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Woodpecker 9015 Series

Managed Gigabit Industrial Switch
8 x10/100/1000 RJ45
8 x10/100/1000 RJ45 & 2 x FX/GbE SFP
Industrial Switch

Description

The 9015 Series is a Managed Industrial Switches especially designed to suit your heavy industrial environments and contains all necessary standard features to deploy in automation systems. Engineered with hardened components and enclosed in a rugged IP40 case, the 9015 Series can operate in wide temperatures from -40°C to 75°C and has excellent tolerance capability to high vibration and shock.

Despite the fact that the 9015 Series is perfectly designed to operate in extreme industrial conditions; the switches are equipped with a variety of management functions that let you configure communication parameters as you desire and monitor the network behavior in number of different simple ways. In addition, the switch is built with dual redundant power inputs to ensure reliability and maximize network up time. Other integrated features of the switch such as Auto-negotiation, Rate limitation and QoS optimizes your network performance and provide a secure network, offering a cost-effective solution in a small but powerful package.

Features Highlight

Robust Performance and Protection

Well-protected in an IP40 casing, the switch provides high level of immunity against EMI and EMS found in industrial environments. Along with those, the 9015 Series is built with various protection features such as ESD Protection, Surge Protection, Over Current Protection, Reverse Polarity Protection and Short Circuit Protection to ensure continuous operation of mission-critical applications even in unstable power conditions.

Code Redundancy

The configuration file of the switch may be lost due to various reasons such as upgrading to a new firmware or power fluctuations and can lead to network down situation. To avoid such situations, the 9015 Series provides a perfect alternate solution using its code redundancy feature with its dual flash. The dual flash memory allows the switch to store a backup file of primary configuration on one flash space. Even if the primary configuration file is lost, the backup file will enable the switch and ensure that your network is running continuously.

Efficient network monitoring and proactive capability

In a network, the issues that impact network performance can be quickly resolved with the 9015 Series most accepted and enhanced traffic management protocols such as SNMP v1/v2c/v3 which gives an enhanced approach for real-time traffic analysis, remote-monitoring and management of individual switches within an industrial network, this avoids high OPEX. The switch is assimilated with intelligent e-mail alarm system and SNMP Trap functionality to detect system abnormality along with Faster Troubleshooting. In addition to this, the device maintains a system log for the subsequent analysis of abnormal and unwanted flaws.

Comprehensive QoS Mechanisms to Assign Priority

Industrial applications need different levels of services delivered to them reliably without any transmission delays and interruptions. The 9015 Series has comprehensive QoS mechanisms which assign priority to applications and sends only specific dedicated traffic to them. In addition, bandwidth management function of the switch allocates high bandwidths to mission-critical communications and reduce the bandwidth to applications that are less critical. With full control of limiting the bandwidth, the administrators can prevent unpredictable errors and utilize the bandwidth more effectively.

Redundant Ring for Faster Network Recovery

Even few seconds of missed communications due to link failures, especially in industrial environment, can cause inconvenience and halt the network. The 9015 Series is designed with various ring protocols like STP, RSTP where the network failure is recovered in time scale of milliseconds by ensuring the real-time network transmission.
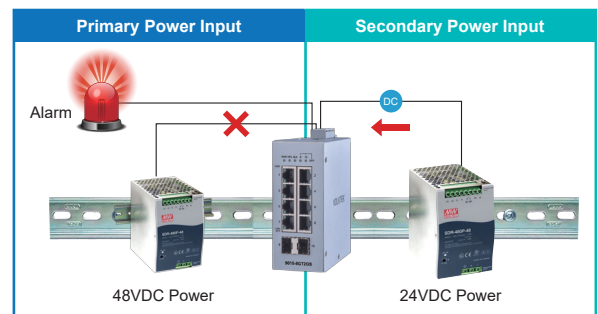
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Features Highlight

