

IDS-104FE Industrial Ethernet Switches

5-port Compact DIN Rail Switches



- 4 x RJ45 ports with 10/100 Mbps on all ports
- 1 x SC or ST port for 100Base-FX
- Redundant dual power input 12/24/48 VDC
- Reverse polarity protection
- Fan-less design with no moving parts
- -10 to 60C industrial operating temperature support
- QoS (Quality of Service) prioritized messages



With a combination of four Fast Ethernet copper ports, and one Fast Ethernet fiber port for long distance connectivity, Perle IDS-104FE Industrial Ethernet Switches are designed for easy deployment in industrial environments with harsh operating conditions and limited space. Designed to stand up to extreme temperatures, surges, vibrations, and shocks found in industrial automation, infrastructure, transportation, security, oil and gas, and mining the IDS-104FE Switches are economical easy-to-use devices, that provide essential industrial Ethernet networking functionality.

These unmanaged switches support 9 to 55VDC redundant power input and provide a relay alarm for power failure. The full/half-duplex auto-negotiation and auto MDI/MDIX operation simplifies installation and setup for convenient connection of a variety of network devices. And, **QoS support** allows for traffic prioritization and effective management of resources.

For automation and industrial control systems using EtherNet/IP, these rugged, DIN rail mountable switches with metal housing provides security and easy installation (mounting kit is included).

IDS-104FE Industrial Ethernet Switch Features

Rugged design for harsh environments	<ul style="list-style-type: none"> • Corrosion resistant IP40 metal case • UL61010 Industrial Control Equipment Safety certified • Handles vibration and shock conditions found in industrial environments
Reliable operation	<ul style="list-style-type: none"> • Fanless, no moving parts • Dual power input. Connect to separate power sources for redundancy. <ul style="list-style-type: none"> ◦ Reverse polarity protection ◦ Overload current protection
Real-time Ethernet performance	<ul style="list-style-type: none"> • Fast wire-speed, store and forward switching, non-blocking architecture • Auto-sensing for speed and duplex • Auto-mdi/mdix-crossover works with straight and crossover cables
Energy Efficient Ethernet (EEE)	Energy Efficient Ethernet (EEE) as per 802.3az. This provides power savings during idle network activity.

