EtherNet/IP™ Communication Converter

COM-ME-2 [For SRZ] Host Communication Data List

IMR02E37-E1

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

For the installation, the detail handling procedures and various function settings, please read if necessary the following separate manuals.

- COM-ME-2 [For SRZ] Installation Manual (IMR02E40-E□): Enclosed with COM-ME-2
- COM-ME-2 [For SRZ] Object Model (IMR02E38-E□): Enclosed with COM-ME-2
- COM-ME-2 [For SRZ] Instruction Manual (IMR02E39-E□): Separate (Download or sold separately)

These manuals can be downloaded from the official RKC website:
https://www.rkcinst.co.jp/english/download-center/

1. HOW TO READ THE DATA MAP

Contents of the Communication data map list are compatible parameters between the SRZ and Host computer by using COM-ME.

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 that are activated by rebooting
♦: Data for each module
★: Parameters which can be used in multi-memory area function
♣: The values on channels 2 and 4 of each Z-TIO module under Heat/Cool PID control or Position proportioning PID control will be "0" for readout and ignored for writing.
■: The values on channels 2 and 4 of each Z-TIO module under Heat/Cool PID control will be "0" for readout and ignored for writing. All of the channels of the Z-TIO module under control mode other than Heat/Cool PID control will be "0" for readout and ignored for writing.

RKC Identifier: Communication identifier of RKC communication

Modbus register address:
A register address of Modbus or EtherNet/IP™ data specification item
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 host computer or PLC is described
RO: Read only data (Host computer or PLC ← The controller)
R/W: Read and Write data (Host computer or PLC ↔ The controller)

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)

Most significant digit ..... Least significant digit

- 16-bit data

Bit 15 ..... Bit 0

Factory set value: Factory set value of communication data

: This area is not used by COM-ME-2.

2. COMMUNICATION DATA MAP

2.1 Communication Data of COM-ME

Name	RKC Identifier	Modbus register address HEX	Modbus register address DEC	Digits	Attribute	Data range and Number of data	Factory set value
Serial number ♦ (COM-ME)	RX	—	—	8	RO	Character [1]	—
Serial number ♦ (Function module*)	RZ	—	—	8	RO	Character [100]	—
Model code ♦ (COM-ME)	ID	—	—	32	RO	Model code (character) [1]	—
Model code ♦ (Function module *)	IE	—	—	32	RO	Model code (character) [100]	—
ROM version ♦ (COM-ME)	VR	—	—	8	RO	ROM version [1]	—
ROM version ♦ (Function module *)	VQ	—	—	8	RO	ROM version [100]	—
Integrated operating time monitor ♦ (COM-ME)	UT	—	—	7	RO	0 to 19999 hours [1]	—
Integrated operating time monitor ♦ (Function module *)	UV	—	—	7	RO	0 to 19999 hours [100]	—
Error code ❑ (COM-ME)	ER	0000	0	7	RO	1: Adjustment data error [1] 2: Data back-up error 4: A/D conversion error [1] (Temperature compensation error included) 16: Internal communication error [2] 32: Error of custom data [1] (Error of downloaded data of logic output) 64: Stack overflow [2] [1] Only the function module * [2] Only the COM-ME The error condition is shown by the *OR* of each module. When multiple errors occur, the error No. is the sum value. [1]	—

