Highly functional network communication

performance without compromise

PROmesh Industrial Switches

PROmesh P10+

Indu-Sol GmbH

PROmesh

Indu Sol
Industrial Solutions

We provide
highly functional switches with best price-performance ratio available

The **PROmesh switches** range includes three product families of high-performance industrial switches for all applications and every environmental situation. Permanently installed in the control cabinet or decentrally in the field for IP67 environments.

Above-average **quality, performance** and **versatility** in use are features taken for granted with the PROmesh series products.

Many products are already equally usable for **PROFINET** and **Ethernet/IP**.

Our know-how as a **specialist for machine networks** with more than 20 years of experience in all **leading technological branches of industry** and **automation** is embedded in all product families.

PROmesh P product family

stands for high-performance managed industrial switches, line diagnosis, condition monitoring and network management.

PROmesh B product family

PROmesh B has convincing managed industrial switches with high-performance switch function and unbeatable value for money.
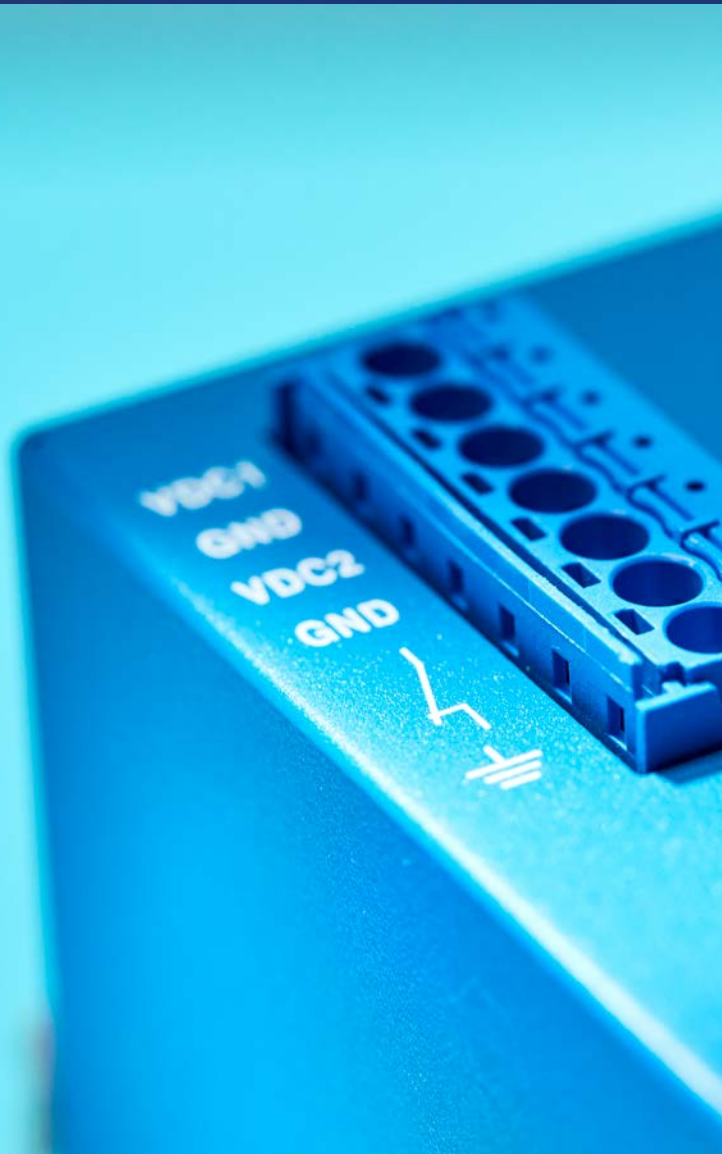
PROmesh U product family

These unmanaged industrial switches round off the range with strong switch performance.

PROmesh P product family

Condition monitoring and network diagnosis with intelligent industrial switches

PROmesh P, our product family of high-performance diagnostic **industrial switches**, has integrated monitoring and diagnostic functions:

Monitor the lines for mechanical indications of wear or ageing phenomena, identify shield currents and diverse other values within the devices, such as the temperature, which allows conclusions to be drawn regarding temperature changes within the control cabinet.

