12DB	4764 ⋮ 4827	1	R/W	0: No function 1: EDS function mode 2: Learning mode 3: Tuning mode	0
EDS mode (for disturbance 2) ♠	NX	12DC ⋮ 131B	4828 ⋮ 4891	1	R/W	EDS function: External disturbance suppression function [Each 64]	0
EDS value 1 (for disturbance 1) ♠	NI	131C ⋮ 135B	4892 ⋮ 4955	7	R/W	−100.0 to +100.0 %	0.0
EDS value 1 (for disturbance 2) ♠	NJ	135C ⋮ 139B	4956 ⋮ 5019	7	R/W		0.0
EDS value 2 (for disturbance 1) ♠	NK	139C ⋮ 13DB	5020 ⋮ 5083	7	R/W		0.0
EDS value 2 (for disturbance 2) ♠	NM	13DC ⋮ 141B	5084 ⋮ 5147	7	R/W	[Each 64]	0.0
EDS transfer time (for disturbance 1) ♠	NN	141C ⋮ 145B	5148 ⋮ 5211	7	R/W	0 to 3600 seconds or 0.0 to 1999.9 seconds	0
EDS transfer time (for disturbance 2) ♠	NO	145C ⋮ 149B	5212 ⋮ 5275	7	R/W	[Each 64]	0
EDS action time (for disturbance 1) ♠	NQ	149C ⋮ 14DB	5276 ⋮ 5339	7	R/W	1 to 3600 seconds	600
EDS action time (for disturbance 2) ♠	NL	14DC ⋮ 151B	5340 ⋮ 5403	7	R/W	[Each 64]	600
EDS action wait time (for disturbance 1) ♠	NR	151C ⋮ 155B	5404 ⋮ 5467	7	R/W	0.0 to 600.0 seconds	0.0
EDS action wait time (for disturbance 2) ♠	NY	155C ⋮ 159B	5468 ⋮ 5531	7	R/W	[Each 64]	0.0
EDS value learning times ♠	NT	159C ⋮ 15DB	5532 ⋮ 5595	7	R/W	0 to 10 times (0: No learning mode) [64]	1
EDS start signal ♠	NU	15DC ⋮ 161B	5596 ⋮ 5659	1	R/W	0: EDS start signal OFF 1: EDS start signal ON (for disturbance 1) 2: EDS start signal ON (for disturbance 2) [64]	0
Operation mode ♠	EI	161C ⋮ 165B	5660 ⋮ 5723	1	R/W	0: Unused 1: Monitor 2: Monitor + Event function 3: Control [64]	3
Startup tuning (ST) ♠	ST	165C ⋮ 169B	5724 ⋮ 5787	1	R/W	0: ST unused 1: Execute once * 2: Execute always * Automatically reverts to 0 after Startup tuning (ST) ends. [64]	0
Automatic temperature rise learning ♠	Y8	169C ⋮ 16DB	5788 ⋮ 5851	1	R/W	0: Unused 1: Learning * * Automatically reverts to 0 after automatic temperature rise learning ends. [64]	0
Communication switch (for logic) ♦	EF	16DC ⋮ 16EB	5852 ⋮ 5867	7	R/W	• RKC communication Least significant digit to 4th digit: Communication switch 1 to 4 5th digit to Most significant digit: Unused Data 0: OFF 1: ON • MECHATROLINK/Modbus b0 to b3: Communication switch 1 to 4 b4 to b15: Unused Data 0: OFF 1: ON [Decimal number: 0 to 15] [16]	0
Unused	—	16EC ⋮ 196B	5868 ⋮ 6507	—	—	—	—

For communication data (Engineering setting), see the **COM-MY SRZ Communication Data List (IMR02E04-E□)**.

