

Industrial EtherCAT Slave I/O Module with Isolated 16-ch Digital Input/Output



Powering the Digital Transformation with EtherCAT

PLANET IECS-1116 series is an industrial EtherCAT slave I/O module equipped with the EtherCAT protocol for today's distributed industrial applications. The module provides high-density digital input and output channels and is protected with 3750 VDC isolation. 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

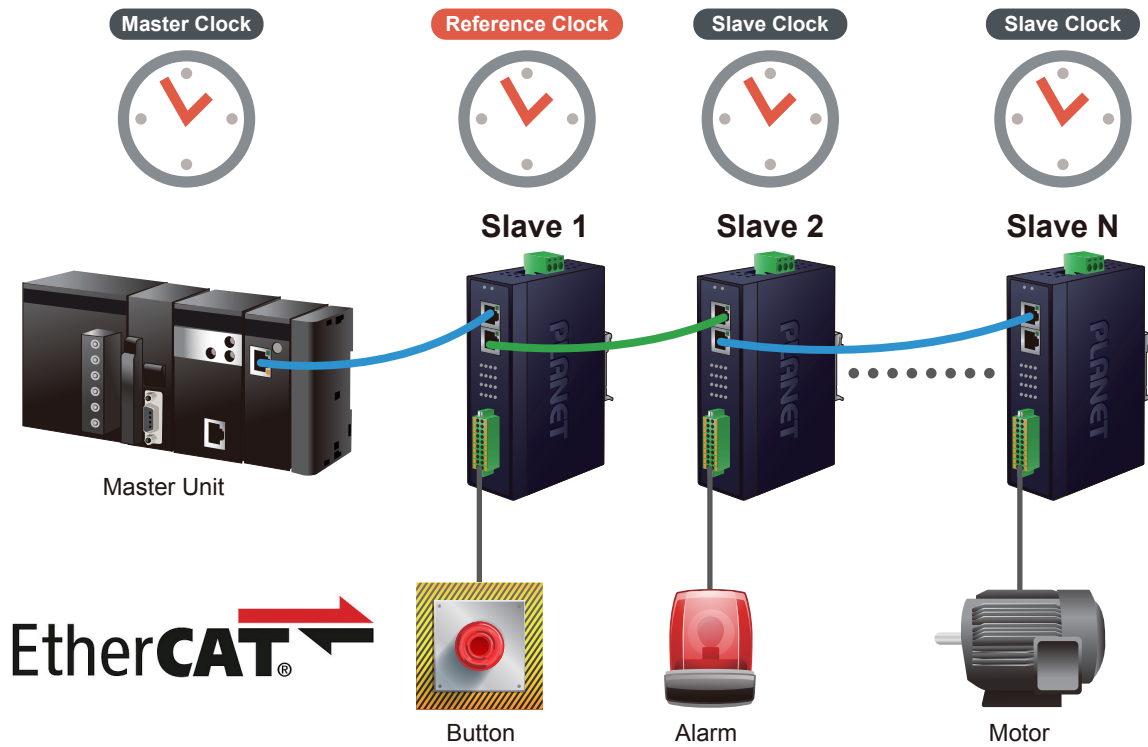
The IECS-1116 series is an ideal high-speed distributed system solution which provides quick installation, real-time connection status monitoring, and wide-ranging power input and operating temperature to improve work efficiency, making them suitable for the harsh environment. Besides, the module comes with 2 10/100BASE-TX RJ45 ports. Through the EtherCAT technology, a network of 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 μ s up to several ms) can be derived

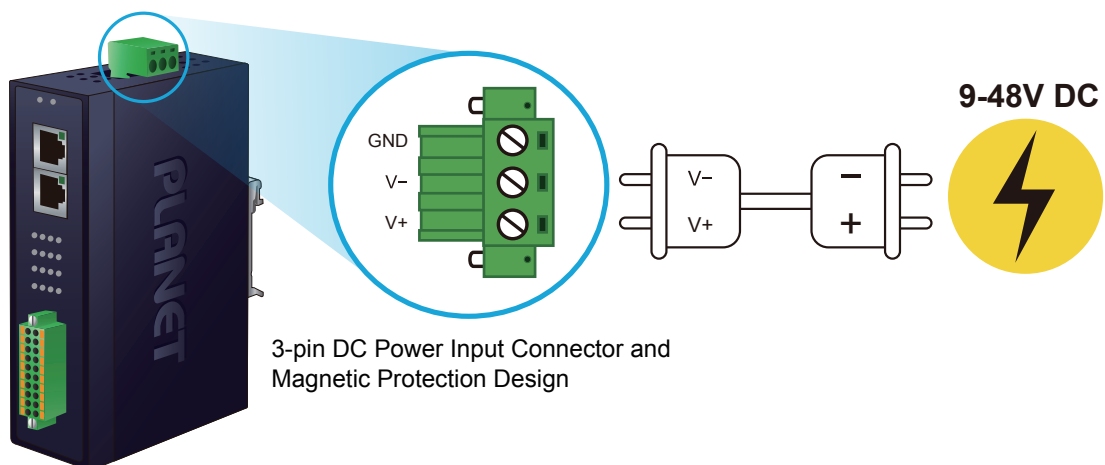
- Built-in isolated 16 digital inputs (IECS-1116-DI)
- Built-in isolated 16 digital outputs (IECS-1116-DO)
- 2 RJ45 bus interfaces
- LED indicators for the input status
- Removable terminal block connector
- 9 ~ 48V DC wide input voltage range
- 700mA/ch high output current (IECS-1116-DO)
- Supports EtherCAT distributed clock (DC) mode and SyncManager mode
- EtherCAT conformance test tool verified