* Function module: Z-TIO module, Z-DIO module or Z-CT module

Name	RKC Identifier	Modbus register address HEX	Modbus register address DEC	Digits	Attribute	Data range and Number of data	Factory set value
Error code ♦ (Function module [1])	EZ	0001 ⋮ 0064	1 ⋮ 100	7	RO	1: Adjustment data error 2: Data back-up error 4: A/D conversion error (Temperature compensation error included) 32: Error of custom data (Error of downloaded data of logic output) When multiple errors occur, the error No. is the sum value. [100]	—
Backup memory state monitor ♦ (COM-ME)	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-ME: 1] [Z-TIO, Z-DIO and Z-CT: 100]	—
Backup memory state monitor ♦ (Function module [1])	CZ	0066 ⋮ 00C9	102 ⋮ 201	1	RO		—
—	—	00CA 00CB	202 203	—	—	—	—
Network error code ❑	ES	00CC	204	7	RO	0: Normal 1: Network operation not possible [1]	—
—	—	00CD ⋮ 0131	205 ⋮ 305	—	—	—	—
Monitor for the number of connected modules ❑	QK	0132	306	7	RO	0 to 31 [1]	—
RUN/STOP transfer [2] ❑	SR	0133	307	1	R/W	0: STOP (Control stop) 1: RUN (Control start) [1]	0
RUN/STOP transfer [3] ♦	SW	0134 ⋮ 0197	308 ⋮ 407	1	R/W	0: STOP (Control stop) 1: RUN (Control start) [100]	0
Control RUN/STOP holding setting [3,4] ♦	X1	0198 ⋮ 01FB	408 ⋮ 507	1	R/W	0: Not holding (STOP start) 1: Holding (RUN/STOP hold) [100]	1
—	—	8000 ⋮ 8003	32768 ⋮ 32771	—	—	—	—
Host communication protocol [5] ❑♥	VP	8004	32772	1	R/W	0: RKC communication 1: Modbus [1]	0
Host communication Communication speed [5] ❑♥	VU	8005	32773	1	R/W	0: 9600 bps 3: 38400 bps 1: 9600 bps 4: 57600 bps 2: 19200 bps [1]	2
Host communication data bit configuration [5] ❑♥	VW	8006	32774	7	R/W	0 to 11 Refer to **Table 1: Data bit configuration**. [1]	0
Host communication interval time ❑	VX	8007	32775	7	R/W	0 to 250 ms [1]	10
—	—	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
—	—	8012	32786	—	—	—	—
Number of connected modules [6] (Z-TIO module) ❑	QY	8013	32787	7	R/W	0 to 16 Maximum number of Z-TIO modules connected to COM-ME. [1]	—
Number of connected modules [6] (Z-DIO module) ❑	QU	8014	32788	7	R/W	0 to 16 Maximum number of Z-DIO modules connected to COM-ME. [1]	—
Number of connected modules [6] (Z-CT module) ❑	QO	8015	32789	7	R/W	0 to 16 Maximum number of Z-CT modules connected to COM-ME. [1]	—
Number of connected modules (module 4) ❑	QP	8016	32790	7	R/W	0 to 16 [1]	—
Number of connected modules (module 5) ❑	QR	8017	32791	7	R/W	0 to 16 [1]	—
Number of connected modules (module 6) ❑	RI	8018	32792	7	R/W	0 to 16 [1]	—
Number of connected modules (module 7) ❑	RQ	8019	32793	7	R/W	0 to 4 [1]	—
—	—	801A	32794	—	—	—	—
First-byte of IP address ❑♥	QB	801B	32795	7	R/W	0 to 255 [1]	192
Second-byte of IP address ❑♥	QC	801C	32796	7	R/W	0 to 255 [1]	168
Third-byte of IP address ❑♥	QD	801D	32797	7	R/W	0 to 255 [1]	1
Fourth-byte of IP address ❑♥	QE	801E	32798	7	R/W	0 to 255 [1]	1
DHCP selection ❑♥	QF	801F	32799	1	R/W	0: DHCP is invalid 1: DHCP is valid [1]	0

[1] Function module: Z-TIO module, Z-DIO module or Z-CT module
[2] When RUN/STOP transfer (Each unit) becomes STOP, the set lock (Identifier: LK, Resister address: 5E0CH to 5E1BH) of the Z-CT module becomes "0: Unlock."
[3] This item does not support a Z-CT module.
[4] Settable only when the RUN/STOP transfer is switched to STOP.
[5] Enabled when the RUN/STOP transfer is switched to RUN from STOP.
[6] 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-ME uses this set value to calculate the number of channels of communication data (RKC communication only).

