### 2. EXTERNAL DIMENSION

<table>
<thead>
<tr>
<th>MODEL</th>
<th>INPUT</th>
<th>OUTPUT</th>
<th>APPLICABLE PLC</th>
<th>CURRENT CONSUMPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>FX-16E-TB</td>
<td>16 pt (Direct input/output)</td>
<td></td>
<td>FXxc-COMMT-D/UL</td>
<td></td>
</tr>
<tr>
<td>FX-32E-TB</td>
<td>32 pt or 16 pt (Direct input/output)</td>
<td></td>
<td>FXxc-COMMT-D/UL</td>
<td></td>
</tr>
<tr>
<td>FX-16EYR-TB</td>
<td>—</td>
<td>16 pt (Relay)</td>
<td>FXxc-COMMT-D/UL</td>
<td>80mA (5mA/1pt)</td>
</tr>
<tr>
<td>FX-16EY/ST-TB</td>
<td>—</td>
<td>16 pt (Relay)</td>
<td>FXxc-COMMT-D/UL</td>
<td>112mA (7mA/1pt)</td>
</tr>
<tr>
<td>FX-16EX-A1-TB</td>
<td>16 pt (100V AC)</td>
<td>—</td>
<td>FXxc-COMMT-D/UL</td>
<td>48mA (3mA/1pt)</td>
</tr>
</tbody>
</table>

### 3. CONFIGURATION AND OPTIONS

#### FXxc-FXxc PLC

#### Standard Pre Terminated Cables

<table>
<thead>
<tr>
<th>LENGTHS</th>
<th>FLAT CABLES</th>
<th>ROUND CABLES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.5 m (4.9 ft)</td>
<td>FX-16E-150CAB</td>
<td>FX-16E-150CAB-R</td>
</tr>
<tr>
<td>3.0 m (9.8 ft)</td>
<td>FX-16E-300CAB</td>
<td>FX-16E-300CAB-R</td>
</tr>
<tr>
<td>5.0 m (16.4 ft)</td>
<td>FX-16E-500CAB</td>
<td>FX-16E-500CAB-R</td>
</tr>
</tbody>
</table>

### 4. CONNECTOR CABLE PIN CONFIGURATION

<table>
<thead>
<tr>
<th>PLCC</th>
<th>Pin No.</th>
<th>TERMINAL BLOCKS</th>
<th>Pin No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>Y0010-15</td>
<td>(1)</td>
<td>Y0010-15</td>
</tr>
<tr>
<td>Y0011-15</td>
<td></td>
<td>(2)</td>
<td>Y0011-15</td>
</tr>
<tr>
<td>Y0012-15</td>
<td></td>
<td>(3)</td>
<td>Y0012-15</td>
</tr>
<tr>
<td>Y0013-16</td>
<td></td>
<td>(4)</td>
<td>Y0013-16</td>
</tr>
<tr>
<td>Y0014-16</td>
<td></td>
<td>(5)</td>
<td>Y0014-16</td>
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<tr>
<td>Y0015-16</td>
<td></td>
<td>(6)</td>
<td>Y0015-16</td>
</tr>
<tr>
<td>Y0016-16</td>
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<td>(7)</td>
<td>Y0016-16</td>
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<tr>
<td>Y0017-16</td>
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<td>(8)</td>
<td>Y0017-16</td>
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<tr>
<td>Y0018-16</td>
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<td>(9)</td>
<td>Y0018-16</td>
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<tr>
<td>Y0019-25</td>
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<td>(10)</td>
<td>Y0019-25</td>
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<tr>
<td>Y0020-25</td>
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<td>(11)</td>
<td>Y0020-25</td>
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<tr>
<td>Y0021-25</td>
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<td>(12)</td>
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<td>Y0022-25</td>
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<td>(13)</td>
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<td>Y0023-25</td>
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<td>Y0024-25</td>
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<td>Y0027-25</td>
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<td>Y0028-25</td>
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<td>Y0032-25</td>
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<td>(24)</td>
<td>Y0033-25</td>
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<tr>
<td>Y0034-25</td>
<td></td>
<td>(25)</td>
<td>Y0034-25</td>
</tr>
</tbody>
</table>

The connections required for the FXxc, FXxc main unit and a terminal block are shown in the diagram below with an example for inputs X000 to X017 and outputs Y000 to Y017.

The I/O connector should be the 20-pin type and should conform to MIL C 83563 of Military Standard.
This manual contains text, diagrams and explanations which will guide the reader in the correct installation and operation of the FX TERMINAL BLOCKS. It should be read and understood before attempting to install or use the unit.