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 <math><1\mu\text{s}</math> between each slave module.



Convenient and Reliable Power System

The IECS-1116 series is equipped with one 3-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.



Environmentally Hardened Design

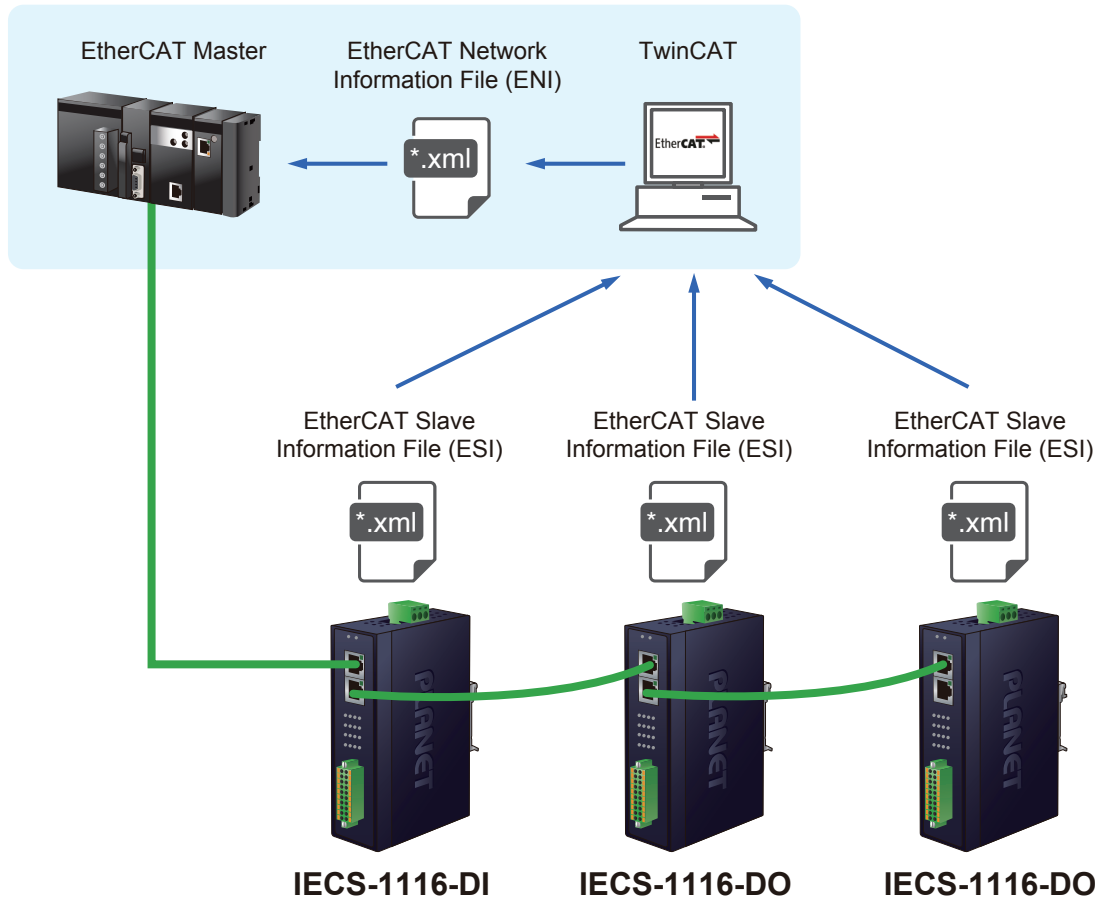
With the IP30 metal industrial case, the IECS-1116 series provides a high level of immunity against electromagnetic interference and heavy electrical surges which are usually found on plant floors or in curb-side traffic control cabinets without air conditioning. It features a ventilated construction 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 IECS-1116 series can be placed in almost any difficult environment.



