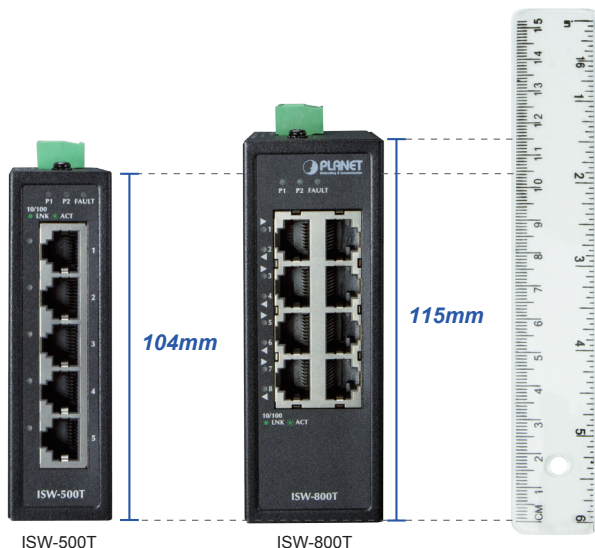# Industrial 5-Port 10/100TX Compact Ethernet Switch

Compact Size for More Practicability and Convenience

PLANET ISW-500T **Industrial 5-Port 10/100TX Compact Ethernet Switch** is tailored for industrial applications, featuring 5 auto-negotiation 10/100Mbps ports, an IP30-rated rugged yet compact case, and a versatile redundant power system **(12~48V DC or 24V AC)**. The ISW-500T operates efficiently in harsh environments, with an operating **temperature range of -40 to 75 degrees** Celsius.

In response to the growing demand for IIoT (Industrial Internet of Things) infrastructure, the ISW-500T is designed for easy deployment of industrial networks with its Plug and Play capability. Furthermore, it ensures stable and reliable fast data and power transmission. The **ISW-500T also supports PROFINET traffic pass-through with QoS**, making it an ideal choice for integrating with industrial automation systems and enhancing communication between devices in a factory setting.

Industrial 5/8-Port Compact Switch

Physical Port
- 5-port 10/100BASE-TX RJ45 with auto-MDI/MDI-X function

Layer 2 Features
- Complies with IEEE 802.3 10BASE-T, IEEE 802.3u 100BASE-TX Ethernet standard
- Supports auto-negotiation and 10/100Mbps half/full duplex mode
- PROFINET traffic pass-through with QoS
- Prevents packet loss with back pressure (half-duplex) and IEEE 802.3x pause frame flow control (full-duplex)
- Complies with IEEE 802.3az Energy Efficient Ethernet (EEE)
- IEEE 802.1p CoS
- Supports 1K MAC address
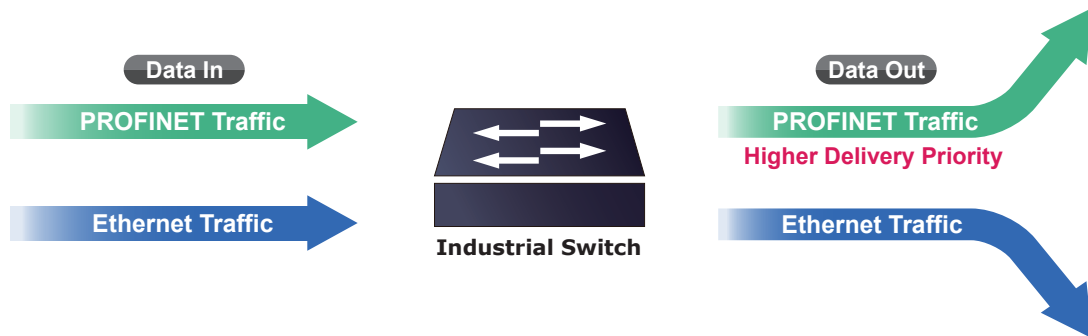- Automatic address learning and address aging

Industrial Case and Installation
- IP30 metal case
- DIN-rail and wall-mount designs
- 12 to 48V DC, redundant power with polarity reverse protect function
- 24V AC power input acceptable
- Supports 6000 VDC Ethernet ESD protection
- -40 to 75 degrees C operating temperature
- Free fall, shock-proof and vibration-proof for industries

PROFINET Traffic Pass-through with QoS

The ISW-500T features brand-new function that enhances support for recognizing the PROFINET traffic for higher delivery priority. Once the ISW-500T receives the PROFINET traffic, it will forward the PROFINET traffic first, and then handle other Ethernet traffic. With this function enhance, the ISW-500T will become the ideal Industrial Unmanaged Switch for the faster PROFINET traffic.

