3onedata
Reliable Connections



IES7120 Series

DIN-Rail or Wall Mounting

20/24-Port 100M/Gigabit Layer 2 Managed Industrial Ethernet Switch

- Support 12 100M copper ports, 4 100M fiber ports, and 4 Gigabit SFP slots, 14 100M copper ports, 2 100M fiber ports, and 4 Gigabit SFP slots, 16/20 100M copper ports, and 4 Gigabit SFP slots
- Support MRP ring network, reconfiguration time < 200ms
- Adopt Ring patented technology, support single ring, coupling ring, chain, Dual-homing function
- Support multiple network protocols and industry standards, such as STP/RSTP/MSTP, MRP, ERPS, DHCP, VLAN, QoS, IGMP Snooping, LLDP, ACL and SNMP.
- DC product supports 2 12/24/48VDC (9~60VDC), dual power supply redundancy, support anti-reverse connection
- AC product supports 1 110/220VAC/DC power supply input
- Support -40~75℃ wide operating temperature range

Industrial Grade RPS +75℃ -40℃

CONNECTING FOR A BETTER FUTURE

3onedata Co.,Ltd.

Introduction

The IES7120 series is a 20/24-port 100M/Gigabit layer 2 managed industrial Ethernet switch. This series provides 8 products and supports 100M copper port, 100M fiber port, and Gigabit SFP slot. They adopt DIN-Rail or wall mounting to meet the requirements of different application scenes.

Network management system supports a variety of network protocols and industry standards, such as IPv4, VLAN, STP/RSTP/MSTP, Ring, MRP, ERPS, DHCP, LLDP, IGMP Snooping, QoS, Modbus TCP monitoring, port trunking, port mirroring, etc. It has perfect management functions, supporting port configuration, port statistics, ACL, 802.1X authentication, network diagnosis, rapid configuration, online upgrade, etc. CLI, WEB, Telnet, SNMP, SSH, and other access methods can be supported. Network management system could bring you great user experience through its friendly interface design and easy and convenient operation.

DC power supply input consists of two independent power supply circuits, which can ensure device's normal operation when one fails. The design of DIP switch could implement device factory setting recovery and restart. When 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 smart grid, new energy, rail transit, intelligent manufacturing, smart city, and other industrial fields.

Features and Benefits

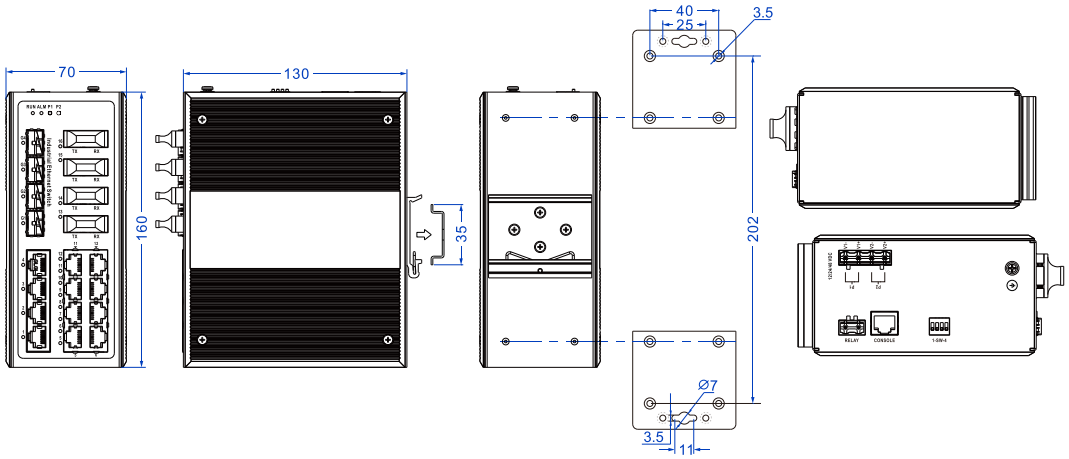
- SNMPv1/v2c/v3 is used for network management of various levels
- RMON can be used for efficient and flexible network monitoring
- Port mirroring can conduct data analysis and monitoring, which is convenient for online debugging
- QoS supports real-time traffic classification and priority setting
- LLDP can achieve automatic topology discovery, which is convenient for visual management
- DHCP server and DHCP client could be used for allocating IP address of different strategies
- DHCP Snooping can ensure DHCP client gets IP address from legal DHCP server
- User privilege classification configuration can set user privilege level
- SSH configuration and HTTPS configuration can improve device's management security and guarantee data access security
- VLAN is used for simplifying network planning
- File management is convenient for the device rapid configuration and online upgrading

