

This manual describes the communication data of the COM-JG. For the installation, the detail handling procedures and various function settings, please read if necessary the following separate manuals.

- COM-JG [For SRZ] Installation Manual (IMR01Y23-E0): Attached to the product
- COM-JG [For SRZ] Quick Instruction Manual (IMR01Y27-E0): Attached to the product
- COM-JG [For SRZ] Instruction Manual (IMR01Y35-E0): Separate volumes (Download or sold separately)

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

1. COMMUNICATION DATA

Describes data to use by PROFIBUS communication.

Data access types

- Static data read/write
- Dynamic data read/write
- Error state register
- Write permission flag register
- Write control flag register

Communication data length

Read data: Up to 170 bytes Write data: Up to 170 bytes

- Static data request
The maximum number of communication items which can be specified:
40 items (Read items + Write items)

The communication items which can be specified:
Data of the "2. COMMUNICATION DATA MAP"

- Dynamic data request
The communication items which can be requested:
Data of the "2. COMMUNICATION DATA MAP"

The number of communication items becomes as follows depending on the number of connecting channels.

[Read data] Number of static read data × Number of connection channel^a × 2 +
Number of dynamic data × 6 + 12^b ≤ 170

[Write data] Number of static write data × Number of connection channel^a × 2 +
Number of dynamic data × 6 + 11^c ≤ 170

^a Total number of continuous accesses

^b (Error state register: 1 byte) + (Write permission flag register: 1 byte) +
(Write control flag register: 10 bytes) = 12

^c (Write permission flag register: 1 byte) + (Write control flag register: 10 bytes) = 11

Number of connection channels	Number of static data *
1 channel	Maximum of 40 items for both read and write.
16 channels	Maximum of 5 items for both read and write.
31 channels	Maximum of 2 items for both read and write.

* Calculated with the number of dynamic data equal to 0. The 10 bytes of the write control flag register for read data and the 10 bytes of the write control flag register for write data can be omitted.

Static data request

- Static data is that which is always read/written from/to the PROFIBUS master such as the PLC. The data item is selected by the configuration tool such as the PLC.
- As the Modbus register address is directly specified, data items of all the controllers connected to the COM-JG can be selected.
- When static data is requested, 1-word (2-byte) data is used for both read and write.

Dynamic data request

- Dynamic data is that which is freely read/written from/to the PROFIBUS master such as the PLC. The data item is freely selected by the sequence program.
- As the Modbus register address is directly specified, data items of all the controllers connected to the COM-JG can be selected.
- When dynamic data is requested, 3-word (6-byte) data is used for both read and write.
- Send register to the COM-JG

Register configuration:

Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5
Attribute	Device address	Communication item address	Communication item address	Communication item address	Communication item data

Byte position	Content								
0	Attribute: <table border="1"> <tr> <td>bit 7</td><td>bit 6</td><td>bit 5</td><td>bit 4</td><td>bit 3</td><td>bit 2</td><td>bit 1</td><td>bit 0</td> </tr> </table> <ul style="list-style-type: none"> Unused 0: Send data is valid 1: Send data is invalid 0: Data read 1: Data write 	bit 7	bit 6	bit 5	bit 4	bit 3	bit 2	bit 1	bit 0
bit 7	bit 6	bit 5	bit 4	bit 3	bit 2	bit 1	bit 0		
1	Device address: Specify an accessing device address of controller (SRZ). Data range: 1 to 99 ("0" at Modbus is invalid)								
2, 3	Communication item address: The communication item address of controller (SRZ), to/from which data is written/read is specified.								
4, 5	Communication item data: Write data of a communication item. For data read, data is ignored.								

