

# IFS-401F & IFS-402F

## Industrial Fast Ethernet Switch

### 4x FE RJ45 + 1x (or 2x) 100Base-FX Fiber (ST/SC)

- » Provides a DIP-Switch to Set Functions
- » Supports Power Failure Alarm Message by Relay
- » 12/24/48VDC (9.6~60VDC) Redundant Dual Power Input
- » IP30, Rugged Metal Housing, Fanless
- » EN50121-4, EN61000-6-2, EN61000-6-4, CE and FCC Certified



The industrial unmanaged Ethernet switches provide stable and reliable Ethernet transmission, IFS-401F and IFS-402F have 4-port 10/100Base-TX UTP and are equipped with 1 or 2 100Base-FX SC/ST optical fiber ports to meet Requirements for extending transmission distance. Housed in rugged enclosures, designed for harsh environments, fanless, high MTBF, supports wide operating temperature, and redundant 12/24/48VDC power input, it is suitable for heavy-duty applications such as industrial networking, intelligent transportation systems (ITS) and are also suitable for many military and utility market applications where environmental conditions exceed commercial product specifications.

## Features

- Wide operating temperature -40 ~ 75°C (-E model)
- Provides broadcast storm protection

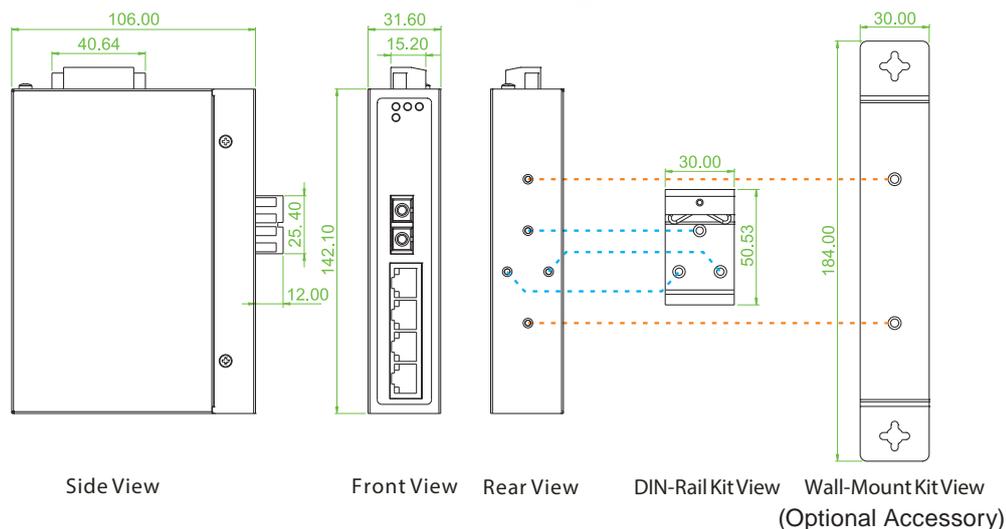
## Specifications

<b>Standard</b>	IEEE 802.3	10Base-T Ethernet
	IEEE 802.3u	100Base-TX and 100Base-FX Fast Ethernet
	IEEE 802.3z	1000Base-X Gigabit Ethernet over fiber-optic
	IEEE 802.3x	Flow Control and Back Pressure
	IEEE 802.3x	Flow Control and Back Pressure
<b>Switch Architecture</b>	Back-Plane (Switching Fabric): IFS-401 1.0Gbps / IFS-402 1.2Gbps (Full Wire-Speed)	
<b>Data Processing</b>	Store and Forward	
<b>Transfer Rate</b>	14,880pps for Ethernet port	
	148,800pps for Fast Ethernet port	
	1,488,000pps for Giga Ethernet port	
<b>Flow Control</b>	IEEE 802.3x flow control, back pressure flow control	
<b>Provides Broadcast Storm Protection</b>	Present, Enable /Disable set by DIP SW	
<b>MAC Address Table</b>	2K	
<b>Packet Buffer Size</b>	448Kbit	
<b>Network Connector</b>	4x RJ-45, 1x Fiber (IFS-401F) / 4x RJ-45, 2x Fiber (IFS-402F)	
	RJ-45 Port: Auto MDI/MDI-X function, 10/100Base-TX Auto negotiation speed, Full/Half duplex	
	1 or 2x 100Base-FX SC/ST fiber port, Multi/Single Mode	

