HES5B/8B Series

5 and 8-port Din-rail Entry-level Unmanaged Ethernet Switches

Features

- 5 or 8 port, copper and LC fiber port options
- UL/cUL Class I/Division 2 Groups A,B,C, and D
- Designed to meet Level 3 (Heavy) industrial environments
- EN61000-6-2 Certifications
- Shock, vibration, free fall tested
- IP30 rated DIN rail case with 6 different panel mount options















Introduction

The HES5B/8B series of industrial Ethernet switches are entry-level industrial 5 and 8-port Ethernet switches that support IEEE 802.3/802.3u/802.3x with 10/100M, full/half-duplex, MDI/MDIX auto-sensing RJ45 ports. The HES5B/8B switches are rated to operate at temperatures ranging from -10 to 60°C, or with a wide operating temperature range from -40 to +75°C. The switches can be easily installed on a DIN-rail as well as in distribution boxes. The DIN-rail mounting capability, wide operating temperature, and the IP30 housing with LED indicators make the plug-and-play HES5B/8B switches easy to use and reliable

Specifications

Technology		
Standard	IEEE802.3, 802.3u, 802.3x	
Processing Type	Store and forward with IEEE802.3x full duplex, non-blocking flow control	
Protocols	IEEE802.3x flow control, back pressure flow control	
Switch Properties		
MAC Table Size	2K	
Interface		
RJ45 Port	10/100BaseT(X) auto negotiationspeed, Full/Half duplex mode, and auto MDI/MDI-X connection	
Fiber Ports	100BaseFX, (multi-mode or single mode with LC connectors)	
LED Indicators	Power, (Link / Speed / Activity for each port)	
Power Requirements		
Input Voltage	12~36VDC and 10~24VAC	
Power Consumption	4w Max	
Input Connection	Removable Terminal Block	
Protection	Reverse Polarity Protection	



