Picking Sensor
F3W-D

Compact, Resistant to Mutual Interference, and Ideal for Picking a Variety of Parts.

• Mounts to a parts rack and uses indicators to show parts picking procedures. Functions as a mistake-proofing Sensor.
• Use either the built-in LED indicators or external picking indicators.

Be sure to read Safety Precautions on page 7.

Features

Sensing Distance of 3 m

Selectable Display Mode: All Lighting, All Flashing, Elevator-like Lighting, Accordion-like Lighting

• Six picking indicators provide very clear displays.
• Selectable display speed (slow/fast)

External Picking Indicators Can Be Connected

An indicator (M22N Series, etc.) can be directly connected to the Picking Sensor and mounted in an easy-to-see location.

* Be sure to check the power supply voltage before use.
For more information on the M22N Series, refer to the A22N/M22N/A30N Data Sheet (Cat. No. A254).
### Ordering Information

#### Sensors

<table>
<thead>
<tr>
<th>Sensing method</th>
<th>Appearance</th>
<th>Connection method (cable length)</th>
<th>Sensing distance</th>
<th>Beams Gap</th>
<th>Qty</th>
<th>Sensing width (mm)</th>
<th>Output type</th>
<th>External indicator</th>
<th>Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Through-beam</td>
<td></td>
<td>Pre-wired (5 m)</td>
<td></td>
<td></td>
<td></td>
<td>3 m</td>
<td>NPN open collector</td>
<td>---</td>
<td>F3W-D052A *1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pre-wired connector (2 m)</td>
<td></td>
<td>25 mm</td>
<td>5</td>
<td></td>
<td>Possible</td>
<td>F3W-D052AP *1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>---</td>
<td>F3W-D052B *1, 2</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Possible</td>
<td>F3W-D052BP *1, 2</td>
<td></td>
</tr>
</tbody>
</table>

*1. Models with PNP outputs are also available. To order PNP Models, replace A with C in the model number for a Pre-wired Model and B with D in the model number for a Pre-wired Connector Model (Example: F3W-D052C).

*2. The XS2F-D521-...G0 is the applicable connector cable. The colors of the external sheathes of the conductors, however, are different. Refer to the XS2.

#### Accessories (Order Separately)

##### Mounting Brackets

<table>
<thead>
<tr>
<th>Appearance</th>
<th>Model</th>
<th>Qty</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F39-L10</td>
<td>two per set</td>
<td>L-shaped Mounting Bracket (mounting screws included)</td>
</tr>
<tr>
<td></td>
<td>F39-L11</td>
<td>two per set</td>
<td>Flat Mounting Bracket (mounting screws included)</td>
</tr>
</tbody>
</table>

##### Protective Bracket

<table>
<thead>
<tr>
<th>Appearance</th>
<th>Model</th>
<th>Qty</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F39-L12</td>
<td></td>
<td>One each for Emitter and Receiver (mounting screws included)</td>
</tr>
</tbody>
</table>

#### Sensor I/O Connectors

(Models for Pre-wired Connectors: A Connector is not provided with the Sensor. Be sure to order a Connector separately.)

<table>
<thead>
<tr>
<th>Size</th>
<th>Type</th>
<th>Appearance</th>
<th>Cable length</th>
<th>Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>M12</td>
<td>Socket on one cable end</td>
<td>Straight</td>
<td>2 m</td>
<td>XS2F-D421-D80-F</td>
</tr>
<tr>
<td></td>
<td></td>
<td>L-shape</td>
<td>5 m</td>
<td>XS2F-D421-G80-F</td>
</tr>
<tr>
<td></td>
<td>Socket and plug on cable ends *</td>
<td>Straight/ Straight</td>
<td>2 m</td>
<td>XS2W-D421-D81-F</td>
</tr>
<tr>
<td></td>
<td></td>
<td>L-shape/L-shape</td>
<td>5 m</td>
<td>XS2W-D421-G81-F</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2 m</td>
<td>XS2W-D422-D81-F</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>5 m</td>
<td>XS2W-D422-G81-F</td>
</tr>
</tbody>
</table>