- Receive register from the COM-JG

Register configuration:

Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5
Attribute	Device address	Communication item address	Communication item address	Communication item address	Communication item data

Byte position	Content								
0	Attribute: <table border="1"> <tr> <td>bit 7</td><td>bit 6</td><td>bit 5</td><td>bit 4</td><td>bit 3</td><td>bit 2</td><td>bit 1</td><td>bit 0</td> </tr> </table> <ul style="list-style-type: none"> Unused 0: Controller data updated 1: Controller data non-update 0: Send data is valid 1: Send data is invalid 0: Data read 1: Data write 	bit 7	bit 6	bit 5	bit 4	bit 3	bit 2	bit 1	bit 0
bit 7	bit 6	bit 5	bit 4	bit 3	bit 2	bit 1	bit 0		
1	Device address: The specified controller (SRZ) device address is returned.								
2, 3	Communication item address: The communication item address of controller (SRZ), to/from which data is written/read is returned. However, if any communication item address out of the data range or of unused item is specified, "FFFFH" is returned.								
4, 5	Communication item data: The current value of relevant communication item is stored. When the data is written, there is a delay in rewriting the data in this register as the COM-JG updates the register after rereading the data on the controller (SRZ).								

Error state register

Bit configuration:

bit 7	bit 6	bit 5	bit 4	bit 3	bit 2	bit 1	bit 0
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Bit position	Content
0	Instrument error: 0: No instrument error 1: Instrument error In case of the following either, become an error. • None of the controllers (SRZ) is connected. • COM-JG is hardware abnormally.
1	Time-out error: 0: No time-out error 1: Time-out error Successive communication time-out occurring twice in the same controller (SRZ) after PROFIBUS is initialized causes a time-out error. Communication continues even during the time-out error and recovers with no time-out error when the communication returns to normal. Time-out time: 3 second
2	Controller communication valid/invalid: 0: Controller communication is valid 1: Controller communication is invalid Interlocked with dip switch No. 7 at the side of the COM-JG.
3	Controller communication initialization: 0: Completed initialization of controller communication 1: During initialization of controller communication Indicates the controller communication initialized state when the power is turned on and at this state invalidates the data on each communication item.
4 to 7	Unused

Write permission flag register

Register to control data write permission/not permission.

00H: Not permission

0FH: Permission

The operation of writing a hexadecimal value of "0FH" to the write permission flag register is necessary for both static and dynamic data requests.

Write control flag register

This register controls whether data writing is "permitted" or "not permitted" for each requested word. Permitted or not permitted is set by bit for each requested word of a static data write request.

- 0: Not permitted
- 1: Permitted

The write control flag register allocates a static data write request for 10 bytes of data with each byte containing 8 words, and sets the bit for each word to "permitted" or "not permitted."

[Example] Write "permitted" or "not permitted" state of static data 1 to 8 words when the value of the first byte is A5H (hexadecimal)
A5H = 10100101 (binary)

1st byte	2nd byte	3rd byte	4th byte	5th byte	6th byte	7th byte	8th byte	9th byte	10th byte
1 to 8 words	9 to 16 words	17 to 24 words	25 to 32 words	33 to 40 words	41 to 48 words	49 to 56 words	57 to 64 words	65 to 72 words	73 to 80 words

8th word	7th word	6th word	5th word	4th word	3rd word	2nd word	1st word
1	0	1	0	0	1	0	1

0: Not permission 1: Permission

2. COMMUNICATION DATA MAP

The communication data map shows data which can be used for communication between the PLC and COM-JG.

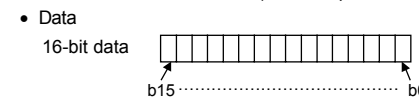
- Modbus register address (HEX: Hexadecimal DEC: Decimal)
For a 4CH type, follow the chart exactly. For the 2CH type, the register addresses for Channel 3 and 4 are unused. For communication parameters for heat/cool control, the register addresses for Channel 2 and 4 are unused.

Example: The register addresses of 0092 (HEX) to 0095 (HEX)

CH#	Address
CH1	0092
CH2	0093
CH3	0094
CH4	0095

(This address is unused with heat/cool control.)
(This address is unused with 2CH type.)
(This address is unused with heat/cool control or 2CH type.)