Hardware warnings

1) Indicates that the identified danger WILL cause physical and property damage.

2) Indicates that the identified danger could POSSIBLY cause physical and property damage.

Guidelines for the safety of the user and protection of the FX TERMINAL BLOCKS

- This manual has been written to be used by trained and competent personnel. This is defined by the European directives for machinery, low voltage and EMC.
- If in doubt at any stage during the installation of the FX TERMINAL BLOCKS always consult a professional electrical engineer who is qualified and trained to the local and national standards.
- Under no circumstances will Mitsubishi Electric be liable or responsible for any consequential damage that may arise as a result of the installation or use of this equipment.
- All examples and diagrams shown in this manual are intended only as an aid to understand the text, not to guarantee operation. Mitsubishi Electric will accept no responsibility for actual use of the product based on these illustrative examples.
- Owing to the very great variety in possible application of this equipment, you must satisfy yourself as to its suitability for your specific application.

1. INTRODUCTION

Terminal blocks convert I/O terminals of connector type PLC into terminal blocks. Some terminal blocks directly extend inputs and outputs of PLC. Other terminal blocks are equipped with diversified built-in functions, and function only as inputs or outputs.

2. EXTERNAL DIMENSION

3. CONFIGURATION AND OPTIONS

4. CONNECTOR CABLE PIN CONFIGURATION

5. TERMINAL WIRING

Never perform external wiring to unused terminals. Such wiring may damage the unit.

Note

- Do not lay I/O cables next to power cables or allow them to share the same trunking duct.
- Where I/O signals are used over extended distance consideration must be made for voltage drop and noise interference.
- Tighten terminals at a torque of 0.5 to 0.8 Nm. Do not tighten the terminal block mounting screws with a torque outside the above-mentioned range. Failure to do so may cause equipment failures or malfunctions.

6. DIRECT INPUT BLOCKS AND DIRECT OUTPUT BLOCKS WIRING
This manual contains text, diagrams and explanations which will guide the reader in the correct installation and operation of the FX TERMINAL BLOCKS. It should be read and understood before attempting to install or use the unit. Further information can be found in the FX series PLC hardware manuals.

In doubt at any stage during the installation of the FX TERMINAL BLOCKS always consult a professional electrical engineer who is qualified and trained to the local and national standards. All terminal blocks described in this manual conform to the UL/cUL Standard.

2. EXTERNAL DIMENSION

3. CONFIGURATION AND OPTIONS

4. CONNECTOR CABLE PIN CONFIGURATION

5. TERMINAL WIRING

Guidelines for the safety of the user and protection of the FX TERMINAL BLOCKS:

- This manual has been written to be used by trained and competent personnel. This is defined by the European directives for machinery, low voltage and EMC.
- If in doubt about the operation or use of the FX TERMINAL BLOCKS please consult the nearest Mitsubishi Electric distributor.
- Under no circumstances will Mitsubishi Electric be liable or responsible for any consequential damage that may arise as a result of the installation or use of equipment.
- Owing to the very great variety of applicable equipment, you must satisfy yourself as to its suitability for your specific application.

Hardware warnings

1) Indicates that the identified danger WILL cause physical and property damage.
2) Indicates that the identified danger could POSSIBLY cause physical and property damage.

Note's on the symbology used in this manual

- (9) and (19) of both CN1 and CN2 are short-circuited internally.
- Guidelines for the safety of the user and protection of the FX TERMINAL BLOCKS:
- Standard pre terminated cables
- Terminal blocks convert I/O terminals of connector type PLC into terminal blocks. Some terminal blocks are intended to ensure the user's personal safety and protect the integrity of the equipment. Whenever any of the following symbols are encountered, its associated note must be read and understood. Each of the symbols used will now be listed with a brief description of its meaning.

Notes on the symbology used in this manual

- Note's on the symbology used in this manual
- Internal circuit
- Hardware warnings
- Standards for the safety of the user and protection of the FX TERMINAL BLOCKS
- Warnings on the symbology used in this manual
- Notes on the symbols used in this manual

6. DIRECT INPUT BLOCKS AND DIRECT OUTPUT BLOCKS WIRING

- Guidelines for the safety of the user and protection of the FX TERMINAL BLOCKS
- Terminal blocks convert I/O terminals of connector type PLC into terminal blocks. Some terminal blocks are intended to ensure the user's personal safety and protect the integrity of the equipment. Whenever any of the following symbols are encountered, its associated note must be read and understood. Each of the symbols used will now be listed with a brief description of its meaning.
Terminal blocks are not equipped with built-in fuses. In order to prevent breakdown of circuits caused by load short-circuit, provide a fuse of 2 A for every four points.

