Industrial 3-Port EtherCAT Junction Slave

- Three 100BASE-TX RJ45 bus interfaces
- LED indicators for the input status
- Dual 9 ~ 48V DC wide input voltage range
- EtherCAT Distributed Clock (DC) mode
- Verified by EtherCAT conformance test tool

Separate Data Transmission with EtherCAT

PLANET IECJ-300 is an industrial **EtherCAT junction** slave equipped with the EtherCAT protocol for today's distributed industrial applications. The IECJ-300 3-port EtherCAT junction can be used in an EtherCAT Terminal segment at any desired position between the EtherCAT Terminals and enables the configuration of the **EtherCAT star topology**. A modular **EtherCAT star** hub can be realized by using several IECJ-300 units in a station. Its compact size and DIN-rail mounting make installation in a cabinet easy. Pluggable terminal blocks and LED indicator help users to maintain and set up their system.
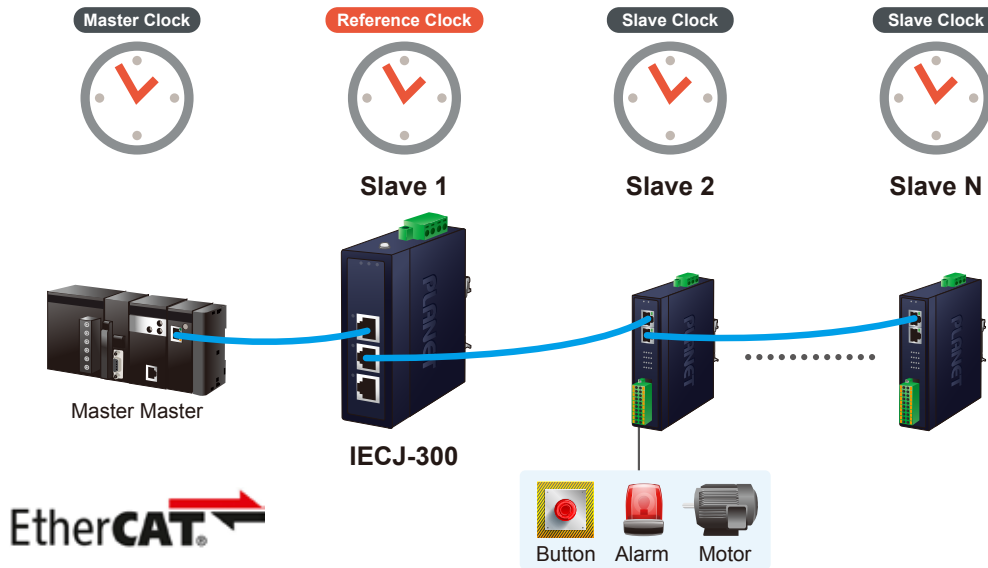

Flexible Installation

The IECJ-300 is an ideal EtherCAT junction solution which provides quick installation, real-time connection status monitoring, wide-ranging power input and wide operating temperature to improve work efficiency, making them suitable for the harsh environment. Besides, both of them come with three 100BASE-TX RJ45 ports. Through the EtherCAT technology, up to 65,535 devices can be supported without the limitation of the type of topology -- line, bus, tree, star or any arrangement -- being used.
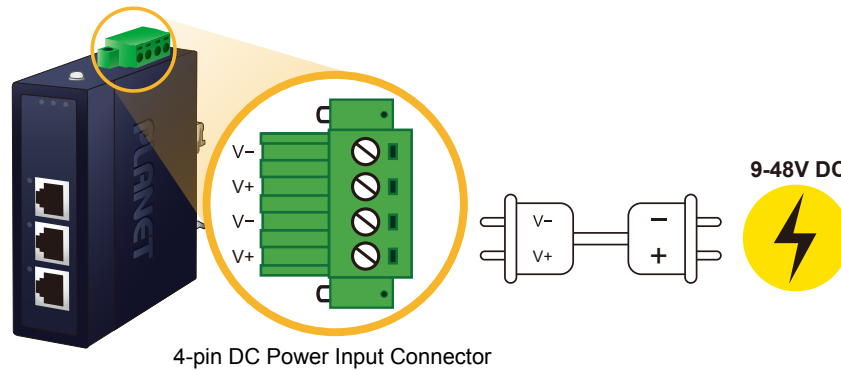
Synchronization

An EtherCAT slave is an electronic device that carries out cyclical sequences of calculations and/or data copying tasks at a certain interval (cycle). The EtherCAT slave working cycle (e.g. in the range of a few µs up to several ms) can be derived from different sources. EtherCAT node can measure time difference between leaving and returning frame. With distributed clocks, EtherCAT can realize a precise synchronization time of <1us between each slave module.