PLANET PROFINET protocol pass-through Industrial Switch

Data In
PROFINET Traffic

Ethernet Traffic

Industrial Switch

Data Out
PROFINET Traffic
Higher Delivery Priority

Ethernet Traffic
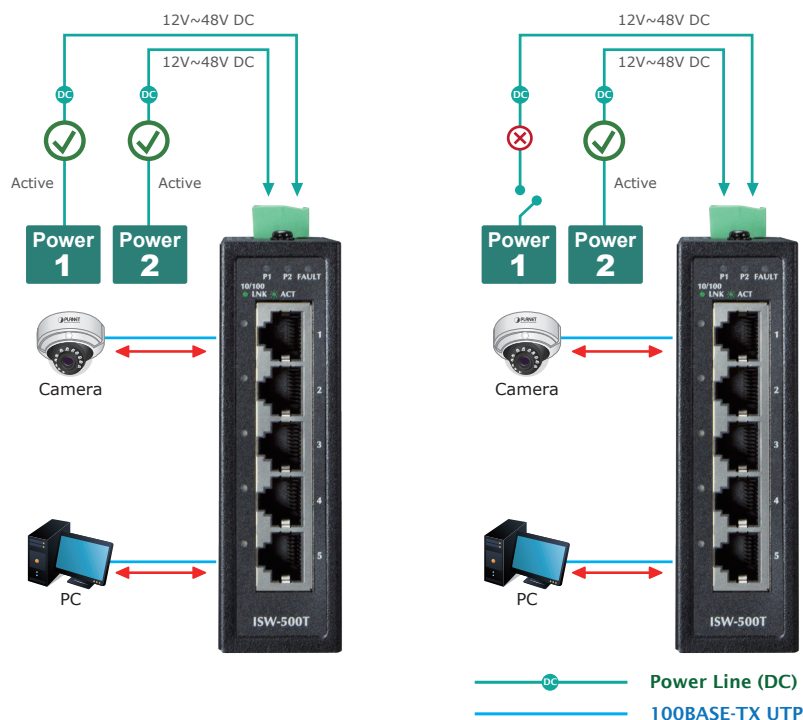
Low Power Consumption for Green Networking

The ISW-500T, adopting the advanced green networking technology, provides the link-on cable length power saving and link-down power saving methods. These features make the ISW-500T consume very low power in full load operation mode, which helps conserve energy effectively but maintains high performance efficiently.

With the **Auto Power Saving** and **IEEE 802.3az Energy Efficient Ethernet (EEE)** Protocol, the ISW-500T can automatically detect cable link status and network traffic, and thus is able to adjust power consumption accordingly. It enables the switch to consume less power when it is less active.

Dual Power Input for High Availability Network System

The ISW-500T features a strong dual power input system with wide-ranging voltages (12V~48V DC or 24V AC) incorporated into customer's automation network to enhance system reliability and uptime. In the example below, when power supply 1 fails to work, the hardware failover function will be activated automatically to keep powering the ISW-500T via power supply 2 alternatively without any loss of operation.

Non-stop Ethernet Service
Dual Power Input with Auto Failover

12V~48V DC

12V~48V DC

DC   DC

Active   Active

Power 1   Power 2

P1 P2 FAULT
10/100 LNK ACT

Camera

PC

ISW-500T

12V~48V DC

12V~48V DC

DC   DC

Active

Power 1   Power 2

P1 P2 FAULT
10/100 LNK ACT

Camera

PC

ISW-500T

DC — Power Line (DC)
100BASE-TX UTP

2

Robust Protection

The ISW-500T provides contact discharge of ±6KV DC and air discharge of ±8KV DC for Ethernet ESD protection. It also supports ±4KV surge immunity to improve product stability and protects users' networks from devastating ESD attacks, making sure the flow of operation does not fluctuate.

High Switch Performance

The ISW-500T offers a high-performance switch architecture. With the 5 10/100Mbps Fast Ethernet ports providing non-blocking switch fabric and wire-speed throughput as high as 1Gbps and the 1K MAC address table, the ISW-500T can perform wire-speed packet transfer without the risk of packet loss. The flow control function enables the ISW-500T to provide fast and reliable data transfer.

Plug and Play

All of the RJ45 copper interfaces in the ISW-500T support 10/100Mbps auto negotiation for optimal speed detection through RJ45 Category 5, 5e, 6, 6a or 7 cables. The standard auto-MDI/MDI-X support can detect the type of connection to any Ethernet device without requiring special straight-through or crossover cables.

