

# IGS-401F

4x 10/100/1000Base-T+ 1x 1000Base-SX/LX  
Gigabit Ethernet Switch

# IGS-402F

4x 10/100/1000Base-T+ 2x 1000Base-SX/LX  
Gigabit Ethernet Switch



IGS-401F/402F models are 4 port 10/100/1000Base-T Ethernet non-managed Gigabit switches, with either 1 x 1000Base-X fiber port (IGS-401F) or 2 x 1000Base-X fiber ports, that provide stable and reliable Ethernet transmission. Housed in rugged DIN rail or wall mountable enclosures, these switches are designed for harsh environments, 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. Standard operating temperature range models (-10 to 60°C) and wide operating temperature range models (-40 to 75°C) fulfill the special needs of industrial automation applications.

## Features

- 12/24/48VDC redundant dual input power design
- 4x Port 1000Base-T RJ-45 with 1 or 2 Fiber Gigabit Ethernet
- Wide operating temperature -40 ~ 75°C (IGS-401F-E, IGS-402F-E)
- Provides broadcast storm protection
- Supports DIP SW for alarm setting and broadcast storm protection
- Supports power failure alarm message by relay
- Supports flow control
- UL60950-1, CE, FCC certification
- Industrial Grade EMS, EMI, EN61000-6-2, EN61000-6-4 certified
- IP30 rugged metal housing

## Specifications

<b>IEEE Standard</b>	IEEE 802.3 10Base-T Ethernet IEEE 802.3u 100Base-TX Fast Ethernet IEEE 802.3ab 1000Base-T Gigabit Ethernet IEEE 802.3z 1000Base-X Gigabit Ethernet IEEE 802.3x Flow Control and Back Pressure
<b>Switch Architecture</b>	Back-plane (Switching Fabric): 10Gbps (IGS-401F, IGS-401F-E) Back-plane (Switching Fabric): 12Gbps (IGS-402F, IGS-402F-E)
<b>Data Processing</b>	Store and Forward
<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>Jumbo Frame</b>	10K Bytes
<b>MAC Address Table</b>	8K
<b>Packet Buffer Size</b>	1Mbits
<b>Network Connector</b>	4 x RJ-45 10/100/1000Base-TX auto negotiation speed, Auto MDI/MDI-X function, Full/Half duplex 1 or 2 1000Base-X Fiber connector : SC
<b>Network Cable</b>	UTP/STP above Cat. 5e cable EIA/TIA-568 100-ohm (100m) Fiber Cable (Multi-mode): 50/125um, 62.5/125um Fiber Cable (Single-mode): 9/125um
<b>Protocols</b>	CSMA/CD
<b>LED</b>	Per unit: Power 1 (Green), Power 2 (Green), Fault (Amber) RJ-45 port : Link/Active (Green), Speed 10 (OFF), 100 (Green), 1000 (Yellow) Fiber Per port: Link/Active (Green)
<b>DIP SW</b>	DIP 1 ON : Disable power failure alarm OFF : Enable power failure alarm DIP 2 ON : Disables broadcast storm protection OFF : Enable broadcast storm protection
<b>Reserve Polarity Protection</b>	Present
<b>Overload current protection</b>	Present

<b>Power Supply</b>	Redundant Dual DC 12/24/48V (9.6~60VDC) Input power (Removable Terminal Block) Provide DC Power JACK adapter cable for external power supply
<b>Power Consumption</b>	Max 7.79W (IGS-401F) Max 7.83W (IGS-402F)
<b>Alarm Relay Contact</b>	Relay outputs with current carrying capacity of 1 A @24VDC
<b>Removable Terminal Block</b>	Provide 2 Redundant power, Alarm relay contact, 6 Pin
<b>Operating Temperature</b>	-10 ~ 60°C (IGS-401F, IGS-402F) -40 ~ 75°C (IGS-401F-E, IGS-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
<b>Dimensions</b>	106 x 62.5 x 134.8 mm (D X W X H)
<b>Weight</b>	0.67kg (IGS-401F), 0.68kg (IGS-402F)
<b>Installation Mounting</b>	DIN Rail mounting or wall mounting
<b>EMC/EMS</b>	CE, FCC
<b>EMI</b>	FCC Part 15 Subpart B Class A, CE EN 55022 Class A EN61000-6-4 – Emission for industrial environment
<b>EMS</b>	EN61000-6-2 – Immunity for Industrial environment EN61000-4-2 (ESD) Level 3, Criteria B EN61000-4-3 (RS) Level 3, Criteria A EN61000-4-4 (EFT) Level 3, Criteria A EN61000-4-5 (Surge) Level 3, Criteria B EN61000-4-6 (CS) Level 3, Criteria A EN61000-4-8 (Magnetic Field) Level 3, Criteria A
<b>Safety</b>	UL60950-1
<b>Rail Traffic</b>	EN 50121-4
<b>Shock</b>	IEC 60068-2-27
<b>Freefall</b>	IEC 60068-2-32
<b>Vibration</b>	IEC 60068-2-6
<b>MTBF</b>	407,596 Hours (IGS-401F) 391,633 Hours (IGS-402F)
<b>Warranty</b>	5 years

Specifications & design are subject to change without prior notice. Please visit CTC Union website for more details.

