FINGER PROTECTION TERMINAL BLOCK

FPWS Series FPSK Series

Finger Protection Terminal Block

Finger protection IP2X

Current-carrying part of FPS-10~80 is the same height

FPS-10, -20, -20H, -30, -40, -50 and FPS-80 are the same height from mounting surface to wiring part.

Attach and detach of name plate

You can attach and detach it in a longitudinal direction and a vertical direction.

Joint plate (See page 8)

You can assemble just only one joint plate between each capacity. You can use as a separation for same capacity and insulation for different capacity.

Side plate ×2 ⇒ Joint plate ×1 ⋯ 3mm saving per place
### Rating

<table>
<thead>
<tr>
<th>Model No.</th>
<th>FPS-10</th>
<th>FPS-20</th>
<th>FPS-20H</th>
<th>FPS-30</th>
<th>FPS-40</th>
<th>FPS-50</th>
<th>FPS-80</th>
<th>FPS-100</th>
<th>FPWS-10</th>
<th>FPWS-20</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Rated voltage</strong></td>
<td>800V</td>
<td>1000V</td>
<td>600V</td>
<td>800V</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Rated current</strong></td>
<td>15A</td>
<td>22A</td>
<td>22A</td>
<td>30A</td>
<td>40A</td>
<td>50A</td>
<td>75A</td>
<td>95A</td>
<td>15A</td>
<td>22A</td>
</tr>
<tr>
<td><strong>Applicable wire</strong></td>
<td>0.75~1.25mm²</td>
<td>1.25~2mm²</td>
<td>1.25~2mm²</td>
<td>2~3.5mm²</td>
<td>3.5~5.5mm²</td>
<td>5.5~8mm²</td>
<td>5.5~14mm²</td>
<td>8~22mm²</td>
<td>0.75~1.25mm²</td>
<td>1.25~2mm²</td>
</tr>
<tr>
<td><strong>Terminal screw</strong></td>
<td>M3×7.3L Pan head sems(±)</td>
<td>M3.5×7.3L Pan head sems(±)</td>
<td>M3.5×7.3L Pan head sems(±)</td>
<td>M4×8L Pan head sems(±)</td>
<td>M5×10L Pan head sems(±)</td>
<td>M5×10L Pan head sems(±)</td>
<td>M6×12L Pan head sems(±)</td>
<td>M3×7.3L Pan head sems(±)</td>
<td>M3.5×7.3L Pan head sems(±)</td>
<td></td>
</tr>
<tr>
<td><strong>Tightening torque</strong></td>
<td>0.5~1.2N・m</td>
<td>0.8~1.4N・m</td>
<td>0.8~1.4N・m</td>
<td>1.2~1.8N・m</td>
<td>1.2~1.8N・m</td>
<td>2.0~3.0N・m</td>
<td>2.0~3.0N・m</td>
<td>2.5~3.7N・m</td>
<td>0.5~1.2N・m</td>
<td>0.8~1.4N・m</td>
</tr>
<tr>
<td><strong>End plate (Sales lot)</strong></td>
<td>FPS-1E (50)</td>
<td>FPS-2E (50)</td>
<td>FPS-3E (10)</td>
<td>FPS-4E (10)</td>
<td>FPS-5E (10)</td>
<td>FPWS-1E (10)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Assembly type Order form

**FPS△-□-※P**

- **△**: L = rail-mounting type  K = direct-mounting type
- **□**: 10, 20, 20H, 30, 40, 50, 80, 100
- **※**: No. of poles

**FPWS L-□-※U**

- **□**: 10, 20
- **※**: No. of units

### Rating table of certified products

<table>
<thead>
<tr>
<th>Terminal screw</th>
<th>Tightening torque</th>
<th>Mass</th>
<th>Sales lot</th>
</tr>
</thead>
<tbody>
<tr>
<td>M3.5×7.3L Pan head sems(±)</td>
<td>0.5~1.2N・m</td>
<td>6.4g</td>
<td>100</td>
</tr>
</tbody>
</table>

### Specification of rail-mounting terminal block

**FPS-10**

#### Rating

<table>
<thead>
<tr>
<th><strong>Terminal screw</strong></th>
<th>M3×7.3L Pan head sems(±)</th>
<th>UL94V-0</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Rated voltage</strong></td>
<td>800V</td>
<td>600V</td>
</tr>
<tr>
<td><strong>Rated current</strong></td>
<td>15A</td>
<td>15A</td>
</tr>
<tr>
<td><strong>Applicable wire</strong></td>
<td>AWG20~16</td>
<td></td>
</tr>
</tbody>
</table>

**Common specification**

- Withstand voltage: 3000V/1min
- Impulse withstand voltage: 8kV
- Insulation resistance: 200MΩ over DC50V megohmmeter
- Ambient temperature: -25℃→+60℃(No freezing or condensation)
- Relative humidity: 45~85%
- IP code: IP2X
- Standard: JIS C 8201-7-1(IEC60947-7-1)/NECA C 2811