When a surge absorber is connected to an AC inductive load in parallel, noise reduction is increased.

To a neon lamp or a minute current load of 0.4VA/100V AC, 1.6VA/200V AC, 2mA, 200V AC 0.1mA 30V DC.

The current of 0.3 A can flow in each output point. However, in order to restrict temperature rise, flow 0.8 A to every output point (= 0.2 A per point on an average). When turning on and off frequently a load with large rush current, set the square average current to 0.2 A or less.
7. AC INPUT BLOCK WIRING

### Specifications
- **Voltages**: 85 - 125V AC 50/60Hz
- **Current**: 0.6mA 110V AC, 0.9mA 220V AC
- **Circuit isolation**: Photocoupler
- **Operation indication**: LED of base unit
- **Switch Rating**: ON=OFF 30V 1.7mA
- **Response time**: 25 - 30ms
- **Signal input supply**: 24V DC 3mA/pt

### Typical wiring
- **Source**: Photocoupler
- **Sink**: Photocoupler of base unit

### Outputs

<table>
<thead>
<tr>
<th>PLC</th>
<th>TYPE</th>
<th>TYPICAL WIRING</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLC</td>
<td>COM1</td>
<td>Photocoupler</td>
</tr>
<tr>
<td>PLC</td>
<td>COM2</td>
<td>Photocoupler</td>
</tr>
</tbody>
</table>

8. OUTPUT BLOCKS WIRING

### Outputs specification
- **Switched voltages**: Less than 250V AC 30V DC
- **Circuit isolation**: By relay coil
- **Operation indication**: LED is lit when output is active
- **Maximum load**: 2A at 85/130VAC (com)
- **Leakage current**: 1mA, 100V AC
- **Minimum load**: 2mA DC 5V
- **Response time**: On-Off Approx. 10ms
- **Inductor output supply**: 24V DC 5mA/pt

### Relay output blocks

#### FX-16EY-ES-TB/UL, FX-16EY-TB wiring
- **Power supply**: for relay
- **Output current**: 0.4A/100V AC, 0.6VA/200V AC

#### Transistor output blocks

#### FX-16EY/ES-TB/UL, FX-16EY-TB (sink)
- **S-Capacitor + 100 to 120 Ω resistor

Terminal blocks are not equipped with built-in fuses. In order to prevent breakdown of circuits caused by load short-circuit, provide a fuse of 2A for every four points.

- **ON VOLTAGE**: The ON voltage of an output transistor is approximately 1.5 V.
- **Current of 0.3 A can flow**: in each output point. However, in order to restrict temperature rise, flow 0.8 A to every output point (= 0.2 A per point on an average). When turning on and off frequently a load with large rush current, set the square average current to 0.2 A or less.

---

**Note**: This symbol mark is for China only.
Contains harmful substances, contains lead, contains cadmium, contains mercury, contains six elements.

---

**Product有害物质的名称及含量**

<table>
<thead>
<tr>
<th>部件名称</th>
<th>名称</th>
<th>含量</th>
</tr>
</thead>
<tbody>
<tr>
<td>电路</td>
<td>电阻</td>
<td>0.1Ω</td>
</tr>
<tr>
<td>电路</td>
<td>电容</td>
<td>0.1μF</td>
</tr>
</tbody>
</table>

---

**Manual number**: JY992D50401

**Manual revision**: J

**Date**: May 2018

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**MITSUBISHI ELECTRIC CORPORATION**

**MANUFACTURED IN JAPAN**

**Model Number**: FX-16EY/ES-TB/UL, FX-16EY-TB

**Effective May 2018**

Specifications are subject to change without notice.
7. AC INPUT BLOCK WIRING

### Specifications

- **Voltages**: 85 - 125V AC 50/60Hz
- **Impedance**: 21Ω (50Hz) / 18Ω (60Hz)
- **Current**: 6.2mA 110V AC/60Hz, 4.7mA 100V AC/50Hz
- **Circuit isolation**: Photocoupler
- **Operation indication**: LED of base unit
- **Switch Rating**: OFF/OFF 80V 3.8mA, ON/OFF 30V 1.7mA
- **Response time**: 25 - 30ms
- **Signal input supply**: 24V DC 3mA/pt

