

## Diagnostic Switch PROmesh P10



Art. No. 114110200

### HIGHLIGHTS

#### Integrated diagnosis:

- Online line monitoring
- Network monitoring
  - Netload
  - Discards
  - Errors
- Leakage current monitoring

#### High Performance:

- Transfer rates up to 2.5 gbps
- Quality of Service
- 8 priority queues

### Your advantages

- Continuous diagnosis of the connected wires during operation.
- The **PROmesh P10** is a full-managed Industrial Ethernet/PROFINET switch for industrial automation plants.
- You can configure it easily and conveniently via its integrated web interface.
- The compact design, flexible mounting on the top-hat rail as well as its optimized thermal properties save space in the control cabinet.
- Extensive diagnostic functions: Keep yourself informed at all times about your network status, cable fault reserve and EMC.

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### Technical details

| Network Interfaces   |   |
|--|---|
| RJ45 Ports   |   |
| ■ Interfaces   | 8                                       |
| ■ Transmission rates   | 10 mbps<br>100 mbps<br>1 gbps           |
| ■ Status LED   | Link + data exchange<br>Portspeed       |
| SFP Slots  |   |
| ■ Interfaces   | 2                                       |
| ■ Transmission rates   | 100 mbps<br>1 gbps<br>2,5 gbps          |
| ■ Status LED   | Link + data exchange<br>Portspeed       |
| Supply voltage, current consumption, power loss, alarm contact |   |
| Interfaces   |   |
| ■ Power supply   | 2 x 0,2 - 2,5 mm <sup>2</sup>           |
| ■ Redundant power supply                                       | 2 x 0,2 - 2,5 mm <sup>2</sup>           |
| ■ Functional earth (FE)  | 1 x 0,2 - 2,5 mm <sup>2</sup>           |
| ■ Alarm contact  | 2 x 0,2 - 2,5 mm <sup>2</sup>           |
| Operating parameters   |   |
| ■ Supply voltage (nominal value)                               | 24 VDC                                  |
| ■ Power supply (min.)  | 12 VDC                                  |
| ■ Power supply (max.)  | 36 VDC                                  |
| ■ Power consumption (max.)                                     | 0,8 A                                   |
| ■ Power loss (max.)  | 8 W                                     |
| ■ Fuse protection (power supply input)                         | 3,5 A / 125 VDC                         |
| ■ Fuse (input of the alarm contact)                            | 1,0 A / 24 VDC<br>0,5 A / 125 VAC       |
| Further device interfaces                                      |   |
| ■ Status LED   | VDC1<br>VDC2<br>Ring<br>Status<br>Error |
| ■ Data memory  | SD card<br>max. 32 GByte                |
| ■ Reset  | Button                                  |
| Functions  |   |
| Basic parameters   |   |
| ■ Switching technology   | Cut-Through                             |
| ■ MAC address table  | 16 K                                    |
| ■ Packet buffer  | 2 Mbit                                  |
| ■ Backplane capacity   | 51,2 gbps                               |
| ■ Throughput   | 19,3 mpps                               |

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| Functions                  |   |
|----------------------------|---|
| Quality of Service (QoS)   |   |
| ■ Queues per port          | 8   |
| ■ Prioritization functions | Port<br>Class of Service (CoS)<br>Type of Service (ToS)                                   |
| ■ Prioritization methods   | Strict prioritization<br>Weighted prioritization  |
| ■ Bandwidth control        | Incoming and outgoing   |
| VLAN                       |   |
| ■ Protocol function        | Port based  |
| ■ Amount                   | 4096  |
| Protocols/services         |   |
| ■ Web                      | HTTP  |
| ■ Network                  | SNMPv1<br>SNMPv2<br>DHCP Client   |
| ■ Data transfer            | TFTP  |
| ■ E-Mail                   | SMTP Client   |
| ■ Time synchronization     | SNTP Client   |
| ■ Neighbourhood            | LLDP  |
| ■ Multicast groups         | IGMP Snopping   |
| ■ Redundancy               | MRP Master<br>MRP Client<br>RSTP  |
| ■ Eventlog                 | Syslog  |
| PROFINET                   |   |
| ■ Standard                 | PROFINET 2.4  |
| ■ Device Class             | Device  |
| ■ Conformance Class        | B   |
| ■ Netload Class            | III   |
| ■ Realtime Class           | 1   |
| Diagnosis                  |   |
| Functions                  |   |
| ■ Wire diagnostic          | Online quality analysis<br>Online wire test<br>Offline wire test                          |
| ■ Port statistics          | Errors<br>Discards<br>Netload/ms + Netload/s<br>Neighbourhood                             |
| ■ Neighbourhood            | Sampling rate 25 kHz<br>Bandwidth 25.6 kHz<br>Measuring range 0 - 10 A<br>Resolution 1 mA |
| ■ Power supply             | Sampling rate 1 Hz<br>Measuring range 12 - 36 VDC<br>Resolution 0.1 V                     |
| ■ Temperature              | Measuring range -40 - 75°C<br>Resolution 1°C  |
| ■ Port Mirroring           | Ingress or ingress and egress<br>Multiple source ports possible                           |

