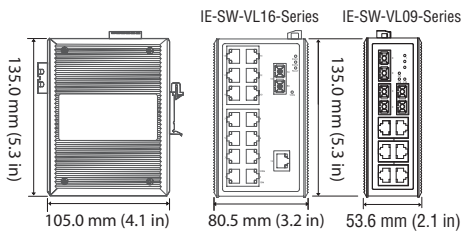


Unmanaged Fast Ethernet Switches

- Redundant dual 24 VDC power inputs
- Relay output warning for power failure and port break alarm
- Broadcast storm protection
- Transparent transmission of VLAN tagged packets
- -40 to 75 °C operating temperature range (T models)



Technical data

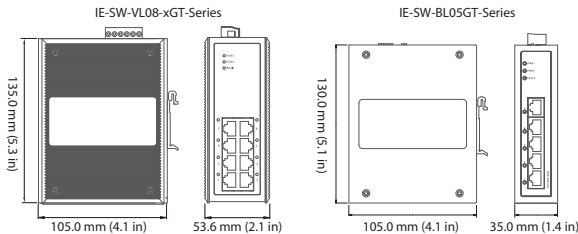
Technology	
Standards	IEEE 802.3 for 10BaseT IEEE 802.3u for 100BaseT(X) and 100BaseFX IEEE 802.3x for Flow Control
Processing Type	Store and Forward
Flow Control	IEEE 802.3x flow control, back pressure flow control
Switch Properties	
MAC Table Size	1 K (IE-SW-VL09...Series), 4 K (IE-SW-VL16...Series)
Packet Buffer Size	512 Kbit (IE-SW-VL09...Series), 1.5 Mbit (IE-SW-VL16...Series)
Interface	
Fiber Ports	100BaseFX ports (SC/ST connector)
RJ45 Ports	10/100BaseT(X) auto negotiation speed, Full/Half duplex mode, and auto MDI/MDI-X connection
DIP Switches	Port break alarm mask
LED Indicators	PWR1, PWR2, FAULT, 10/100M (TP port), 100M (fiber port)
Alarm Contact	1 relay output with current carrying capacity of 1 A @ 24 VDC
Optical Fiber	
	100BaseFX Multi-mode
Wavelength	1300 nm
Max. TX	-10 dBm
Min. TX	-20 dBm
RX Sensitivity	-32 dBm
Link Budget	12 dB
Typical Distance	5 km (50/125 µm multimode cable) 4 km (62,5/125 µm multimode cable)
Saturation	-6 dBm
Power Requirements	
Input Voltage	IE-SW-VL09...16-Ports: 24 VDC (12 to 45 VDC), redundant dual inputs
Input Current	IE-SW-VL09T-6TX-3SC: 0.31 A @ 24 V IE-SW-VL16-16TX: 0.27 A @ 24 V IE-SW-VL16 SC/ST: 0.44 A @ 24 V
Power Requirements	
Overload Current Protection	IE-SW-VL09/16...Series: 1.6 A
Connection	1 removable 6-pin terminal blocks
Reverse Polarity Protection	Present
Physical Characteristics	
Housing	Metal, IP30 protection
Dimensions	IE-SW-VL09...Series: 53.6 x 135 x 105 mm (2.11 x 5.31 x 4.13 in) IE-SW-VL16...Series: 80.5 x 135 x 105 mm (3.16 x 5.31 x 4.13 in)
Weight	IE-SW-VL09: 630 g IE-SW-VL16: 1140g

Physical Characteristics			
Installation	DIN-Rail mounting		
Environmental Limits			
Operating Temperature	Standard Models: 0 to 60 °C (32 to 140 °F) Wide Temp. Models: -40 to 75 °C (-40 to 167 °F)		
Storage Temperature	-40 to 85 °C (-40 to 185 °F)		
Ambient Relative Humidity	5 to 95 % (non-condensing)		
Regulatory Approvals			
Safety	IE-SW-VL09...Series: UL508, UL60950-1, CSA C22.2 No. 60950-1, EN60950-1 IE-SW-VL16...Series: UL508, UL60950-1, EN60950-1		
Hazardous Location	UL/cUL Class I, Division 2, Groups A, B, C and D; ATEX Zone 2, Ex nC IIC		
EMI	FCC Part 15, 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; EN61000-4-6 (CS), level 3;		
Maritime	DNV, GL		
Shock	IEC 60068-2-27		
Freefall	IEC 60068-2-32		
Vibration	IEC 60068-2-6		
MTBF (mean time between failures)			
Time	IE-SW-VL09...Series: 396,000 hrs IE-SW-VL16...Series: 257,000 hrs		
Database	MIL-HDBK-217F, GB 25 °C		
Warranty			
Warranty Period	5 years		
Ordering Information			
Port Variants	Model Type	Operating Temperature	Order No.
16 * RJ45	IE-SW-VL16-16TX ¹⁾	0 to 60 °C	1241000000
6 * RJ45, 3 * SC-Multimode	IE-SW-VL09T-6TX-3SC	-40 to +75 °C	1240980000
14 * RJ45, 2 * SC-Multimode	IE-SW-VL16-14TX-2SC ¹⁾	0 to 60 °C	1241030000
14 * RJ45, 2 * ST-Multimode	IE-SW-VL16-14TX-2ST ¹⁾	0 to 60 °C	1241050000
¹⁾ Model with extended operating temperature -40 to +75 °C on request			
Accessories			
	Model Type		Order No.
19" Rack Mounting Kit	RM-KIT		1241440000