- Log management records Console log, RAM log and Flash log
- Bandwidth management can reasonably distribute network bandwidth, preventing unpredictable network status
- 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
- ACL can enhance network flexibility and security
- Relay alarm is convenient for troubleshooting of construction site
- Storm suppression can restrain broadcast, unknown multicast and unicast
- Port Trunking can increase network bandwidth and enhance the reliability of network connection to achieve optimum bandwidth utilization
- IGMP Snooping and static multicast can be used to filter multicast data to save network bandwidth
- STP/RSTP/MSTP/Ring/MRP could implement network redundancy and prevent network storm
- With high reliability and stability, ERPS could avoid broadcast storm caused by data loopback
- Support Modbus TCP protocol which can monitor device information in real time.
- Network diagnosis and troubleshooting could be conducted via Ping, Traceroute, Cable Diagnosis, SFP Digital Diagnosis

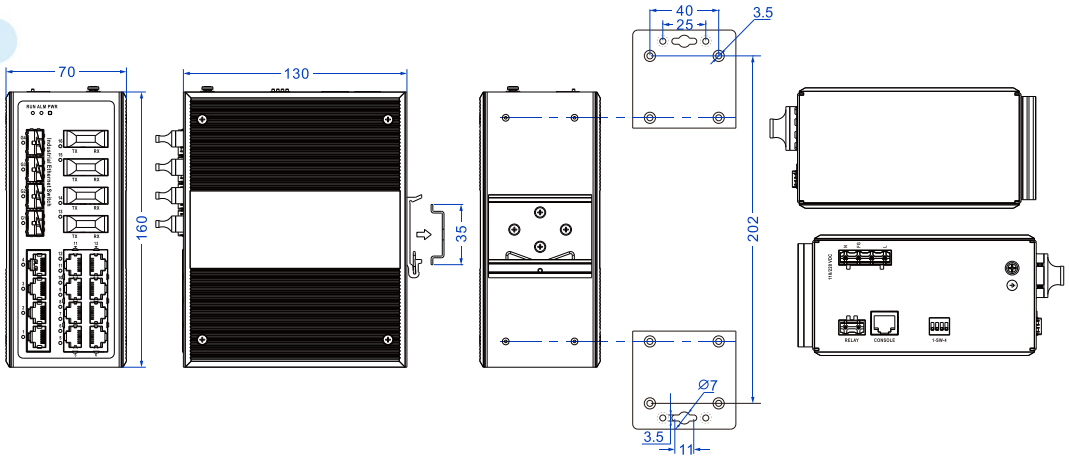
Dimension

Unit: mm

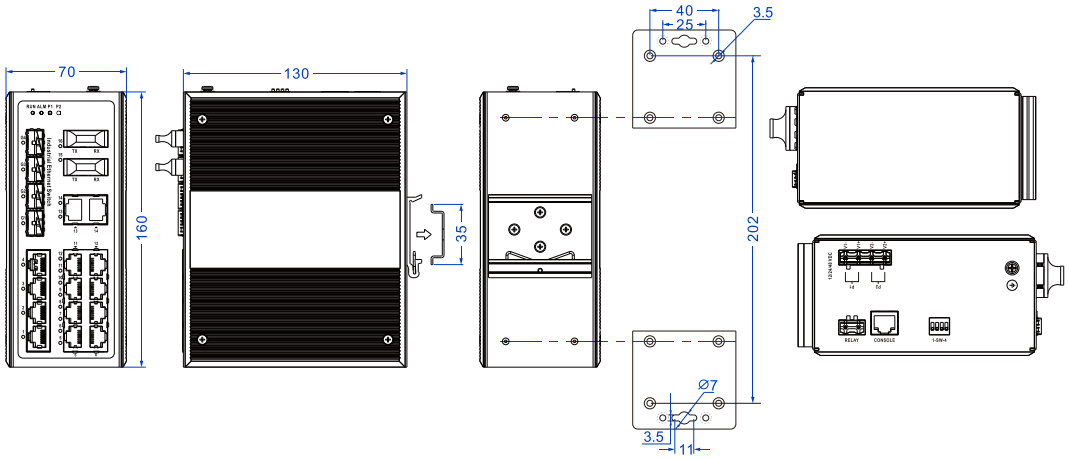
- IES7120-12T4F4GS-2LV



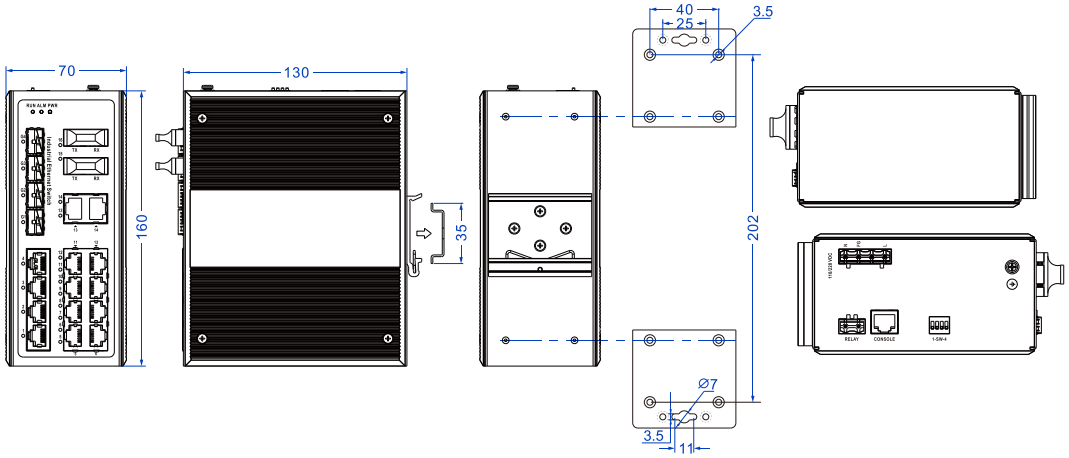
- IES7120-12T4F4GS-HV



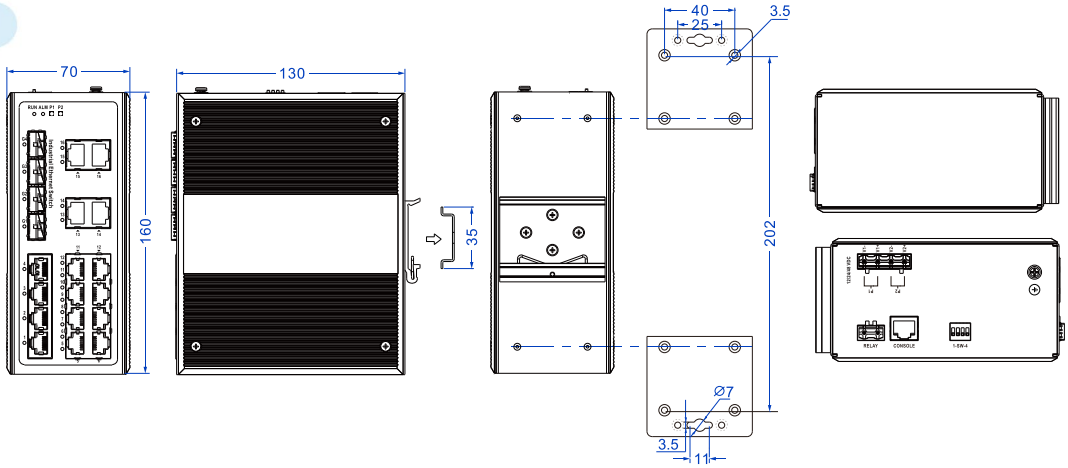
- IES7120-14T2F4GS-2LV



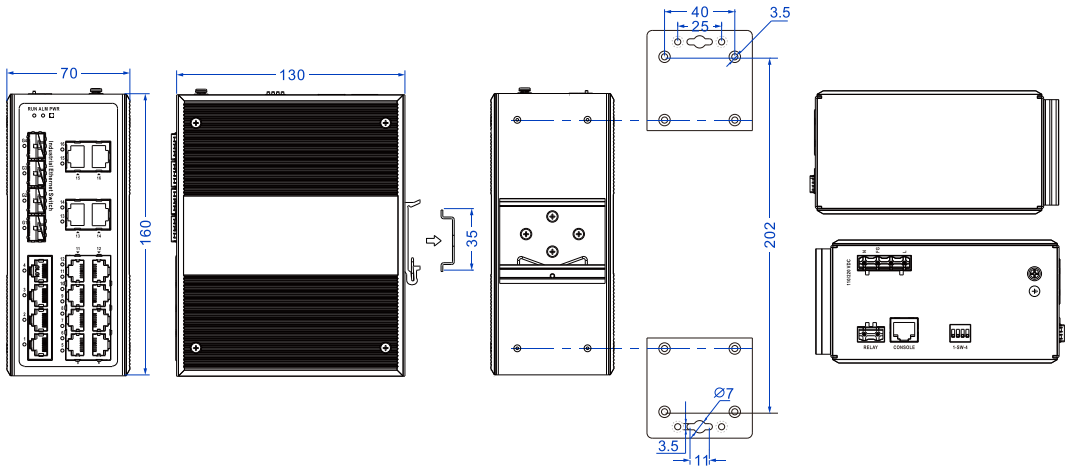
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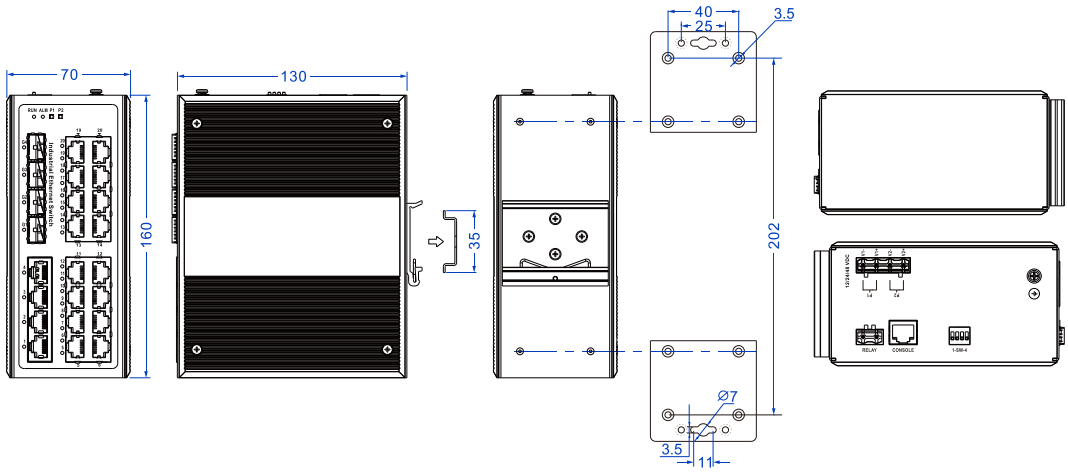
- IES7120-16T4GS-2LV