Slim Metal Case, IP30 Design			
Dimensions HESSB: 25×100×75mm HESSB: 24×145×75mm Installation DIN Rail or Panel Mounting Optical Fiber Mode Multi-mode Single Mode Transmission Distance 2km 20km Centre Wavelength 1310nm 1310nm Cable Size 62.5/125um 9/125um TX Power(dBm) -20 to -10dBm -15 to -8dBm RX Power(dBm) -32dBm -32dBm Transmission Rate 100Mbps 100Mbps Environment Limits Operating Temp Standard Models: -10°C to 60°C Wide Temp. Models: -40°C to 75°C Storage Temp -40°C to 85°C Ambient Relative Humidity 5 to 95%(Non-condensing) Standards and Certifications Safety cUL508 EMI FCC Part15, CISPR(EN55022) Class A EMS EN61000-4-2(ESD) Level 3, EN61000-4-3(EST) Level 3, EN61000-4-3(EST) Level 3, EN61000-4-5(Surge) Level 3, EN61000-4-5(Surge) Level 3, EN61000-4-5(Surge) Level 3, EN61000-4-6(CS) Level 3, EN61000-4-6 (CS) Level 3, EN6	Physical Characteristics		
Installation DIN Rail or Panel Mounting Optical Fiber Mode Multi-mode Single Mode Transmission Distance 2km 20km Centre Wavelength 1310nm 1310nm Cable Size 62.5/125um 9/125um TX Power(dBm) -20 to -10dBm -15 to -8dBm RX Power(dBm) < -32dBm -32dBm Transmission Rate 100Mbps 100Mbps Environment Limits Operating Temp Standard Models: -10°C to 60°C Wide Temp. Models: -40°C to 75°C Storage Temp -40°C to 85°C Ambient Relative Humidity 5 to 95%(Non-condensing) Standards and Certifications Safety cUL508 EMI FCC Part15, CISPR(EN55022) Class A EMS EN61000-4-2(ESD) Level 3, EN61000-4-3(Surge) Level 3, EN61000-4-3(Surge) Level 3, EN61000-6-2 Shock IEC 60068-2-27 Freefall IEC 60068-2-32 Vibration IEC 60068-2-6 Warranty	Case	Slim Metal Case, IP30 Design	
Optical Fiber Mode Multi-mode Single Mode Transmission Distance 2km 20km Centre Wavelength 1310nm 1310nm Cable Size 62.5/125um 9/125um TX Power(dBm) -20 to -10dBm -15 to -8dBm RX Power(dBm) <-32dBm	Dimensions	HES5B: 25×100×75mm	HES8B: 24×145×75mm
Mode Multi-mode Single Mode Transmission Distance 2km 20km Centre Wavelength 1310nm 1310nm Cable Size 62.5/125um 9/125um TX Power(dBm) -20 to -10dBm -15 to -8dBm RX Power(dBm) <-32dBm	Installation	DIN Rail or Panel Mounting	
Transmission Distance	Optical Fiber		
Centre Wavelength 1310nm 1310nm 9/125um 9/125um 9/125um 1X Power(dBm) -20 to -10dBm -15 to -8dBm	Mode	Multi-mode	Single Mode
Cable Size 62.5/125um 9/125um TX Power(dBm) -20 to -10dBm -15 to -8dBm RX Power(dBm) <-32dBm <-32dBm 100Mbps 100Mbps Environment Limits Operating Temp Standard Models: -10°C to 60°C Wide Temp. Models: -40°C to 75°C Storage Temp -40°C to 85°C Ambient Relative Humidity 5 to 95%(Non-condensing) Standards and Certifications Safety cUL508 EMI FCC Part15, CISPR(EN55022) Class A EMS EM61000-4-2(ESD) Level 3, EN61000-4-3(RS) Level 3, EN61000-4-4(EFT) Level 3, EN61000-4-5(Surge) Level 3, EN61000-4-5(Transmission Distance	2km	20km
TX Power(dBm) -20 to -10dBm -15 to -8dBm RX Power(dBm) <-32dBm -32dBm -32dBm Transmission Rate 100Mbps 100Mbps Environment Limits Operating Temp Standard Models: -10°C to 60°C Wide Temp. Models: -40°C to 75°C Storage Temp -40°C to 85°C Ambient Relative Humidity 5 to 95%(Non-condensing) Standards and Certifications Safety cUL508 EMI FCC Part15, CISPR(EN55022) Class A EMS EN61000-4-2(ESD) Level 3, EN61000-4-3(RS) Level 3, EN61000-4-3(RS) Level 3, EN61000-4-3(Surge) Level 3, EN61000-4-5(Surge) Level 3, EN61000-6-2 Shock IEC 60068-2-27 Freefall IEC 60068-2-32 Vibration IEC 60068-2-6 Warranty	Centre Wavelength	1310nm	1310nm
