## 1. EXPLANATION OF DATA MAP ITEMS

The data that can be communicated by the PLC and Z-SRZ unit is compiled in the PLC communication data map.

### Name

- **Name of communication data**
- **Register address**: A register address of communication data in PLC communication
  - (Excluding data of the Z-COM module)

### Attributes

- **R/W**: At the time of Monitor request bit 1" SRZ unit writes in data to the PLC.
- **R**: At the time of Sending request bit 1" SRZ unit reads data from the PLC.
- **U**: At the time of Monitor request bit 1" SRZ unit reads data to the PLC.

### Data range

- **Register address**: The address of the register assigned when the PLC communication environment is set as follows:
  - **Register type**: 1 (B) TOSHIBA PLC/MELSEC series: D register
  - **Register start number**: 100
  - **Register address of Bit-channel specification**: 64
  - **Register address of 4-channel specification**: 24
  - **Register address of 32-channel specification**: 32
  - **Register address of 64-channel specification**: 64
  - **Number of data**: This is the maximum number per communication data that can be handled by one SRZ unit.

### Structure

- **Data for each 1**: D: Data for each channel
- **Data for each 16**: U: Data for each register
- **Data for each SRZ unit**: M: Data for each module
- **Data for each Z-COM unit**: C: Data for each channel
- **Data for each Z-COM module**: C: Data for each module

### Factory set value

- Factory set value: Factory set value of communication data

### Notes

- The PLC register read/write error flag is set to 1 when there is a PLC register read/write error.
- The slave communication timeout flag is set to 1 when there is a slave communication timeout error.
- The internal communication error flag is set to 1 when there is an internal communication error.
- The master communication timeout flag is set to 1 when there is a master communication timeout error.
- The unused bit flags are set to 0 when there are unused communication items.

### Communication data of Z-COM module

- For the communication data of Z-COM module, refer to "PLC Communication DATA OF Z-COM MODULE".

### Communication data of PLC

- For the communication data of PLC communication, refer to the corresponding registers in the PLC instruction manuals.

### Communication data of Z-TIO/BCC/CT module

- For the communication data of Z-TIO module, refer to "Z-TIO Host Communication Quick Instruction Manual (IMS01T02-E)".

## 2. DATA MAP

### 16-channel specification

- **System data (monitor item)**
  - Monitor group: D01000 to D01010
  - Setting group: D01100 to D01105

- **32-channel specification

- **64-channel specification

### Name

<table>
<thead>
<tr>
<th>Name</th>
<th>Register address</th>
<th>Structure</th>
<th>Attribute</th>
<th>Data range</th>
<th>Number of data</th>
<th>Factory set value</th>
</tr>
</thead>
<tbody>
<tr>
<td>System communication data</td>
<td>D01000 to D01005</td>
<td>16 CH</td>
<td>U</td>
<td>RO</td>
<td>0 to 1</td>
<td>0 to 1</td>
</tr>
<tr>
<td>SRZ common communication flag</td>
<td>D01091</td>
<td>16 CH</td>
<td>U</td>
<td>RO</td>
<td>0 to 1</td>
<td>0 to 1</td>
</tr>
<tr>
<td>PLC communication error code</td>
<td>D01028</td>
<td>16 CH</td>
<td>U</td>
<td>RO</td>
<td>0 to 1</td>
<td>0 to 1</td>
</tr>
<tr>
<td>Unit recognition flag</td>
<td>D01035</td>
<td>16 CH</td>
<td>U</td>
<td>RO</td>
<td>0 to 1</td>
<td>0 to 1</td>
</tr>
<tr>
<td>Monitor for the number of connected modules</td>
<td>D01036</td>
<td>16 CH</td>
<td>U</td>
<td>RO</td>
<td>0 to 1</td>
<td>0 to 1</td>
</tr>
</tbody>
</table>

### Notes

- Parameters only used for heat/Cool control or Position proportioning control, therefore data for CH0 and CH1 of Z-TIO modules are unused.
### Error code

<table>
<thead>
<tr>
<th>Error code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>D01150</td>
<td>Bit data</td>
</tr>
<tr>
<td>D01151</td>
<td>Bit 0: SB4M error</td>
</tr>
<tr>
<td>D01152</td>
<td>Bit 2: Bit data error</td>
</tr>
<tr>
<td>D01153</td>
<td>Bit 4: Software error</td>
</tr>
<tr>
<td>D01154</td>
<td>Bit 6: Stack overflow</td>
</tr>
</tbody>
</table>

### PID control

<table>
<thead>
<tr>
<th>Input/output value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

### Manual manipulated output value

<table>
<thead>
<tr>
<th>Input/output value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

### Specifications

- **PV bias**
  - Input to Input span

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### PLC communication data of Z-CT module

- **Current transfer (CT) input value monitor**
  - CANopen device: 31-32
  - CANopen data: 0x00, 0x01

- **Heater break alarm (HBA) set value**
  - CANopen device: 31-32
  - CANopen data: 0x00, 0x01

### Communication data of the Z-CT module

- **Z-COM Host Communication Instruction Manual**
  - IMS01T23-E
  - IMS01T04-E
  - Z-CT Monitor Communication Instruction Manual
  - IMS01T11-E
  - Z-COM Host Communication Instruction Manual (Z-CT Monitor Communication Instruction Manual) IMS01T23-E

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### Parameters only used for Heat/Cool control or Position proportioning control, therefore data for CH2 and CH4 of Z-TIO modules are unused.

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### Communication data of the Z-CT module

- **PID control**
  - Output value to Output limit high
  - RealTime PID control
  - Cool-side output lower limit to high
  - Heater break alarm (HBA) [With alarm interlock function]

- **Operation mode**
  - Bit 4: 0 D1 manual output
  - Bit 8: D1 manual output
  - Bit 16: D1 manual output
  - Bit 24: D1 manual output

- **Manual output**
  - Bit 16: D1 manual output
  - Bit 24: D1 manual output

### Parameters only used for Heat/Cool control or Position proportioning control, therefore data for CH2 and CH4 of Z-TIO modules are unused.

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### PID control

- **Input span**
  - 0 to 100 A

- **Input scale low to Input scale high**
  - 0 to 100: OFF

- **Position proprotioning control**
  - 0 to 100: OFF

### Heater break alarm (HBA) set value

- **Heater break alarm (HBA) set value**
  - 0 to 100 A

### Heater overcurrent alarm setting

- **Heater overcurrent alarm**
  - 0 to 100 A

### Heater overcurrent alarm setting

- **Heater overcurrent alarm**
  - 0 to 100 A

### Heater break alarm (HBA) set value

- **Heater break alarm (HBA) set value**
  - 0 to 100 A