




Product information MACH1000, Full Gigabit Ethernet switch 16 ports - ports on rear - MAR1140-4C4C4C4C9999SLLPHH09.0.

Industrial Ethernet:Ruggedized Switches:Fast/Gigabit Ethernet Control Cabinet Switches:Full Gigabit Ethernet Control Cabinet Switches:with Firmware Release 9:MACH1000, Full Gigabit Ethernet switch 16 ports - ports on rear

<https://www.e-catalog.beldensolutions.com:443/link/57078-24455-49846-49997-82828-437643-438071/en/MAR1140-4C4C4C4C9999SLLPHH09.0./uistate>

Name	MACH1000, Full Gigabit Ethernet switch 16 ports - ports on rear
	
	Ethernet/Fast Ethernet/Gigabit Ethernet-Switch, managed, Industrial Switch 19" rack mount, ports on rear, fanless design
Delivery informations	
Availability	available
Product description	
Description	Ethernet/Fast Ethernet/Gigabit Ethernet-Switch, managed, Industrial Switch 19" rack mount, ports on rear, fanless design
Port type and quantity	16 x combo ports (10/100/1000BASE TX RJ45 plus related FE/GE-SFP slot)
Type	MAR1140-4C4C4C4C9999SLLPHH09.0.
Order No.	MAR1140-4C4C4C4C9999SLLPHH09.0.
More Interfaces	
Power supply/signaling contact	power supply 1: power supply, 2 pin plug-in terminal block, signal contact, 2 pin plug-in terminal block; power supply 2: power supply, 2 pin plug-in terminal block, signal contact, 2 pin plug-in terminal block
V.24 interface	1 x RJ11 socket
USB interface	1 x USB to connect the AutoConfiguration Adapter ACA21-USB
Network size - length of cable	
Twisted pair (TP)	0 m ... 100 m
Multimode fiber (MM) 50/125 µm	cf. Gigabit and Fast Ethernet SFP modules
Multimode fiber (MM) 62.5/125 µm	cf. Gigabit and Fast Ethernet SFP modules
Single mode fiber (SM) 9/125 µm	cf. Gigabit and Fast Ethernet SFP modules
Single mode fiber (LH) 9/125 µm (long haul transceiver)	cf. Gigabit and Fast Ethernet SFP modules
Network size - cascability	
Line - / star topology	any
Ring structure (HIPER-Ring) quantity switches	up to 10 ms (10 switches), up to 30 ms (50 switches), up to 40 ms (100 switches), up to 60 ms (200 switches)
Power requirements	
Operating voltage	power supply 1: 24/36/48 V DC, power supply 2: 24/36/48 V DC
Current consumption at 24 V DC	power supply 1: 1080 mA max., if all ports are equipped with SFP; power supply 2: 1080 mA max., if all ports are equipped with SFP
Current consumption at 230 V AC	power supply 1: n/a; power supply 2: n/a
Power output in Btu (IT) h	90 max (350 PoE option)
Software	
Management	Dual Software Image Support; TFTP; LLDP (802.1AB); LLDP-MED; SSHv1; SSHv2; V.24; HTTP; HTTPS; Traps; SNMP v1/v2/v3; Telnet
Diagnostics	Management Address Conflict Detection; Address Relearn Detection; MAC Notification; Signal Contact; Device Status Indication; TCPDump; LEDs; Syslog; Port Monitoring with Auto-Disable; Link Flap Detection; Overload Detection; Duplex Mismatch Detection; RMON (1,2,3,9); Port Mirroring 1:1; Port Mirroring 8:1; Port Mirroring N:1; System Information; Self-Tests on Cold Start; Copper Cable Test; SFP Management; Configuration Check Dialog; Switch Dump; Link Speed and Duplex Monitoring
Configuration	AutoConfiguration Adapter ACA11 Limited Support (RS20/30/40, MS20/30); Automatic Configuration Undo (roll-back); Configuration Fingerprint; BOOTP/DHCP Client with Auto-Configuration; DHCP Server: per Port; DHCP Server: Pools per VLAN; DHCP Server: Option 43; AutoConfiguration Adapter ACA21/22 (USB); HiDiscovery; DHCP Relay with Option 82; Command Line Interface (CLI); CLI Scripting; Full-featured MIB Support; Web-based Management; Context-sensitive Help
Security	IP-based Port Security; MAC-based Port Security; Port-based Access Control with 802.1X; Guest/unauthenticated VLAN; RADIUS VLAN Assignment; Multi-Client Authentication per Port; MAC Authentication Bypass; Access to Management restricted by VLAN; HTTPS Certificate Management; Restricted Management Access; Appropriate Use Banner; SNMP Logging; Local User Management; Remote Authentication via RADIUS