### Typical wiring

#### PLC Outputs
- **TYPE**: Outputs
- **Switched voltages**: Less than 250V AC 30V DC
- **Circuit isolation**: Photocoupler
- **Operation indication**: LED of base unit

#### Relay Output blocks FX-16EYR-ES-TB/UL, FX-16EYR-TB wiring

- **Outputs**
  - **RELAY**: PLC Outputs
  - **TRIAC**: PLC Outputs
  - **TRANSISTOR**: PLC Outputs

- **Switched voltages**: Less than 250V AC 30V DC
- **Circuit isolation**: By relay coil
- **Operation indication**: LED is lit when coil is active.

#### Triac output block FX-16EYR-S/T-ES-TB/UL wiring

- **Outputs**
  - **RELAY**: PLC Outputs
  - **TRIAC**: PLC Outputs
  - **TRANSISTOR**: PLC Outputs

- **Switched voltages**: Less than 250V AC 30V DC
- **Circuit isolation**: By relay coil
- **Operation indication**: LED is lit when coil is active.

### Output blocks wiring

#### Relay output blocks FX-16EYR-ES-TB/UL, FX-16EYR-TB wiring

- **Terminals**: Outputs
- **Sink Source**: Relay output blocks FX-16EYR-ES-TB/UL, FX-16EYR-TB wiring
- **FX-16EYT -ESS-TB/UL (source)**
- **FX2C-**
- **FX2NC-**
- **FX2NC-**
- **FX2MT-**
- **FX2C-**
- **FX2NC-**

### Photocoupler power supply

- **FX2C-MT**
- **FX2C-MT**
- **FX2C-MT**

### PLC Outputs

- **TYPE**: Outputs
- **Switching voltages**: 85 - 125V AC 50/60Hz
- **Circuit isolation**: Photocoupler
- **Operation indication**: LED of base unit

### Outputs specification

<table>
<thead>
<tr>
<th>Terminal</th>
<th>Voltage (V)</th>
<th>Current (mA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM1</td>
<td>24V DC</td>
<td>5A</td>
</tr>
<tr>
<td>COM2</td>
<td>24V DC</td>
<td>5A</td>
</tr>
<tr>
<td>COM3</td>
<td>24V DC</td>
<td>5A</td>
</tr>
<tr>
<td>COM4</td>
<td>24V DC</td>
<td>5A</td>
</tr>
</tbody>
</table>

### Switches

- **Switches**: OFF/OFF 80V 3.8mA, ON/OFF 30V 1.7mA
- **Response time**: 25 - 30ms

### Output blocks wiring

#### Relay output blocks FX-16EYR-ES-TB/UL, FX-16EYR-TB wiring

- **Outputs**
  - **RELAY**: PLC Outputs
  - **TRIAC**: PLC Outputs
  - **TRANSISTOR**: PLC Outputs

- **Switched voltages**: Less than 250V AC 30V DC
- **Circuit isolation**: By relay coil
- **Operation indication**: LED is lit when coil is active.

#### Triac output block FX-16EYR-S/T-ES-TB/UL wiring

- **Outputs**
  - **RELAY**: PLC Outputs
  - **TRIAC**: PLC Outputs
  - **TRANSISTOR**: PLC Outputs

- **Switched voltages**: Less than 250V AC 30V DC
- **Circuit isolation**: By relay coil
- **Operation indication**: LED is lit when coil is active.

### Output blocks wiring

#### Relay output blocks FX-16EYR-ES-TB/UL, FX-16EYR-TB wiring

- **Outputs**
  - **RELAY**: PLC Outputs
  - **TRIAC**: PLC Outputs
  - **TRANSISTOR**: PLC Outputs

- **Switched voltages**: Less than 250V AC 30V DC
- **Circuit isolation**: By relay coil
- **Operation indication**: LED is lit when coil is active.

#### Triac output block FX-16EYR-S/T-ES-TB/UL wiring

- **Outputs**
  - **RELAY**: PLC Outputs
  - **TRIAC**: PLC Outputs
  - **TRANSISTOR**: PLC Outputs

- **Switched voltages**: Less than 250V AC 30V DC
- **Circuit isolation**: By relay coil
- **Operation indication**: LED is lit when coil is active.
This manual contains text, diagrams and explanations which will guide the reader in the correct installation and operation of the FX TERMINAL BLOCKS. It should be read and understood before attempting to install or use the unit. Further information can be found in the FX series PLC hardware manuals.