■ Communication data of Z-DIO module

Name	RKC Identifier	MECHATROLINK/Modbus register address HEX	MECHATROLINK/Modbus register address DEC	Digits	Attribute	Data range and Number of data	Factory set value
Digital input (DI) state 1 ♦	L1	3E6C ⋮ 3E7B	15980 ⋮ 15995	7	RO	• RKC communication Least significant digit to 4th digit: DI1 to DI4 5th digit to Most significant digit: Unused Data 0: Contact open 1: Contact closed • MECHATROLINK/Modbus b0 to b7: DI1 to DI8 b8 to b15: Unused Data 0: Contact open 1: Contact closed [Decimal number: 0 to 255] [16]	—
Digital input (DI) state 2 ♦	L6	—	—	7	RO	Only for RKC communication Least significant digit to 4th digit: DI5 to DI8 5th digit to Most significant digit: Unused Data 0: Contact open 1: Contact closed [16]	—
Digital output (DO) state 1 ♦	Q2	3E7C ⋮ 3E8B	15996 ⋮ 16011	7	RO	• RKC communication Least significant digit to 4th digit: DO1 to DO4 5th digit to Most significant digit: Unused Data 0: OFF 1: ON • MECHATROLINK/Modbus b0 to b7: DO1 to DO8 b8 to b15: Unused Data 0: OFF 1: ON [Decimal number: 0 to 255] [16]	—
Digital output (DO) state 2 ♦	Q3	—	—	7	RO	Only for RKC communication Least significant digit to 4th digit: DO5 to DO8 5th digit to Most significant digit: Unused Data 0: OFF 1: ON [16]	—
Unused	—	3E8C ⋮ 3FDB	16012 ⋮ 16347	—	—	—	—
DO manual output 1 ♦	Q4	3FDC ⋮ 3EFB	16348 ⋮ 16353	7	R/W	• RKC communication Least significant digit to 4th digit: DO1 manual output to DO4 manual output 5th digit to Most significant digit: Unused Data 0: OFF 1: ON • MECHATROLINK/Modbus b0 to b7: DO1 manual output to DO8 manual output b8 to b15: Unused Data 0: OFF 1: ON [Decimal number: 0 to 255] [16]	0
DO manual output 2 ♦	Q5	—	—	7	R/W	Only for RKC communication Least significant digit to 4th digit: DO5 manual output to DO8 manual output 5th digit to Most significant digit: Unused Data 0: OFF 1: ON [16]	0
DO output distribution selection ♠	DO	3FEC ⋮ 406B	16364 ⋮ 16491	1	R/W	0: DO output 1: Distribution output [128]	0
DO output distribution bias ♠	O8	406C ⋮ 40EB	16492 ⋮ 16619	7	R/W	−100.0 to +100.0 % [128]	0.0
DO output distribution ratio ♠	O9	40EC ⋮ 416B	16620 ⋮ 16747	7	R/W	−9.999 to +9.999 [128]	1.000
DO proportioning cycle time ♠	V0	416C ⋮ 41EB	16748 ⋮ 16875	7	R/W	0.1 to 100.0 seconds M: Relay contact output D: Open collector output [128]	M output: 20.0 D output: 2.0
DO minimum ON/OFF time of proportioning cycle ♠	VJ	41EC ⋮ 426B	16876 ⋮ 17003	7	R/W	0 to 1000 ms [128]	0
Unused	—	426C ⋮ 433B	17004 ⋮ 17211	—	—	—	—

For communication data (Engineering setting), see the **COM-MY SRZ Communication Data List (IMR02E04-E□)**.

■ Communication data of Z-CT module

Name	RKC Identifier	MECHATROLINK/Modbus register address HEX	MECHATROLINK/Modbus register address DEC	Digits	Attribute	Data range and Number of data	Factory set value
Current transformer (CT) input value monitor ♠	M4	46BC ⋮ 477B	18108 ⋮ 18299	7	RO	CTL-6-P-Z: 0.0 to 10.0 A CTL-6-P-N: 0.0 to 30.0 A CTL-12-S56-10L-N: 0.0 to 100.0 A [192]	—
Load factor conversion CT monitor ♠	M5	477C ⋮ 483B	18300 ⋮ 18491	7	RO	0.0 to 100.0 A [192]	—
Heater break alarm (HBA) state monitor ♠	AF	483C ⋮ 48FB	18684 ⋮ 18683	1	RO	0: Normal 1: Break 2: Melting [192]	—
Heater overcurrent alarm state monitor ♠	AG	48FC ⋮ 49BB	18684 ⋮ 18875	1	RO	0: Normal 1: Heater overcurrent [192]	—
Automatic setting state monitor ♦	CJ	49BC ⋮ 49CB	18876 ⋮ 18891	1	RO	0: Normal state 1: Automatic setting execution 2: Automatic setting failure [16]	—