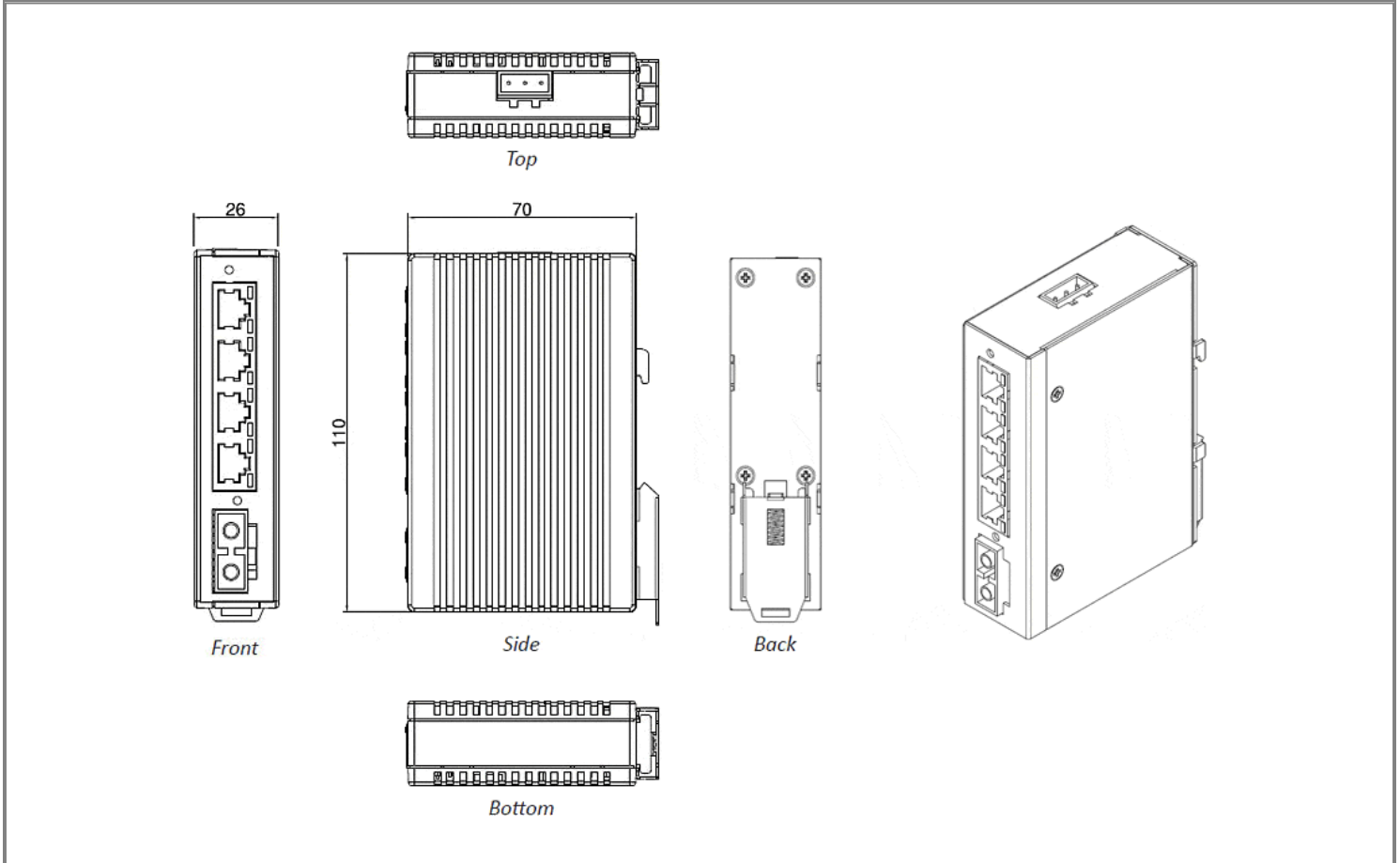
Specifications	
5 Year Return to Factory Warranty	Reach, RoHS and WEEE Compliant
HTSUS Number: 8517.62.0020	UNSPSC Code: 43222612
ECCN: 5A991	
	
Interfaces	
RJ45	<ul style="list-style-type: none"> • 4 x RJ45 ports for 10/100Base-TX up to 100 meters (328 ft) • Auto-negotiation • Auto-MDI/MDIX-crossover for use with either crossover over straight-through cable types • Ethernet isolation 1500 V
100FX Fiber	<ul style="list-style-type: none"> • IDS-104FE-M2SC2: 1 x Multi Mode (SC) - 2Km • IDS-104FE-M2ST2: 1 x Multi Mode (ST) - 2Km • IDS-104FE-S2SC20: 1 x Single Mode (SC) - 20Km • IDS-104FE-S2ST20: 1 x Single Mode (ST) - 20Km
Power	
Power Input	12/24/48VDC (9-55VDC)
Power Consumption	1.82W Max. 0.14A@12VDC / 0.07A@24VDC, 0.038A@48VDC
Maximum Current Consumption @24 vDC	0.14A@12VDC / 0.07A@24VDC, 0.038A@48VDC
Power Connector	3-Pin Removable Terminal Block
Overload Current Protection	Reset-able fuse provides overload current protection
Reverse polarity protection	The positive and negative inputs can be reversed providing safe and simple power connectivity.