Flexible and Easy Installation with Limited Space

The compact sized ISW-500T is specially designed to be installed in a narrow environment, such as wall enclosure. It can be installed by fixed wall mounting or DIN rail, thereby making its usability more flexible and easier in any space-limited location.
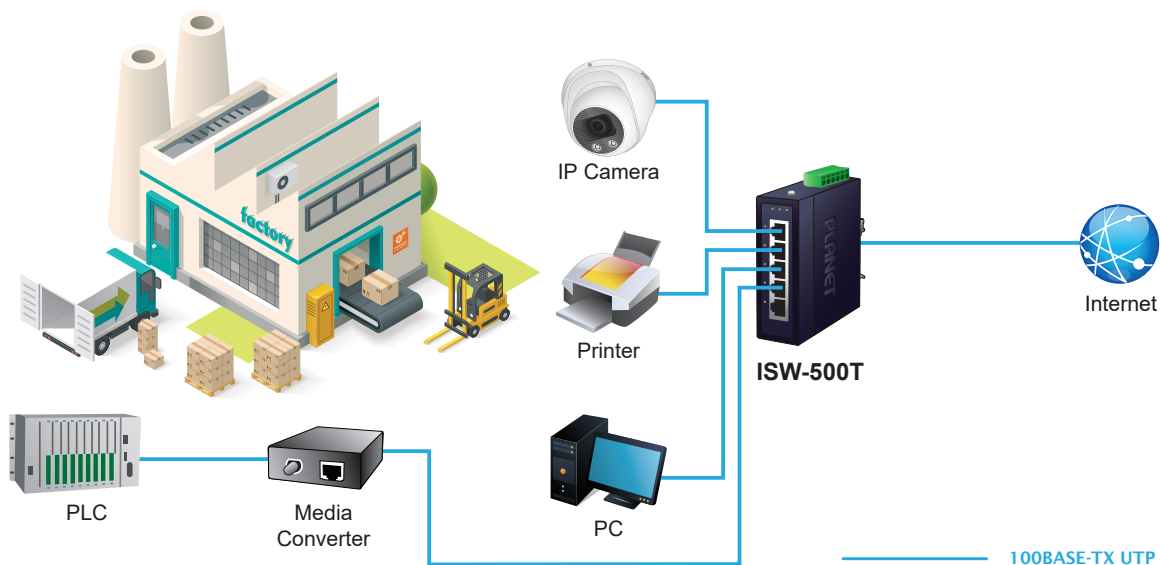
Optional installation method

| DIN-rail Mounting | Wall Mounting | Side Wall Mounting (Space saving) |

* The above pictures are for illustration only.