## Application

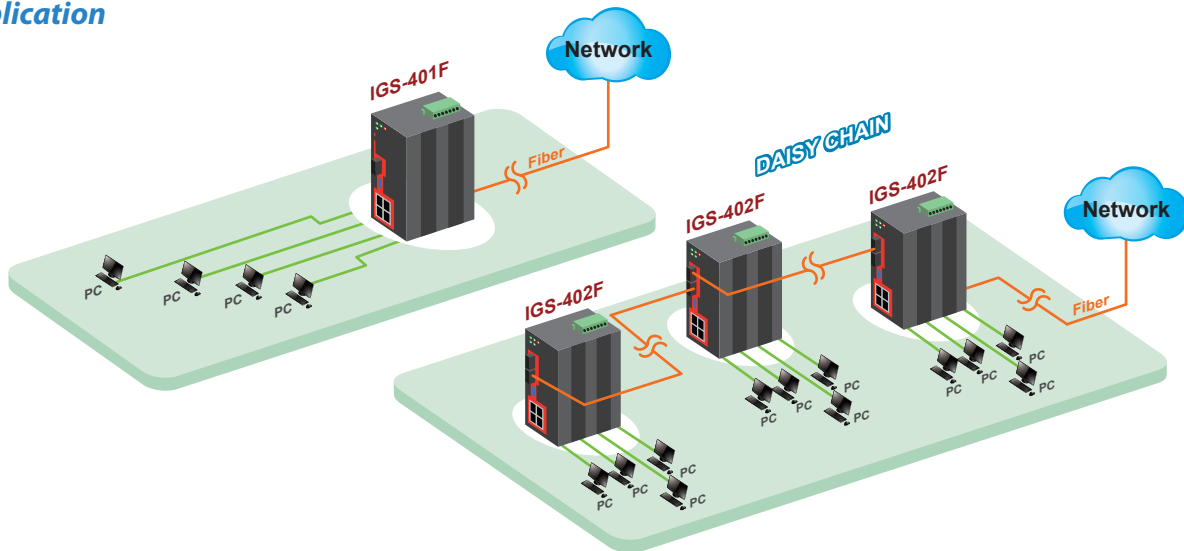
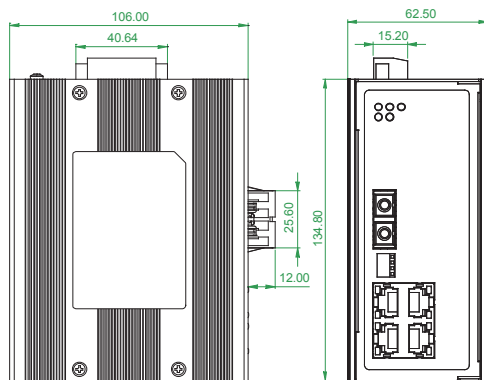


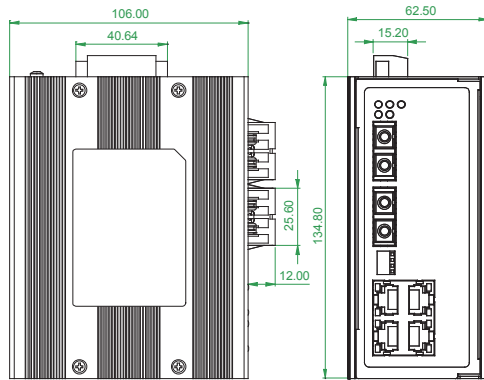
Figure : IGS-401F & IGS-402F Gigabit Ethernet Switch Transmission

## Dimensions

### IGS-401F

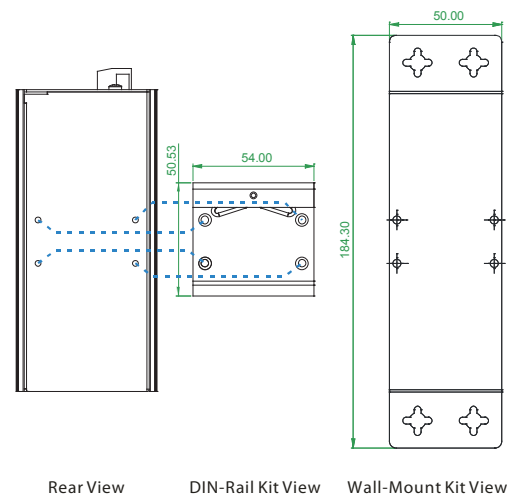


### IGS-402F



Side View

Front View



Rear View

DIN-Rail Kit View

Wall-Mount Kit View

## Ordering Information

Model Name	Description
IGS-401F	4-Port 10/100/1000Base-T + 1-Port 1000Base Gigabit Ethernet Switch (-10 ~ 60°C)
IGS-401F-E	4-Port 10/100/1000Base-T + 1-Port 1000Base Gigabit Ethernet Switch (-40 ~ 75°C)
IGS-402F	4-Port 10/100/1000Base-T + 2-Port 1000Base Gigabit Ethernet Switch (-10 ~ 60°C)
IGS-402F-E	4-Port 10/100/1000Base-T + 2-Port 1000Base Gigabit Ethernet Switch (-40 ~ 75°C)
Fiber Connector	Connectivity Distance
SC (IGS-401F & IGS-401F-E only)	SC001: 500m (SC, M/M) 002: 2km (M/M) SC020: 20km (SC, S/M) SC040: 40km (SC, S/M) SC020A: WDM 20km A type (TX:1310nm) SC020B: WDM 20km B type (TX:1550nm)

### Accessories

DR-4524	Industrial Power, Input 85 ~ 264VAC, Output 24VDC, 48W, -10 ~ +50°C
MDR-40-24	Industrial Power, Input 85 ~ 264VAC, Output 24VDC, 40W, -20 ~ +70°C

Port Number Temperature Connector Type Connectivity Distance  
**IGS - 40**  **F** -  -      
 Example: IGS - 401F - E - SC002