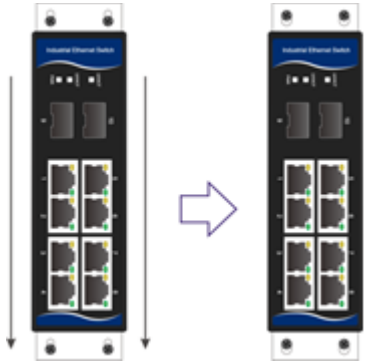
To remove unit from rail, please repeat procedure in reverse. Start by pulling out the bottom of unit from the DIN rail.

Wall mounting procedure

All Industrial switches from HC, HSW and HGW series have DIN rail bracket mounted from factory to the rear panel of the unit. If Wall mounting is needed, please first remove the pre-installed DIN rail bracket.

Secure the wall mounting brackets to the switch as in the below diagram. You will need 4x M3 screws for the wall mounting brackets (included) and screws for wall securing that should have head diameter larger than 6mm and screw body less than 3.5mm (these screws are not included in the package)



Warning

1. Use only indoors in climate-controlled environment.
2. Avoid looking directly into fibers or lasers while unit is powered.
3. Use only the AC adapter included with the unit (or with the LFC series chassis available separately)

FCC and CE markings

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

This is a CE class B device, intended to be used in residential, commercial or industrial applications.

Industrial Ethernet

Unmanaged Switches Fast and Gigabit Ethernet

HC-102-SFP, HC-1002-SFP, HC-1002-SFP-PSE
HSW-800, HSW-802GS
HGW-500, HGW-401S, HGW-802S, HGW-802S-PSE

User's Manual

Industrial Ethernet Switches

Ordering Information

HC-102-SFP Fast Ethernet Switch 2x 10/100Base-Tx to 100Base-X SFP slot, DIN rail and Wall mount installation
HC-1002-SFP Gigabit Ethernet Switch 2x 10/100/1000Base-Tx to 100/1000Base-X SFP slot, DIN rail and Wall mount installation
HC-1002-SFP-PSE Gigabit Ethernet Switch 2x 10/100/1000Base-Tx to 100/1000Base-X SFP slot, PoE 60W budget DIN rail and Wall inst.
HSW-800 Fast Ethernet Switch 8x 10/100Base-Tx ports, DIN rail and Wall installation
HSW-802GS Fast Ethernet Switch 8x 10/100Base-Tx + 2x 100/1000Base-X SFP slot ports, DIN rail and Wall installation
HGW-500 Gigabit Ethernet Switch 5x 10/100/1000Base-Tx ports, DIN rail and Wall installation
HGW-401S Gigabit Ethernet Switch 4x 10/100/1000Base-Tx + 1x 100/1000Base-X SFP slot ports, DIN rail and Wall installation
HGW-802S Gigabit Ethernet Switch 8x 10/100/1000Base-Tx + 2x 100/1000Base-X SFP slot ports, DIN rail and Wall installation
HGW-802S-PSE Gigabit Ethernet Switch 8x 10/100/1000Base-Tx + 2x 100/1000Base-X SFP slot ports, PoE budget 240W, DIN rail and Wall installation

Overview

The Industrial Ethernet models listed above are high performance and reliability Ethernet switches. All Industrial models are hardened for -40 to +75℃ operation and have 4KV surge protection on all ports. Largest configuration of the unmanaged models is 8 copper and 2 fiber ports. All PoE models deliver 30W per each UTP port supporting 802.3at PoE+ standard. Reliability is highly ranked with an MTBF exceeding 120,000 hours. All Industrial Ethernet models listed in this manual have passed IEC standards as described in the Technical Specifications table.

Package includes DIN rail mounting bracket, Wall bracket, screw block power connector and one User Manual.