Note: 1. Each model includes one cable. A cable is required for both the Emitter and the Receiver (two cables total).
2. Refer to Sensor I/O Connectors/Sensor Controllers on your OMRON website for details.
* Straight type/L-shape type combinations are also available.
## Ratings and Specifications

<table>
<thead>
<tr>
<th>Item</th>
<th>F3W-D052A (P) *1</th>
<th>F3W-D052B (P) *1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensing method</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Model</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Through-beam</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sensing distance</td>
<td>3 m, switchable between LONG mode (1 to 3 m) and SHORT mode: (0.05 to 1 m), factory-set to SHORT mode.</td>
<td></td>
</tr>
<tr>
<td>Beam gap</td>
<td>25 mm</td>
<td></td>
</tr>
<tr>
<td>Number of beams</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Sensing width</td>
<td>100 mm</td>
<td></td>
</tr>
<tr>
<td>Standard sensing object</td>
<td>Opaque, 35 mm dia. min.</td>
<td></td>
</tr>
<tr>
<td>Light source (emission wavelength)</td>
<td>Infrared LED (860 nm)</td>
<td></td>
</tr>
<tr>
<td>Power supply voltage</td>
<td>12 to 24 VDC±10% (ripple (p-p): 10% max.)</td>
<td></td>
</tr>
<tr>
<td>Power consumption</td>
<td>Emitter: 0.6 W max., Receiver: 0.7 W max.</td>
<td></td>
</tr>
<tr>
<td>Control output</td>
<td>NPN open collector with 100 mA max. at 30 VDC NPN open collector output type Dark-ON or Light-ON (selectable)</td>
<td></td>
</tr>
<tr>
<td>Picking instruction indicator input</td>
<td>Open collector with relay or transistor input Indicator ON: Input voltage of 0 to 2 V Indicator OFF: Open (with leakage current of 0.1 mA max.)</td>
<td></td>
</tr>
<tr>
<td>Protection circuits</td>
<td>Reverse-connection protection, output short protection, and mutual interference prevention function (set with frequency switch)</td>
<td></td>
</tr>
<tr>
<td>Response time</td>
<td>Operate/Reset: 10 ms max.</td>
<td></td>
</tr>
<tr>
<td>Indicators</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Receiver</td>
<td>Operation indicator (orange), stability indicator (green), and 6 picking indicators (orange), UNI-WIRE Direct Connection Models: Transmission indicator (orange) *2</td>
<td></td>
</tr>
<tr>
<td>Emitter</td>
<td>Power indicator (green), different frequency indicator (green), and 6 picking indicators (orange), UNI-WIRE Direct Connection Models: Transmission indicator (orange) *2</td>
<td></td>
</tr>
<tr>
<td>Ambient temperature</td>
<td>Operating: −10° to 55°C, Storage: −25° to 70°C (with no icing or condensation)</td>
<td></td>
</tr>
<tr>
<td>Ambient humidity</td>
<td>35% to 85% (with no condensation)</td>
<td></td>
</tr>
<tr>
<td>Insulation resistance</td>
<td>20 MΩ min. (at 500 VDC)</td>
<td></td>
</tr>
<tr>
<td>Dielectric strength</td>
<td>1,000 VAC 50/60 Hz for 1 min</td>
<td></td>
</tr>
<tr>
<td>Vibration resistance (destruction)</td>
<td>10 to 50 Hz, 1.5-mm double-amplitude for 2 hours each in X, Y and Z directions</td>
<td></td>
</tr>
<tr>
<td>Shock resistance (destruction)</td>
<td>500 m/s², 3 times each in X, Y and Z directions</td>
<td></td>
</tr>
<tr>
<td>Degree of protection</td>
<td>IEC60529: IP62 (with the operation cover closed)</td>
<td></td>
</tr>
<tr>
<td>Connection method</td>
<td>Pre-wired Standard cable length: 5 m *3</td>
<td>Pre-wired connector (M12 5-pin connector) Standard cable length: 2 m *3</td>
</tr>
<tr>
<td>Weight (packed state)</td>
<td>Approx. 360 g</td>
<td>Approx. 230 g</td>
</tr>
<tr>
<td>Materials</td>
<td>Case, indicator windows ABS resin</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lens Acrylic resin</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Operation cover Nylon (PA6)</td>
<td></td>
</tr>
<tr>
<td>Accessories</td>
<td>Instruction manual</td>
<td></td>
</tr>
</tbody>
</table>

*1. The F3W-D052@P Emitters are provided with the external picking indicator output line shown in the following table.