- Attribute
RO: Read only data (Host computer ← The controller)
R/W: Read and Write data (Host computer ↔ The controller)



Symbols used in MAP

- ★: Parameters only used for heat/cool control or position proportioning control, therefore data for CH2 and CH4 are unused.
- ☆: Parameters which can be used in multi-memory area function.
- ◆: Data for each module
- ▲: Data for each channel

Communication data of Z-TIO module

No.	Name	Modbus register address		Attribute	Data range	Factory set value
		HEX	DEC			
1	Measured value (PV) ▲	0000	0	RO	Input scale low to Input scale high	—
2	Comprehensive event state ▲	0004	4	RO	b0 to b3: Event 1 state to Event 4 state b4: Heater break alarm state b5: Temperature rise completion b6: Burnout b7 to b15: Unused Data 0: OFF 1: ON [Decimal number: 0 to 127]	—
3	Operation mode state monitor ▲	0008	8	RO	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]	—
4	Error code ◆	000C	12	RO	b0: Adjustment data error b1: Data back-up error b2: A/D conversion error b3: Unused b4: Unused b5: Logic output data error b6 to b15: Unused Data 0: OFF 1: ON [Decimal number: 0 to 63]	—
5	Manipulated output value (MV) monitor [heat-side] ★ ▲	000D	13	RO	PID control or heat/cool PID control: -5.0 to +105.0 % Position proportioning control (FBR input): 0.0 to 100.0 %	—

No.	Name	Modbus register address		Attribute	Data range	Factory set value
		HEX	DEC			
6	Manipulated output value (MV) monitor [cool-side] ★ ▲	0011	17	RO	-5.0 to +105.0 %	—
7	Current transformer (CT) input value monitor ▲	0015	21	RO	CTL-6-P-N: 0.0 to 30.0A CTL-12-S56-10L-N: 0.0 to 100.0 A	—
8	Set value (SV) monitor ▲	0019	25	RO	Setting limiter (low) to Setting limiter (high)	—
9	Remote setting (RS) input value monitor ▲	001D	29	RO	Setting limiter (low) to Setting limiter (high)	—
10	Burnout state monitor ▲	0021	33	RO	0: OFF 1: ON	—
11	Event 1 state monitor ▲	0025	37	RO	0: OFF 1: ON	—
12	Event 2 state monitor ▲	0028	40	RO	—	—
13	Event 3 state monitor ▲	002C	44	RO	—	—
14	Event 4 state monitor ▲	002D	45	RO	—	—
15	Heater break alarm (HBA) state monitor ▲	0030	48	RO	0: OFF 1: ON	—
16	Output state monitor ◆	0031	49	RO	b0 to b3: OUT1 to OUT4 b4 to b15: Unused Data 0: OFF 1: ON [Decimal number: 0 to 15]	—
17	Memory area soak time monitor ▲	0034	52	RO	0 to 11999 seconds or 0 to 5999 minutes	—
18	Integrated operating time monitor ◆	003A	58	RO	0 to 19999 hours	—
19	Holding peak value ambient temperature monitor ▲	003D	61	RO	-10.0 to +100.0 °C or 14 to 212 °F	—
20	Backup memory state monitor ◆	003E	62	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.	—
21	Logic output monitor ◆	003F	63	RO	b0 to b7: Logic output 1 to 8 b8 to b15: Unused Data 0: OFF 1: ON [Decimal number: 0 to 255]	—
22	Unused	0042	66	—	—	—
23	PID/AT transfer ▲	0043	67	RO	0: PID control 1: Autotuning (AT)	0
24	Auto/Manual transfer ▲	0044	68	RO	0: Auto mode 1: Manual mode	0
25	Remote/Local transfer ▲	0045	69	RO	0: Local mode 1: Remote mode	0
26	RUN/STOP transfer ◆	0060	96	R/W	0: STOP (Control stop) 1: RUN (Control start)	0
27	Memory area transfer ▲	0061	97	R/W	1 to 8	1
28	Interlock release	0064	100	R/W	0: Normal state 1: Interlock release execution	0
29	Event 1 set value (EV1) ★ ▲	0066	102	R/W	Deviation action, Deviation action between channels, Temperature rise completion range*: -Input span to +Input span	50
30	Event 2 set value (EV2) ★ ▲	0067	103	R/W	Process action, SV action: Input scale low to Input scale high	50
31	Event 3 set value (EV3) ★ ▲	0072	114	R/W	MV action: -5.0 to +105.0 %	50
32	Event 4 set value (EV4) ★ ▲	0076	118	R/W	*When temperature rise completion is selected at Event 3 action type.	50
33	Control loop break alarm (LBA) time ★ ▲	0077	119	R/W	0 to 7200 seconds (0: Unused)	480
34	LBA deadband ★ ▲	0078	120	R/W	0 (0.0) to Input span	0 (0.0)
35	Set value (SV) ★ ▲	0079	121	R/W	Setting limiter (low) to Setting limiter (high)	TC/RTD: 0 °C [°F] V/I: 0.0 %
36	Proportional band [heat-side] ★ ★ ▲	0081	129	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	TC/RTD: 30 V/I: 30.0
37	Integral time [heat-side] ★ ★ ▲	0082	130	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	240
38	Derivative time [heat-side] ★ ★ ▲	0085	133	R/W	PID control or heat/cool PID control: 0 to 3600 seconds or 0.0 to 1999.9 seconds (0, 0.0: PI action)	60

