IES6116 Series

DIN-Rail or Wall Mounting

16-Port 100M Layer 2 Managed Industrial Ethernet Switch

- Support 16/14/12/10/8 100M copper ports (optional) and 2/4/6/8 100M fiber ports (optional)
- Adopt Ring patent technology, support single ring, coupling ring, chain ring, Dual-homing ring network function, automatic recovery time of network failure < 50ms
- 2*12/24/48VDC (9~60VDC), redundant power input, support non-polarity
- Support 1 220VAC (100~240VAC) or 110VDC (110~300VDC) power supply input, support non-polarity
- Support -40~75℃ wide operating temperature range
- Support IP40 protection grade

Industrial Grade

RPS

ROBUST INDUSTRIAL CONNECTION

Introduction

IES6116 series product is a 16-port 100M layer 2 unmanaged industrial Ethernet switch. This series of products offers 100M copper ports and 100M fiber ports. The DC product supports a power supply solution of 9~60VDC, while the AC product offers optional power supply solutions of either 110~240VAC or 110~300VDC, and adopts DIN rail or wall-mounted installation methods, which can meet the needs of different application sites.

Network management system supports various network protocols and industrial standards, such as STP/RSTP, 802.1Q VLAN, QoS Function, Port Trunking, Port Mirroring, IP Filtering, LLDP, 802.1X. It also possesses complete management functions, including Port Configuration, Port Statistics, Access Control, Network Diagnosis, Rapid Configuration, Online Upgrading and so on, and supports CLI, HTTP, HTTPS, Telnet, SNMP, and other access methods. Network management system could bring you great user experience through its friendly interface design and easy and convenient operation.

DIP switch can achieve restoring factory defaults. When DC power supply or port has link failure, ALM indicator will be bright and send out alarm, meanwhile, alarm device connected to the relay will send out alarm for rapid scene troubleshooting. Hardware adopts fanless, low power consumption, wide temperature and voltage design and has passed rigorous industrial standard tests, which can suit for the industrial scene environment with harsh requirements for EMC. It can be widely used in rail transit, smart city, safety city, new energy, intelligent manufacturing, and other industrial fields.

Features and Benefits

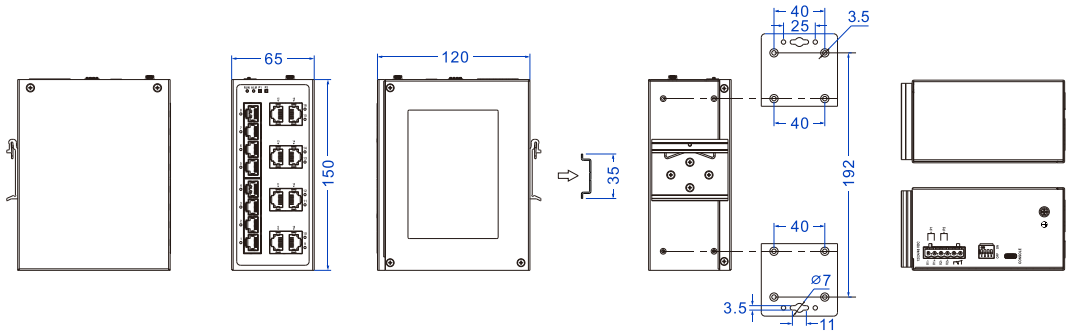
- SNMPv1/v2c is used for network management of various levels
- Port mirroring can conduct data analysis and monitoring, which is convenient for online debugging
- QoS supports real-time traffic classification and priority setting
- File management is convenient for the device rapid configuration and online upgrade
- Port statistics can be used for the port real time traffic statistics
- User password can conduct user hierarchical management to improve the device management security
- Relay alarm is convenient for troubleshooting of construction site
- Storm suppression can restrain broadcast, unknown multicast and unicast
- VLAN is used for simplifying network planning
- Port Trunking can increase network bandwidth and enhance the reliability of network connection to achieve optimum bandwidth utilization
- Bandwidth management and flow control can reasonably distribute network bandwidth, preventing unpredictable network status
- IGMP Snooping can be used for filtering multicast traffic to save the network bandwidth
- Ring and STP/RSTP can achieve network redundancy, preventing network storm

