MICREX-SX Series
Market Release of FBC2000 Board Controllers

We would like to thank you for your continued patronage of Fuji Programmable Controllers. Please be informed that Fuji Electric FA has released the MICREX-SX-series FBC2000 Board Controllers.

1. Models Released

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<th>Product name</th>
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<th>General specifications</th>
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<tr>
<td>NP3PM-048E1</td>
<td>SPH2000, 48ksteps (Equivalent in function to NP1PM-48E + general-purpose communications)</td>
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<td>NP3PM-256E1</td>
<td>SPH2000, 256ksteps (Equivalent in function to NP1PM-256E + general-purpose communications)</td>
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<td>I/O Boards</td>
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<td>NP3W24AX4</td>
<td>16 DI points, 8 DO-Ry points, and 4 AI points (Equivalent in function to NP1AXH4-MR + 32 DIO points)</td>
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<td>Communications Boards</td>
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<tr>
<td>NP3L-RS1</td>
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<tr>
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<td>RS-232C × 2 ch and RS-485 × 2 ch (Equivalent in function to NP1L-RS1 × 2 modules)</td>
<td></td>
</tr>
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<td>NP3L-RS7</td>
<td>RS-232C × 2 ch and Ethernet × 1 ch (Equivalent in function to NP1L-RS3 + NP1L-ET1)</td>
<td></td>
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<tr>
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<td>WEB board (Equivalent in function to NP1L-WE1)</td>
<td></td>
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<td>FL-net (version 2) × 1 ch (Equivalent in function to NP1L-FL3)</td>
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<td>Enclosed CPU Boards</td>
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<td>NP3PM-048E1 + Vertical housing</td>
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<td>NP3PM-256E1 + Vertical housing</td>
<td></td>
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<tr>
<td>NP3PMKW-048E0</td>
<td>NP3PM-048E0 + Horizontal housing</td>
<td></td>
</tr>
<tr>
<td>NP3PMKW-048E1</td>
<td>NP3PM-048E1 + Horizontal housing</td>
<td></td>
</tr>
<tr>
<td>NP3PMKW-256E1</td>
<td>NP3PM-256E1 + Horizontal housing</td>
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</table>

2. Start of Sales
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3. Product Features
   (1) CPU, I/O, and communications boards with compact, thin-profile construction.
   (2) The same performance features as the SPH2000, such as high-capacity memory and versatile interfaces.
   (3) SPH-compatible Programming Support Tools (Expert or Standard) are available.
4. Overview of CPU Boards (NP3PM-048E0/048E1/256E1)

4-1 Appearance

- Status display indicators
- Rotary key switch
- Rotary CPU number switch
- SX bus connectors
- 24V power supply terminals
- Ethernet connector (RJ45)
- RS-232C/485 communications connector (RJ45)
- User ROM (CF card) connector
- Data backup battery
- Loader connector (RJ45) (See note 2.)
- USB connector (for loader connection) USB-miniB
- USB connector (for loader connection)
- RS-485 terminator switch
- RS-232C/485 communications switch
- (IN)
- (OUT)

Note: 1. Put the provided termination plugs onto the SX bus connectors (IN and OUT).
   2. Use the NW0H-CNV RS232C/RS422 signal converter and NW0H-CA3 loader cable.

4-2 Dimensions

- Six, 3.6-dia. holes
5. Overview of NP3W24AWH4 I/O Board

5-1 Appearance

- Gain switch and offset and channel switch
- Indicator switch
- Status indicators
- 24V power supply terminal block
- PCB connector (top)
- PCB connector (bottom)
- AI (4 points)
- DO (8 Ry points)
- DI (16 points)

5-2 Dimensions

Ten, 3.6-dia. holes
6. Overview of NP3L-RS1 Communications Board (RS-232C × 1 and RS-485 × 1)

6-1 Appearance

- PCB connector (top)
- Mode setting switch
- RS-485 node address switch
- Status indicators
- 24V power supply terminal block
- Terminator switch
- RS-485 connector (6-pin European terminal block)
- RS-232C connector (D-sub 9-pin male, inch screws)
- Board connector
- PCB connector (bottom)

6-2 Dimensions

Eight, 3.6-dia. holes
7. Overview of NP3L-RS6 Communications Board (RS-232C × 2, RS-485 × 2)