<table>
<thead>
<tr>
<th>Item</th>
<th>F3W-D052AP, F3W-D052BP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection method</td>
<td>Pre-wired (standard cable length: 300 mm)</td>
</tr>
<tr>
<td>Electrical specifications</td>
<td>Output current: 50 mA max. Output voltage: Fixed at Sensor power supply voltage</td>
</tr>
</tbody>
</table>

*2. The transmission indicator indicates bus transmission status.

*3. The following cable lengths are also available.

F3W-D052A (P): 2 m, 7 m
F3W-D052B: 1 m, 3.5 m
Engineering Data (Typical)

Parallel Operating Range

**LONG Mode**

- **Tilt**
- **Rotation**

**SHORT Mode**

- **Tilt**
- **Rotation**

**Angle Characteristics**

**LONG Mode: Tilt**

**LONG Mode: Rotation**

**SHORT Mode: Tilt**

**SHORT Mode: Rotation**

(1) Emitter Angle Characteristics

(2) Receiver Angle Characteristics

(1) Horizontal Movement Characteristics

(2) Vertical Movement Characteristics

*Distance X (m)*

*Distance Y (mm)*

*Angle θ (°)*
## I/O Circuits

### NPN Open-collector Outputs

<table>
<thead>
<tr>
<th>Model</th>
<th>Operation mode</th>
<th>Timing chart</th>
<th>Mode selector switch</th>
<th>Output circuit</th>
</tr>
</thead>
<tbody>
<tr>
<td>F3W-D052A</td>
<td>Dark-ON mode</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F3W-D052AP</td>
<td>ON: One beam or more is interrupted</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F3W-D052B</td>
<td>OFF: No beam is interrupted</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F3W-D052BP</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Dark-ON mode
- **ON:** No beam is interrupted
- **OFF:** All beams are interrupted
- **Light incident:** Operation indicator (orange)
- **Control output:** ON
- **Load (relay, etc.):** Operate

#### Light-ON mode
- **ON:** No beam is interrupted
- **OFF:** All beams are interrupted
- **Light incident:** Operation indicator (orange)
- **Control output:** OFF
- **Load (relay, etc.):** Reset

**Note:** The circled numbers represent the pin numbers for Pre-wired Connector Models.

*1. The sections surrounded by single-dashed lines are applicable to the F3W-D052AP-L/BP-L only.
*2. The circled numbers represent external picking indicator output pin numbers.

The following diagram shows the relationship between the picking instruction input, picking indicator status, and external picking indicator output. DIP switch 1 is used to switch the picking display mode between all lighting, all flashing, elevator-like lighting, and accordion-like lighting. It is also possible to switch the external picking indicator display mode between lighting and flashing.

![Diagram showing the relationship between picking instruction input, picking indicator status, and external picking indicator output.](image-url)
Setting Method

NPN Open-collector Output Models
DIP Switch 1 Mode Switching

Emitters

<table>
<thead>
<tr>
<th>DIP switch 1</th>
<th>Function</th>
<th>OFF(left)</th>
<th>ON(right)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Flash Pattern</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Flash Time “2” (picking indicator flashing speed setting)</td>
<td>Slow</td>
<td>Fast</td>
</tr>
<tr>
<td>3</td>
<td>External Flash Pattern (external picking display mode setting)”3”</td>
<td>Lit</td>
<td>Flashing</td>
</tr>
<tr>
<td>4</td>
<td>Frequency Setting *4</td>
<td>A</td>
<td>B</td>
</tr>
</tbody>
</table>