Unmanaged Gigabit Switches – Basic/Value Line

Unmanaged Gigabit Ethernet Switches

- Fiber optic options for extending distance and electrical noise immunity
- Redundant dual 12/24/48 VDC power inputs
- Relay output warning for power failure and port break alarm
- Broadcast storm protection



Technical data

Technology	
Standards	IEEE 802.3 for 10BaseT IEEE 802.3u for 100BaseT(X) and 100BaseFX IEEE 802.3ab for 1000BaseT(X) IEEE 802.3z for 1000BaseX IEEE 802.3x for Flow Control
Processing Type	Store and Forward
Flow Control	IEEE 802.3x flow control, back pressure flow control
Switch Properties	
MAC Table Size	8 K
Packet Buffer Size	1088 Kbit (IE-SW-BL05-5GT), 1408 Kbit (IE-SW-VL08-xGT)
Interface	
Fiber Ports	100/1000BaseSFP slot (IE-SW-VL08-6GT-2GS)
RJ45 Ports	10/100/1000BaseT(X) auto negotiation speed, Full/Half duplex mode, and auto MDI/MDI-X connection
DIP Switches	One for port break alarm, one for Enable/Disable broadcast storm protection
LED Indicators	PWR1, PWR2, FAULT, 10/100/1000M
Alarm Contact	1 relay output with current carrying capacity of 1 A @ 24 VDC
Power Requirements	
Input Voltage	12/24/48 VDC (9.6 to 60 VDC), redundant dual inputs
Input Current	IE-SW-BL05-5GT: 0.20 A @ 24 V IE-SW-VL08-8GT: 0.32 A @ 24 V IE-SW-VL08-6GT-2GS: 0.34 A @ 24 V
Connection	1 removable 6-contact terminal block
Reverse Polarity Protection	Present
Physical Characteristics	
Housing	Metal, IP30 protection
Dimensions	IE-SW-BL05-5GT: 35 x 130 x 105 mm (1.37 x 5.12 x 4.13 in) IE-SW-VL08-xGT: 53.6 x 135 x 105 mm (2.11 x 5.31 x 4.13 in)
Weight	IE-SW-BL05-5GT: 290 g IE-SW-VL08-xGT: 630 g
Installation	DIN-Rail mounting
Environmental Limits	
Operating Temperature	Standard Models: 0 to 60 °C (32 to 140 °F) Wide Temp. Models: -40 to 75 °C (-40 to 167 °F) (on request)
Storage Temperature	-40 to 85 °C (-40 to 185 °F)
Ambient Relative Humidity	5 to 95 % (non-condensing)
Regulatory Approvals	
Safety	UL508
Hazardous Location	UL/cUL Class I, Division 2, Groups A, B, C, and D; ATEX Zone 2, Ex nC IIC
EMI	FCC Part 15, CISPR (EN55022) class A

Regulatory Approvals			
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	
Maritime		DNV, GL	
Shock		IEC 60068-2-27	
Freefall		IEC 60068-2-32	
Vibration		IEC 60068-2-6	
MTBF (meantime between failures)			
Time		325,000 hrs (IE-SW-VL08-xGT series)	
Database		Telcordia (Bellcore), GB (IE-SW-VL08-xGT series)	
Warranty			
Warranty Period		5 years	
Ordering Information			
Port Variants	Model Type	Operating Temperature	Order No.
5 * RJ45 10/100/1000BaseT(X)	IE-SW-BL05-5GT	0 to 60 °C	1241250000
8 * RJ45 10/100/1000BaseT(X)	IE-SW-VL08-8GT	0 to 60 °C	1241270000
6 * RJ45 10/100/1000BaseT(X), 2 Combo Ports (10/100/1000 BaseT(X) or 100/1000BaseSFP)	IE-SW-VL08-6GT-2GS	0 to 60 °C	1241280000
Models with extended operating temperature -40 to +75 °C on request			
Accessories			
	Model Type		Order No.
19" Rack Mounting Kit	RM-KIT		1241440000