No.	Name	Modbus register address		Attribute	Data range	Factory set value
		HEX	DEC			
39	Control response parameter ★ ▲	009E 00A1	158 161	R/W	0: Slow 1: Medium 2: Fast P or PD action: 2 (Fast) fixed	PID control, Position proportioning control: 0 Heat/cool PID control: 2
40	Proportional band [cool-side] ▲ ★ ▲	00A2 00A5	162 165	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	TC/RTD: 30 V/I: 30.0
41	Integral time [cool-side] ▲ ★ ▲	00A6 00A9	166 169	R/W	0 to 3600 seconds or 0.0 to 1999.9 seconds (0, 0.0: PD action)	240
42	Derivative time [cool-side] ▲ ★ ▲	00AA 00AD	170 173	R/W	0 to 3600 seconds or 0.0 to 1999.9 seconds (0, 0.0: PI action)	60
43	Overlap/Deadband ▲ ★ ▲	00AE 00B1	174 177	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	0
44	Manual reset ★ ▲	00B2 00B5	178 181	R/W	-100.0 to +100.0 %	0.0
45	Setting change rate limiter (up) ★ ▲	00B6 00B9	182 185	R/W	0 (0.0) to Input span/unit time 0 (0.0): Unused	0 (0.0)
46	Setting change rate limiter (down) ★ ▲	00BA 00BD	186 189	R/W	Unit time: 60 seconds (factory set value)	0 (0.0)
47	Area soak time ★ ▲	00BE 00C1	190 193	R/W	0 to 11999 seconds or 0 to 5999 minutes	0
48	Link area number ★ ▲	00C2 00C5	194 197	R/W	0 to 8 (0: No link)	0
49	Heater break alarm (HBA) set value ▲	00C6 00C9	198 201	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)	0.0
50	Heater break determination point ▲	00CA 00CD	202 205	R/W	0.0 to 100.0 % of HBA set value (0.0: Heater break determination is invalid)	30.0
51	Heater melting determination point ▲	00CE 00D1	206 209	R/W	0.0 to 100.0 % of HBA set value (0.0: Heater melting determination is invalid)	30.0
52	PV bias ▲	00D2 00D5	210 213	R/W	-Input span to +Input span	0
53	PV digital filter ▲	00D6 00D9	214 217	R/W	0.0 to 100.0 seconds (0.0: Unused)	0.0
54	PV ratio ▲	00DA 00DD	218 221	R/W	0.500 to 1.500	1.000
55	PV low input cut-off ▲	00DE 00E1	222 225	R/W	0.00 to 25.00 % of input span	0.00
56	RS bias * ▲	00E2 00E5	226 229	R/W	-Input span to +Input span	0
57	RS digital filter * ▲	00E6 00E9	230 233	R/W	0.0 to 100.0 seconds (0.0: Unused)	0.0
58	RS ratio * ▲	00EA 00ED	234 237	R/W	0.001 to 9.999	1.000
59	Output distribution selection ▲	00EE 00F1	238 241	R/W	0: Control output 1: Distribution output	0
60	Output distribution bias ▲	00F2 00F5	242 245	R/W	-100.0 to +100.0 %	0.0
61	Output distribution ratio ▲	00F6 00F9	246 249	R/W	-9.999 to +9.999	1.000
62	Proportional cycle time ▲	00FA 00FD	250 253	R/W	0.1 to 100.0 seconds M: Relay contact output V: Voltage pulse output T: Triac output D: Open collector output	M output: 20.0 V, T, D output: 2.0
63	Minimum ON/OFF time of proportioning cycle ▲	00FE 0101	254 257	R/W	0 to 1000 ms	0
64	Manual manipulated output value ▲ ▲	0102 0105	258 261	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 ON, 1: Close-side output ON, Open-side output OFF 2: Close-side output OFF, Open-side output ON	0.0
65	Area soak time stop function ▲	0106 0109	262 265	R/W	0: No function 1: Event 1 2: Event 2 3: Event 3 4: Event 4	0