*1. DIP Switch 1 Picking Display Mode Setting

Receivers

<table>
<thead>
<tr>
<th>DIP switch 1</th>
<th>Function</th>
<th>OFF(left)</th>
<th>ON(right)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Flash Pattern</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Flash Time “2” (picking indicator flashing speed setting)</td>
<td>Slow</td>
<td>Fast</td>
</tr>
<tr>
<td>3</td>
<td>Operation mode setting</td>
<td>Dark-ON</td>
<td>Light-ON</td>
</tr>
<tr>
<td>4</td>
<td>Sensing distance (sensitivity) setting</td>
<td>LONG</td>
<td>SHORT</td>
</tr>
<tr>
<td>5</td>
<td>Sensing distance (sensitivity) setting</td>
<td>(1 to 3 m)</td>
<td>(0.05 to 1 m)</td>
</tr>
<tr>
<td>6</td>
<td>NC</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*2. The flashing speed can be changed in picking display mode (all flashing, elevator-like lighting, or accordion-like lighting) or in external picking display mode. The flashing speed varies with each display mode.

*3. This setting is supported for F3W-D052...P-L Emitters only.

*4. Mutual Interference Prevention Function:
The frequency selector is used to switch the emitting frequency between A and B. Making the emitting frequencies of two Sensors different helps prevent malfunction caused by mutual interference.
F3W-D

Nomenclature

NPN Open Collector Output Models

<table>
<thead>
<tr>
<th>Emitter</th>
<th>Receiver</th>
</tr>
</thead>
<tbody>
<tr>
<td>F3W-D052A(P)-L</td>
<td>F3W-D052A(P)-D</td>
</tr>
<tr>
<td>F3W-D052B(P)-L</td>
<td>F3W-D052B(P)-D</td>
</tr>
</tbody>
</table>

Safety Precautions

Refer to Warranty and Limitations of Liability.

**WARNING**

Do not apply the F3W-D as safety mechanisms used in pressing machines or any other safety mechanisms for protecting the human body from danger.

1. Do not apply the F3W-D as safety mechanisms used in pressing machines, shears, rolling machines, spinning machines, cotton mill machines, or robots for the protection of an operator’s hands and body.
2. The F3W-D is designed for detection of the human body or moving objects in the detection area but not for protection against danger.
3. The F3W-D or any product incorporating the F3W-D may be exported to any country. Should the F3W-D cause any problem conflicting with local laws or related to product liability locally, however, OMRON shall, without exception, assume no responsibility for it.

**Precautions for Safe Use**

- **Operating Environment**
  - Do not use the Sensor in an environment containing flammable or volatile gases.
  - Do not use the Sensor underwater.
  - Do not disassemble, repair, or modify the Sensor.
  - Always turn OFF the system power before installing or replacing the Sensor.
  - Applying excessive force to the mode switch may result in damage. Do not apply a force of more than 5 N.

**Precautions for Correct Use**

- Do not use the product in atmospheres or environments that exceed product ratings.
- **System Design**
  - **Mutual Interference Prevention Function**
    - When using more than one set of the Sensors, install and configure them so that no Mutual Interference occur.
    - **(1) Two Sets of Sensors:**
      - Set these Sensors to different frequencies with the frequency selector. Refer to DIP Switch 1 Mode Switching on page 6.
      - If the mutual interference prevention function is not used, and there are two Sensors with the same frequency setting, a beam from the Emitter of one Sensor may hit the Receiver of the other Sensor, resulting in malfunction.
    - This function cannot prevent mutual interference between the F3W-D Sensor and a Photoelectric Sensor of a different model.
    - **(2) Three or More Sets of Sensors:**
      - When 3 or more sets of Sensors are used in parallel, mutual interference may result in malfunction. Take the following measures to prevent mutual interference, and check for mutual interference.
      - While in LONG mode, the Sensors are more easily affected by interference. Therefore, if the distance between the Emitter and Receiver of a Sensor is 1 m or less, use the SHORT mode.
The distance between two adjacent sets of Sensors must be at least \( l_1 \) or \( l_2 \), which does not cause mutual interference between two Sensors with the same frequency setting. \( l_1 \) or \( l_2 \) is at least 1.5 times the distance shown in Parallel Operating Range of the Engineering Data.