Name	RKC Identifier	Modbus register address HEX	Modbus register address DEC	Digits	Attribute	Data range and Number of data	Factory set value
Communication data items setting ❑	QG	8020 ⋮ 8051	32800 ⋮ 32849	7	R/W	0 to 65535 [50]	65535
Number of measured data items (IN) ❑	QH	8052 ⋮ 8083	32850 ⋮ 32899	7	R/W	0 to 128 0: Unused [50]	0
Number of setting data items (OUT) ❑	QI	8084 ⋮ 80B5	32900 ⋮ 32949	7	R/W	0 to 127 0: Unused [50]	0
—	—	80B6	32950	—	—	—	—
Control RUN/STOP holding setting ❑♥	X2	80B7	32951	1	R/W	0: Not holding (STOP start) 1: Holding (RUN/STOP hold) [1]	1
—	—	80B8	32952	—	—	—	—
Network status	—	80B9	32953	—	RO	Bit data Bit 0 to Bit 7: Update counter of Read data Bit 8: Toggle counter of Data mapping update Bit 9: Write completion flag Bit 10:Write error flag Bit 11:Error occurring flag Bit 12 to Bit 15: Unused Data 0: OFF 1: ON [Decimal number: 0 to 4095] [1]	—
—	—	80BA ⋮ 813E	32954 ⋮ 33086	—	—	—	—
First-byte of gateway address ❑♥	W1	813F	33087	7	R/W	0 to 255 [1]	0
Second-byte of gateway address ❑♥	W2	8140	33088	7	R/W	0 to 255 [1]	0
Third-byte of gateway address ❑♥	W3	8141	33089	7	R/W	0 to 255 [1]	0
Fourth-byte of gateway address ❑♥	W4	8142	33090	7	R/W	0 to 255 [1]	0
Subnet mask CIDR ❑♥	W5	8143	33091	7	R/W	0 to 32 [1]	24
—	—	8144 ⋮ 81FF	33092 ⋮ 33279	—	—	—	—
General-purpose readout register	JX	8200 ⋮ 823F	33280 ⋮ 33343	7	R/W	0 to 65535 Readable only on EtherNet/IP Written through the host communication and monitored through the Ethernet/IP. Turns zero when the power is turned on. [64]	0
—	—	8240 ⋮ 82FF	33344 ⋮ 33535	—	—	—	—
General-purpose write register	JY	8300 ⋮ 833F	33536 ⋮ 33599	7	R/W	0 to 65535 Readable and writable on EtherNet/IP Rewritable through the host communication and the Ethernet/IP as well. Turns zero when the power is turned on. [64]	0
—	—	8340 ⋮ 8FFF	33600 ⋮ 36863	—	—	—	—

Table 1: Data bit configuration

Set value	Data bit	Parity bit	Stop bit	Settable communication
0	8	None	1	Modbus
1	8	Even	1	RKC communication
2	8	Odd	1	
3	7	None	1	RKC communication
4	7	Even	1	
5	7	Odd	1	
6	8	None	2	Modbus
7	8	Even	2	RKC communication
8	8	Odd	2	
9	7	None	2	RKC communication
10	7	Even	2	
11	7	Odd	2	

2.2 Communication Data of Z-TIO Module

Name	RKC Identifier	Modbus register address HEX	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 (HBA) 6th digit: Temperature rise completion 7th digit: Burnout Data 0: OFF 1: ON • Modbus Bit 0 to Bit 3: Event 1 to Event 4 Bit 4: Heater break alarm (HBA) Bit 5: Temperature rise completion Bit 6: Burnout Bit 7 to Bit 15: 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: STOP 2nd digit: RUN 3th digit: Manual mode 4th digit: Remote mode 5th digit to Most significant digit: Unused Data 0: OFF 1: ON • Modbus Bit 0: STOP Bit 1: RUN Bit 2: Manual mode Bit 3: Remote mode Bit 4 to Bit 15: Unused Data 0: OFF 1: ON [Decimal number: 0 to 15] [64]	—

