

## Diagnostic Switch PROmesh P10



Art. No. 114110200-SL

### 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.

## Diagnostic Switch PROmesh P10

### Technical details

Network Interfaces	
RJ45 Ports	
■ Interfaces	8
■ Transmission rates	10 mbps 100 mbps 1 gbps
■ Status LED	Link + data exchange Portspeed
SFP Slots	
■ Interfaces	2
■ Transmission rates	100 mbps 1 gbps 2,5 gbps
■ Status LED	Link + data exchange 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 0,5 A / 125 VAC
Further device interfaces	
■ Status LED	VDC1 VDC2 Ring Status Error
■ Data memory	SD card 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 Class of Service (CoS) Type of Service (ToS)
■ Prioritization methods	Strict prioritization Weighted prioritization
■ Bandwidth control	Incoming and outgoing
VLAN	
■ Protocol function	Port based
■ Amount	4096
Protocols/services	
■ Web	HTTP
■ Network	SNMPv1 SNMPv2 DHCP Client
■ Data transfer	TFTP
■ E-Mail	SMTP Client
■ Time synchronization	SNTP Client
■ Neighbourhood	LLDP
■ Multicast groups	IGMP Snopping
■ Redundancy	MRP Master MRP Client 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 Online wire test Offline wire test
■ Port statistics	Errors Discards Netload/ms + Netload/s Neighbourhood
■ Neighbourhood	Sampling rate 25 kHz Bandwidth 25.6 kHz Measuring range 0 - 10 A Resolution 1 mA
■ Power supply	Sampling rate 1 Hz Measuring range 12 - 36 VDC Resolution 0.1 V
■ Temperature	Measuring range -40 - 75°C Resolution 1°C
■ Port Mirroring	Ingress or ingress and egress 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) Wire quality Netload Leakage current Neighbourhood Power supply Temperature MRP
<ul style="list-style-type: none"> <li>Receiver</li> </ul>	PROFINET Email SNMP Trap 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