Name	RKC Identifier	MECHATROLINK/Modbus register address HEX	MECHATROLINK/Modbus register address DEC	Digits	Attribute	Data range and Number of data	Factory set value
Unused	—	49CC ⋮ 4FCB	18892 ⋮ 20427	—	—	Do not use this register address as it is used for the internal processing.	—
Heater break/ Heater overcurrent alarm automatic setting selection ♠	BT	4FCC ⋮ 508B	20428 ⋮ 20619	1	R/W	0: Automatic setting is disabled. (Alarm set value cannot be automatically set by the push button and communication.) 1: Automatic setting for heater break alarm is enabled. 2: Automatic setting for heater overcurrent alarm set value is enabled. 3: Automatic setting for heater break alarm (HBA) and heater overcurrent alarm set values are enabled. [192]	1
Automatic setting transfer ♠	BU	508C ⋮ 514B	20620 ⋮ 20811	1	R/W	0: Normal state 1: Automatic setting execution 2: Automatic setting failure (RO) [192]	0
Heater break alarm (HBA) set value ♠	A8	514C ⋮ 520B	20812 ⋮ 21003	7	R/W	0.0 to 100.0 A 0.0: Heater break alarm function (HBA) OFF (HBA function OFF: The current transformer (CT) input value monitoring is available.) [192]	0.0
Heater break alarm (HBA) selection ♠	BZ	520C ⋮ 52CB	21004 ⋮ 21195	1	R/W	0: Heater break alarm (HBA) unused 1: Heater break alarm (HBA) 2: Heater break alarm (HBA) (With alarm interlock function) [192]	1
Heater overcurrent alarm set value ♠	A6	52CC ⋮ 538B	21196 ⋮ 21387	7	R/W	0.0 to 105.0 A 0.0: Heater overcurrent alarm function OFF [192]	0.0
Heater overcurrent alarm selection ♠	BO	538C ⋮ 544B	21388 ⋮ 21579	1	R/W	0: Heater overcurrent alarm unused 1: Heater overcurrent alarm 2: Heater overcurrent alarm (With alarm interlock function) [192]	1
Heater break alarm (HBA) interlock release ♠	CX	544C ⋮ 550B	21580 ⋮ 21771	1	R/W	0: Normal state 1: Interlock release execution [192]	0
Heater overcurrent alarm interlock release ♠	CY	550C ⋮ 55CB	21772 ⋮ 21963	1	R/W	0: Normal state 1: Interlock release execution [192]	0
Unused	—	55CC ⋮ 5E0B	21964 ⋮ 24075	—	—	—	—
Set lock ♦	LK	5E0C ⋮ 5E1B	24076 ⋮ 24091	1	R/W	0: Unlock 1: Lock [192]	0
CT type ♠	BV	5E1C ⋮ 5EDB	24092 ⋮ 24283	1	R/W *	0: CTL-6-P-N (0.0 to 30.0 A) 1: CTL-12-S56-10L-N (0.0 to 100.0 A) 2: CTL-6-P-Z (0.0 to 10.0 A) [192]	Depends on model code. When not specifying: 0
CT ratio ♠	XT	5EDC ⋮ 5F9B	24284 ⋮ 24475	7	R/W *	0 to 9999 [192]	Note1
Number of heater break alarm (HBA) delay times ♠	DI	5F9C ⋮ 605B	24476 ⋮ 24667	7	R/W *	0 to 255 times [192]	5
Automatic setting factor for heater break alarm (HBA) ♠	BW	605C ⋮ 611B	24668 ⋮ 24859	7	R/W *	1 to 100 % [192]	75
Automatic setting factor for heater overcurrent alarm ♠	B9	611C ⋮ 61DB	24860 ⋮ 25051	7	R/W *	100 to 1000 % [192]	200
Determination current value for automatic setting ♠	BP	61DC ⋮ 629B	25052 ⋮ 25243	7	R/W *	0.0 to 100.0 A [192]	1.0
Automatic setting time ♠	BQ	629C ⋮ 635B	25244 ⋮ 25435	7	R/W *	10 to 250 seconds [192]	60
Module address assignments for CT input ♠	BX	635C ⋮ 641B	25436 ⋮ 25627	7	R/W *	0 to 99 [192]	0
Module channel assignments for CT input ♠	BY	641C ⋮ 64DB	25628 ⋮ 25819	7	R/W *	1 to 99 [192]	1
Load factor conversion method ♠	IC	64DC ⋮ 659B	25820 ⋮ 26011	1	R/W *	0: Mean conversion 1: Root mean squared value conversion [192]	0
CT Interval time ♦	VH	659C ⋮ 65AB	26012 ⋮ 26027	7	R/W *	0 to 250 ms [16]	10
Unused	—	65AC ⋮ 666B	26028 ⋮ 26219	—	—	—	—

* When the set lock (Identifier: LK, Register address: 5E0C to 5E1B) is set to "0: Unlock," writing data is possible.

Note1 CTL-6-P-N, CTL-6-P-Z: 800 CTL-12-S56-10L-N: 1000

RKC® RKC INSTRUMENT INC. The first edition: MAY 2007 [IMQ00] The second edition: NOV. 2007 [IMQ00]

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NOV. 2007