Name	RKC Identifier	Modbus register address HEX	Modbus register address DEC	Digits	Attribute	Data range and Number of data	Factory set value
—	—	02BC ⋮ 02CB	700 ⋮ 715	—	—	—	—
Manipulated output value (MV) monitor [heat-side] [1] ♠	O1	02CC ⋮ 030B	716 ⋮ 779	7	RO	PID control or Heat/Cool PID control: −5.0 to +105.0 % Position proportioning PID control (FBR input): 0.0 to 100.0 % [64]	—
Manipulated output value (MV) monitor [cool-side] [2] ♠	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 30.0A 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	—
Event 3 state monitor ♠	AC	04CC ⋮ 050B	1228 ⋮ 1291	1	RO	Comprehensive event state (Identifier: AJ, Register address: 023C to 027B). (The Event 3 state monitor does not turn ON.)	—
Event 4 state monitor ♠	AD	050C ⋮ 054B	1292 ⋮ 1355	1	RO	[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 • Modbus Bit 0 to Bit 3: OUT1 to OUT4 Bit 4 to Bit 15: 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 59seconds: RKC communication: 0:00 to 199:59 (min:sec) Modbus: 0 to 11999 seconds 0 hours 00 minutes to 99 hours 59 minutes: RKC communication: 0:00 to 99:59 (hrs:min) Modbus: 0 to 5999 minutes [64]	—
—	—	05DC ⋮ 05EB	1500 ⋮ 1515	—	—	—	—
Holding peak value ambient temperature monitor ♠	Hp	05EC ⋮ 062B	1516 ⋮ 1579	7	RO	−10.0 to +100.0 °C (14.0 to 212.0 °F) [64]	—
—	—	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 • Modbus Bit 0 to Bit 7: Logic output 1 to 8 Bit 8 to Bit 15: Unused Data 0: OFF 1: ON [Decimal number: 0 to 255] [16]	—
Logic output monitor 2 ♦	EE	—	—	7	RO	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	—
—	—	064C ⋮ 080B	1612 ⋮ 2059	—	—	—	—
PID/AT transfer ♠	G1	080C ⋮ 084B	2060 ⋮ 2123	1	R/W	0: PID control 1: Autotuning (AT) When the Autotuning (AT) is finished, the control will automatically returns to 0: PID control. [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
—	—	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

[1] The values on channels 2 and 4 on each Z-TIO module will be "0" for readout under Heat/Cool PID control or Position proportioning PID control.
[2] The values on channels 2 and 4 of each Z-TIO module under Heat/Cool PID control as well as all of the channels of the Z-TIO module under the control mode other than Heat/Cool PID control will be "0" for readout.

Name	RKC Identifier	Modbus register address HEX	Modbus register address DEC	Digits	Attribute	Data range and Number of data	Factory set value
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 * When temperature rise completion is selected at Event 3 action type. Process action, SV action: Input scale low to Input scale high MV action: −5.0 to +105.0 % [Each 64]	50 (50.0)
Event 2 set value (EV2) ♠ ★	A2	099C ⋮ 09DB	2460 ⋮ 2523	7	R/W		50 (50.0)
Event 3 set value (EV3) ♠ ★	A3	09DC ⋮ 0A1B	2524 ⋮ 2587	7	R/W		50 (50.0)
Event 4 set value (EV4) ♠ ★	A4	0A1C ⋮ 0A5B	2588 ⋮ 2651	7	R/W		50 (50.0)
Control loop break alarm (LBA) time ♠ ★	A5	0A5C ⋮ 0A9B	2652 ⋮ 2715	7	R/W	0 to 7200 seconds (0: LBA OFF) [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 (0.0) 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 [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 action: 0 to 3600 seconds or 0.0 to 1999.9 seconds (0, 0.0: PD action) Position proportioning PID control: 1 to 3600 seconds or 0.1 to 1999.9 seconds [64]	240
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 1: Medium 2: Fast P or PD action: 2 (Fast) fixed [64]	PID control, Position proportioning PID 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 (0.0)
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): Limiter OFF 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): Limiter OFF 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) Modbus: 0 to 11999 seconds 0 hours 00 minutes to 99 hours 59 minutes: RKC communication: 0:00 to 99:59 (hrs:min) Modbus: 0 to 5999 minutes [64]	RKC communication: 0:00 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 CTL-6-P-N: 0.0 to 30.0 A (0.0: HBA OFF) When CTL-12-S56-10L-N: 0.0 to 100.0 A (0.0: HBA OFF) [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 (0.0)
PV digital filter ♠	F1	0F5C ⋮ 0F9B	3932 ⋮ 3995	7	R/W	0.0 to 100.0 seconds (0.0: Digital filter OFF [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 (0.0)
RS digital filter * ♠	F2	105C ⋮ 109B	4188 ⋮ 4251	7	R/W	0.0 to 100.0 seconds (0.0: Digital filter OFF) [64]	0.0
RS ratio * ♠	RR	109C ⋮ 10DB	4252 ⋮ 4315	7	R/W	0.001 to 9.999 [64]	1.000