Master Clock | Reference Clock | Slave Clock | Slave Clock

Slave 1 | Slave 2 | Slave N

Master Master

IECJ-300

Button | Alarm | Motor

Convenient and Reliable Power System

The IECJ-300 is equipped with one 4-pin DC power input connector with screws for power supply installation. With power magnetic protection design, it can avoid the device burnout due to wrong wiring. In addition, it also possesses an integrated power supply source with wide-ranging voltages (9 to 48V DC) for worldwide high availability applications.

V−
V+
V−
V+

9-48V DC

V−
V+

4-pin DC Power Input Connector
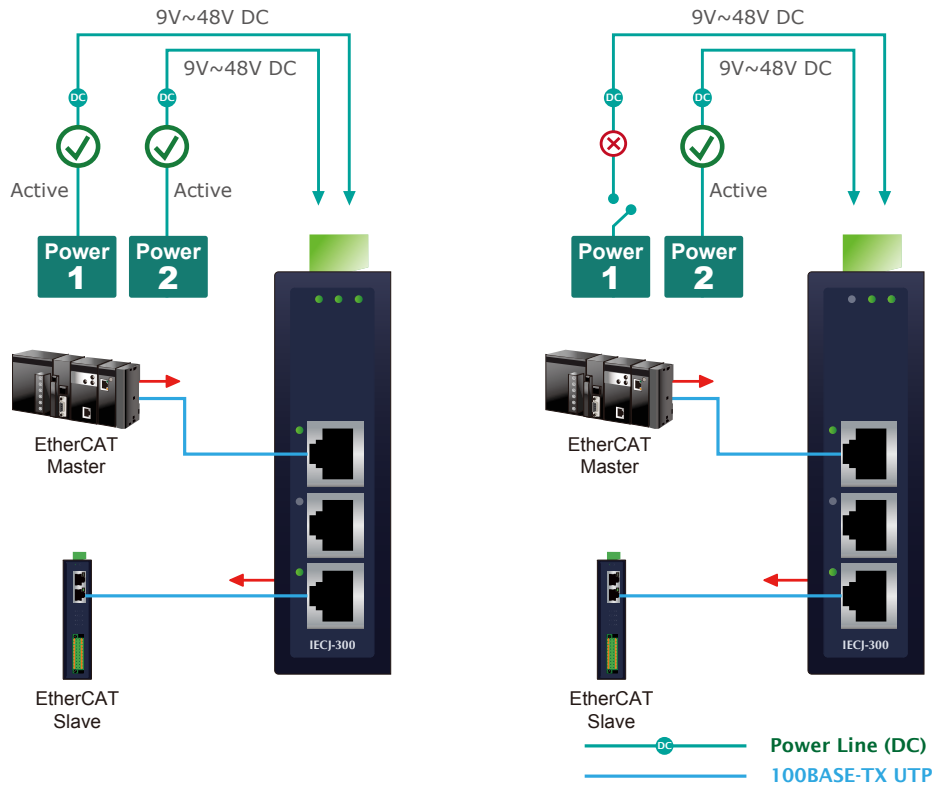
Environmentally Hardened Design

With the IP30 metal industrial case, the IECJ-300 provides a high level of immunity against electromagnetic interference and heavy electrical surges which are usually found on plant floors or in curb-side traffic control cabinets without air conditioning. It features a ventilated construction in which a cooling fan is not necessary, thereby making its operation noiseless. Being able to operate under the temperature range from -40 to 75 degrees C, the IECJ-300 can be placed in almost any difficult environment.

2 x 9~48V DC Power Input

3 x RJ45 Bus Interface

IP30 Rugged Case

-40°C | 75°C

IECJ-300

Dual Power Input for High Availability Network System

The IECJ-300 features a strong dual power input system with wide-ranging voltages (9V~48V DC) 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 IECJ-300 via power supply 2 alternatively without any loss of operation.