RX Power(dBm) < -32dBm < -32dBm Transmission Rate 100Mbps 100Mbps Environment Limits Operating Temp Standard Models: -10°C to 60°C Wide Temp. Models: -40°C to 75°C Storage Temp -40°C to 85°C Ambient Relative Humidity 5 to 95%(Non-condensing) Standards and Certifications Safety cUL508 EMI FCC Part15, CISPR(EN55022) Class A EMS EN61000-4-2(ESD) Level 3, EN61000-4-3(RS) Level 3, EN61000-4-3(RS) Level 3, EN61000-4-5(Surge) Level 3, EN61000-4-5(Surge) Level 3, EN61000-4-5(Surge) Level 3, EN61000-4-5(Surge) Level 3, EN61000-6-2 Shock IEC 60068-2-27 Freefall IEC 60068-2-32 Vibration IEC 60068-2-6 Warranty	Cable Size	62.5/125um	9/125um
Environment Limits Operating Temp Standard Models: -10°C to 60°C Wide Temp. Models: -40°C to 75°C Storage Temp -40°C to 85°C Ambient Relative Humidity 5 to 95%(Non-condensing) Standards and Certifications Safety CUL508 EMI FCC Part15, CISPR(EN55022) Class A EMS EN61000-4-2(ESD) Level 3, EN61000-4-3(RS) Level 3, EN61000-4-3(RS) Level 3, EN61000-4-5(Surge) Level 3, EN61000-4-5(Surge) Level 3, EN61000-6-2 Shock IEC 60068-2-27 Freefall Vibration IEC 60068-2-6 Warranty	TX Power(dBm)	-20 to -10dBm	-15 to -8dBm
Environment Limits Operating Temp Standard Models: -10°C to 60°C Wide Temp. Models: -40°C to 75°C Storage Temp -40°C to 85°C Ambient Relative Humidity 5 to 95%(Non-condensing) Standards and Certifications Safety CUL508 EMI FCC Part15, CISPR(EN55022) Class A EMS EMS EN61000-4-2(ESD) Level 3, EN61000-4-3(RS) Level 3, EN61000-4-4(EFT) Level 3, EN61000-4-5(Surge) Level 3, EN61000-4-5(Surge) Level 3, EN61000-4-6(CS) Level 3, EN61000-6-2 Shock IEC 60068-2-27 Freefall IEC 60068-2-32 Vibration Warranty	RX Power(dBm)	<-32dBm	<-32dBm
Operating Temp Standard Models: -10°C to 60°C Wide Temp. Models: -40°C to 75°C Storage Temp -40°C to 85°C Ambient Relative Humidity 5 to 95%(Non-condensing) Standards and Certifications Safety CUL508 EMI FCC Part15, CISPR(EN55022) Class A EMS EN61000-4-2(ESD) Level 3,	Transmission Rate	100Mbps	100Mbps
Wide Temp. Models: -40°C to 75°C Storage Temp	Environment Limits		
Ambient Relative Humidity 5 to 95%(Non-condensing) Standards and Certifications Safety cUL508 EMI FCC Part15, CISPR(EN55022) Class A EMS EN61000-4-2(ESD) Level 3, EN61000-4-3(RS) Level 3, EN61000-4-4(EFT) Level 3, EN61000-4-5(Surge) Level 3, EN61000-4-5(Surge) Level 3, EN61000-4-6(CS) Level 3, EN61000-6-2 Shock IEC 60068-2-27 Freefall IEC 60068-2-32 Vibration IEC 60068-2-6	Operating Temp		
Standards and Certifications Safety cUL508 EMI FCC Part15, CISPR(EN55022) Class A EMS EN61000-4-2(ESD) Level 3, EN61000-4-3(RS) Level 3, EN61000-4-4(EFT) Level 3, EN61000-4-5(Surge) Level 3, EN61000-4-5(Surge) Level 3, EN61000-6-2 Shock IEC 60068-2-27 Freefall IEC 60068-2-32 Vibration IEC 60068-2-6 Warranty	Storage Temp	-40°C to 85°C	
Safety EMI FCC Part15, CISPR(EN55022) Class A EMS EN61000-4-2(ESD) Level 3, EN61000-4-3(RS) Level 3, EN61000-4-4(EFT) Level 3, EN61000-4-5(Surge) Level 3, EN61000-4-5(Surge) Level 3, EN61000-6-2 Shock IEC 60068-2-27 Freefall IEC 60068-2-32 Vibration IEC 60068-2-6 Warranty	Ambient Relative Humidity	5 to 95%(Non-condensing)	
EMI FCC Part15, CISPR(EN55022) Class A EMS EN61000-4-2(ESD) Level 3,	Standards and Certifications		
EMS EN61000-4-2(ESD) Level 3, EN61000-4-3(RS) Level 3, EN61000-4-4(EFT) Level 3, EN61000-4-5(Surge) Level 3, EN61000-4-6(CS) Level 3, EN61000-6-2 Shock IEC 60068-2-27 Freefall Vibration IEC 60068-2-6 Warranty	Safety	cUL508	
EN61000-4-3(RS) Level 3, EN61000-4-4(EFT) Level 3, EN61000-4-5(Surge) Level 3, EN61000-6-2 Shock IEC 60068-2-27 Freefall Vibration IEC 60068-2-6 Warranty	EMI	FCC Part15, CISPR(EN55022) Class A	
Freefall IEC 60068-2-32 Vibration IEC 60068-2-6 Warranty	EMS	EN61000-4-3(RS) Level 3, EN61000-4-4(EFT) Level 3, EN61000-4-5(Surge) Level 3, EN61000-4-6(CS) Level 3,	
Vibration IEC 60068-2-6 Warranty	Shock	IEC 60068-2-27	
Warranty	Freefall	IEC 60068-2-32	
	Vibration	IEC 60068-2-6	
Warranty Period 3 years	Warranty		
	Warranty Period	3 years	



