



Industrial Networking Solutions

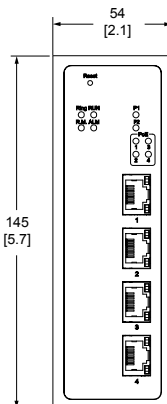
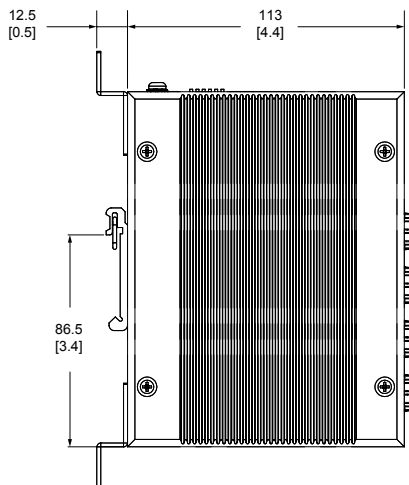
Harsh Environments Switches



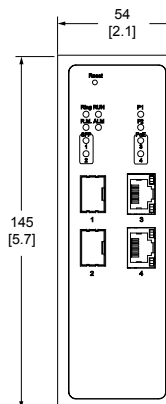
Layer-2 Managed DIN-Rail Switches | DIN-Rail/Wall Mount | Aluminum Housing | IP30 Rating



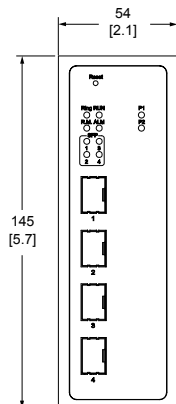
Industrial Managed Gigabit Switches				
Part Number [MFG #]	10/100/1000 RJ45 Ports	1000 SFP Slots	Max PoE Ports	Features
E45PNMS-4M [EHG7504]	4	N/A	N/A	Industrial EMC Protection Profinet & Ethernet/IP Ready Profinet CC-B v2.33 Certified IEEE1588 Precision Timing Redundant Ring Redundant Power Input Relay Output Railway Certified (EN50155) NEMA TS-2 Certified
E45PNMS-4M-2M-2SFP [EHG7504-2SFP]	2	2	N/A	
E45PNMS-4M-4SFP [EHG7504-4SFP]	N/A	4	N/A	
Industrial Managed Gigabit Switches with PoE				
E45PNMS-4M-4POE [EHG7504-4POE]	4	N/A	4	Industrial EMC Protection Profinet & Ethernet/IP Ready Profinet CC-B v2.33 Certified IEEE1588 Precision Timing Redundant Ring Redundant Power Input Relay Output Railway Certified (EN50155) NEMA TS-2 Certified
E45PNMS-4M-2POE-2SFP [EHG7504-2POE-2SFP]	2	2	2	



E45PNMS-4M
E45PNMS-4M-4POE



E45PNMS-4M-2M-2SFP
E45PNMS-4M-2POE-2SFP



E45PNMS-4M-4SFP

Feature Highlights:

- Up to 8 10/100/1000 BASE-T(X) RJ45 ports or 1000 BASE-X SFP slots.
- Up to 8 802.3af/ 802.3at Power over Ethernet ports, with maximum 30W
- PoE power per port and maximum 240 W device power budget
- Powerful Switching Platform, supporting Redundancy advanced
- Protocols, such as ERPS, RSTP, STP, MRP (Client) and compatible rings
- Profinet Conformance Class B compatible & Ethernet/IP Ready
- IEEE 1588v2 Precision Time Protocol Hw-Based Transparent clock
- Works from -20°C~70°C



Industrial Networking Solutions

Specifications & Approvals



Layer-2 Managed DIN-Rail Switches | DIN-Rail/Wall Mount | Aluminum Housing | IP30 Rating

Switch Properties	
Priority Queues	8
VLAN Table	4096
MAC-Based VLAN	512
VLAN ID Range	VID 1 to 4094
Trunk Group	4
Static IGMP Groups	128
Dynamic IGMP Groups	256
MAC Table Size	16K
Packet Buffer Size	1.5 MB
Jumbo Frame	9216 Byte

Power Management	
Input Voltage	9-57 VDC for Non-PoE models 45-57 VDC for 802.3af mode 51-57 VDC for 802.3at mode
Input Current (System)	Max. 1.4A @ 9VDC (without PoE) Max. 2.9A @ 45VDC (Support up to 8 ports at 15.4W per PoE port) Max. 5.0A @ 51VDC (Support up to 8 ports at 30W per PoE port)
Power Consumption (System)	Max 12.6 W @9 VDC (without PoE) Max 130.5 W @45VDC (802.3af, with 15.4W PoE per port for 8 ports) Max 255 W @51VDC (802.3at, with 30W PoE per port for 8 ports)
Connector	5-Pin 5.08mm Lockable Terminal Block
Reverse Polarity Protection	Present (DC only)