No.	Name	Modbus register address		Attribute	Data range	Factory set value
		HEX	DEC			
66	EDS mode (for disturbance 1) ▲	010A 010D	266 269	R/W	0: No function 1: EDS function mode 2: Learning mode 3: Tuning mode EDS function: External disturbance suppression function	0
67	EDS mode (for disturbance 2) ▲	010E 0111	270 273	R/W		0
68	EDS value 1 (for disturbance 1) ▲	0112 0115	274 277	R/W	-100.0 to +100.0 %	0.0
69	EDS value 1 (for disturbance 2) ▲	0116 0119	278 281	R/W		0.0
70	EDS value 2 (for disturbance 1) ▲	011A 011D	282 285	R/W		0.0
71	EDS value 2 (for disturbance 2) ▲	011E 0121	286 289	R/W		0.0
72	EDS transfer time (for disturbance 1) ▲	0122 0125	290 293	R/W	0 to 3600 seconds or 0.0 to 1999.9 seconds	0
73	EDS transfer time (for disturbance 2) ▲	0126 0129	294 297	R/W		0
74	EDS action time (for disturbance 1) ▲	012A 012D	298 301	R/W	1 to 3600 seconds	600
75	EDS action time (for disturbance 2) ▲	012E 0131	302 305	R/W		600
76	EDS action wait time ▲ (for disturbance 1)	0132 0135	306 309	R/W	0.0 to 600.0 seconds	0.0
77	EDS action wait time ▲ (for disturbance 2)	0136 0139	310 313	R/W		0.0
78	EDS value learning times ▲	013A 013D	314 317	R/W	0 to 10 times (0: No learning mode)	1
79	EDS start signal ▲	013E 0141	318 321	R/W	0: EDS start signal OFF 1: EDS start signal ON (for disturbance 1) 2: EDS start signal ON (for disturbance 2)	0
80	Operation mode ▲	0142 0145	322 325	R/W	0: Unused 1: Monitor 2: Monitor + Event function 3: Control	3
81	Startup tuning (ST) ▲	0146 0149	326 329	R/W	0: ST unused 1: Execute once 2: Execute always	0
82	Automatic temperature rise learning ▲	014A 014D	330 333	R/W	0: Unused 1: Learning	0
83	Communication switch (for logic) ▲	014E 0175	334 373	R/W	b0 to b4: Communication switch 1 to 4 b5 to b15: Unused Data 0: OFF 1: ON [Decimal number: 0 to 31]	0
84	Unused	014F 0175	335 373	—		—

For communication data (Engineering setting), refer to the COM-JG [For SRZ] Instruction Manual (IMR01Y35-EJ).

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

Memory area data of Z-TIO module

The register addresses, 0500H to 0553H are used for checking and changing each set value belonging to the memory area.