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| Diagnosis  |   |
|--|---|
| Alert  |   |
| <ul style="list-style-type: none"> <li>■ Trigger</li> </ul>                            | Port (Up, Down, Status change)<br>Wire quality<br>Netload<br>Leakage current<br>Neighbourhood<br>Power supply<br>Temperature<br>MRP |
| <ul style="list-style-type: none"> <li>■ Receiver</li> </ul>                           | PROFINET<br>Email<br>SNMP Trap<br>Alarm contact   |
| Environmental conditions   |   |
| <ul style="list-style-type: none"> <li>■ Operating temperature</li> </ul>              | -40°C ... 60°C  |
| <ul style="list-style-type: none"> <li>■ Storage temperature</li> </ul>                | -40°C ... 85°C  |
| <ul style="list-style-type: none"> <li>■ Air humidity, rel.</li> </ul>                 | 5 - 95% non-condensing  |
| <ul style="list-style-type: none"> <li>■ Protection Class</li> </ul>                   | IP20  |
| <ul style="list-style-type: none"> <li>■ MTBF</li> </ul>                               | 59 years  |
| Design, Dimensions, Weights  |   |
| <ul style="list-style-type: none"> <li>■ Building type</li> </ul>                      | compact   |
| <ul style="list-style-type: none"> <li>■ Material (housing)</li> </ul>                 | Aluminium, anodised   |
| <ul style="list-style-type: none"> <li>■ Mounting</li> </ul>                           | 35 mm DIN top-hat rail  |
| <ul style="list-style-type: none"> <li>■ Width</li> </ul>                              | 49 mm   |
| <ul style="list-style-type: none"> <li>■ Height</li> </ul>                             | 105 mm  |
| <ul style="list-style-type: none"> <li>■ Depth</li> </ul>                              | 112 mm  |
| <ul style="list-style-type: none"> <li>■ Installation distance (vertical)</li> </ul>   | 50 mm   |
| <ul style="list-style-type: none"> <li>■ Installation distance (horizontal)</li> </ul> | 50 mm   |
| <ul style="list-style-type: none"> <li>■ Weight (net)</li> </ul>                       | 0,85 kg   |
| Standards, directives, approvals   |   |
| EMC  |   |
| <ul style="list-style-type: none"> <li>■ Guideline</li> </ul>                          | 2014/30/EU  |
| <ul style="list-style-type: none"> <li>■ Emitted interference</li> </ul>               | EN 55032  |
| <ul style="list-style-type: none"> <li>■ Susceptibility</li> </ul>                     | EN 61000-6-2  |
| Mechanical stability   |   |
| <ul style="list-style-type: none"> <li>■ Vibration</li> </ul>                          | IEC 60068-2-6   |
| <ul style="list-style-type: none"> <li>■ Shock</li> </ul>                              | IEC 60068-2-27  |
| <ul style="list-style-type: none"> <li>■ Free fall</li> </ul>                          | IEC 60068-2-32  |
| Approval   |   |
| <ul style="list-style-type: none"> <li>■ Europe</li> </ul>                             | CE  |
| Environment  |   |
| <ul style="list-style-type: none"> <li>■ RoHS</li> </ul>                               | 2011/65/EU  |
| <ul style="list-style-type: none"> <li>■ REACH</li> </ul>                              | 1907/2006/EG  |