Switch Properties	
Standards	<ul style="list-style-type: none"> • IEEE 802.3u 100BASE-TX/FX • IEEE802.3x full-duplex flow control • IEEE 802.3az Energy Efficient Ethernet • IEEE 802.1p Quality of Service (QoS)
Processing Type	<ul style="list-style-type: none"> • Store-and-Forward • Auto Negotiation • Half-duplex back-pressure • 802.3x full-duplex flow control • Auto MDI/MDIX
MAC Address Table Size	1K
Packet Buffer Memory	448 Kbps
Jumbo Frame Size	No
Forward/Filtering Rate	<ul style="list-style-type: none"> • 14,880pps for 10Mbps • 148,810pps for 100Mbps
Indicators	
Power LED	This LED is green when power is applied
RJ45 / SFP Ethernet LED	Link/Activity (Green), Speed (Yellow)
Environmental Specifications	
Operating Temperature Ranges	-10 to 60°C (14 to 140°F)
Storage Temperature Range	-40 to 85°C (-40 to 185°F)
Operating Humidity Range	5% to 90% non-condensing
Storage Humidity Range	5% to 95% non-condensing
Operating Altitude	Up to 3,048 meters (10,000 feet)
Chassis	Plastic with an IP30 ingress protection rating

Din Rail Mountable	DIN Rail attachment included. Mounts to standard 35 mm DIN rail in accordance with DIN EN 60175.
Maximum Heat Output	6.22 BTU/Hr (max.)
MTBF	710611 Hours <i>Calculation model based on MIL-HDBK-217-FN2 @ 25°C</i>
Product Weight and Dimensions	
Weight	0.2Kg / 0.44lbs
Dimensions	26 x 70 x 110mm / 1.02 x 2.76 x 4.33 Inch (W x D x H)
Packaging	
Shipping Weight	0.34Kg (0.75lb.)
Shipping Dimensions	30 x 76.3 x 110mm / 1.18 x 3.05 x 4.4 Inch (W X D X H)
Contents Shipped	<ul style="list-style-type: none"> • Industrial Ethernet Switch with DIN Rail attachment • Terminal block • Installation guide
Standards and Certifications	
Safety	UL 62368
EMC Emissions	<ul style="list-style-type: none"> • FCC Part 15 Class A • VCCI Class A • EN 61000-3-2 • EN 61000-3-3 • EN 61000-6-4
EMC Immunity	<ul style="list-style-type: none"> • EN 61000-6-2 • EN 61000-4-2 (ESD) • EEN 61000-4-3 (Radiated RFI) • EN 61000-4-4 (Burst) • EN 61000-4-5 (Surge: ±4kV line-to-ground) • EN 61000-4-6 (Induced RFI) • EN 61000-4-8 (Magnetic field)

<p>Industrial</p>	<p>IEC 60068-2-6 Fc (Vibration) IEC 60068-2-27 Ea (Shock)</p>
<p>Laser Safety</p>	<ul style="list-style-type: none"> • EN 60825-1 • Fiber optic transmitters on this device meet Class 1 Laser safety requirements per IEC-60825 FDA/CDRH standards and comply with 21CFR1040.10 and 21CFR1040.11.

Mechanical drawings of IDS-104FE Industrial Ethernet Switches



Product List



IDS-104FE-M2SC2 Industrial Switch with 5-ports: 4 x 10/100Mbps RJ45 ports and 1 x 100Base-FX, 1310nm multimode port with duplex SC connector [2 km/ 1.2 miles]. -10 to 60C operating temperature.

Power Cord & Part Number(s)

None

07017410



IDS-104FE-M2ST2 Industrial Switch with 5-ports: 4 x 10/100Mbps RJ45 ports and 1 x 100Base-FX, 1310nm multimode port with duplex ST connector [2 km/ 1.2 miles]. -10 to 60C operating temperature.

Power Cord & Part Number(s)

None

07017420



IDS-104FE-S2SC20 Industrial Switch with 5-ports: 4 x 10/100Mbps RJ45 ports and 1 x 100Base-FX 1310nm Singlemode port with duplex SC connector [20 km/ 12.4 miles]. -10 to 60C operating temperature.

Power Cord & Part Number(s)

None

07017430



IDS-104FE-S2ST20 Industrial Switch with 5-ports: 4 x 10/100Mbps RJ45 ports and 1 x 100Base-FX 1310nm Singlemode port with duplex ST connector [20 km/ 12.4 miles]. -10 to 60C operating temperature.

Power Cord & Part Number(s)

None

07017440