Features

- IEEE 802.3 10Base-T, 802.3u 100Base-TX, 802.3z 1000Base-T, 802.3af and 802.3at support
- Auto-Negotiation and Auto MDI/MDIX
- 4kV Ethernet surge protection on all TP ports
- Full-duplex and Half-duplex flow control modes
- Auto PoE detection for connected PD devices
- 15.4W PoE power for IEEE 802.3af and 30W PoE power for IEEE 802.3at standard for each copper port (PSE models only)
- Store and Forward switching mechanism
- Extreme -40 ~ +75℃ operating temperature
- DIN rail or Wall mount installation options, IP40 rated housing
- 9-52V DC wide power input (48-52V DC for PoE PSE models)

LED Indicators (markings will vary with models)

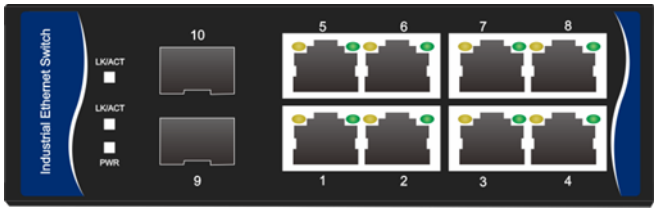
	Function
PWR	Off – No power available; On – Power is present
Fiber LK/ACT LINK	Off – No link; On – Fiber link OK; Blinking – data traffic present
UTP GREEN	Off – 10M/100M; On – 1000M on RJ45 port
UTP YELLOW	Off – No link; On – UTP link OK; Blinking – data traffic present
SYS	Off – Switch failed; On – Switch operating normally

Note: Gigabit models require approx. 10 seconds from “Power On” to start operating

Switch front plate view

(common front view, may vary with model)

Models
HC-102-SFP
HC-1002-SFP
HC-1002-SFP-PSE
HGW-500
HGW-401S



HSW-800
HSW-802GS
HGW-802S
HGW-802S-PSE

ROBOfiber Industrial Ethernet Unmanaged

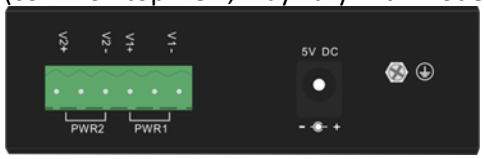
Technical specifications by model

Model	HC-102-SFP	HC-1002-SFP	HC-1002-SFP-PSE	HSW-800	HSW-802GS	HGW-500	HGW-401S	HGW-802S	HGW-802S-PSE
TP ports (RJ45)	2 x 10/100	2 x 10/100/1000	2 x 10/100/1000	8 x 10/100	8 x 10/100	5 x 10/100/1000	4 x 10/100/1000	8 x 10/100/1000	8 x 10/100/1000
SFP slots	1 x 100	1 x 100/1000	1 x 100/1000	none	2 x 100/1000	none	1 x 100/1000	2 x 100/1000	2 x 100/1000
LEDs									
Network Protocols	CSMA/CD	CSMA/CD	CSMA/CD	CSMA/CD	CSMA/CD	CSMA/CD	CSMA/CD	CSMA/CD	CSMA/CD
Bandwidth	1G	10G	10G	1.6G	20G	10G	10G	20G	20G
Packet buffer size	512K	1M	1M	1M	2M	1M	1M	2M	2M
Packet max. size (bytes)	2048	10K	10K	10K	9K	10K	10K	9K	9K
MAC address table size	4K	4K	4K	4K	4K	4K	4K	4K	4K
Safety	CE/LVD EN60950	CE/LVD EN60950	CE/LVD EN60950	CE/LVD EN60950	CE/LVD EN60950	CE/LVD EN60950	CE/LVD EN60950	CE/LVD EN60950	CE/LVD EN60950
Power input	DC 9~56V/DC5V	DC 9~56V/DC5V	DC 48~52V	DC 9~56V/DC5V	DC 9~56V/DC5V	DC 9~56V/DC5V	DC 9~56V/DC5V	DC 9~56V/DC5V	DC 48~52V
Reverse Polarity Protection	yes	yes	Yes	yes	yes	yes	yes	yes	yes
PoE budget	none	none	60W	none	none	none	none	none	240W
Max PoE power per port	n/a	n/a	30W	n/a	n/a	n/a	n/a	n/a	30W
Mounting DIN rail bracket	yes	yes	Yes	yes	yes	yes	yes	yes	yes
Mounting Wall bracket	yes	yes	Yes	yes	yes	yes	yes	yes	yes
Operating Temp (℃)	-40 ~ +75	-40 ~ +75	-40 ~ +75	-40 ~ +75	-40 ~ +75	-40 ~ +75	-40 ~ +75	-40 ~ +75	-40 ~ +75
Storage Temp (℃)	-50 ~ +85	-50 ~ +85	-50 ~ +85	-50 ~ +85	-50 ~ +85	-50 ~ +85	-50 ~ +85	-50 ~ +85	-50 ~ +85
Operating Humidity	10 ~ 90% non-condensing								
Dimensions (mm) *	120x 88x 35	120x 88x 35	120x 88x 35	138x 108x 49	138x 108x 49	138x 108x 49	138x 108x 49	138x 108x 49	138x 108x 49
Weight (g)									
MTBF	120,000 hours								
Warranty	3 years	3 years	3 years	3 years	3 years	3 years	3 years	3 years	3 years
Industrial Compliance									
EMI	FCC Part 15 Subpart B Class A, EN 55022 Class A								
EMS	EN 61000-4-2 (ESD) Level 3 Criteria B, EN 61000-4-3 (RS) Level 3 Criteria A, EN 61000-4-4 (EFT) Level 3 Criteria A, EN 61000-4-5 (Surge) Level 3 Criteria B, EN 61000-4-6 (CS) Level 3 Criteria A, EN 61000-4-8(PFMF, Magnetic Field) Field Strength 300A/m Criteria A								
Vibration	IEC 60068-2-6								
Freefall	IEC 60068-2-32								
Shock	IEC 60068-2-27								
Rail Traffic	EN 50121-4								
Traffic Control	NEMA-TS2								

