

## Product information

### MACH102-8TP-FR

Industrial Ethernet: Workgroup Switches: Fast-/Gigabit Ethernet Workgroup Switches, 10/24 ports :MACH102-8TP-FR

<http://www.e-catalog.beldensolutions.com/link/57078-24455-49848-85612-40979/en/conf/uistate>

| Name                                                    |  | MACH102-8TP-FR                                                                                                                                                                                                                 |
|---------------------------------------------------------|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                         |  |                                                                                                                                               |
|                                                         |  | 10 port Fast Ethernet/Gigabit Ethernet Industrial Workgroup Switch (2 x GE, 8 x FE), managed, Software Layer 2 Professional, Store-and-Forward-Switching, fanless Design, redundant power supply                               |
| Delivery informations                                   |  |                                                                                                                                                                                                                                |
| Availability                                            |  | available                                                                                                                                                                                                                      |
| Product description                                     |  |                                                                                                                                                                                                                                |
| Description                                             |  | 10 port Fast Ethernet/Gigabit Ethernet Industrial Workgroup Switch (2 x GE, 8 x FE), managed, Software Layer 2 Professional, Store-and-Forward-Switching, fanless Design, redundant power supply                               |
| Port type and quantity                                  |  | 10 ports in total; 8x (10/100 BASE-TX, RJ45) and 2 Gigabit Combo ports                                                                                                                                                         |
| Type                                                    |  | MACH102-8TP-FR                                                                                                                                                                                                                 |
| Order No.                                               |  | 943 969-301                                                                                                                                                                                                                    |
| More Interfaces                                         |  |                                                                                                                                                                                                                                |
| Power supply/signaling contact                          |  | 1 x plug-in terminal block, 2-pin, output manual or automatic switchable (max. 1 A, 24 V DC bzw. 24 V AC)                                                                                                                      |
| V.24 interface                                          |  | 1 x RJ11 socket, serial interface for device configuration                                                                                                                                                                     |
| USB interface                                           |  | 1 x to connect auto-configuration adapter ACA21-USB                                                                                                                                                                            |
| Network size - length of cable                          |  |                                                                                                                                                                                                                                |
| Twisted pair (TP)                                       |  | 0 - 100 m                                                                                                                                                                                                                      |
| Multimode fiber (MM) 50/125 µm                          |  | Fast Ethernet: cf. SFP LWL module M-FAST SFP-MM/LC; Gigabit Ethernet: cf. SFP LWL module M-SFP-SX/LC and M-SFP-LX/LC                                                                                                           |
| Multimode fiber (MM) 62.5/125 µm                        |  | Fast Ethernet: cf. SFP LWL module M-FAST SFP-MM/LC; Gigabit Ethernet: cf. SFP LWL module M-SFP-SX/LC and M-SFP-LX/LC                                                                                                           |
| Single mode fiber (SM) 9/125 µm                         |  | Fast Ethernet: cf. SFP LWL module M-FAST SFP-SM/LC and M-FAST SFP-SM+/LC; Gigabit Ethernet: cf. SFP LWL module M-SFP-LX/LC                                                                                                     |
| Single mode fiber (LH) 9/125 µm (long haul transceiver) |  | Fast Ethernet: cf. SFP LWL modul M-FAST SFP-LH/LC; Gigabit Ethernet: cf. SFP LWL modul M-SFP-LH/LC and M-SFP-LH+/LC                                                                                                            |
| Network size - cascability                              |  |                                                                                                                                                                                                                                |
| Line - / star topology                                  |  | any                                                                                                                                                                                                                            |
| Ring structure (HIPER-Ring) quantity switches           |  | 50 (reconfiguration time < 0,3 sec.)                                                                                                                                                                                           |
| Power requirements                                      |  |                                                                                                                                                                                                                                |
| Operating voltage                                       |  | 100 - 240 VAC, 47 - 63 Hz (redundant)                                                                                                                                                                                          |
| Power output in Btu (IT) h                              |  | 44                                                                                                                                                                                                                             |
| Rated current                                           |  | 0.4 - 0.2 A                                                                                                                                                                                                                    |
| Power consumption                                       |  | 13 W                                                                                                                                                                                                                           |
| Software                                                |  |                                                                                                                                                                                                                                |
| Management                                              |  | serial Interface, web interface, SNMP V1/V2, HiVision file transfer SW HTTP/TFTP                                                                                                                                               |
| Diagnostics                                             |  | LEDs, log-file, syslog, signal contact, RMON (statistic, history, alarms, events), port mirroring, topology discovery 802.1AB, cable diagnostic                                                                                |
| Configuration                                           |  | Comand line interface (CLI), TELNET, BootP, DHCP, DHCP option 82, HIDiscovery, auto-configuration adapter (ACD11, ACA21-USB), Watchdog configuration; integrated DHCP server                                                   |
| Security                                                |  | Port security (IP and MAC), SNMP V3, SSH, authentication (802.1x)                                                                                                                                                              |
| Redundancy functions                                    |  | HIPER-ring (ring structure), MRP (IEC-ring functionality), RSTP 802.1D-2004, redundant network/ring coupling, dual homing, link aggregation, redundant 100 - 240 VAC power supply                                              |
| Filter                                                  |  | QoS 4 Klassen, Portpriorisierung (IEEE 802.1D/p), VLAN (IEEE 802.1Q), shared VLAN learning, Multicast (IGMP Snooping/Querier), Multicast Detection unknown Multicast, Broadcastlimiter, Fast Aging, Multicast GMRP IEEE 802.1D |
| Industrial Profiles                                     |  | EtherNet/IP, PROFINET, configuration and diagnostic via automation software tools like e.g. STEP7, or Control Logix                                                                                                            |
| Time synchronisation                                    |  | SNTP server, realtime clock with energy buffer                                                                                                                                                                                 |
| Flow control                                            |  | Flow Control 802.3x, Port Priority 802.1D/p, Priority (TOS/DIFFSERV), Prio (MAC/IP), Prio Mapping (TOS Layer2), Traffic Shaping (Unicast, Multicast, Broadcast) Ingress / Egress                                               |
| Ambient conditions                                      |  |                                                                                                                                                                                                                                |
| Operating temperature                                   |  | 0° - +50°C                                                                                                                                                                                                                     |