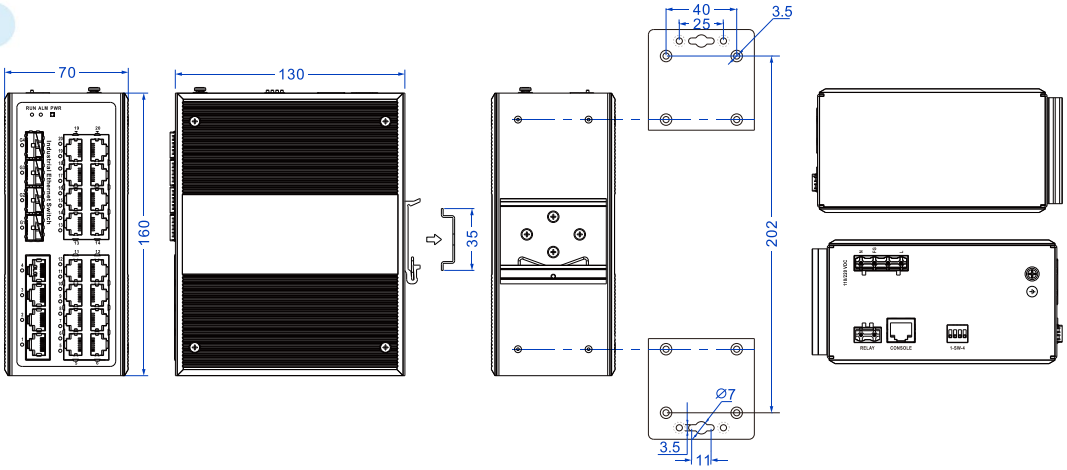
- IES7120-16T4GS-HV



- IES7120-20T4GS-2LV



- IES7120-20T4GS-HV



Specification

Standard & Protocol	IEEE 802.3 for 10Base-T IEEE 802.3u for 100Base-TX IEEE 802.3u for 100Base-FX IEEE 802.3z for 1000Base-X IEEE 802.3x for Flow Control IEEE 802.1D for Spanning Tree Protocol IEEE 802.1w for Rapid Spanning Tree Protocol IEEE 802.1s for Multiple Spanning Tree Protocol IEEE 802.1Q for VLAN IEEE802.1p for CoS IEEE 802.1X for 802.1X Authentication IEEE 802.1AB for LLDP ITU-T G.8032 for ERPS IEEE 802.3ad for LACP
Management	SNMP v1/v2c/v3, RMON, LLDP, PoE, QoS, DHCP Server, DHCP Snooping, port settings, dynamic/static MAC addresses, MAC/IPv4, storm suppression, user passwords, file management, log management, port statistics, link flapping protection, Modbus TCP monitoring
Security	User Privilege Classification, Port and Power Alarm, SSH Configuration, HTTPS Configuration, Access Control, SNMP, RMON, Port Limit Control, Port Security, NAS, ACL, Ethernet Services, RADIUS Server Authentication, TACACS + Server Authentication, Port Alarm, Temperature Alarm, Power Supply Alarm, Network Load Alarm
Switch Function	802.1Q VLAN, link aggregation, static aggregation, flow control, LACP
Unicast / Multicast	Multicast filtering, IGMP Snooping

Redundancy Technology	STP/RSTP/MSTP, ERPS, Ring, MRP
Troubleshooting	Log record, port mirroring, Ping, Traceroute, network cable diagnosis, SFP DDM
Time Management	NTP, Time Zone Configuration
Interface	100M copper port: 10/100Base-T(X), RJ45, Automatic Flow Control, Full/half Duplex Mode, MDI/ MDI-X Autotunning 100M fiber port: 100Base-X, optional SC/ST/FC Gigabit SFP: 1000Base-X SFP slot, support forced 100M Console port: CLI command line management port (RS-232), RJ45 Alarm port: 2-pin 7.62mm pitch terminal blocks, support 1 relay alarm output, current carrying capacity is 5A@30VDC or 10A@125VAC