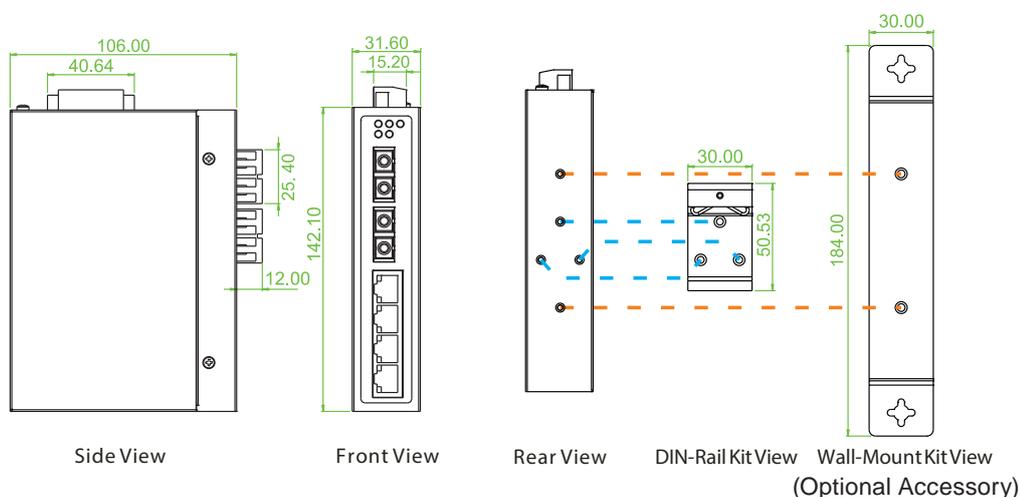
<b>Network Cable</b>	UTP/STP Cat. 5e cable or above EIA/TIA-568 100-ohm (100meter) Fiber Cable (Multi-mode): 50/125um~62.5/125um Fiber Cable (Single-mode): 8/125um~10/125um Wavelength: 1310nm (Multi-mode/Single-mode) Available distance: 2KM (Multi-Mode), 30KM (Single-Mode), 50KM (Single Mode)
<b>Protocol</b>	CSMA/CD
<b>LED</b>	System: Power 1 (Green), Power 2 (Green), Fault (Amber) UTP: Link/Active (Green), Speed 100 (Yellow) Fiber: Link/Active (Green)
<b>DIP SW</b>	DIP 1 OFF : Enable power failure alarm ON : Disable DIP 2 Broadcast storm protection OFF : Enable ON : Disables
<b>Reverse Polarity Protection</b>	Supported for Power Input
<b>Overload Current Protection</b>	Supported
<b>Power Supply</b>	Redundant Dual DC 12/24/48V (9.6~60VDC) Input power (Removable Terminal Block)
<b>Power Consumption</b>	4.4W (IFS-401F) / 5.8W (IFS-402F)
<b>Alarm Relay Contact</b>	Relay outputs with current carrying capacity of 1A @24VDC, NC
<b>Removable Terminal Block</b>	Provides 2 Redundant power, Alarm relay contact, 6 Pin
<b>Operating Temperature</b>	-10 ~ 60°C (IFS-401F, IFS-402F) -40 ~ 75°C (IFS-401F-E, IFS-402F-E)
<b>Operating Humidity</b>	5% to 95% (Non-condensing)
<b>Storage Temperature</b>	-40 ~ 85°C
<b>Housing</b>	Rugged Metal, IP30 Protection and Fanless
<b>Dimensions</b>	106 x 31.6 x 142mm (D x W x H)
<b>Weight</b>	0.37kg (IFS-401F) / 0.42kg (IFS-402F)
<b>Installation Mounting</b>	DIN Rail mounting or wall mounting (Optional)
<b>MTBF</b>	908,971 Hours (IFS-401F) / 907,622 Hours (IFS-402F) (MIL-HDBK-217)
<b>Certification</b>	
<b>EMC/EMS</b>	CE (EN55032, EN55035)
<b>EMI (Electromagnetic Interference)</b>	FCC Part 15 Subpart B Class A, CE
<b>Railway Traffic</b>	EN50121-4
<b>Immunity for Heavy Industrial Environment</b>	EN61000-6-2
<b>Emission for Heavy Industrial Environment</b>	EN61000-6-4
<b>EMS (Electromagnetic Susceptibility) Protection Level</b>	EN61000-4-2 (ESD) Level 3, Criteria B EN61000-4-3 (RS) Level 3, Criteria A EN61000-4-4 (Burst) Level 3, Criteria A EN61000-4-5 (Surge) Level 3, Criteria B EN61000-4-6 (CS) Level 3, Criteria A EN61000-4-8 (PFMF, Magnetic Field) Field Strength: 300A/m, Criteria A
<b>Shock</b>	IEC 60068-2-27
<b>Freefall</b>	IEC 60068-2-32
<b>Vibration</b>	IEC 60068-2-6

## Dimensions

### ► IFS-401F



### ► IFS-402F



## Ordering Information

Model Name	Total Port	RJ45		SC/ST		Certification		Operating Temperature	
		10/100Base-TX		100Base-FX		EN50121-4	EN61000-6-2 EN61000-6-4		CE, FCC
IFS-401F	5	4		1		V	V	V	-10~60°C
IFS-401F-E	5	4		1		V	V	V	-40~75°C
IFS-402F	6	4		2		V	V	V	-10~60°C
IFS-402F-E	6	4		2		V	V	V	-40~75°C

Fiber Connector	Connectivity Distance
SC, ST	002: 2km 030: 30km 050: 50km
	020A: WDM Bidi 20km A type (TX:1310nm)
	020B: WDM Bidi 20km B type (TX: 1550nm)

\* MOQ is requested for ST type

## Optional Accessories

### ■ Wall Mount Kit

IND-WMK01	Wall Mount kit for Industrial product, 184 x 30mm (Narrow )
-----------	---

### ■ Industrial Power Supply

MDR-20-24	Industrial Power, Input 85 ~ 264VAC/120 ~ 370VDC, Output 24VDC, 24W, -20 ~ 70°C
MDR-40-48	Industrial Power, Input 85 ~ 264VAC/120 ~ 370VDC, Output 48VDC, 40W, -20 ~ 70°C