Applications

Industrial-grade EtherCAT Slave Module for Factory Automation

The IECS-1116 series is an EtherCAT slave I/O module with isolated 16-ch input or output for distributed industrial applications. Each module is equipped with high density I/O (up to 16 points) and powerful features in a compact size. DIN-rail design and daisy-chain wiring powered by EtherCAT technology make it easy to install the modules in the field. Besides, the IECS-1116 series is able to provide a wide variety of I/O combinations. With the standard ESI file, users can always find suitable I/O modules for their high-speed EtherCAT-based applications.



Specifications

Model	IECS-1116-DI	IECS-1116-DO
Digital Input		
Channels	16	--
Input Type	Wet (sink/source) / Dry (source)	--
Wet Contact	ON Voltage Level	+3.5 V ~ +50 V
	OFF Voltage Level	+4 V max.
Dry Contact	ON Voltage Level	Close to GND
	OFF Voltage Level	Open
Photo Isolation	3750 VDC	--
Digital Output		
Channels	--	16
Output Type	--	Open collector (sink)
Load Voltage	--	+3.5 V ~ +50 V
Max. Load Current	--	700 mA per channel
Photo Isolation	--	3750 VDC
Communication Interface		
Connector	2 x RJ45	
Protocol	EtherCAT	
Distance between Stations	Max. 100m (100BASE-TX)	
Data Transfer Medium	Ethernet/EtherCAT cable (min. cat5), shielded	
Power		
Input Voltage Range	9V~48V DC	
Power Consumption	4W max.	
Mechanical		
Dimensions (H x W x D)	135 x 87 x 32mm	
Installation	DIN-rail mounting	
Case Material	IP30 metal	
Environment		
Operating Temperature	-40~75°C	
Storage Temperature	-40~75°C	
Relative Humidity	5~95% (non-condensing)	

Ordering Information

IECS-1116-DI	Industrial EtherCAT Slave I/O Module with Isolated 16-ch Digital Input
IECS-1116-DO	Industrial EtherCAT Slave I/O Module with Isolated 16-ch Digital Output

Related Products

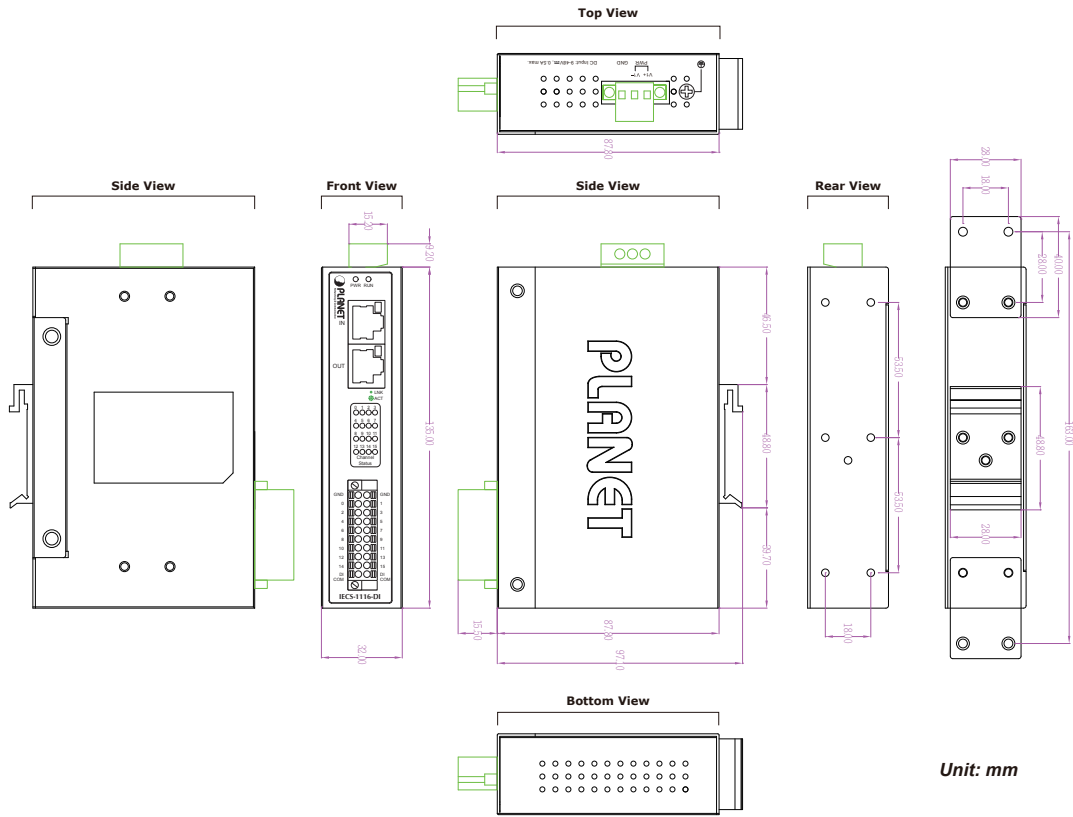
IMG-2100T	Industrial 1-port RS232/422/485 Modbus Gateway
IMG-2102T	IP30 Industrial 1-Port RS232/RS422/RS485 Modbus Gateway (1 x 100FX SC, MM/2km, -40~75 degrees C)
IMG-2102TS	IP30 Industrial 1-Port RS232/RS422/RS485 Modbus Gateway (1 x 100FX SC, SM/30km, -40~75 degrees C)
IMG-2105AT	IP30 Industrial 1-Port RS232/RS422/RS485 Modbus Gateway with 1-Port 100BASE-FX SFP
IMG-2200T	IP30 Industrial 2-Port RS232/RS422/RS485 Modbus Gateway (2 x 10/100TX, -40~75 degrees C, 2KV isolation)
IMG-2400T	Industrial 4-Port RS232/422/485 Modbus Gateway