Applications

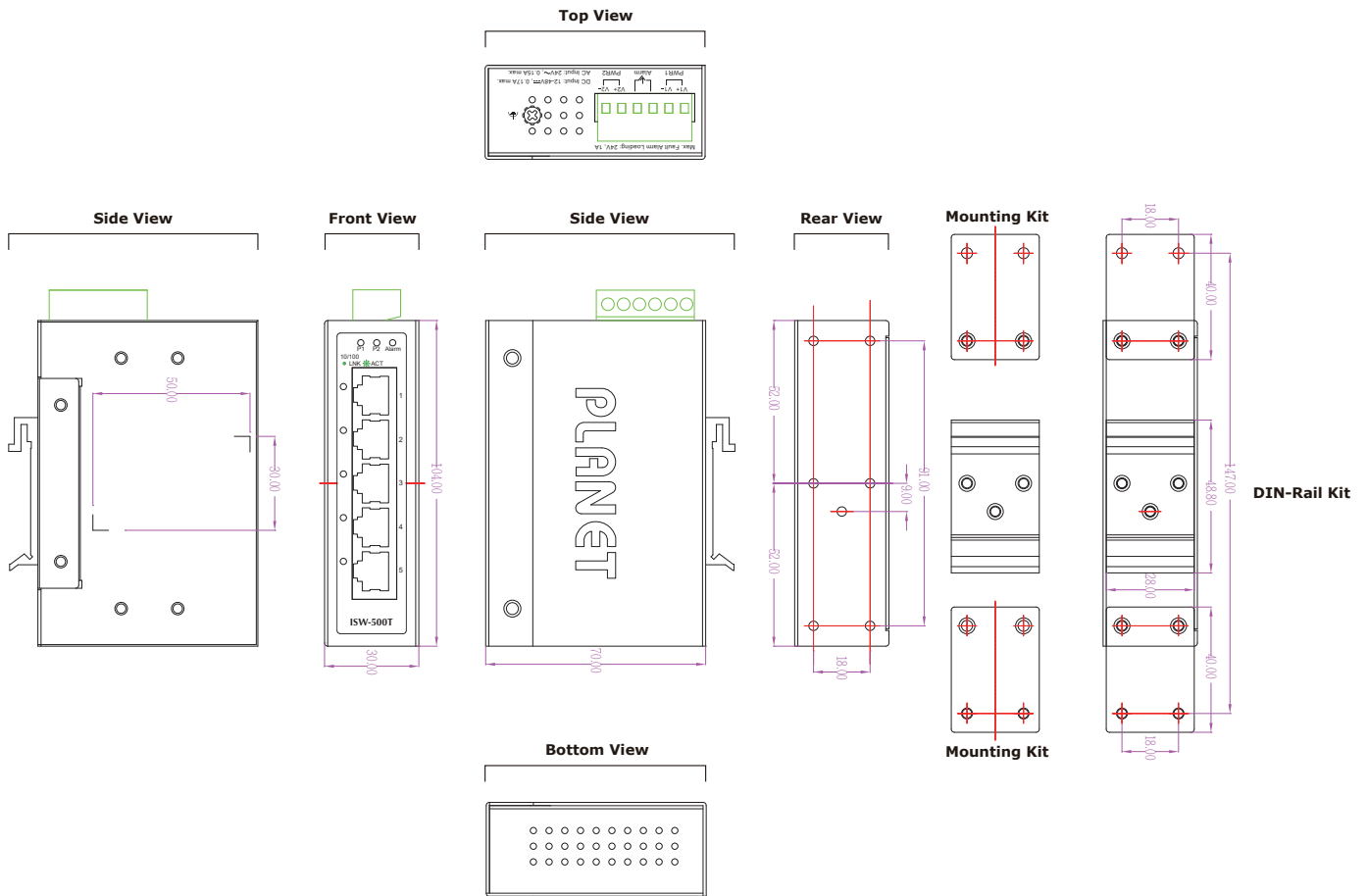## Designed for Heavy Industries

The ISW-500T's IP30-rated metal case is particularly designed for heavy industries, such as factories, harbors, warehouses, and more. When installed at these establishments, it can enhance the work performance of these establishments by speedily transferring incoming and outgoing data.

IP Camera

Printer

ISW-500T

Internet

PLC

Media Converter

PC

100BASE-TX UTP

3

Specifications

Model	ISW-500T
Hardware Specifications	
Hardware Version	2
Copper Ports	5 x 10/100BASE-TX RJ45 TP auto-MDI/MDI-X, auto negotiation
Connector	Removable 6-pin terminal block Pin 1/2 for Power 1; Pin 3/4 for fault alarm; Pin 5/6 for Power 2
Alarm	Provides one relay output for power failure Alarm relay current carry ability: 1A@DC 24V
LED	**3 x LED for system and power:** ■ Green: DC Power 1 ■ Green: DC Power 2 ■ Red: Power Alarm **1 x LED for each copper port:** ■ Green: 10/100Mbps LNK/ACT
ESD Protection	6KV
EFT Protection	6KV
Power Requirements	12~48V DC, redundant power with reverse polarity protection function, 24V AC power support
Power Consumption / Dissipation	Max. 1.1 watts/3.77BTU (Power on without any connection) Max. 2 watts/6.86BTU (Ethernet full loading)
Installation	DIN-rail kit and wall-mount ear
Enclosure	IP30 metal case
Dimensions (W x D x H)	30 x 70 x 104 mm
Weight	255g
Switch Specifications	
Switch Processing Scheme	Store-and-Forward
Address Table	1K entries
Shared Data Buffer	448K bits
Flow Control	Back pressure for half duplex
IEEE 802.3x pause frame for full duplex	
Switch Fabric	1Gbps
Throughput (packet per second)	0.74Mpps@64bytes
Network Cables	10/100BASE-TX Cat. 3, 4, 5, 5e, 6 UTP cable (max. 100 meters) EIA/TIA-568 100-ohm STP (max. 100 meters)
Standards Conformance	
Standards Compliance	IEEE 802.3 Ethernet IEEE 802.3u Fast Ethernet IEEE 802.3x Full-Duplex Flow Control IEEE 802.3az Energy Efficient Ethernet IEEE 802.1p Class of Service PROFINET Traffic Pass-through with QoS
Regulatory Compliance	FCC Part 15 Class A, CE
Stability Testing	IEC 60068-2-32 (free fall) IEC 60068-2-27 (shock) IEC 60068-2-6 (vibration)
Environment	
Temperature	Operating: -40~75 degrees C Storage: -40~75 degrees C
Humidity	Operating: 5~95%, Storage: 5~95% (non-condensing)

Dimensions

Top View

Side View　　**Front View**　　**Side View**　　**Rear View**　　**Mounting Kit**

ISW-500T

DIN-Rail Kit

Mounting Kit

Bottom View

Unit: mm

Ordering Information

ISW-500T	Industrial 5-port 10/100TX Compact Ethernet Switch (-40~75 degrees C operating temperature)

Related Products

ISW-800T	Industrial 8-Port 10/100TX Compact Ethernet Switch
ISW-501T	5-Port 10/100TX Industrial Fast Ethernet Switch (-40~75 degrees C operating temperature)
ISW-801T	8-Port 10/100TX Industrial Fast Ethernet Switch (-40~75 degrees C operating temperature)
ISW-1600T	Industrial 16-Port 10/100TX Fast Ethernet Switch

ISW-500T