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

Name	RKC Identifier	Modbus register address HEX	Modbus register address DEC	Digits	Attribute	Data range and Number of data	Factory set value
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 V: Voltage pulse output T: Triac 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
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 PID control (with FBR input): Output limiter low to Output limiter high Position proportioning PID 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 (Returns to "0" after the tuning is finished.) 2: Execute always [64]	0
Automatic temperature rise learning ♠ ♣	Y8	169C ⋮ 16DB	5788 ⋮ 5851	1	R/W	0: Unused 1: Learning (Returns to "0" after the tuning is finished.) [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 • Modbus Bit 0 to Bit 3: Communication switch 1 to 4 Bit 4 to Bit 15: Unused Data 0: OFF 1: ON [Decimal number: 0 to 15] [16]	0
—	—	16EC ⋮ 196B	5868 ⋮ 6507	—	—	—	—

For communication data (Engineering setting), refer to the **COM-ME-2 [for SRZ] Instruction Manual (IMR02E39-E□)**.

2.3 Communication Data for Multi-memory Area Data (only for Modbus)

Use the register addresses of 386CH to 3DABH to confirm or change set values of parameters in multi-memory areas which are not selected.

☞ For the multi-memory area data, refer to the **COM-ME-2 [for SRZ] Instruction Manual (IMR02E39-E□)**.

2.4 Communication Data of Z-DIO Module

Name	RKC Identifier	Modbus register address HEX	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 • Modbus Bit 0 to Bit 7: DI1 to DI8 Bit 8 to Bit 15:Unused Data 0: Contact open 1: Contact closed [Decimal number: 0 to 255] [16]	—
Digital input (DI) state 2 ♦	L6	—	—	7	RO	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	—
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 • Modbus Bit 0 to Bit 7: DO1 to DO8 Bit 8 to Bit 15:Unused Data 0: OFF 1: ON [Decimal number: 0 to 255] [16]	—
Digital output (DO) state 2 ♦	Q3	—	—	7	RO	RKC communication Least significant digit to 4th digit: DO5 to DO8 5th digit to Most significant digit: Unused Data 0: OFF 1: ON	—
—	—	3E8C ⋮ 3FDB	16012 ⋮ 16347	—	—	—	—
DO manual output 1 ♦	Q4	3FDC ⋮ 3FEB	16348 ⋮ 16363	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 • Modbus Bit 0 to Bit 7: DO1 manual output to DO8 manual output Bit 8 to Bit 15: Unused Data 0: OFF 1: ON [Decimal number: 0 to 255] [16]	0
DO manual output 2 ♦	Q5	—	—	7	R/W	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	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 D output: 2
DO minimum ON/OFF time of proportioning cycle ♠	VJ	41EC ⋮ 426B	16876 ⋮ 17003	7	R/W	0 to 1000 ms [128]	0
—	—	426C ⋮ 433B	17004 ⋮ 17211	—	—	—	—

For communication data (Engineering setting), refer to the **COM-ME-2 [for SRZ] Instruction Manual (IMR02E39-E□)**.

2.5 Communication Data of Z-CT Module

Name	RKC Identifier	Modbus register address HEX	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	18492 ⋮ 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]	—
—	—	49CC ⋮ 4FCB	18892 ⋮ 20427	—	—	—	—
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 (HBA) 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 (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
—	—	55CC ⋮ 5E0B	21964 ⋮ 24075	—	—	—	—
Set lock ♦	LK	5E0C ⋮ 5E1B	24076 ⋮ 24091	1	R/W	0: Unlock 1: Lock [16]	0

For communication data (Engineering setting), refer to the **COM-ME-2 [for SRZ] Instruction Manual (IMR02E39-E□)**.

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