Indicator	Power indicator, running indicator, alarm indicator, interface indicator
Switch Property	● Transmission mode: store and forward ● MAC address: 8K ● Cache: 4.1Mbit ● Backplane bandwidth: 12.8Gbps ● Switch time delay: <10μs
Power Supply	Adopt 4-pin 7.62mm pitch terminal blocks ● DC product 2 12/24/48VDC (9~60VDC), dual power supply redundancy, support anti-reverse connection ● AC product 1 110/220VAC/DC power supply input
Power Consumption	

Model	No-load	Full-load
IES7120-12T4F4GS-2LV	11.571W@48VDC	12.96W@48VDC
IES7120-12T4F4GS-HV	8.9W@220VAC	12.9W@220VAC
IES7120-14T2F4GS-2LV	6.79W@48VDC	11.15W@48VDC
IES7120-14T2F4GS-HV	6.3W@220VAC	10.5W@220VAC
IES7120-16T4GS-2LV	5.2W@48VDC	9.6W@48VDC
IES7120-16T4GS-HV	4.7W@220VAC	9.0W@220VAC
IES7120-20T4GS-2LV	4.9W@48VDC	9.6W@48VDC
IES7120-20T4GS-HV	5.1W@220VAC	9.4W@220VAC

Working Environment	Operating temperature: -40~75℃ Storage temperature: -40~85℃ Relative humidity: 5%~95% (no condensation)

Mechanical Structure	Housing: IP40 protection, metal Installation: DIN-Rail or wall mounting Dimension (W x H x D): 70mm×160mm×130mm Weight: 1.040kg
Industrial Standard	IEC 61000-4-2 (ESD, electronic static discharge), Level 4 ● Air discharge: ± 15kV ● Contact discharge: ±8kV IEC 61000-4-4 (EFT, electrical fast transient pulses), Level 4 ● 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 Shock: IEC 60068-2-27 Free fall: IEC 60068-2-31 Vibration: IEC 60068-2-6
Authentication	CE, FCC, RoHS
Warranty	5 years

Ordering Information

Model	100M Copper Port	100M Fiber Port	Gigabit SFP Slot	Power Supply
IES7120-12T4F4GS-2LV	12	4	4	2 12/24/48VDC(9~60VDC) dual power supply redundancy
IES7120-14T2F4GS-2LV	14	2	4	
IES7120-16T4GS-2LV	16	—	4	
IES7120-20T4GS-2LV	20	—	4	
IES7120-12T4F4GS-HV	12	4	4	1 110/220VAC/DC power input
IES7120-14T2F4GS-HV	14	2	4	
IES7120-16T4GS-HV	16	—	4	
IES7120-20T4GS-HV	20	—	4	

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