Strong Protection Against Electrical Threats

9015 Series is incorporated with enhanced Reverse Polarity Protection function to provide safety against wrong combinations of positive and negative poles, which prevents huge internal circuitry damage. The Over Current Protection is designed with a secured fuse component to safeguard the device during sudden increase of current flow. In addition, a Power Isolation concept is used to separate the transmitted data from grounded noise enabling steady and noise free transmission.
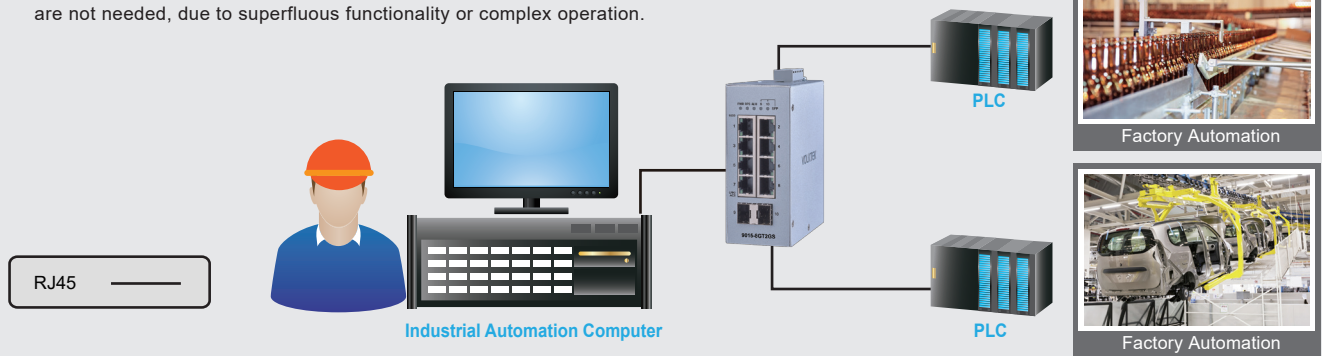
Redundant Power Input

When taking the failure impact of mission-critical applications into consideration, the 9015 Series development uses a standard of industrial terminal block along with wide-range redundant power inputs extending from 24/48VDC. The redundant power provides continuous service even if the primary power fails, which results in a reliable and consistent network. In addition to this, the switch is also equipped with an alarm feature to notify the occurrence of power failure. This solution provides you with a quicker respond time and faster troubleshooting.

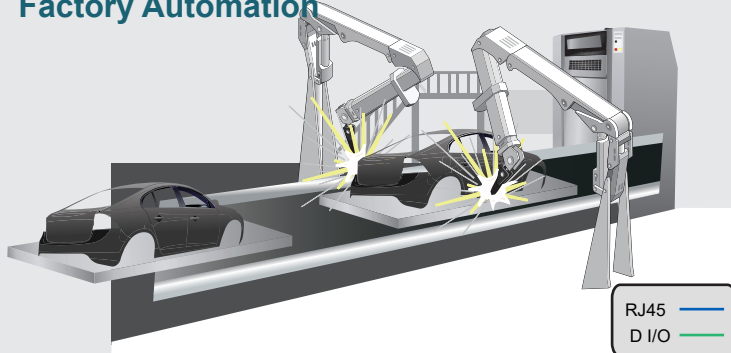| Primary Power Input	Secondary Power Input
Alarm	DC
48VDC Power	24VDC Power

Applications

In designing the 9015 Series, the absolute necessary management functions were integrated to enable the configuration and monitoring of the switches. This allows the 9015 Series switches to bring added value to areas where unmanaged switches cannot deliver the required performance. It can also be used when fully-managed switches are not needed, due to superfluous functionality or complex operation.

RJ45 ——

Industrial Automation Computer

PLC

PLC

Factory Automation

Factory Automation

Factory Automation

▶ **Relay Output Alarm for Power Failure**

The 9015 Series is built with relay contact outputs that trigger alarms to notify network engineers in the event of power failure, and enables them to quickly respond and resolve high priority issues.
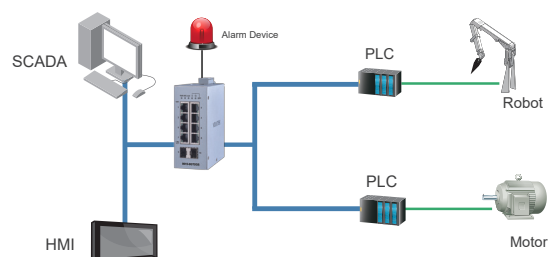
▶ **Redundant Power input**

The 9015 Series has dual power inputs to provide a redundant system against power supply disruptions. In case of one power source failure, the other acts as a backup to remain continuous network power for critical industrial applications.