- LLDP can achieve automatic topology discovery, which is convenient for visual management
- 802.1X authentication could strength the flexibility and security of network
- Support blacklist and whitelist filtering rules to block communication between clients in the local area network (LAN) and the wide area network (WAN).
- Loop protection could efficiently eliminate the influence caused by port loopback by detecting the existence of port loopback
- Support port and power connection exception alarm, port rate, CPU, and memory utilization rate threshold alarm

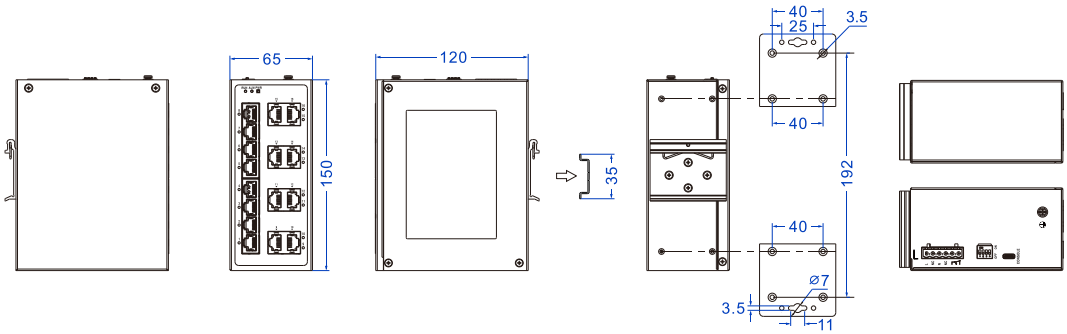
Dimension

Unit: mm

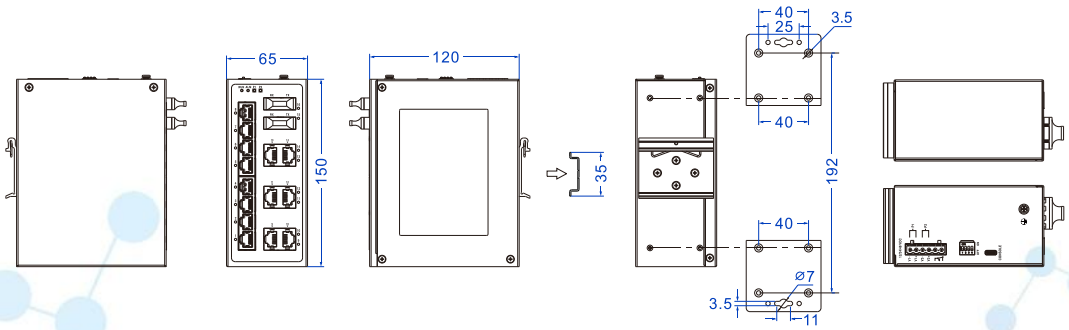
- IES6116-2LV



- IES6116-HV



- IES6116-2F-2LV



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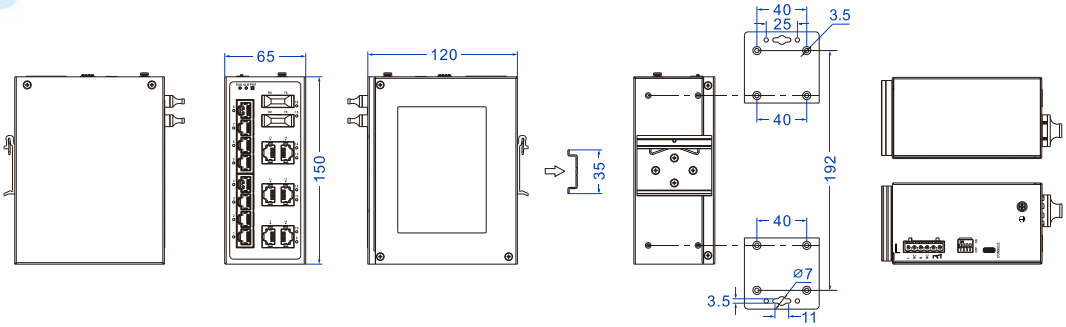

