



## Product information

### MACH1000, Fast Ethernet switch 2-20 ports, ports on rear - MAR1120-99TTTTTTMMMMMMMMMMMM99999999ULLHPHH09.0.

Industrial Ethernet:Ruggedized Switches:Fast/Gigabit Ethernet Control Cabinet Switches:Fast Ethernet Control Cabinet Switches:MACH1000, Fast Ethernet switch 2-20 ports, ports on rear  
<http://dev-catalog.beldensolutions.com/link/57078-24455-49846-49997-80035-438055/en/MAR1120-99TTTTTTMMMMMMMMMMMM99999999ULLHPHH09.0/uistate>

Name	MACH1000, Fast Ethernet switch 2-20 ports, ports on rear
	
	Industrial managed Fast Ethernet Switch, 19" rack mount, fanless design, according to IEEE 802.3, store-and-forward-switching, ports on rear
<b>Delivery informations</b>	
Availability	available
<b>Product description</b>	
Description	Industrial managed Fast Ethernet Switch, 19" rack mount, fanless design, according to IEEE 802.3, store-and-forward-switching, ports on rear
Port type and quantity	Fast-Ethernet ports in total: 16 x ports in total; 6 x Twisted Pair; 10 x Multimode SC;
Type	MAR1120-99TTTTTTMMMMMMMMMMMM99999999ULLHPHH09.0.
Order No.	MAR1120-99TTTTTTMMMMMMMMMMMM99999999ULLHPHH09.0.
<b>More Interfaces</b>	
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 to connect auto-configuration adapter ACA21-USB
<b>Network size - length of cable</b>	
Twisted pair (TP)	0 m ... 100 m
Multimode fiber (MM) 50/125 µm	0 - 5000 m, 8 dB Link Budget at 1300 nm, A = 1 dB/km, 3 dB reserve, B = 800 MHz x km
Multimode fiber (MM) 62.5/125 µm	0 - 4000 m, 11 dB Link Budget at 1300 nm, A = 1 dB/km, 3 dB reserve, B = 500 MHz x km
<b>Network size - cascading</b>	
Line - / star topology	Any
Ring structure (HIPER-Ring) quantity switches	100 switches
<b>Power requirements</b>	
Operating voltage	Power supply 1: 24/36/48 VDC; Power supply 2: 24/36/48 VDC
Current consumption at 24 V DC	Power supply 1 and 2: 1400 mA max, if all ports are equipped with fiber
<b>Software</b>	
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); 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)
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; Link Speed and Duplex Monitoring; 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
Configuration	AutoConfiguration Adapter ACA11; 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; ACL Hit Counter; Access to Management restricted by VLAN; HTTPS Certificate Management; Restricted Management Access; Appropriate Use Banner; SNMP Logging; Local User Management; Remote Authentication via RADIUS
Redundancy functions	Advanced Ring Configuration for MRP; HIPER-Ring (Manager); HIPER-Ring (Ring Switch); 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
Industrial Profiles	EtherNet/IP Protocol; IEC61850 Protocol (MMS Server, Switch Model); PROFINET IO Protocol
Time synchronisation	Buffered Real Time Clock; SNTP Client; SNTP Server
Miscellaneous	Manual Cable Crossing