RJ45 ——
D I/O ——

SCADA

Alarm Device

PLC

Robot

PLC

Motor

HMI

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Specifications

Standards	
IEEE 802.3	10BASE-T
IEEE 802.3u	100BASE-TX
IEEE 802.3ab	1000BASE-T
IEEE 802.3u	100BASE-FX
IEEE 802.3z	1000BASE-SX/LX
IEEE 802.3	Nway Auto-negotiation
IEEE 802.3x	Flow Control
IEEE 802.1ad	Link Aggregation
IEEE 802.3az	Energy Efficient Ethernet (EEE)
IEEE 802.1AB	LLDP
IEEE 802.1ad	QinQ
IEEE 802.1D	STP
IEEE 802.1w	RSTP
IEEE 802.1p	Class of Service
IEEE 802.1Q	VLAN Tagging
IEEE 802.1X	Port Authentication

Interface	
Ports	9015-8GT-I: 8x10/100/1000Base-T
	9015-8GT2GS-I: 8x10/100/1000Base-T & 2x100FX/Gigabit SFP
DIP Switch	Primary/Redundant Power Voltage Drop Alarm setting
LED Panel	PWR, RPS, ALM, SFP, 1000, LNK/ACT

Features	
Performance	Jumbo frame Size: 10KBytes
	MAC Table Entries: 8K
	Switch Fabric: 9015-8GT2GS: 20Gbps
	9015-8GT: 16Gbps
	L2 Forwarding Rate: 9015-8GT2GS: 14.8Mpps
	9015-8GT: 11.9Mpps
Management	CLI, Telnet, SSH, HTTP, HTTPs, SNMP v1/v2c, SNMP v3, SNMP Trap, Management VLAN (MVLAN), Firmware upgradable, Configuration Backup/Restore, Syslog, SNTP, LLDP, DHCP Client/Relay/Option82, Port Mirroring, Server (service) control, Port Utilization, Alarm Information, ModbusTCP, Topology Map, Port Configuration(enable/disable, speed/duplex), ONVIF, Port Statistic, System reboot from remote side, User Account with authority
Reliability	STP/RSTP/MSTP, ERPS v1/v2, Dual Homing, LACP, Static Trunk, Code Redundancy
VLAN	IEEE 802.1Q, Port-based VLAN, MAC-based VLAN, Management VLAN, QinQ
Traffic Control	802.1p QoS, Flow Control, Traffic Monitor (Abnormal Traffic Detection), Storm Control, Port Isolation, Loop Detection
Security	ACL, SSH, HTTPs, SNMPv3, Port-based 802.1x, Port Security, MAC Search, Static MAC, DHCP Snooping, DHCP Sever Screening, BPDU Guard/Filter, Root Guard, Managed Host, IP Source Guard

Power	
Input Voltage	Primary inputs: 24~48VDC
	Redundant inputs: 24~48VDC
Connection	Terminal Block
Power Consumption	System: 9015-8GT2GS-I: Max. 11W 24V/0.4A)
	9015-8GT-I: Max. 10W (24V/0.35A)
Alarm Relay	One relay output 1A @ 24V DC

Mechanical and Environment	
Housing	Metal (IP40 Protection)
Mounting	DIN-Rail
Operating Temperature	-40°C~75°C (-40°F~167°F)
Storage Temperature	-40°C~85°C (-40°F~185°F)
Operating Humidity	5 to 95% RH (non-condensing)
Storage Humidity	5 to 95% RH (non-condensing)
Weight	550 g (1.2 lb)
Dimension (WxHxD)	9015-8GT: 50 x119.2 x 99.9 mm (1.97 x 4.69 x 3.93 in)
	9015-8GT2GS: 50 x119.2 x 102 mm (1.97 x 4.69 x 4.02 in)

