Industrial Switching Hubs

W4S1-

Provides the environmental resistance and functionality required in factory automation built around Industrial Ethernet communications.
Environmentally Resistant and Highly Reliable Ethernet Communications for Production Sites

The W4S1 Switching Hub from OMRON is a low-cost, unmanaged switch that does not require software settings to maintain superior reliability and consistent control data performance on an Ethernet/IP network. It can be used with confidence because it carries a brand name well known at production sites and because it is backed by OMRON's total support package for products ranging from PLCs to switching hubs.

Perfect Fit for Factory Automation Environments

Tough environmental resistance assures users that the W4S1 Switching Hub can perform in any environment where PLCs and robots are found. Add to this simple DIN track mounting and well-thought out cable mounting angles and the result is a significant reduction in the man-hours and space requirements for control panel installation.

Highly Reliable

Enhanced Network Reliability

The W4S1 Switching Hub is an unmanaged switch that is fully capable of failure detection and broadcast storm detection. It improves network reliability by notifying users immediately via contact outputs and LED indicators when an error occurs to quickly pinpoint the location of the error.

- **Failure Notification**
  LED indicators and external outputs notify users when an SW-LSI or microcomputer error has occurred.

- **Broadcast Storm Detection and Suppression**
  The W4S1 Switching Hub detects and suppresses broadcast storms that occur when switches are accidentally connected in a loop.
The 3- or 5-port Product Variation Ensures the Right Product Choice

We offer a low-cost 3-port model that can be used as easily as a T-branch to let you select the best model for your application.

Maintaining EtherNet/IP Performance

Quality of Service (QoS) without Support Software

The QoS (packet prioritization control) for EtherNet/IP ensures high-speed delivery of control data even if it is dispersed among images and similar data-intensive applications. And complex software settings are eliminated because QoS can be enabled with a DIP switch setting.

No Support Software required.

Simply turn ON a DIP switch pin to enable QoS.
Specifications

<table>
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<th>Product name</th>
<th>Specifications</th>
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<tr>
<td>Industrial Switching Hubs</td>
<td>Quality of Service (QoS): Ethernet/IP control data priority</td>
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<td>Failure detection: Broadcast storm and LSI error detection</td>
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<td></td>
<td>10/100BASE-TX, Auto-Negotiation</td>
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<table>
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<tr>
<th>Functions</th>
<th>No. of ports</th>
<th>Failure detection</th>
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</thead>
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<tr>
<td>Quality of Service (QoS)</td>
<td>3</td>
<td>×</td>
</tr>
<tr>
<td>Ethernet/IP control data</td>
<td>5</td>
<td>×</td>
</tr>
<tr>
<td>priority</td>
<td>5</td>
<td>○</td>
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<table>
<thead>
<tr>
<th>Current consumption (A)</th>
<th>Model</th>
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<tr>
<td>0.08</td>
<td>W4S1-03B</td>
</tr>
<tr>
<td>0.12</td>
<td>W4S1-05B</td>
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<tr>
<td>0.12</td>
<td>W4S1-05C</td>
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### Summary of Functions

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<tr>
<th>Model</th>
<th>No. of ports (10/100TX)</th>
<th>Auto MDI/MDI-X</th>
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<tr>
<td>W4S1-03B</td>
<td>3</td>
<td>Supported</td>
<td>80 KB</td>
<td>2,000</td>
<td>Not supported</td>
<td>Not supported</td>
<td>Not supported</td>
</tr>
<tr>
<td>W4S1-05B</td>
<td>5</td>
<td>Supported</td>
<td>80 KB</td>
<td>2,000</td>
<td>Supported</td>
<td>Supported</td>
<td>Supported</td>
</tr>
<tr>
<td>W4S1-05C</td>
<td>5</td>
<td>Supported</td>
<td>80 KB</td>
<td>2,000</td>
<td>Supported</td>
<td>Supported</td>
<td>Supported</td>
</tr>
</tbody>
</table>

### Dimensions

**W4S1-03B**

- **Dimensions** (Unit: mm)
  - MOVING POSITION
  - 82.6 × 25 × 82.6

**W4S1-05B**

- **Dimensions** (Unit: mm)
  - MOVING POSITION
  - 82.6 × 25 × 82.6

**W4S1-05C**

- **Dimensions** (Unit: mm)
  - MOVING POSITION
  - 82.6 × 25 × 82.6

### Specifications

- **Power supply voltage**: 24 VDC ±5%
- **Power consumption**: 1.92 W max. (W4S1-03B), 2.88 W max. (W4S1-05B/W4S1-05C)
- **Inrush current**: \( l_p = 1.42 \ A \)
- **Dielectric strength**: 1 mA at 250 VAC for 1 minute (Between LAN connectors, between error output connectors, and between FG and power supply connectors)
- **EMI and EMS**: Complies with JIS C60028-2-6 and JIS C60068-2-27
- **Vibration and shock resistance**: EN: 61000-6-4 2007 and EN: 61000-6-2 2005
- **Setting method**: Settings are made in the Switching Hub.
- **Ambient operating environment**: No corrosive gas
- **Ambient operating temperature**: 0 to 55°C (with no icing and no condensation)
- **Ambient operating humidity**: 10% to 90% (with no condensation)
- **Ambient storage temperature**: -20 to 75°C (with icing and no condensation)
- **EMC**: EN: 61000-6-2 2005

### Warranty and Limitations of Liability

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**Note**: Do not use this document to operate the Unit.

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