No.	Name	Modbus register address		Attribute	Data range	Factory set value
		HEX	DEC			
1	Setting memory area number	0500 0503	1280 1283	R/W	1 to 8	1
2	Event 1 set value (EV1)	0504 0507	1284 1287	R/W	Deviation action, Deviation action between channels, Temperature rise completion range: -Input span to +Input span	50
3	Event 2 set value (EV2)	0508 050B	1288 1291	R/W	Process action, SV action: Input scale low to Input scale high	50
4	Event 3 set value (EV3)	050C 050F	1292 1295	R/W	MV action: -5.0 to +105.0 %	50
5	Event 4 set value (EV4)	0510 0513	1296 1299	R/W		50
6	Control loop break alarm (LBA) time	0514 0517	1300 1303	R/W	0 to 7200 seconds (0: Unused)	480
7	LBA deadband	0518 051B	1304 1307	R/W	0 (0.0) to Input span	0 (0.0)
8	Set value (SV)	051C 051F	1308 1311	R/W	Setting limiter (low) to Setting limiter (high)	TC/RTD: 0 °C [°F] V/I: 0.0 %
9	Proportional band [heat-side] ▲	0520 0523	1312 1315	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	TC/RTD: 30 V/I: 30.0

No.	Name	Modbus register address		Attribute	Data range	Factory set value
		HEX	DEC			
10	Integral time [heat-side] ▲	0524 0527	1316 1319	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	240
11	Derivative time [heat-side] ▲	0528 052B	1320 1323	R/W	0 to 3600 seconds or 0.0 to 1999.9 seconds (0, 0.0: PI action)	60
12	Control response parameter ▲	052C 052F	1324 1327	R/W	0: Slow 1: Medium 2: Fast P or PD action: 2 (Fast) fixed	PID control, Position proportioning control: 0 Heat/cool PID control: 2
13	Proportional band [cool-side] ▲	0530 0533	1328 1331	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	TC/RTD: 30 V/I: 30.0
14	Integral time [cool-side] ▲	0534 0537	1332 1335	R/W	0 to 3600 seconds or 0.0 to 1999.9 seconds (0, 0.0: PD action)	240
15	Derivative time [cool-side] ▲	0538 053B	1336 1339	R/W	0 to 3600 seconds or 0.0 to 1999.9 seconds (0, 0.0: PI action)	60
16	Overlap/Deadband ▲	053C 053F	1340 1343	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	0
17	Manual reset ▲	0540 0543	1344 1347	R/W	-100.0 to +100.0 %	0.0
18	Setting change rate limiter (up) ▲	0544 0547	1348 1351	R/W	0 (0.0) to Input span/unit time 0 (0.0): Unused	0 (0.0)
19	Setting change rate limiter (down) ▲	0548 054B	1352 1355	R/W	Unit time: 60 seconds (factory set value)	0 (0.0)
20	Area soak time ▲	054C 054F	1356 1359	R/W	0 to 11999 seconds or 0 to 5999 minutes	0
21	Link area number ▲	0550 0553	1360 1363	R/W	0 to 8 (0: No link)	0

Communication data of Z-DIO module

No.	Name	Modbus register address		Attribute	Data range	Factory set value
		HEX	DEC			
1	Digital input (DI) state ▲	0000	0	RO	b0 to b7: DI1 to DI8 b8 to b15: Unused Data 0: Contact open 1: Contact closed [Decimal number: 0 to 255]	—
2	Digital input (DO) state ▲	0001	1	RO	b0 to b7: DO1 to DO8 b8 to b15: Unused Data 0: OFF 1: ON [Decimal number: 0 to 255]	—
3	Error code ▲	0002	2	RO	b1: Data back-up error b0, b2 to b15: Unused Data 0: OFF 1: ON [Decimal number: 0 to 2]	—
4	Integrated operating time monitor ▲	0003	3	RO	0 to 19999 hours	—
5	Backup memory state monitor ▲	0004	4	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.	—
6	Unused	0005 0045	5 69	—		—
7	RUN/STOP transfer ▲	0046	70	R/W	0: STOP (Control stop) 1: RUN (Control start)	0
8	DO manual output ▲	0047	71	R/W	b0 to b7: DO1 manual output to DO8 manual output b8 to b15: Unused Data 0: OFF 1: ON [Decimal number: 0 to 255]	0
9	DO output distribution selection ▲	0048 004F	72 79	R/W	0: DO output 1: Distribution output	0
10	DO output distribution bias ▲	0050 0057	80 87	R/W	-100.0 to +100.0 %	0.0
11	DO output distribution ratio ▲	0058 005F	88 95	R/W	-9.999 to +9.999	1.000
12	DO proportioning cycle time ▲	0060 0067	96 103	R/W	0.1 to 100.0 seconds	Depend on specification