Certifications	
EMI	FCC Part 15 Subpart B Class A EN 55011: 2016 Class A EN 55032: Class A CISPR 32 Class A EN 61000-6-4
EMS	EN 55024 EN 61000-6-2 EN 61000-4-2 (ESD) EN 61000-4-3 (RS) EN 61000-4-4 (Burst) EN 61000-4-5 (Surge) EN 61000-4-6 (CS) EN 61000-4-8 (PFMF)
Shock	IEC 60068-2-27
Freefall	IEC 60068-2-31
Vibration	IEC 60068-2-6

Ordering Information	
9015-8GT	Managed 8 x 10/100/1000 RJ45 Switch
9015-8GT2GS	Managed 8 x 10/100/1000 RJ45 & 2 x FX/GbE SFP Switch

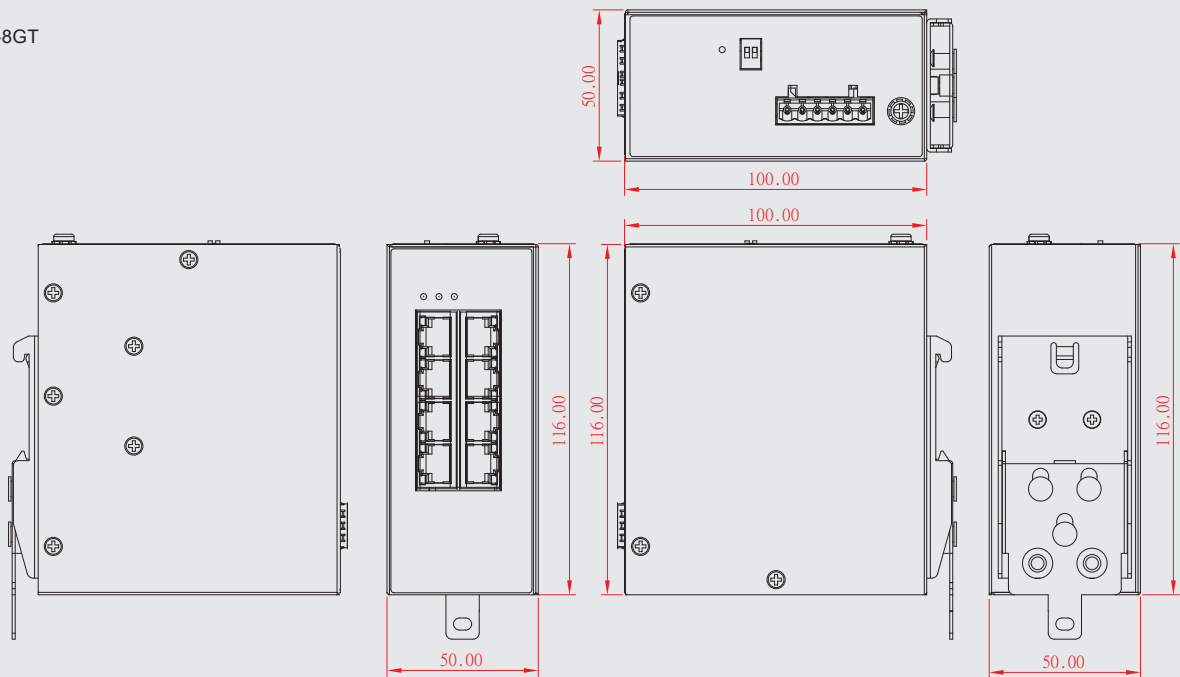| Optional Accessories	
Power Supply	SDR-120-48: 120W DIN-Rail 48V DC Industrial Power Supply, -25°C~70°C (-13°F~158°F)
GBM-104	1000BASE-SX 1.25G, Multi-mode SFP, 500m
GBM-123TS	1000BASE-LX, Bi-Di SFP TX:1310/RX:1550 Single Mode, 10Km, 0°C~70°C (32°F~158°F)
GBM-123RS	1000BASE-LX, Bi-Di SFP TX:1550/RX:1310 Single Mode, 10Km, 0°C~70°C (32°F~158°F)

Note :
* The SFP communication distance upon the request.
* Industrial SFP with wide operating temperature from -40°C~85°C (-40°F~185°F) is
*   available upon request.*
* Specifications subject to change without notice.

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Dimension

9015-8GT

9015-8GT2GS