

DIAGNOSTIC-SWITCH PROmesh P9+

Item no.: 114110194

The **PROmesh P9+** is a fully-managed Industrial Ethernet/PROFINET switch for industrial automation systems.

The compact design, simple mounting on the top-hat rail and its optimized thermal properties save you space in the control cabinet.

Continuous diagnosis of the connected lines during operation.

You can use it easily and conveniently via its integrated web interface.



Extensive diagnostic functions: Find out about your network status, the interference reserve of cables as well as EMC and environmental influences (e.g. vibrations, light, ...) at any time.

HIGHLIGHTS

Integrated diagnostics:



- Online cable monitoring
- Network monitoring (network load, discards, errors)
- Leakage current monitoring

High Performance:



- Transfer rates up to 1 Gbit/s
- Quality of Service
- 8 Priority Queues

DIAGNOSTIC-SWITCH PROmesh P9+ | Technical Details

Network interfaces	
RJ45 Ports	
Interfaces	9 (designation P1 – P9)
Transmission rates	10 Mbit/s 100 Mbit/s 1 Gbit/s
Status LED	Link + data exchange
Further device interfaces	
Status LED	VDC 1 VDC 2 Status Error
Data memory	SD card
Reset	Button
Supply voltage, current consumption, power loss, alarm contact	
Connections	
Power supply	2 x 0,2 – 2,5 mm ²
Redundant power supply	2 x 0,2 – 2,5 mm ²
Functional earthing (FE)	1 x 0,2 – 2,5 mm ²
Alarm contact	2 x 0,2 – 2,5 mm ²
Operating parameters	
Supply voltage (nominal value)	24 VDC
Supply voltage (min.)	12 VDC
Supply voltage (max.)	48 VDC
Current consumption (max.)	0,6 A
Power loss (max.)	7,2 W
Fuse protection (supply voltage input)	3 A/125 VDC
Design, dimensions, weight	
Design	Compact
Material (housing)	Metal
Mounting	Top hat rail
Width	60 mm
Height	110 mm
Depth	132 mm
Installation distance (vertical)	50 mm
Installation distance (horizontal)	50 mm
Weight (net)	930 g

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Environmental conditions	
Operating temperature	-40 – 75°C
Storage temperature	-40 – 85°C
Humidity, rel.	5 – 95% non-condensing
Protection class	IP20
Functions	
Basic parameters	
Switching technology	Store-and-Forward
MAC address table	16 k
Switch memory	2 Mbit
Backplane capacity	18 Gbit/s
Throughput	13,4 Mpps
MTBF	40 years
Quality of Service (QoS)	
Queues pro Port	8
Prioritization functions	Port-based Class of Service (CoS) Type of Service (ToS)
Prioritization methods	Strict prioritization Weighted prioritization
Bandwidth control	Inbound and outbound
VLAN	
Protocol function	Port-based
Quantity	4096
Protocols/Services	
Management access	http https
Network access	SNMPv1 SNMPv2c SNMPv3 DHCP Client
E-mail	SMTP Client
Time synchronization	SNTP Client SNTP Server
Neighborhood	LLDP
IP setting	Static PROFINET DHCP
Multicast/Broadcast	Broadcast limitation IGMP Snooping (max multicast group is 512)
Redundancy	MRP Master MRP Client STP RSTP MSTP Static link aggregation Dynamic link aggregation
Event log	Syslog

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Applications	
PROFINET	
Standard	PROFINET 2.4
Device class	Device
Conformity class	B
Netload Class	III
Realtime Class	1
EtherNet/IP	
EtherNet/IP	EDS-file
Diagnosis	
Functions	
Line diagnostics	Online quality analysis
Port statistics	Errors Discards Network load/ms + Network load/s Neighborhood
Leakage current monitoring	Sampling rate 18 kHz Bandwidth 25.6 kHz Measuring range 0 - 10 A Resolution 1 mA
Power supply	Sampling rate 1 kHz Measuring range 12-48 VDC Resolution 0.3 V
Temperature	Measuring range -40 - 120°C Resolution 1°C
Port Mirroring	Incoming or incoming and outgoing packets Multiple source ports possible
Alerting	
Trigger	Port (up, down, status change) Line quality Networkload Leakage current Neighborhood Supply voltage Supply temperature MRP Discards Errors
Receiver	PROFINET E-mail SNMP trap Alarm contact

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Standards, guidelines, approvals	
EMC	
Guideline	2014/30/EU
Interference emission	EN 55032
Interference immunity	EN 61000-6-2
Mechanical stability	
Vibration	IEC 60068-2-6
Shock	IEC 60068-2-27
Free fall	IEC 60068-2-32
Approval	
Europe	CE
USA	UL
Canada	CSA
Environment	
RoHS	2011/65/EU
REACH	1907/2006/EG
FCC	
Overvoltage protection	IEC 6100045, Level 3
EFT	IEC 6100044

DIAGNOSTIC-SWITCH PROmesh P9+ | Technical Drawing