**Materials**

- Body insulator: modified PPE(black)
- End plate (L or K): modified PPE(black)
- Conductive plate: Cooper alloy (Ni-plate)
- Terminal screw: Steel (zinc trivalent chromate-plating)
- Joint plate: modified PPE(gray)

**Accessories**

- End plate: FPS-1E(2.3g)
- Name plate: AM-10
- Stopper: GTY18
- Rail: DAV(DAS)

**Model No.**

- FPSL-10-※P
- FPSL-20-※P
- FPSL-20H-※P
- FPSL-30-※P
- FPSL-40-※P
- FPSL-50-※P
- FPSL-80-※P
- FPSL-100-※P
- FPWSL-10-※P
- FPWSL-20-※P
<table>
<thead>
<tr>
<th>FPS-20</th>
<th>Rating</th>
<th>JS/IEC</th>
<th>UL/cUL</th>
<th>Terminal screw</th>
<th>M3.5×7.3L Pan head semi[3]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated voltage</td>
<td>800V</td>
<td>600V</td>
<td></td>
<td>Tightening torque</td>
<td>0.8~1.4N-m</td>
</tr>
<tr>
<td>Rated current</td>
<td>22A</td>
<td>19A</td>
<td></td>
<td>Mass</td>
<td>8.6g</td>
</tr>
<tr>
<td>Applicable wire</td>
<td>1.25~2mm²</td>
<td>AWG16~14</td>
<td></td>
<td>Sales lot</td>
<td>50</td>
</tr>
</tbody>
</table>

**Accessories**
- End plate: FPS-1E (2.3g)
- Name plate: AM-10
- Stopper: GTY1B
- Rail: DAV (DAS)

<table>
<thead>
<tr>
<th>FPS-20H</th>
<th>Rating</th>
<th>JS/IEC</th>
<th>UL/cUL</th>
<th>Terminal screw</th>
<th>M3.5×7.3L Pan head semi[3]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated voltage</td>
<td>800V</td>
<td>600V</td>
<td></td>
<td>Tightening torque</td>
<td>0.8~1.4N-m</td>
</tr>
<tr>
<td>Rated current</td>
<td>22A</td>
<td>22A</td>
<td></td>
<td>Mass</td>
<td>8.6g</td>
</tr>
<tr>
<td>Applicable wire</td>
<td>1.25~2mm²</td>
<td>AWG20~14</td>
<td></td>
<td>Sales lot</td>
<td>50</td>
</tr>
</tbody>
</table>

**Accessories**
- End plate: FPS-1E (2.3g)
- Name plate: AM-10
- Stopper: GTY1B
- Rail: DAV (DAS)

<table>
<thead>
<tr>
<th>FPS-30</th>
<th>Rating</th>
<th>JS/IEC</th>
<th>UL/cUL</th>
<th>Terminal screw</th>
<th>M4×8L Pan head semi[3]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated voltage</td>
<td>1000V</td>
<td>600V</td>
<td></td>
<td>Tightening torque</td>
<td>1.2~1.8N-m</td>
</tr>
<tr>
<td>Rated current</td>
<td>30A</td>
<td>30A</td>
<td></td>
<td>Mass</td>
<td>14g</td>
</tr>
<tr>
<td>Applicable wire</td>
<td>2~3.5mm²</td>
<td>AWG14~10</td>
<td></td>
<td>Sales lot</td>
<td>50</td>
</tr>
</tbody>
</table>

**Accessories**
- End plate: FPS-2E (2.7g)
- Name plate: AM-10
- Stopper: HDV-2
- Rail: DAV (DAS)

<table>
<thead>
<tr>
<th>FPS-40</th>
<th>Rating</th>
<th>JS/IEC</th>
<th>UL/cUL</th>
<th>Terminal screw</th>
<th>M4×8L Pan head semi[3]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated voltage</td>
<td>1000V</td>
<td>600V</td>
<td></td>
<td>Tightening torque</td>
<td>1.2~1.8N-m</td>
</tr>
<tr>
<td>Rated current</td>
<td>40A</td>
<td>35A</td>
<td></td>
<td>Mass</td>
<td>14g</td>
</tr>
<tr>
<td>Applicable wire</td>
<td>3.5~5.5mm²</td>
<td>AWG12~10</td>
<td></td>
<td>Sales lot</td>
<td>50</td>
</tr>
</tbody>
</table>

**Accessories**
- End plate: FPS-2E (2.7g)
- Name plate: AM-10
- Stopper: HDV-2
- Rail: DAV (DAS)
Joint plate

You can use separation for same capacity and insulation for different capacity.
※ Check following operating suggestions when you use joint plate.
※ FPWS series are not used joint plate.