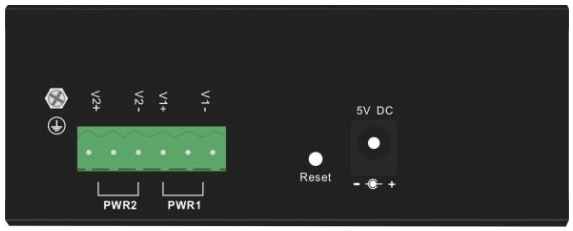
* dimensions are taken with no SFPs inserted, nor power block connectors

Top panel view

(common top view, may vary with model)



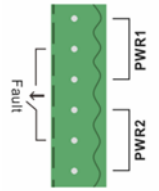
Models
HC-102-SFP
HC-1002-SFP
HC-1002-SFP-PSE
HGW-500
HGW-401S



HSW-800
HSW-802GS
HGW-802S
HGW-802S-PSE

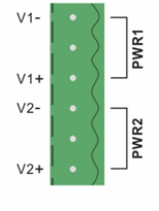
Top panel has terminal screw block for PWR1 and PWR2 input as well as Alarm Relay output, alternate DC5V power jack and M3 grounding screw.

Alarm Relay wiring



The alarm relay is closed during normal operation. If a Fault is encountered (like power supply input lost) then relay contacts become open until fault is remedied

Power input wiring



There are two independent and redundant power inputs, marked PWR1 and PWR2. Please observe voltage polarity when wiring power to the screw block connector. Please complete wiring without hot wires and with screw block connector disconnected from switch.

Installation warning

Please make sure of proper electrical grounding availability before powering up device. The unit should be grounded using either the M3 grounding screw or making sure the DIN rail installation or wall mount brackets are correctly grounded. Make sure power wires have adequate gauge for the power

required by the unit to avoid risk of wires overheating and any risk of fire. This is especially important for the PoE PSE equipment. As general rule, please keep power wiring on a different path from data cables and avoid crossing wires. This will reduce the risk of power surges on data ports.

Rear panel view with DIN rail and wall mounting brackets

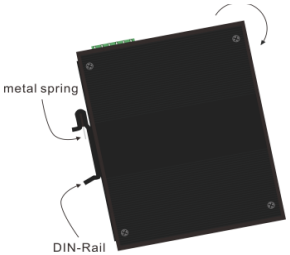
(common rear view, may vary with model)

Models
HC-102-SFP
HC-1002-SFP
HC-1002-SFP-PSE
HGW-500
HGW-401S
HSW-800
HSW-802GS
HGW-802S
HGW-802S-PSE

DIN rail mounting procedure

All Industrial switches from HC, HSW and HGW series have DIN rail bracket mounted from factory to the rear panel of the unit. IF Wall mounting is needed, please first remove the DIN rail bracket. If DIN rail bracket needs to be reattached, please make sure the spring is located on top position when unit is vertical.

Step 1
Please hold unit as in below image, making sure top of bracket with spring falls onto the top edge of TS-35 DIN rail



Step 2
Rotate and snap the unit onto the DIN rail by pushing the bottom unto the TS-35 DIN rail. Unit will be secured to rail.