

## Diagnostic Switch PROmesh P9+

### PROmesh P9+



Art.-Nr.: 114110193

### HIGHLIGHTS

- online line monitoring
- Network monitoring:
  - Network load
  - Discards
  - Errors
- Leakage current monitoring
- High performance:
  - Transmission rates up to 1.0 Gbit/s
  - Quality of service
  - 8 priority queues

### Your advantages

- Continuous diagnostics of the connected lines during operation.
- The PROmesh P9+ is a fully managed Industrial Ethernet/PROFINET/Ethernet IP switch for industrial automation systems.
- You can configure it easily and conveniently via its integrated web interface.
- The compact design, the simple attachment to the DIN rail and its optimized thermal properties save you space in the control cabinet.
- Extensive diagnostic functions: Find out about your network status, the interference reserve of cables and EMC at any time.

## Diagnostic Switch PROmesh P9+

### technical details

network interfaces	
RJ45 ports	
■ interfaces	9
■ transfer rate	10 Mbps 100 Mbps 1 Gbps
■ status LED	link + data communication
power supply, current consumption, power loss, alarm contact	
connections	
■ 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>
■ PE-connection	1 x 0,2 – 2,5 mm <sup>2</sup>
■ alarm contact	2 x 0,2 – 2,5 mm <sup>2</sup>
operating parameters	
■ power supply (nominal value)	24 VDC, redundant
■ power supply (min.)	12 VDC
■ power supply (max.)	48 VDC
environmental parameters	
■ operating temperatur	-40°C ... 75°C
■ storage temperature	-40°C ... 75°C
■ humidity (relative)	<95% RHD, non-condensing
design, dimensions, weights	
■ design	compact passive cooling
■ material (housing)	anodized aluminum
■ fastening	35 mm DIN rail (0°, 90°)
■ broad	60 mm
■ height	110 mm
■ depth	131 mm
■ installation distance (vertical)	50 mm
■ installation distance (horizontal)	20 mm
other device interfaces	
■ status LED	VDC1 VDC2 Status Error
■ data storage	SD card
■ reset	button
function	
basic parameter	
■ switch mode	store & forward
■ MAC address table	16 K
■ package storage	2 Mbit
■ backplane capacity	18 Gbps
■ throughput	13,4 Mpps

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function	
quality of service (QoS)	
■ queues per port	8
■ prioritization methods	strict prioritization weighted prioritization
■ bandwidth limitation	incoming and outgoing
■ port prioritization	yes
■ COS: class of service	yes
■ TOS: type of services	yes
VLAN	
■ portbased	yes
■ tagged	yes
■ number	4096
protocols/services	
■ management access	HTTP HTTPS webmanagement CLI PROmanage NT®
■ network	SNMPv1 SNMPv2c SNMPv3
■ file transfer	TFTP
■ e-Mail	SMTP Client
■ time synchronization	Sntp Client NTP Server
■ neighborhood	LLDP
■ event log	syslog
■ file transfer	TFTP
■ redundancy	MRP master MRP client STP RSTP MSTP static link aggregation dynamic link aggregation
■ IP setting	static PROFINET ETHERNET/IP
■ multicast/broadcast	Static Multicast IGMP Snooping Broadcast Limitation
application specific	
PROFINET	
■ standard	V 2.4
■ conformance class	B
■ net load class	III
■ real-time-class	1

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application specific	
ETHERNET/IP	
<ul style="list-style-type: none"> <li>ETHERNET/IP</li> </ul>	yes
diagnosis	
function	
<ul style="list-style-type: none"> <li>online line diagnostics</li> </ul>	yes
<ul style="list-style-type: none"> <li>port statistics</li> </ul>	errors discards network load/ms + network load/s neighborhood
<ul style="list-style-type: none"> <li>Leake current monitoring:</li> </ul>	sampling rate 25 kHz bandwidth 25.6 kHz measuring range 0 – 10 A resolution 1 mA
<ul style="list-style-type: none"> <li>supply voltage</li> </ul>	sampling rate 1 Hz measuring range 12 – 48 VDC resolution 0.3 V
<ul style="list-style-type: none"> <li>temperature</li> </ul>	measuring range -40 – 110°C resolution 1°C
<ul style="list-style-type: none"> <li>port mirroring</li> </ul>	incoming or incoming and outgoing packets multiple source ports possible
alerting	
<ul style="list-style-type: none"> <li>triggers</li> </ul>	port (up, down, status change) cable quality network load leakage current neighborhood supply voltage temperature MRP error discard
<ul style="list-style-type: none"> <li>recipient</li> </ul>	PROFINET email SNMP trap alarm contact (relay)
security	
<ul style="list-style-type: none"> <li>security</li> </ul>	User accounts (individual login) IP filter port alarm
standards, guidelines, approvals	
EMC	
<ul style="list-style-type: none"> <li>policy</li> </ul>	2014/30/EU
<ul style="list-style-type: none"> <li>interference emission</li> </ul>	EN 55032
<ul style="list-style-type: none"> <li>noise immunity</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>Freefall</li> </ul>	IEC 60068-2-32

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### technical details

standards, guidelines, approvals	
permit	
■ Europe	CE
■ USA	UL
■ Canada	CSA
environment	
■ RoHS	2011/65/EU
■ REACH	1907/2006/EG