Non-stop Ethernet Server
Dual Power Input with Auto Failover

Flexible and Easy Installation with Limited Space

The compact-sized IECJ-300 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.
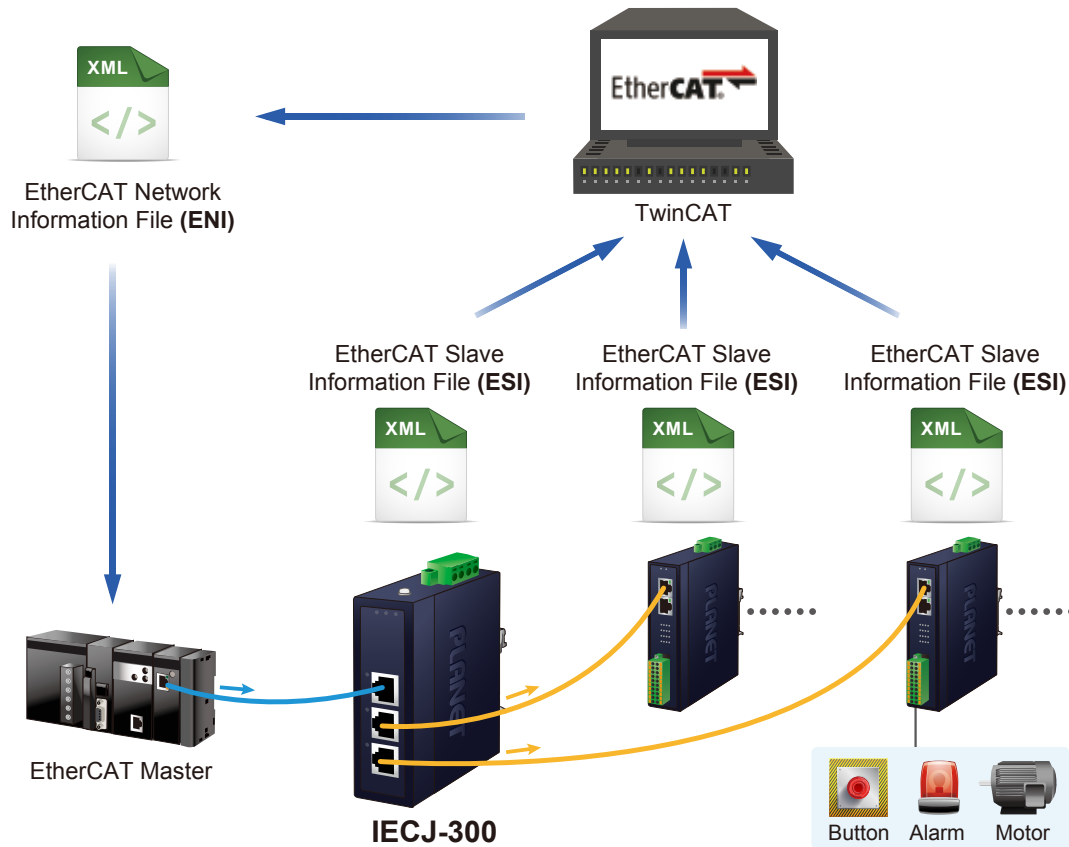
Optional installation method

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

* The above pictures are for illustration only.