7-1 Appearance

- PCB connector (top)
- Mode setting switches
- RS-485 node address switches
- Status indicators
- 24V power supply terminal block
- Terminator switches
- Board connector
- RS-485 connector (6-pin European terminal block)
- RS-232C connector (D-sub 9-pin male, inch screws)

7-2 Dimensions

- Eight, 3.6-dia. holes

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**Dimensions:**

- 200
- 20
- 90
- 80
- 5
- 83
- 83
- 83
- 151
- 62
- 25
- 109
8. Overview of NP3L-RS7 Communications Board (RS-232C × 2 and Ethernet × 1)

8-1 Appearance

- RS-232C CH1     CH2
- PCB connector (top)
- PCB connector (bottom)
- Status indicators
- 24V power supply terminal block
- RS-232C mode setting switch
- Ethernet
- RS-232 CH1     CH2
- PCB connector (top)
- RS-232 CH1     CH2
- PCB connector (bottom)

8-2 Dimensions

- Eight, 3.6-dia. holes

200 200 80 200 20 90 80 5

(120)

(60)
9. Overview of NP3L-WE1 Communications Board (WEB x 1)

9-1 Appearance

- Status indicators
- 24V power supply terminal
- RS-232C
- Ethernet
- PCB connector (top)
- PCB connector (bottom)

9-2 Dimensions

- Eight, 3.6-dia. holes
10. Overview of NP3L-FL3 Communications Board (FL-net x 1)

10-1 Appearance

- Status indicators
- CPU number switches/FL-net node number switches
- 24V power supply terminal block
- PCB connector (top)
- PCB connector (bottom)

10-2 Dimensions

- Eight, 3.6-dia. holes

Dimensions:
- 200 mm
- 20 mm
- 90 mm
- 80 mm
- 5 mm
- 9 mm
11. Combinations of Boards

11-1 Conditions

(1) A maximum of three boards can be stacked.
   Place the CPU board on the top level, communications board in the middle, and I/O board on the bottom.
(2) Prepare the parts (spacers and screws) required for assembly. The boards are not sold together with these parts.
(3) The space between boards must be 18mm. Use metal spacers that are 18mm long and provided with a male screw on one end and a female screw hole on the other end.
   Metal spacers for the bottom must be at least 8mm long and provided with female screw holes on both ends.
   Use six M3 screws with spring washers and flat washers to secure the boards.
(4) Secure all the mounting holes with the spacers and screws.
(5) Connect a 24V DC power supply to one of the power supply terminal blocks.
   There is no need to connect the power supply to the terminal block of each board, because all terminal blocks are internally connected.

11-2 Combination Examples

A combination example of a CPU board, general-purpose communications board, and I/O board is shown below.

<table>
<thead>
<tr>
<th>Number</th>
<th>Required number</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1</td>
<td>10</td>
<td>M3 lock screws</td>
</tr>
<tr>
<td>#2</td>
<td>14</td>
<td>18mm-long metal spacers provided with a male screw on one end and a female screw hole on the other end</td>
</tr>
<tr>
<td>#3</td>
<td>10</td>
<td>Metal spacers that are at least 8mm long and provided with female screw holes on both ends.</td>
</tr>
</tbody>
</table>

Tightening torque: 0.5 to 0.7 N m

Approx. 91 (SX bus termination plug included)
12. Overview of NP3PMKS-048E0/048E1/256E1 Enclosed CPU Board (Vertical Housing)

12-1 Appearance

- Power supply terminal block (right angles)
- SX Bus (right angles)
- RS-232C/RS-485 switch
- RS-485 terminator
- ON/OFF switch
- Ethernet
- RS-232C/RS-485 loader connectors
- USB
- User ROM (CF card)
- Battery for data backup

12-2 Dimensions

Dimensions: 224 x 110 x 30 (mm)
13. Overview of NP3PMKW-048E0/048E1/256E1 Enclosed CPU Board (Horizontal Housing)

13-1 Appearance

- RS-232C/RS-485 switch
- Data backup battery
- SX bus (straight)
- Power supply terminal block (straight)
- RS-485 terminator switch

13-2 Dimensions

- Width: 224 mm
- Height: 110 mm
- Depth: 30 mm (120 mm)