If in doubt at any stage during the installation of the FX TERMINAL BLOCKS always consult a professional electrical engineer who is qualified and trained to the local and national standards.

All terminal blocks described in this manual conform to the UL/UL Standard.

Note on the symbology used in this manual
At various times throughout this manual certain symbols will be used to highlight points of information which are intended to ensure the users personal safety and protect the integrity of the equipment. Whenever any of the following symbols are encountered, its associated note must be read and understood. Each of the symbols used will now be listed with a brief description of its meaning.

Hardware warnings
1) Indicates that the identified danger WILL cause physical and property damage.
2) Indicates that the identified danger could POSSIBLY cause physical and property damage.
3) Indicates that the identified danger could cause property damage.
4) Indicates that the identified danger could cause personal injury.
5) Indicates that the identified danger will cause personal injury.

Guidelines for the safety of the user and protection of the FX TERMINAL BLOCKS
- This manual has been written to be used by trained and competent personnel. This is defined by the European directives for machinery, low voltage and EMC.
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1. INTRODUCTION

Terminal blocks convert I/O terminals of connector type PLC into terminal blocks. Some terminal blocks directly extend inputs and outputs of PLC. Other terminal blocks are equipped with diversified built-in devices, and function only as inputs or outputs.

2. EXTERNAL DIMENSION

3. CONFIGURATION AND OPTIONS

4. CONNECTOR CABLE PIN CONFIGURATION

The connections required between the FXcc, FXcc main unit and a terminal block are shown in the diagram below with an example for inputs X000 to X017 and outputs Y000 to Y017. The I/O connector should be the 20-pin type and should conform to MIL-C-83503 of Military Standard.
### Outputs

<table>
<thead>
<tr>
<th>PLC</th>
<th>TYPE</th>
<th>TYPICAL WIRING</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLC-CDMT/E-UL</td>
<td>Source</td>
<td>PLC Outputs</td>
</tr>
<tr>
<td>PLC-CDMT/EUL</td>
<td>Sink</td>
<td>PLC Outputs</td>
</tr>
</tbody>
</table>

For the IO specifications and detailed information, refer to the FX2C Hardware Manual or the FX2NC Hardware Manual.

### 7. AC INPUT BLOCK WIRING

**Specifications**

<table>
<thead>
<tr>
<th>Input</th>
<th>VOLTAGES</th>
<th>85 - 125V AC 50/60Hz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impedance</td>
<td>21kΩ / 50Hz</td>
<td>18kΩ / 60Hz</td>
</tr>
<tr>
<td>Current</td>
<td>6.2mA 110V AC/60Hz</td>
<td>4.7mA 100V AC/50Hz</td>
</tr>
<tr>
<td>Circuit isolation</td>
<td>Photocoupler</td>
<td></td>
</tr>
<tr>
<td>Operation indication</td>
<td>LED of base unit</td>
<td></td>
</tr>
<tr>
<td>Switch Rating</td>
<td>OFF</td>
<td>ON</td>
</tr>
<tr>
<td>Response time</td>
<td>25 - 30ms</td>
<td></td>
</tr>
<tr>
<td>Signal input supply</td>
<td>24V DC 3mA/pt</td>
<td></td>
</tr>
</tbody>
</table>

### 8. OUTPUT BLOCKS WIRING

**Outputs specification**

<table>
<thead>
<tr>
<th>RELAY</th>
<th>TRIAC</th>
<th>TRANSISTOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Switched voltage</td>
<td>Less than 250V AC 30V DC</td>
<td></td>
</tr>
<tr>
<td>Between 85 - 242V AC</td>
<td>3 - 30V DC</td>
<td></td>
</tr>
<tr>
<td>Circuit isolation</td>
<td>By relay coil</td>
<td></td>
</tr>
<tr>
<td>Operation indication</td>
<td>Photocoupler</td>
<td></td>
</tr>
<tr>
<td>Maximum load</td>
<td>3A (24VDC)</td>
<td></td>
</tr>
<tr>
<td>Leakage current</td>
<td>1mA, 100V AC 2mA, 200V AC</td>
<td></td>
</tr>
<tr>
<td>Minimum load</td>
<td>2mA 5V DC</td>
<td></td>
</tr>
<tr>
<td>Response time</td>
<td>Approx. 10ms</td>
<td></td>
</tr>
</tbody>
</table>

- **Terminal blocks are not equipped with built-in fuses. To prevent breakdown of circuits caused by load short-circuit, provide a fuse of 5 to 10 A for every four points.**

- **[ DC LOAD ]**
  - Connect a noise suppression diode to a DC inductive load in parallel. If the diode is not connected, the lifetime of the contact becomes considerably shorter.
  - Select a noise suppression diode whose reverse withstand voltage is 5 to 10 times or more the load voltage and whose current in the forward direction is not less than the load current.