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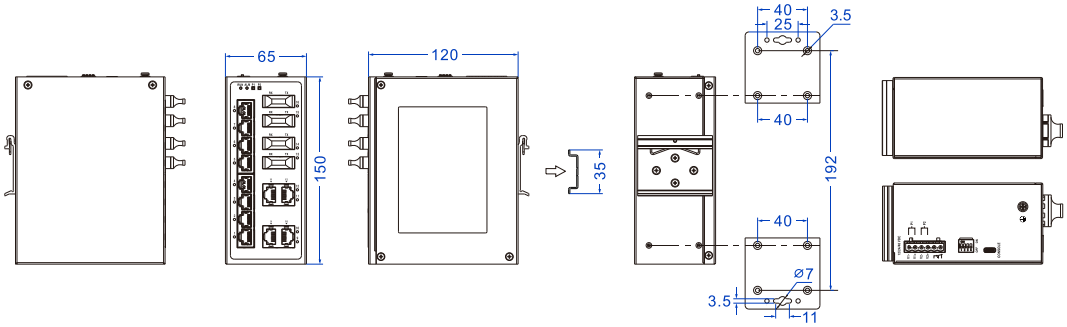
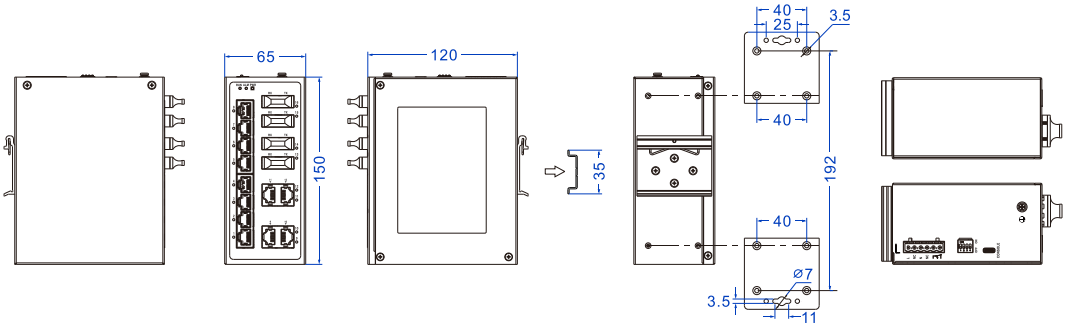
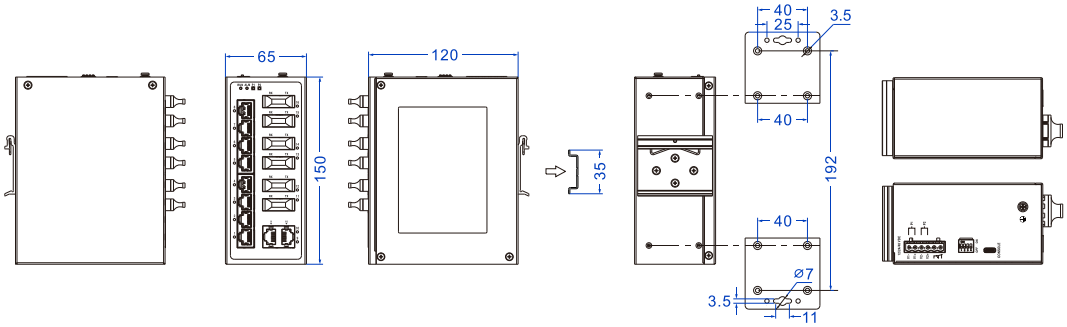