Install a baffle so that there will not be mutual interference between Sensors with the same frequency setting. (See Figure 1.) A light reflection from the wall or floor may go around a baffle and reach the Receivers. Install a baffle so that it will also block any light reflection. (See Figure 2.)

### Wiring Precautions

**Connection**
- Before turning ON the power, make sure that the supply voltage is within the maximum allowable voltage range.
- Always connect the sync lines.
- Be very careful not to get metal chips in the connector, especially during wiring.
- Incorrect wiring may damage the equipment. Make sure that the cable length and routing are appropriate to prevent the connectors and cables from getting disconnected.
- Always leave the operation cover closed during operation.

**Cables**
Make sure that the bending radius is 25 mm or more.

### Installation Precautions

**Installation**
- Install the Sensor so that its sensing face will not receive light from the sun, fluorescent lamps, incandescent lamps, and other light sources.
- Do not strike the Sensor with a hammer or any other tool during installation, otherwise the internal circuits of the Sensor may be damaged.

**Reflection from Wall or Floor**
If the Emitter and Receiver are installed as shown in the following illustration, all the axes may not be interrupted due to light reflection from the floor or wall. Make sure that the Emitter and Receiver detect the sensing object properly before using the F3W-D in actual operation.

**Adjustment**

**Operation and Stability Status Display**
- The following illustration shows the indicator status corresponding to each incident level.
- Install the Receiver so that the green stability indicators are both ON in light receiving status.

**Error Display**
F3W-D052 Picking Sensors are provided with only one error display mode.

If an error occurs, the indicator on the Sensor’s Receiver, as indicated by the arrow in the diagram on the right, will flash. The error indicated in this example is a synchronization error.

The possible causes are as follows:
1. The sync line is not connected.
2. The sync line is shorted with another line.
**F3W-D**

**Dimensions** (Unit: mm)

**Sensors**

**Emitter**

F3W-D052A(P)-L

F3W-D052B(P)-L

- **Dimensions**
  - F3W-D
  - Emitter
    - 4.7 mm
    - 130 mm
    - 130 ± 0.15 mm
    - Two, M4 holes
    - 18 ± 0.1 mm
    - 100 mm
    - 45°
    - 140 mm
    - 77.5 mm
    - 8.5 mm
    - 25 mm
    - 4.5 mm
    - 5 mm
    - 25°
    - 15
    - 90°
    - 18
    - 10

**Receiver**

F3W-D052A(P)-D

F3W-D052B(P)-D

- **Dimensions**
  - F3W-D
  - Receiver
    - 4.5 dia.
    - Two, M4 nut holes
      - Depth: 1 mm
    - Six picking indicators (orange)
    - Two, M4 nut holes
      - Depth: 3.5 mm
    - Power indicator (green)
    - Different frequency indicator (green)
    - Five lenses, 6.5 dia.
    - 45°
    - 130 mm
    - 100 mm
    - 140 mm
    - 77.5 mm
    - 4.5 mm
    - 4.5 mm
    - 4.5 mm
    - 15
    - 15
    - 25
    - 10
    - 45°
    - 18
    - 18

**Mounting Hole Dimensions**

- **F3W-D052A(P)-L**
  - Vinyl-insulated round cable, 4 dia.
  - Standard length: 2 m
  - 5 poles
  - 44.7 mm
  - 19.3 mm

- **F3W-D052B(P)-L**
  - Vinyl-insulated round cable with four conductors, 4 dia.
  - Conductor: 0.2 mm²
  - Insulation: 1.1 mm dia.
  - Standard length: 5 m

- **F3W-D052A(P)-D**
  - Vinyl-insulated round cable with five conductors, 4 dia.
  - Conductor: 0.2 mm²
  - Insulation: 1.1 mm dia.
  - Standard length: 5 m

- **F3W-D052B(P)-D**
  - Vinyl-insulated round cable, 4 dia.
  - Standard length: 300 mm
  - 5 poles
  - 44.7 mm
  - 19.3 mm