Applications

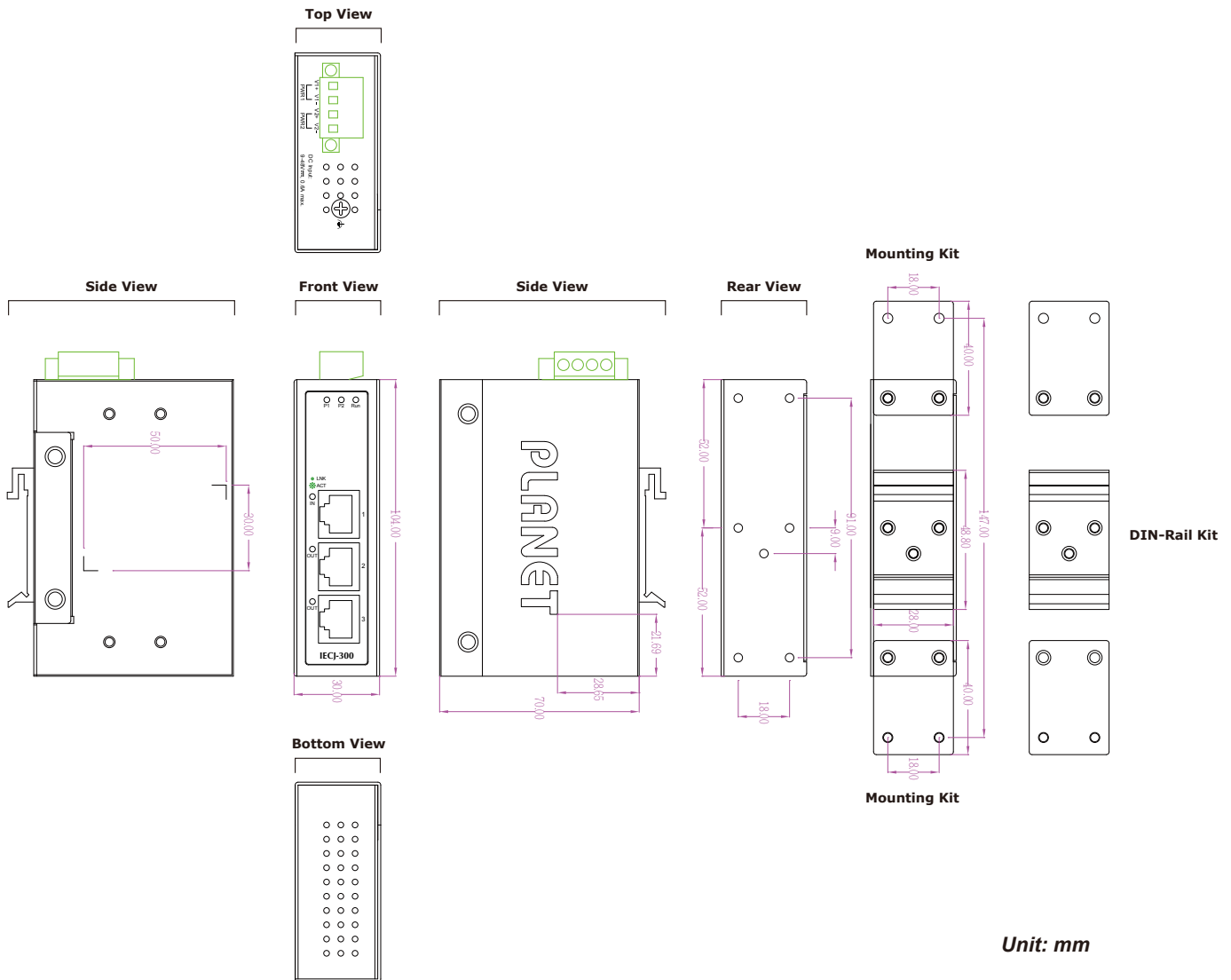### Suitable for Factory Automation and More

Designed for distributed industrial applications, the IECJ-300 EtherCAT junction is suitable for factory automation and more. Its 3 copper ports (one input and two output) can expand network for data transmission. It provides powerful features though it is compact in size. Its DIN-rail mounting and daisy-chain wiring powered by EtherCAT technology can easily install the slave modules in the network segment. With the standard ESI file, users can always find suitable I/O modules for their high-speed EtherCAT-based applications.

EtherCAT Network Information File **(ENI)**

TwinCAT

EtherCAT Slave Information File **(ESI)**

EtherCAT Slave Information File **(ESI)**

EtherCAT Slave Information File **(ESI)**

EtherCAT Master

IECJ-300

Button   Alarm   Motor

Specifications

Product	IECJ-300		
Communication Interface			
Copper	Port	3 x 100BASE-TX RJ45 port	
	Distance between Stations	max. 100 m (100BASE-TX)	
	Data Transfer Medium	Ethernet/EtherCAT cable (min. cat5), shielded	
EtherCAT			
Protocol	EtherCAT		
Power			
Input Voltage Range	Dual 9~48V DC Redundant power with reverse polarity protection		
Power Consumption	1.44W max.		
Mechanical			
Dimensions (W x D x H)	33 x 70 x 104mm		
Installation	DIN-rail and wall mounting		
Case Material	IP30 metal		
Environment			
Operating Temperature	-40~75 degrees C		
Storage Temperature	-40~85 degrees C		
Relative Humidity	5~95% (non-condensing)		

Dimensions

Top View

Side View

Front View

Side View

Rear View

Mounting Kit

IECJ-300

DIN-Rail Kit

Bottom View

Mounting Kit

Unit: mm

Ordering Information

IECJ-300	Industrial 3-Port EtherCAT Junction Slave

Related Products

IECS-1116-DO	Industrial EtherCAT Slave I/O Module with Isolated 16-ch Digital Output
IECS-1116-DI	Industrial EtherCAT Slave I/O Module with Isolated 16-ch Digital Input
IECC-210-KIT	Industrial EtherCAT Media Converter Kit (IECC-210T + IECC-210R)
IMG-2102TS	Industrial 1-Port RS232/422/485 Modbus Gateway with 1-Port 100BASE-FX SFP

Accessories

PWR-240-48	240W 48V DC Single Output Industrial DIN-rail Power Supply (-20 ~ 70 degrees C)
PWR-480-48	480W 48V DC Single Output Industrial DIN-rail Power Supply (-20 ~ 70 degrees C)

IECJ-300