Accessories

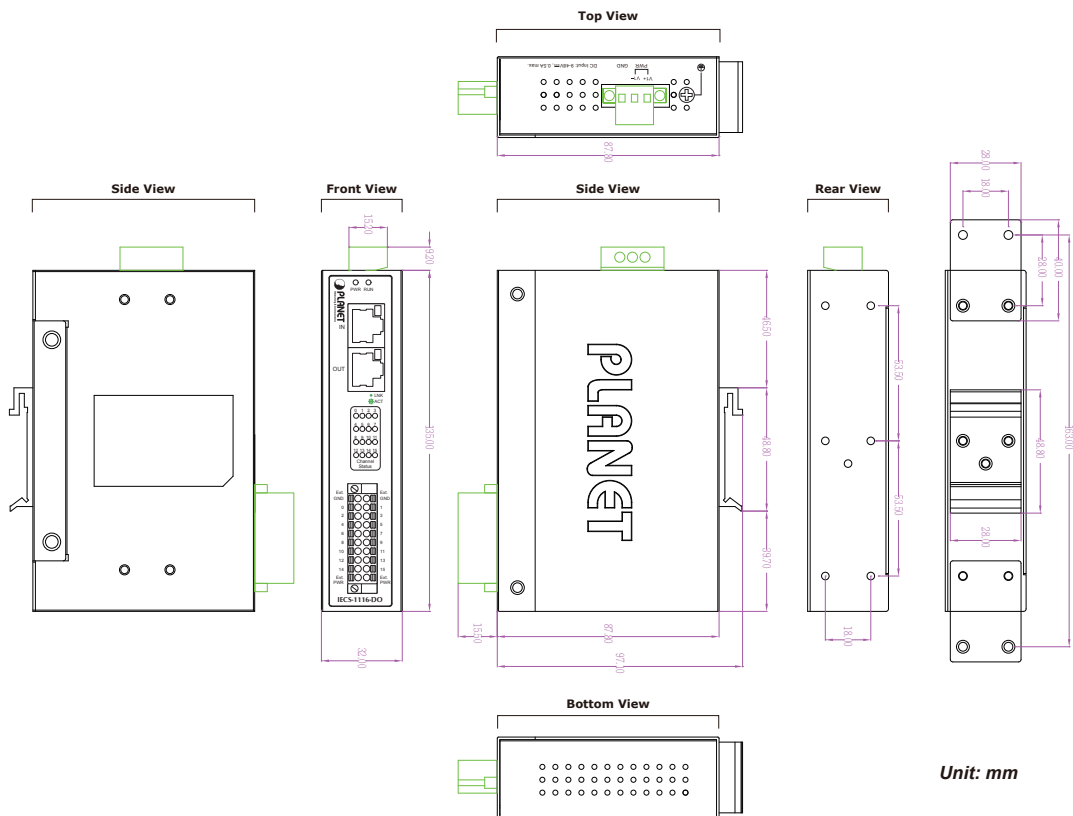
PWR-75-48	75W 48V DC Single Output Industrial DIN-rail Power Supply (-20 ~ 70 degrees C)
PWR-120-48	120W 48V DC Single Output Industrial DIN-rail Power Supply (-20 ~ 70 degrees C)
PWR-240-48	240W 48V DC Single Output Industrial DIN-rail Power Supply (-20 ~ 70 degrees C)
PWR-480-48	480W 48V DC Single Output Industrial DIN-rail Power Supply (-20 ~ 70 degrees C)

Dimensions

IECS-1116-DI



IECS-1116-DO



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IECS-1116-DI/IECS-1116-DO