- **[ AC LOAD ]**
  - When a surge absorber is connected to an AC inductive load in parallel, noise generation is reduced.

- **Operation indication LED of base unit**
  - LED is lit when output is ON |
  - LED is lit when output is OFF |

- **Output current**
  - The current of 0.3 A can flow in each output point. However, in order to restrict temperature rise, flow 0.8 A to every output points (0.2 A per point on an average).

- **[ MINUTE CURRENT LOAD ]**
  - To a neon lamp or a minute current load of 0.4VA/100V AC, 1.6VA/200V AC or less, connect a surge absorber in parallel.

- **[ OUTPUT CURRENT ]**
  - The current of 0.3 A can flow in each output point. However, in order to restrict temperature rise, flow 0.8 A to every output points (0.2 A per point on an average). When turning on and off frequently a load with large rush current, set the square average current to 0.2 A or less.

### Relay output blocks FX-16EYR-ES-TB/UL, FX-16EYR-TB wiring

Terminal blocks are not equipped with built-in fuses. In order to prevent breakdown of circuits caused by load short-circuit, provide a fuse of 2 A for every four points.

- **[ ON VOLTAGE ]**
  - The ON voltage of an output transistor is approximately 1.5 V.

- **When driving a semiconductor device, etc., pay attention to the input voltage characteristics of the used device.**

### Transistor output blocks wiring

Terminal blocks are not equipped with built-in fuses. In order to prevent breakdown of circuits caused by load short-circuit, provide a fuse of 2 A for every four points.

- **[ ON VOLTAGE ]**
  - The ON voltage of an output transistor is approximately 1.5 V.

- **When driving a semiconductor device, etc., pay attention to the input voltage characteristics of the used device.**

### TYPICAL WIRING

<table>
<thead>
<tr>
<th>PLC</th>
<th>Source</th>
<th>Sink</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLC-CDMT/E-UL</td>
<td>PLC Outputs</td>
<td>PLC Outputs</td>
</tr>
<tr>
<td>PLC-CDMT/EUL</td>
<td>PLC Outputs</td>
<td>PLC Outputs</td>
</tr>
</tbody>
</table>

For the IO specifications and detailed information, refer to the FX2C Hardware Manual or the FX2NC Hardware Manual.

### Relay output blocks wiring

Terminal blocks are not equipped with built-in fuses. In order to prevent breakdown of circuits caused by load short-circuit, provide a fuse of 5 to 10 A for every four points.

- **[ DC LOAD ]**
  - Connect a noise suppression diode to a DC inductive load in parallel. If the diode is not connected, the lifetime of the contact becomes considerably shorter.
  - Select a noise suppression diode whose reverse withstand voltage is 5 to 10 times or more the load voltage and whose current in the forward direction is not less than the load current.

- **[ AC LOAD ]**
  - When a surge absorber is connected to an AC inductive load in parallel, noise generation is reduced.

The standard lifetime of contactors and solenoid valves against AC inductive load is 500,000 times of actuation against 35 VA.

The table below shows the guideline of the lifetime of relays based on the result of the lifetime test performed in our company.

<table>
<thead>
<tr>
<th>LOAD CAPACITY</th>
<th>LIFE TIME OF CONTACT</th>
<th>EXAMPLE OF APPLICABLE LOAD</th>
</tr>
</thead>
<tbody>
<tr>
<td>25VA</td>
<td>0.5A / 100V AC</td>
<td>S-K150, S-K150</td>
</tr>
<tr>
<td>1.5A / 200V AC</td>
<td>S-N150 ~ S-N350.17A / 200V AC</td>
<td></td>
</tr>
<tr>
<td>80VA</td>
<td>0.8A / 100V AC</td>
<td>S-K180, S-K400</td>
</tr>
<tr>
<td>1.5A / 200V AC</td>
<td>S-K500, S-K800</td>
<td></td>
</tr>
<tr>
<td>120VA</td>
<td>0.6A / 200V AC</td>
<td></td>
</tr>
</tbody>
</table>

Note: This symbol mark is for China only.

Effective May 2018
Specifications are subject to change without notice