**Industrial Ethernet: Workgroup Switches: Fast-/Gigabit Ethernet Workgroup Switches, 10/24 ports : MACH102-8TP-FR**
<http://www.e-catalog.beldensolutions.com/link/57078-24455-49848-85612-40979/en/conf/ui/state>

|                                                   |                                                                                                                                                                                                                          |
|---------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Storage/transport temperature</b>              | -20° - +85°C                                                                                                                                                                                                             |
| <b>Relative humidity (non-condensing)</b>         | 10% to 95%                                                                                                                                                                                                               |
| <b>MTBF</b>                                       | 18,06 years (MIL-HDBK-217F Gb 25°C)                                                                                                                                                                                      |
| <b>Mechanical construction</b>                    |                                                                                                                                                                                                                          |
| <b>Dimensions (W x H x D)</b>                     | 448 x 44 x 310 (without fixing bracket)                                                                                                                                                                                  |
| <b>Mounting</b>                                   | 19" control cabinet                                                                                                                                                                                                      |
| <b>Weight</b>                                     | 3.85 kg                                                                                                                                                                                                                  |
| <b>Protection class</b>                           | IP20                                                                                                                                                                                                                     |
| <b>EMC interference immunity</b>                  |                                                                                                                                                                                                                          |
| <b>EN 61000-4-2 electrostatic discharge (ESD)</b> | 4 kV contact discharge, 8 kV air discharge                                                                                                                                                                               |
| <b>EN 61000-4-3 electromagnetic field</b>         | 10 V/m (80 - 2700 MHz)                                                                                                                                                                                                   |
| <b>EN 61000-4-4 fast transients (burst)</b>       | 2 kV power line, 4 kV data line                                                                                                                                                                                          |
| <b>EN 61000-4-5 surge voltage</b>                 | power line: 2 kV (line/earth), 1 kV (line/line), 4 kV data line                                                                                                                                                          |
| <b>EN 61000-4-6 conducted immunity</b>            | 10 V (150 kHz - 80 MHz)                                                                                                                                                                                                  |
| <b>EMC emitted immunity</b>                       |                                                                                                                                                                                                                          |
| <b>FCC CFR47 Part 15</b>                          | FCC 47 CFR Part 15 Class A                                                                                                                                                                                               |
| <b>EN 55022</b>                                   | EN 55022 Class A                                                                                                                                                                                                         |
| <b>Approvals</b>                                  |                                                                                                                                                                                                                          |
| <b>Safety of industrial control equipment</b>     | cUL 508                                                                                                                                                                                                                  |
| <b>Safety of information technology equipment</b> | cUL 60950-1                                                                                                                                                                                                              |
| <b>Scope of delivery and accessories</b>          |                                                                                                                                                                                                                          |
| <b>Scope of delivery</b>                          | MACH100 device, terminal block for signal contact, 2 brackets with fasteningscrews (pre-assembled), housing feet - stick-on, non-heating appliance cable - Euro model, CD-ROM with user manual, installation user manual |
| <b>Accessories to order separately</b>            | Fast Ethernet SFP modules, Gigabit Ethernet SFP modules, autoConfiguration Adapter ACA21-USB, terminal cable, Industrial Hivision Network Management software                                                            |

For more information please contact:

**Hirschmann Automation and Control GmbH**

Stuttgarter Strasse 45-51

72654 Neckartenzlingen

Germany

Phone: +49 7127/14-1809

E-Mail: [inet-sales@belden.com](mailto:inet-sales@belden.com)

The information published in the websites has been compiled as carefully as possible. It is subject to alteration without notice in technical as well as in price-related/commercial respect. The complete information and data were available on user documentation. Mandatory information can only be obtained by a concrete query.