1. Outline of Product

The CL1XY4-DR1B2 is a 32-point input module that is compatible with the NC series programmable controller. It is a compact terminal block input module designed for use in various industrial applications.

2. Name and Setting of Each Part and Terminal Arrangement

2.1 Input terminal arrangement

- X0 to X15: Input terminals for positive common
- X16 to X31: Input terminals for negative common
- COM: Common terminal
- COM1: Common terminal for internal use
- COM2: Common terminal for internal use

2.2 Terminal arrangement

- Terminal block for I/O interface
- Hook for installation to DIN rail
- Width of the useable part of the DIN rail: 16mm (0.63") or more

3. Specifications

3.1 Input specifications

- Rated voltage: DC 24V ±10%
- Load voltage: DC 150V
- ON voltage: 24V DC
- OFF voltage: 0V DC

3.2 Electrical characteristics

- On time: 1 ms or less
- Off time: 10ms or less

3.3 Mechanical insulation

- Number of interconnections: 100,000
- Mechanical life: 100,000 cycles

3.4 Dimensions

- Width: 100mm
- Height: 30mm
- Depth: 70mm

4. Installation

4.1 Module installation method

- The CL1XY4-DR1B2 can be installed to DIN rail or directly installed using screws. For direct installation, the screws should be tightened after checking the connection status.

4.2 Connection to sensor

- When using a closed-type sensor: 0.7mm (0.03")
- When using a diode-type sensor: 1.6mm (0.06")

5. Performance specifications

5.1 Response time

- OFF voltage/OFF current: 10ms or less
- ON voltage/ON current: 15ms or less

5.2 Input specifications

- Input method: Logic (positive common)
- Voltage rating: DC 24V ±10%
- Load: 200mA

5.3 Output specifications

- Rated load voltage: DC 30V AC or less
- Rated output voltage: DC 30V
- Rated output current: 200mA

6. Outside Dimensions

- Width: 100mm
- Height: 30mm
- Depth: 70mm

7. Accessories

- Screws (2 pieces)
- DIN rail (2 pieces)
- Installation manual

8. Regulatory Information

- CE marking
- UL listing
- UL/cUL listed

Mitsubishi Electric Corporation

9. Contact Information

www.mitsubishielectric.com
**SAFETY PRECAUTIONS**

If any station No. outside the range from 1 to 64 is set, it is noted as an error.

**CAUTION**

- **Remote input and output cannot be switched ON or OFF when a problem occurs in communication.**
- **If the screws are too loose, the module may drop from its installation position, short circuit, and nonconformity may be caused.**
- **For the control panel, use the product having sufficient strength, fire resistance, and sufficient safety measures.**

**INSTALLATION PRECAUTIONS**

- **Fix the module securely using DIN rail or installation screws within the specified torque range.**
- **Tighten the terminal screws (M3 screws) on the terminal block with a tightening torque of 0.5 to 1.0 N·m.**

**WARNING**

- **Before using the product for special purposes such as nuclear power, electric power distribution, and measurement and control of safety-related equipment for power equipment, consult the manufacturer.**

**DESIGN PRECAUTIONS**

- **Remote input and output cannot be switched ON or OFF when a problem occurs in communication.**
- **For the control panel, use the product having sufficient strength, fire resistance, and sufficient safety measures.**

**TRANSMISSION AND MAINTENANCE PRECAUTIONS**

- **For the control panel, use the product having sufficient strength, fire resistance, and sufficient safety measures.**
- **When installing the module to the DIN rail, tighten the mounting screws at the specified torque range and close the cover.**

**CAUTION**

- **When installing the module to the DIN rail, tighten the mounting screws at the specified torque range and close the cover.**

**CLASSIFICATION OF THE HARMFUL SUBSTANCES**

- **This product is a mark that instructs to use the cable with an insulation material that does not contain halogen.**

**HIGHLY CHEMICAL RESISTANT COMPONENTS**

- **The power supply is supplied from the AC power supply for I/O interface (cable in the main unit).**

**LOW VOLTAGE DESIGNATION (LV)**

- **The module is not isolated from the power supply.**

**REFERENCES**

- **This product is a mark that instructs to use the cable with an insulation material that does not contain halogen.**

**TERMINAL RESISTOR**

- **When a terminal resistor is not attached or when the module is not used, the terminal resistance is high and non-conformity may be caused.**

**CONTACT**

- **For the control panel, use the product having sufficient strength, fire resistance, and sufficient safety measures.**

**SPECIFICATIONS SUBJECT TO CHANGE WITHOUT PRIOR NOTICE**

- **Specifications subject to change without notice.**

**OUTPUT SPECIFICATIONS**

- **Output specifications subject to change without notice.**

**PRODUCTS CONFORMING TO EMERGENCY STANDARDS (EMC)**

- **Compliance with all relevant aspects of standards (EMC) is assured for each module.**

**INPUT/OUTPUT SPECIFICATIONS**

- **Input/output specifications subject to change without notice.**

**CONTACT**

- **For the control panel, use the product having sufficient strength, fire resistance, and sufficient safety measures.**

**NOTES**

- **Specifications subject to change without notice.**

**PRODUCTS CONFORMING TO EMERGENCY STANDARDS (EMC)**

- **Compliance with all relevant aspects of standards (EMC) is assured for each module.**
3. Installation

3.1 Installation in DIN rail

When the DIN rail should be eliminated, the DIN rail can be removed from the panel.

3.2 Installation method

Remove the module from the DIN rail, then remove the DIN rail from the panel. 

4. Wiring

When connecting a two-wire type sensor or input equipment containing a 
parallel resistor, select a sensor or equipment whose leakage current is 
2mA or less.

5. Specifications

5.1 General specifications

<table>
<thead>
<tr>
<th>Item</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input/output</td>
<td>Square-wave (50ms level)</td>
</tr>
<tr>
<td>Power supply</td>
<td>DC 24V</td>
</tr>
<tr>
<td>Power consumption</td>
<td>0.2W (max)</td>
</tr>
</tbody>
</table>

5.2 Input specifications

<table>
<thead>
<tr>
<th>Item</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage range</td>
<td>0V to 24V</td>
</tr>
<tr>
<td>Current range</td>
<td>0mA to 10mA</td>
</tr>
</tbody>
</table>

5.3 Output specifications

<table>
<thead>
<tr>
<th>Item</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage range</td>
<td>24V to 30V</td>
</tr>
<tr>
<td>Current range</td>
<td>4mA to 8mA</td>
</tr>
</tbody>
</table>

6. Outside Dimensions

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Width</td>
<td>71.5(2.82&quot;)</td>
</tr>
<tr>
<td>Height</td>
<td>20(0.8&quot;)</td>
</tr>
<tr>
<td>Depth</td>
<td>10(0.40&quot;)</td>
</tr>
</tbody>
</table>

7. Notes

- For further information, refer to the latest User’s Manual.
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