

**DIAGNOSTIC-SWITCH PROmesh P24+**

**Item no.: 114110230**

The PROmesh P24+ is a fully-managed Industrial Ethernet/PROFINET switch for industrial automation systems.

Increased network security thanks to integrated firewall functions. Connect your machine and production network using NAT.

Continuous diagnosis of the connected lines during operation.

You can configure 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 diagnosis:**



- Online line monitoring
- Network monitoring (Network load, discards, errors)
- Environmental monitoring (Leakage current, vibration, light, humidity)

**High Performance:**



- Full Gigabit and transfer rates up to 10 Gbit/s
- Quality of Service
- 8 Priority Queues

## DIAGNOSTIC-SWITCH PROmesh P24+ | Technical Details

Network interfaces	
RJ45 Ports	
Interfaces	20 (designation P1 – P20)
Transfer rates	10 Mbit/s 100 Mbit/s 1 Gbit/s
Status LED	Link + data exchange
SFP-Ports	
Interfaces	4 (designation P21 – P24)
Transfer rates	100 Mbit/s 1 Gbit/s 10 Gbit/s
Status LED	Link + data exchange
Further device interfaces	
Status LED	VDC 1 VDC 2 Status Error
Data memory	SD card
Reset	Button
Sensors	Light Air humidity
Supply voltage, 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>
Functional earthing (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
Supply voltage (min.)	12 VDC
Supply voltage (max.)	48 VDC
Current consumption (max.)	2,1 A
Power loss (max.)	24,9 W
Fuse protection (supply voltage input)	7 A/125 W
Design, dimensions, weight	
Material (housing)	Metal
Mounting	Top hat rail
Width	130 mm
Height	155 mm
Depth	155 mm
Installation distance (vertical)	50 mm
Installation distance (horizontal)	50 mm
Weight (net)	2200 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
Packet memory	2 Mbit
Backplane capacity	80 Gbps
Throughput	120 Mpps
MTBF	50 years
Quality of Service (QoS)	
Queues per 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 DHCP Server
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 MRP Interconnection Multi MRP 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	Erros 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 1mA
Temperature	Measuring range -40 – 75°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 Network load Leakage current Sensors (light, humidity) Neighborhood Temperature MRP Discards Errors
Receiver	PROFINET E-mail SNMP Trap Alarm contact

## DIAGNOSTIC-SWITCH PROmesh P24+ | Technical Details

Standards, guidelines, approvals	
EMC	
Directive	2014/30/EU
Interference emission	EN 55032
Interference immunity	EN 61000-6-2
ESD	IEC 61000-4-2
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 P24+ | Technical Drawing**