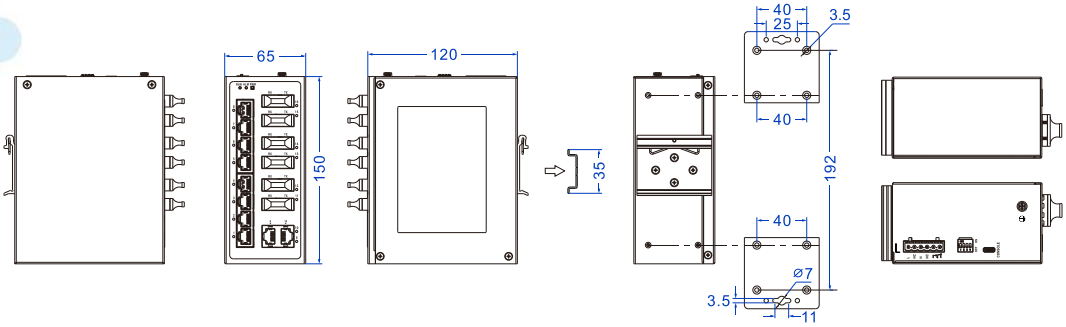
- IES6116-4F-HV



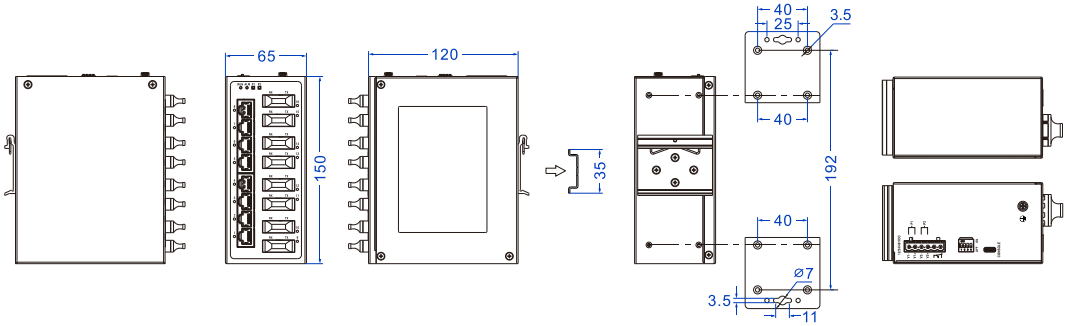
- IES6116-6F-2LV



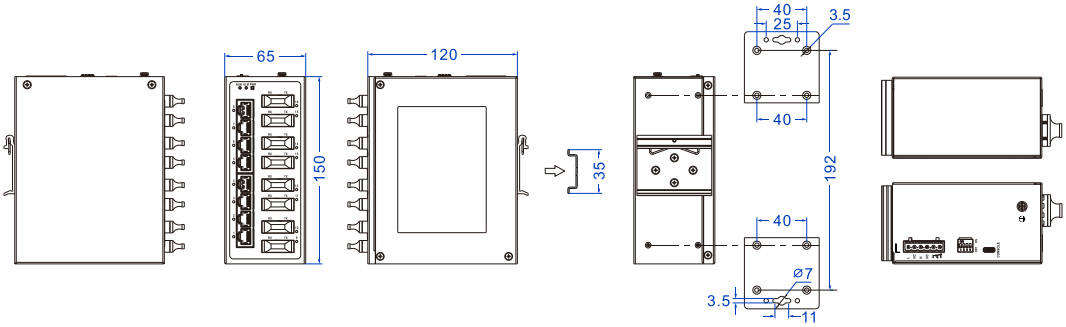
- IES6116-6F-HV



- IES6116-8F-2LV



- IES6116-8F-HV



Specification

Standard & Protocol	IEEE 802.3 for 10Base-T IEEE 802.3u for 100Base-TX and 100Base-FX IEEE 802.3x for Flow Control IEEE 802.1D-2004 for Spanning Tree Protocol IEEE 802.1w for Rapid Spanning Tree Protocol IEEE 802.1Q for VLAN IEEE 802.1p for CoS IEEE 802.1AB for LLDP IEEE 802.1X for 802.1X Authentication
Management	Console/Telnet/WEB management method, SNMP v1/v2c Centralized Management of Equipment, Port Mirroring, QoS, LLDP, File Management, Port Statistics, IP Filtering

Security	User privilege classification, Relay Alarm (Port Alarm and Power Alarm), IEEE802.1X, Threshold Alarm, Loop Protection
Switch Function	802.1Q VLAN, Static Port Aggregation, Bandwidth Management, Flow Control
Unicast / Multicast	IGMP Snooping
Redundancy Technology	Ring, STP/RSTP
Interface	Copper port: 10/100Base-T(X), RJ45, Automatic Flow Control, Full/Half Duplex Mode, MDI/ MDI-X Autotuning Fiber port: 100Base-FX, optional SC/ST/FC Console port: CLI command line management port (RS-232), Type-C Alarm port: 6-Pin 5.08mm pitch terminal blocks (relay occupies 2 pins), support 1 relay alarm output, current loading capacity is 2A@30VDC or 2A@250VAC
Indicator	Running Indicator, Port Indicator, Power Supply Indicator, Alarm Indicator
Switch Property	Transmission mode: store and forward MAC address: 16K Packet buffer size: 4Mbit Backplane bandwidth: 12.8Gbps Switch time delay: <10μs
Power Supply	DC Product: ● Voltage range:12/24/48VDC (9~60VDC) ● Power supply quantity: dual power supply redundancy backup ● Connection method: 6-pin 5.08mm pitch terminal blocks (power supply occupies 4 pins) ● Connection protection: support non-polarity AC Product: ● Power supply range: 220VAC (100~240VAC) or 110VDC (110~300VDC) ● Number of power supply: single power supply ● Connection method: 6-pin 5.08mm pitch terminal blocks (power supply occupies 4 pins) ● Connection protection: support non-polarity