Ordering Information

HES5B	
HES5B-VL	Entry-level Din-rail Unmanaged, 5 x 100Mbps Copper Port, Industrial Temperature -10 to +6 0 °C, Power Input 12~36VDC or 10~24VAC
HES5B-VLW	Entry-level Din-rail Unmanaged, 5 x 100Mbps Copper Port, Industrial Wide Temperature -40 to +75 °C, Power Input 12~36VDC or 10~24VAC
HES5B-LC-VL	Entry-level Din-rail Unmanaged, 4 x 100Mbps Copper Port, 1 x 100Mbps Multi-Mode Fiber Port with LC Connectors, 2KM, Industrial Temperature -10 to +60 °C, Power Input 12~36VDC or 10~24VAC
HES5B-LC-VLW	Entry-level Din-rail Unmanaged, 4 x 100Mbps Copper Port, 1 x 100Mbps Multi-Mode Fiber Port with LC Connectors, 2KM, Industrial Wide Temperature -40 to +75 $^{\circ}$ C, Power Input 12~3 6VDC or 10~24VAC
HES5B-SLC-VL	Entry-level Din-rail Unmanaged, 4 x 100Mbps Copper Port, 1 x 100Mbps Single-Mode Fiber Port with LC Connectors, 20KM, Industrial Temperature -10 to +60 °C, Power Input 12~36VD C or 10~24VAC
HES5B-SLC-VLW	Entry-level Din-rail Unmanaged, 4 x 100Mbps Copper Port, 1 x 100Mbps Single-Mode Fiber Port with LC Connectors, 20KM, Industrial Wide Temperature -40 to +75 $^{\circ}$ C, Power Input 12~ 36VDC or 10~24VAC
HES8B	
HES8B-VL	Entry-level Din-rail Unmanaged, 8 x 100Mbps Copper Port, Industrial Temperature -10 to +6 0 °C, Power Input 12~36VDC or 10~24VAC
HES8B-VLW	Entry-level Din-rail Unmanaged, 8 x 100Mbps Copper Port, Industrial Wide Temperature -40 to +75 °C, Power Input 12~36VDC or 10~24VAC
HES8B-LC-VL	Entry-level Din-rail Unmanaged, 7 x 100Mbps Copper Port, 1 x 100Mbps Multi-Mode Fiber Port with LC Connectors, 2KM, Industrial Temperature -10 to +60 °C, Power Input 12~36VDC or $10\sim24$ VAC
HES8B-LC-VLW	Entry-level Din-rail Unmanaged, 7 x 100Mbps Copper Port, 1 x 100Mbps Multi-Mode Fiber Port with LC Connectors, 2KM, Industrial Wide Temperature -40 to +75 $^{\circ}$ C, Power Input 12~3 6VDC or 10~24VAC
HES8B-SLC-VL	Entry-level Din-rail Unmanaged, 7 x 100Mbps Copper Port, 1 x 100Mbps Single-Mode Fiber Port with LC Connectors, 20KM, Industrial Temperature -10 to +60 °C, Power Input 12~36VD C or $10\sim24$ VAC
HES8B-SLC-VLW	Entry-level Din-rail Unmanaged, 7 x 100Mbps Copper Port, 1 x 100Mbps Single-Mode Fiber Port with LC Connectors, 20KM, Industrial Wide Temperature -40 to +75 °C, Power Input 12~ 36VDC or 10~24VAC