**Power indicator** (green)
- Vinyl-insulated round cable, 4 dia.
- Standard length: 2 m

**Operation indicator** (orange)
- Vinyl-insulated round cable, 4 dia.
- Standard length: 300 mm

**Stability indicator** (green)
- Vinyl-insulated round cable, 4 dia.
- Standard length: 2 m

**F3W-D052A(P)-L**
- Two, 4.5 dia.
- Two, M4 nut holes
  - Depth: 1 mm
- Six picking indicators (orange)
- Power indicator (green)
- Different frequency indicator (green)
- Five lenses, 6.5 dia.
- 45°
- 130 mm
- 100 mm
- 140 mm
- 77.5 mm
- 4.5 mm
- 4.5 mm
- 4.5 mm
- 15
- 15
- 25
- 10
- 45°
- 18
- 18

**F3W-D052B(P)-L**
- Two, 4.5 dia.
- Two, M4 nut holes
  - Depth: 3.5 mm
- Six picking indicators (orange)
- Power indicator (green)
- Different frequency indicator (green)
- Five lenses, 6.5 dia.
- 45°
- 130 mm
- 100 mm
- 140 mm
- 77.5 mm
- 4.5 mm
- 4.5 mm
- 4.5 mm
- 15
- 15
- 25
- 10
- 45°
- 18
- 18

**F3W-D052A(P)-D**
- Two, 4.5 dia.
- Two, M4 nut holes
  - Depth: 1 mm
- Six picking indicators (orange)
- Power indicator (green)
- Different frequency indicator (green)
- Five lenses, 6.5 dia.
- 45°
- 130 mm
- 100 mm
- 140 mm
- 77.5 mm
- 4.5 mm
- 4.5 mm
- 4.5 mm
- 15
- 15
- 25
- 10
- 45°
- 18
- 18

**F3W-D052B(P)-D**
- Two, 4.5 dia.
- Two, M4 nut holes
  - Depth: 3.5 mm
- Six picking indicators (orange)
- Power indicator (green)
- Different frequency indicator (green)
- Five lenses, 6.5 dia.
- 45°
- 130 mm
- 100 mm
- 140 mm
- 77.5 mm
- 4.5 mm
- 4.5 mm
- 4.5 mm
- 15
- 15
- 25
- 10
- 45°
- 18
- 18

**Mounting Hole Dimensions**

- **F3W-D052A(P)-L**
  - Two, M4 holes
    - Depth: 1 mm
- **F3W-D052B(P)-L**
  - Two, M4 nut holes
    - Depth: 3.5 mm
- **F3W-D052A(P)-D**
  - Two, M4 nut holes
    - Depth: 1 mm
- **F3W-D052B(P)-D**
  - Two, M4 nut holes
    - Depth: 1 mm

**Emitter F3W-D052A(P)-L**

- Vinyl-insulated round cable, 4 dia.
- Standard length: 2 m
- 5 poles
- 44.7 mm
- 19.3 mm

**Receiver F3W-D052A(P)-D**

- Vinyl-insulated round cable with five conductors, 4 dia.
- Conductor: 0.2 mm²
- Insulation: 1.1 mm dia.
- Standard length: 5 m
- 4.5 mm
- 4.5 mm
- 4.5 mm
- 15
- 15
- 25
- 10
- 45°
- 18
- 18
**Accessories (Sold Separately)**

**Mounting Brackets**

**F39-L10 (L-shaped)**

- Material: Iron (Thickness: 2 mm)
- Mounting screws provided.

**F39-L11 (Flat)**

- Material: Iron (Thickness: 2 mm)
- Mounting screws provided.
Protective Bracket
F39-L12 (Receiver)

Material: Iron
(Thickness: 1.6 mm)
Mounting screws provided.

Note: The Emitter and Receiver are axially symmetrical.

Y-shaped Joint Plugs and Sockets (Cable with Connectors on Both Ends)
XS2R-D526-S001-2 (L=2,000 mm)
XS2R-D526-S001-5 (L=5,000 mm)

Y-shaped Joint Plugs and Sockets without Cable
XS2R-D526-S003

Wiring Diagram
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