Assemble of FPS-10, FPS-20, and FPS-20H / use separation for same capacity and insulation for different capacity
Assemble of FPS-30 or 40 and FPS-10, 20, or 20H / use separation for same capacity and insulation for different capacity
Assemble of FPS-50 and FPS-10, 20, 20H, 30, or 40 / use separation for same capacity and insulation for different capacity
Assemble of FPS-80 and FPS-10, 20, 20H, 30, 40, or 50 / use separation for same capacity and insulation for different capacity
Assemble of FPS-100 and FPS-10, 20, 20H, 30, 40, 50, and 80 / use separation for same capacity and insulation for different capacity

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Operating suggestions
● Assemble flat surface of joint plate in towards electrode side of terminal block.
● Barrier side of every capacity terminal block should be taken a direction. (Face-to-face assembling is impossible.) (Fig.1)
● Assemble in proper order (in a direction from small towards large capacity) when you assemble different capacity terminal block.

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Example of rail-mounting mixed assembly terminal block

You can set just only one joint plate between each capacity.
You can use as a separation for same capacity and insulation for different capacity.
Side plate × 2 ⇒ Joint plate × 1 ・・・ 3mm saving per place
**FPWS Series**

### FPWS-10

**Rating**
- Rated voltage: 600V
- Rated current: 15A
- Applicable wire: 0.75~1.25mm² AWG20~16

**Accessories**
- End plate: FPWS-1E (13.5g)
- Name plate: M-1LE
- Stopper: HDV-4
- Rail: DAV(DAS)

**Terminal screw:** M3×7.3L Pan head screws
- Tightening torque: 0.5~1.2N-m
- Mass: 15.6g
- Sales lot: 50

### FPWS-20

**Rating**
- Rated voltage: 800V
- Rated current: 22A
- Applicable wire: 1.25~2mm² AWG18~14

**Accessories**
- End plate: FPWS-1E (13.5g)
- Name plate: M-1LE
- Stopper: HDV-4
- Rail: DAV(DAS)

**Terminal screw:** M3.5×7.3L Pan head screws
- Tightening torque: 0.8~1.4N-m
- Mass: 18.1g
- Sales lot: 50

### FPSK-10-※P

**Rating**
- Rated voltage: 800V
- Rated current: 15A
- Applicable wire: 0.75~1.25mm²
- Terminal screw: M3×7.3L Pan head screws
- Tightening torque: 0.5~1.2N-m
- No. of poles: 1~30P
- Joint plate: FPS-1J
- Shaft: SF3
- Name plate: AM-10

**Materials**
- End plate: modified PPE(UL94V-0)
- Spring: SUS
- Mass: FPS-K: 4.9g
  - FPS-100K: 16.7g

**Direct-mounting assembly terminal block**

- We assemble terminal blocks with your request poles and make the shipment here.

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**Notes:**
- End plate: FPWSL-10-※U
- Joint plate: FPWSL-20-※U
- Shaft length: MINφ3.5
- Installation pitch (A): MIN4 MAX4
- Terminal screw: M3×7.3L Pan head screws
- No. of poles: 1~30P
- Sales lot: 50

**Dimensions:**
- Total length of terminal (L)
- Installation pitch (A)
- Terminal screw M3×7.3L Pan head screws
- No. of poles (※)
- Tightening torque
- Flexible terminal connection

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**Series:**
- FPSK Series
- FPWS Series

**Manufacturer:**
- TOYOGIKEN CO.,LTD.
## FPSK-20-※P

### Rating
- **Rated voltage**: 800V
- **Rated current**: 22A
- **Applicable wire**: 1.25~2mm²
- **Terminal screw**: M3.5x7.3 (Pan head screws)
- **Tightening torque**: 0.8~1.4N·m
- **No. of poles**: 1~30P

### Accessories
- **End plate**: FPS-K
- **Joint plate**: FPS-J
- **Shaft**: SF3
- **Name plate**: AM-10

### FPSK-20H-※P

### Rating
- **Rated voltage**: 800V
- **Rated current**: 22A
- **Applicable wire**: 1.25~2mm²
- **Terminal screw**: M3.5x7.3 (Pan head screws)
- **Tightening torque**: 0.8~1.4N·m
- **No. of poles**: 1~20P

### Accessories
- **End plate**: FPS-K
- **Joint plate**: FPS-J
- **Shaft**: SF3
- **Name plate**: AM-10

## FPSK-30-※P

### Rating
- **Rated voltage**: 1000V
- **Rated current**: 30A
- **Applicable wire**: 1.2~3.5mm²
- **Terminal screw**: M4x8 (Pan head screws)
- **Tightening torque**: 1.2~1.8N·m
- **No. of poles**: 1~20P

### Accessories
- **End plate**: FPS-K
- **Joint plate**: FPS-J
- **Shaft**: SF3
- **Name plate**: AM-10

## FPSK-40-※P

### Rating
- **Rated voltage**: 1000V
- **Rated current**: 40A
- **Applicable wire**: 3.5~5.5mm²
- **Terminal screw**: M4x8 (Pan head screws)
- **Tightening torque**: 1.2~1.8N·m
- **No. of poles**: 1~20P

### Accessories
- **End plate**: FPS-K
- **Joint plate**: FPS-J
- **Shaft**: SF3
- **Name plate**: AM-10

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**Note:** The diagrams and tables are not fully transcribed due to the nature of the image and the focus on text readability. For detailed specifications, please refer to the original document.