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16 ports - ports on rear

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Redundancy functions	Advanced Ring Configuration for MRP; HIPER-Ring (Manager); HIPER-Ring (Ring Switch); Fast HIPER-Ring; Link Aggregation with LACP; Media Redundancy Protocol (MRP) (IEC62439-2); Redundant Network Coupling; Sub Ring Manager; RSTP 802.1D-2004 (IEC62439-1); MSTP (802.1Q); RSTP Guards; RSTP over MRP
Filter	PoE (802.3AF); PoE+ (802.3AT); Manual Cable Crossing
Industrial Profiles	EtherNet/IP Protocol; IEC61850 Protocol (MMS Server, Switch Model); PROFINET IO Protocol
Time synchronisation	Dual Software Image Support; TFTP; LLDP (802.1AB); LLDP-MED; SSHv1; SSHv2; V.24; HTTP; HTTPS; Traps; SNMP v1/v2/v3; Telnet
Switching	Disable Learning (hub functionality); Independent VLAN Learning; Fast Aging; Static Unicast/Multicast Address Entries; QoS / Port Prioritization (802.1D/p); TOS/DSCP Prioritization; Egress Broadcast Limiter per Port; Flow Control (802.3X); Jumbo Frames; VLAN (802.1Q); GARP VLAN Registration Protocol (GVRP); Double VLAN Tagging (QinQ); Voice VLAN; GARP Multicast Registration Protocol (GMRP); IGMP Snooping/Querier (v1/v2/v3)
Ambient conditions	
Operating temperature	0 °C ... 60 °C
Storage/transport temperature	-40 °C ... 85 °C
Relative humidity (non-condensing)	5 % ... 95 %
MTBF	13.6 years (MIL-HDBK-217F)
Protective paint on PCB	No
Mechanical construction	
Dimensions (W x H x D)	445 mm x 44 mm x 345 mm
Mounting	19" control cabinet
Weight	5600 g
Protection class	IP30
Mechanical stability	
IEC 60068-2-27 shock	15 g, 11 ms duration, 18 shocks
IEC 60068-2-6 vibration	1 mm, 2 Hz-13.2 Hz, 90 min.; 0.7g, 13.2 Hz-100 Hz, 90 min.; 3.5 mm, 3 Hz-9 Hz, 10 cycles, 1 octave/min.; 1 g, 9 Hz-150 Hz, 10 cycles, 1 octave/min.
EMC interference immunity	
EN 61000-4-2 electrostatic discharge (ESD)	8 kV contact discharge, 15 kV air discharge
EN 61000-4-3 electromagnetic field	35 V/m (80-2700 MHz); 1 kHz, 80% AM
EN 61000-4-4 fast transients (burst)	4 kV power line, 4 kV data line
EN 61000-4-5 surge voltage	power line: 2 kV (line/earth), 1 kV (line/line), 1 kV data line, IEEE1613: power line 5 kV (line/earth)
EN 61000-4-16 mains frequency voltage	30 V, 50 Hz continuous; 300 V, 50 Hz 1 s
EMC emitted immunity	
FCC CFR47 Part 15	FCC 47 CFR Part 15 Class A
EN 55022	EN 55022 Class A
Approvals	
Safety of industrial control equipment	cUL 508
Hazardous locations	ISA 12.12.01 Class 1 Div. 2
Shipbuilding	Germanischer Lloyd
Railway norm	EN 50121-4, EN50155 (pending), NEMA TS
Substation	IEC 61850-3, IEEE 1613
Transportation	EN 50121-4, EN50155 (pending), NEMA TS
Scope of delivery and accessories	
Scope of delivery	device, operating manual

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