Interfaces	
RJ45 Ports	Up to 8 10/100/1000BASE-T(X) auto negotiation speed
Fiber Optics Ports	Up to 4 1000BASE-X SFP slot
LED Indicators	PWR1, PWR2, Alarm, Run, Ring, Ring Master, RJ-45 Link/Speed, SFP Link, PoE
Console	RS232 (RJ45 connector)
Relay Output	2 relay outputs with current carrying capacity of 1A @ 24 VDC
DIP Switches	Ring Control and Profinet Setting
Button	Reset Button

Environmental Limits	
Operating Temperature	-20°C~70°C (-4°F~158°F)
Storage Temperature	-40°C~85°C (-40°F~185°F)
Ambient Relative Humidity	5%~95%, 55°C (Non-condensing)

Ethernet	
Standards	IEEE 802.3af / 802.3at for Power-over-Ethernet IEEE 802.3 for 10BASE-T IEEE 802.3u for 100BASE-T(X) IEEE 802.3ab for 1000BASE-T IEEE 802.3z for 1000BASE-X IEEE 802.3x for Flow Control IEEE 802.1d-2004 for Spanning Tree Protocol IEEE 802.1w for Rapid Spanning Tree Protocol IEEE 802.1s for Multiple Spanning Tree Protocol IEEE 802.1q/p for VLAN Tagging and Class of Service IEEE 802.1x for Authentication IEEE 802.3ad for Port Trunk with LACP IEEE 802.3az for Energy Efficient Ethernet
Protocols	IPv4, IPv6, IGMPv1/v2/v3, GARP, GMRP, GVRP, SNMPv1/ v2c/v3, SNMP Inform, ICMP, Telnet, SSH, DHCP Server/ Relay/Client, DHCP Option 66/67/82, BootP, RARP, TFTP, NTP Server/Client, Sntp, SMTP, SMTP (Gmail), RMON, HTTP, HTTPS, Syslog, MRP (Client), LLDP, IEEE 1588 PTP V1/V2, IEEE 1588 Hardware Transparent Clock, 802.1x, EAP, RADIUS, TACACS+, Mirror port, QoS, ACL, Serial Console, U-Ring, STP, RSTP, MSTP, Redundancy Compatible Ring
Automation Profiles	Profinet, Ethernet/IP, Modbus/TCP
SNMP MIB	MIB II, IF-MIB, SNMPv2 MIB, BRIDGE-MIB, RMON MIB Group 1,2,3,9, RFC 1157, RFC 1213, RFC 1215, RFC 1493, RFC 1643, RFC 1757, RFC 2011, RFC 2012, RFC 2013, RFC 2233, RFC 2571, RFC 2742, RFC 2819, RFC 2863, RFC 3411, RFC 3412, RFC 3413, RFC 3414, RFC 3415

Regulatory Approvals				
Safety	UL 60950-1 2nd Ed. / CSA C22.2 No.60950-1-07 2nd Ed. / EN 60950-1 / CB			
EMC	FCC Part 15, Subpart B, Class A EN 55032, EN 55024, EN 61000-3-2, EN 61000-3-3, EN 61000-6-2, EN 61000-6-4			
EMS Test	Item	Value	Level	
IEC 61000-4-2	ESD	Contact Discharge	±6KV	3
		Air Discharge	±8KV	3
IEC 61000-4-3	RS	80-1000MHz	10(V/m)	3
		1.4-2.0GHz	3(V/m)	3
		2.0-2.7GHz	10(V/m)	3
IEC 61000-4-4	EFT	AC Power Port	±2.0 KV	3
		DC Power Port	±2.0 KV	3
		Signal Port	±1.0 KV	3
IEC 61000-4-5	Surge	DC Power Port	Line-to Line±1.0kV	3
		DC Power Port	Line-to Earth±2.0kV	3
		Signal Port	Line-to Earth±2.0kV	3
IEC 61000-4-6	CS	0.15-80MHz	10 Vrms	3
IEC 61000-4-8	PFMF	Enclosure	30 V/m	4
IEC 61000-4-11	DIP	AC Power Port	-	A
Shock	MIL-STD-810G Method 516.5			
Drop	MIL-STD-810F Method 516.5			
Vibration	MIL-STD-810F Method 514.5 C-1 & C-2			
RoHS II	Yes			
MTBF	20 Years			