No.	Name	Modbus register address		Attribute	Data range	Factory set value
		HEX	DEC			
13	DO minimum ON/OFF time of proportioning cycle ▲	0068 006F	104 111	R/W	0 to 1000 ms	0
14	Unused	0070 00A3	112 163	—		—

For communication data (Engineering setting), refer to the COM-JG [For SRZ] Instruction Manual (IMR01Y35-EJ).

COM-JG initial setting items

No.	Name	Modbus register address		Attribute	Data range	Factory set value
		HEX	DEC			
1	No. 1 Number of continuous accesses	FE00	65024	R/W	1 to 85	4
31	No. 31 Number of continuous accesses	FE1E	65054	R/W	1 to 85	4
32	Unused	FE1F	65055	—		—
33	No. 1 Controller address	FE20	65056	R/W	1 to 99 0: No controller connected	1
63	No. 31 Controller address	FE3E	65086	R/W	1 to 99 0: No controller connected	31
64	Unused	FE3F FE9F	65087 65183	—		—
65	Transmission wait time of controller communication	FEA0	65184	R/W	0 to 100 ms	0
66	Continuous accesses enable selection 1 to 8	FEA1	65185	R/W	0 to 255 Bit setting for each of 8 groups Example: Continuous accesses enable selection 1 to 8 bit 0: Group 1 bit 1: Group 2 bit 2: Group 3 bit 3: Group 4 bit 4: Group 5 bit 5: Group 6 bit 6: Group 7 bit 7: Group 8	255
67	Continuous accesses enable selection 9 to 16	FEA2	65186	R/W	Continuous accesses enable selection 1 to 8 bit 0: Group 1 bit 1: Group 2 bit 2: Group 3 bit 3: Group 4 bit 4: Group 5 bit 5: Group 6 bit 6: Group 7 bit 7: Group 8	255
68	Continuous accesses enable selection 17 to 24	FEA3	65187	R/W	Continuous accesses enable selection 1 to 8 bit 0: Group 1 bit 1: Group 2 bit 2: Group 3 bit 3: Group 4 bit 4: Group 5 bit 5: Group 6 bit 6: Group 7 bit 7: Group 8	255
69	Continuous accesses enable selection 25 to 32	FEA4	65188	R/W	Continuous accesses enable selection 1 to 8 bit 0: Group 1 bit 1: Group 2 bit 2: Group 3 bit 3: Group 4 bit 4: Group 5 bit 5: Group 6 bit 6: Group 7 bit 7: Group 8	255
70	Continuous accesses enable selection 33 to 40	FEA5	65189	R/W	Data 0: Continuous accesses disabled 1: Continuous accesses enabled	255
71	Static data read range CH1	FEA6	65190	R/W	0 to 65535 Upper and lower 2-byte setting	0
72	Static data read range CH2	FEA7	65191	R/W	Upper: Number of connection modules Lower: Number of communication items	0
73	Static data read range CH3	FEA8	65192	R/W	Upper: Number of connection modules Lower: Number of communication items	0
74	Static data read range CH4	FEA9	65193	R/W	Upper: Number of connection modules Lower: Number of communication items	0
75	Static data read range CH5	FEAA	65194	R/W	Upper: Number of connection modules Lower: Number of communication items	0
76	Static data write range CH1	FEAB	65195	R/W	0 to 65535 Upper and lower 2-byte setting	0
77	Static data write range CH2	FEAC	65196	R/W	Upper: Number of connection modules Lower: Number of communication items	0
78	Static data write range CH3	FEAD	65197	R/W	Upper: Number of connection modules Lower: Number of communication items	0
79	Static data write range CH4	FEAE	65198	R/W	Upper: Number of connection modules Lower: Number of communication items	0
80	Static data write range CH5	FEAF	65199	R/W	Upper: Number of connection modules Lower: Number of communication items	0

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