	Model	No-load	Full-load
Power Consumption	IES6116-2LV	25°C: 4.26W@48VDC 75°C: 4.46W@48VDC	25°C: 5.71W@48VDC 75°C: 6.03W@48VDC
	IES6116-HV	25°C: 3.34W@220VAC 75°C: 3.83W@220VAC	25°C: 5.11W@220VAC 75°C: 5.33W@220VAC
	IES6116-2F-2LV	25°C: 5.59W@48VDC 75°C: 6.10W@48VDC	25°C: 6.92W@48VDC 75°C: 7.44W@48VDC
	IES6116-2F-HV	25°C: 5.06W@220VAC 75°C: 5.46W@220VAC	25°C: 6.47W@220VAC 75°C: 6.87W@220VAC
	IES6116-4F-2LV	25°C: 6.18W@48VDC 75°C: 6.58W@48VDC	25°C: 7.65W@48VDC 75°C: 8.05W@48VDC
	IES6116-4F-HV	25°C: 5.94W@220VAC 75°C: 6.51W@220VAC	25°C: 7.76W@220VAC 75°C: 8.60W@220VAC
	IES6116-6F-2LV	25°C: 7.83W@48VDC 75°C: 8.57W@48VDC	25°C: 9.01W@48VDC 75°C: 9.76W@48VDC
	IES6116-6F-HV	25°C: 7.24W@220VAC 75°C: 7.86W@220VAC	25°C: 8.67W@220VAC 75°C: 9.28W@220VAC
	IES6116-8F-2LV	25°C: 9.49W@48VDC 75°C: 10.24W@48VDC	25°C: 10.54W@48VDC 75°C: 11.28W@48VDC
	IES6116-8F-HV	25°C: 9.21W@220VAC 75°C: 10.07W@220VAC	25°C: 10.34W@220VAC 75°C: 11.07W@220VAC

Working Environment	Operating temperature: -40~75℃ Storage temperature: -40~85℃ Relative humidity: 0%~95% (no condensation)
Mechanical Structure	Housing: IP40 protection, metal Installation: DIN-Rail or wall mounting Dimension (W x H x D): 65mm×150mm×120mm Weight: IES6116-4F-HV: 0.965kg IES6116-8F-2LV: 0.957kg
Industrial Standard	IEC 61000-4-2 (ESD), Level 4 ● Air discharge: ±15kV ● Contact discharge: ±8kV IEC 61000-4-4 (EFT), Level4 ● Power supply: ±4kV ● Ethernet interface: ±2kV ● Relay: ±4kV IEC 61000-4-5 (Surge), Level 4 ● Power supply: common mode ±4kV, differential mode ±2kV ● Ethernet port: common mode ±4kV, differential mode ±2kV ● Relay: common mode ±4kV, differential mode ±2kV

	IEC 61000-4-18 (DOW immunity test), Level 4 ● Power supply: common mode ±2.5kV, differential mode ±1kV Shock: IEC 60068-2-27 Free fall: IEC 60068-2-31 Vibration: IEC 60068-2-6
Authentication	CE, FCC, RoHS, UL62368
Warranty	5 years

Ordering Information

Model	100M Copper Port	100M Fiber Port	Power Supply
IES6116-2LV-N	16	—	12/24/48VDC (9~60VDC) Dual power supply redundancy
IES6116-2F-2LV-N	14	2	
IES6116-4F-2LV-N	12	4	
IES6116-6F-2LV-N	10	6	
IES6116-8F-2LV-N	8	8	
IES6116-HV-N	16	—	220VAC (100~240VAC) or 110VDC (110~300VDC) single power supply
IES6116-2F-HV-N	14	2	
IES6116-4F-HV-N	12	4	
IES6116-6F-HV-N	10	6	
IES6116-8F-HV-N	8	8	