OMRON

Industrial Switching Hubs

W4S1-□□□

Provides the environmental resistance and functionality required in factory automation built around Industrial Ethernet communications.


EtherNet/IP™

CX-One

*real**i**zing*

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.

Environmentally Resistant

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.
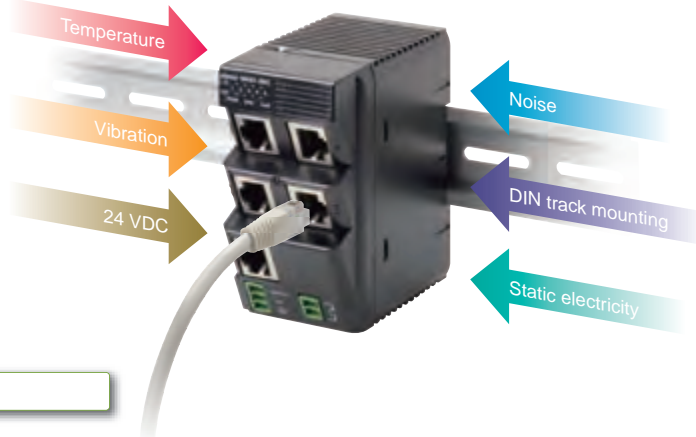
Highly Reliable

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.
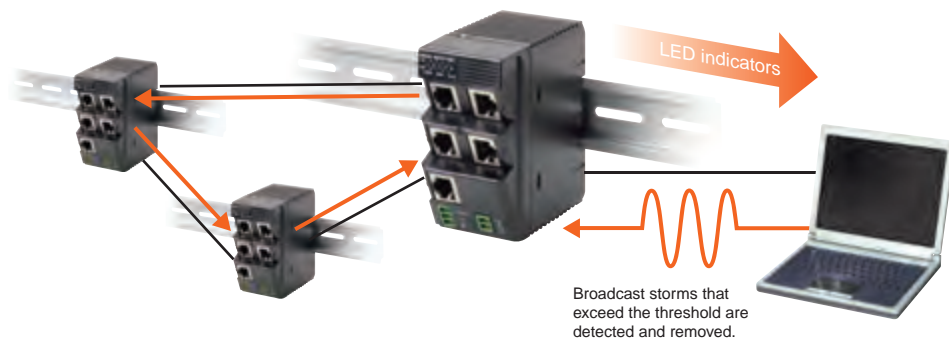
Failure Notification

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.

Broadcast storms that exceed the threshold are detected and removed.

Web: https://www.bolenscontrol.com/ - Phone: (800) 658-5241 - Email: sales@bolenscontrol.com

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.
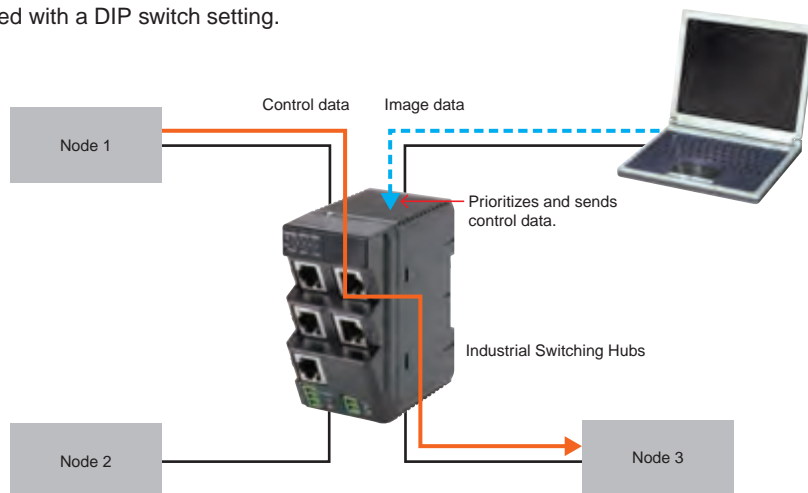
3-port model   5-port model

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.

Control data   Image data

Node 1

Prioritizes and sends control data.

Industrial Switching Hubs

Node 2   Node 3

No Support Software required.

Simply turn ON a DIP switch pin to enable QoS.

Ordering Information

Product name	Specifications			Current consumption (A)	Model
	Functions	No. of ports	Failure detection		
Industrial Switching Hubs	Quality of Service (QoS): EtherNet/IP control data priority Failure detection: Broadcast storm and LSI error detection 10/100BASE-TX, Auto-Negotiation	3	✕	0.08	**W4S1-03B**
		5	✕	0.12	**W4S1-05B**
		5	❍	0.12	**W4S1-05C**

Summary of Functions

	W4S1-03B	W4S1-05B	W4S1-05C
No. of ports (10/100TX)	3	5	5
Auto MDI/MDI-X	Supported	Supported	Supported
Buffer	80 KB		
MAC addresses	2,000		
SW-LSI and microcomputer error detection	Not supported	Not supported	Supported
Broadcast storm detection	Not supported	Not supported	Supported
QoS for EtherNet/IP	Supported	Supported	Supported

Specifications

|	
Power supply voltage	24 VDC ±5%
Power consumption	1.92 W max, (WS41-03B) 2.88 W max, (WS41-05B/WS41-05C)
Inrush current	Ip = 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	EN: 61000-6-4 2007 and EN: 61000-6-2 2005
Vibration and shock resistance	Complies with JIS C60028-2-6 and JIS C60068-2-27
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)
International standards (See note.)	EC Directives

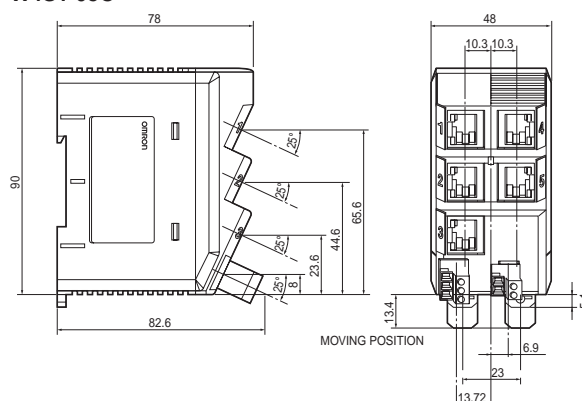Note: Contact your OMRON representative for further details and applicable conditions for these standards.

Dimensions

(Unit: mm)

W4S1-03B

MOVING POSITION

W4S1-05B
W4S1-05C

MOVING POSITION
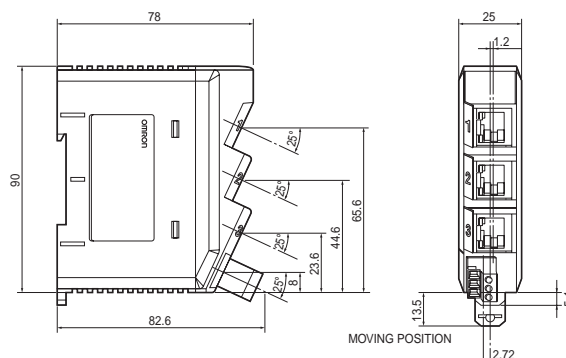
- The application examples provided in this catalog are for reference only. Check functions and safety of the equipment before use.
- Never use the products for any application requiring special safety requirements, such as nuclear energy control systems, railroad systems, aviation systems, medical equipment, amusement machines, vehicles, safety equipment, or other application involving serious risk to life or property, without ensuring that the system as a whole has been designed to address the risks, and that the OMRON products are properly rated and installed for the intended use within the overall equipment or system.

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