With PROmesh P switches

» **you** keep an eye on the condition of the system or network section – end-to-end and transparent at all times.

» you localise identified sources of disturbance – without additional measuring equipment or time lost due to manual measuring tasks.

In this way, emerging faults or wear phenomena in the network can be identified and counteracted in good time and unscheduled machine stoppages, caused by network errors detected too late, can be prevented. The plant availability increases and you have fewer costs.

With their **performance, diagnostic and monitoring functions**, PROmesh P switches combine the standards of modern electrical design and the effective, forward-looking maintenance of automation systems and industrial plants.

Integrated in the condition monitoring management system **(CMMS) for PROFINET/Ethernet/IP** applications, the PROmesh P switch becomes a powerful diagnostic and management tool and contributes significantly to the CMMS's detection of up to 90% of the anomalies that lead to unscheduled downtimes.

A PROmesh P switch is thus "state-of-the-art". As an intelligent sensor with performance-oriented industrial switch technology, it is designed for the increasing data traffic and ever more complex machine and building networks.

PROmesh P product family

High performance with condition monitoring functions

» mechanical line monitoring, with display of wear or ageing phenomena

» monitoring of shield currents of the data lines

» Netload class III certified

» monitoring of temperatures and warning of overheating

» automatic alerting function

» 24 volt monitoring

General data	PROmesh P8+F	PROmesh P9+	PROmesh P10+	PROmesh P10X	PROmesh P20
Line diagnosis	✓	✓	✓	✓	✗
EMC monitoring	✓	✓	✓	✓	✓
TCP/IP retransmission	✗	✗	✓	✗	✗
Environment monitoring	24V, temperature	24V, temperature	24V, temperature, vibration, light, humidity	24V, temperature	24V, temperature
Performance monitoring	✓	✓	✓	✓	✓
Ports	8 x 1 Gbit/s RJ45	9 x 1 Gbit/s RJ45	8 x 1 Gbit/s RJ45 2 x 2,5 Gbit/s SFP	8 x 100 Mbit/s M12 d-coded 2 x 1 Gbit/s M12 x-coded	16 x 100 Mbit/s RJ45 4 x 1 Gbit/s SFP
PROFINET standard	V 2.4	V 2.4	V 2.4	V 2.4	V 2.3
PROFINET Conformance class	B	B	B	B	B
Netload class	III	III	III	III	III
Routing	✗	✗	NAT	✗	NAT
Firewall	✗	✗	✓	✗	✓
PoE	✗	✗	✗	✗	✗
VLAN	✓	✓	✓	✓	✓
Redundancy	MRP, RSTP, MSTP	MRP, RSTP, MSTP	MRP, RSTP, MSTP	MRP, RSTP, MSTP	MRP, RSTP, MSTP
SNMP	v1, v2c, v3	v1, v2c, v3	v1, v2c, v3	v1, v2c, v3	v1, v2c, v3
Protection rating	IP20	IP20	IP20	IP67	IP30
Operating temperature	-40°C ... 75°C	-40°C to 75°C	-40°C to 85°C	-40°C to 75°C	-40°C to 75°C
Voltage supply	24 VDC	24 VDC	24 VDC	24 VDC	24 VDC
Dimensions (W x H x D) in mm	150 x 130 x 60	60 x 110 x 131	60 x 110 x 131	60 x 284 x 28	68 x 130 x 138
Weight	900 g	900 g	900 g	800 g	960 g
Type of assembly	Top hat rail	Top hat rail	Top hat rail	Wall mounting	Top hat rail
Backplane [Gbps]	16	18	26	20	12,8
Throughput [Mpps]	13,4	13,4	19,3	14,9	8,5
Shared buffer [Mbit]	2	2	2	2	4
Article number	114110198	114110194	114110204	114110211	114110022

PROmesh P8+F

PROmesh P9+

PROmesh P10+

PROmesh P10X

PROmesh P20

INDUSTRIAL Production product of the year 2023 nominated

automation PRODUCT OF THE YEAR 2023 Nominee
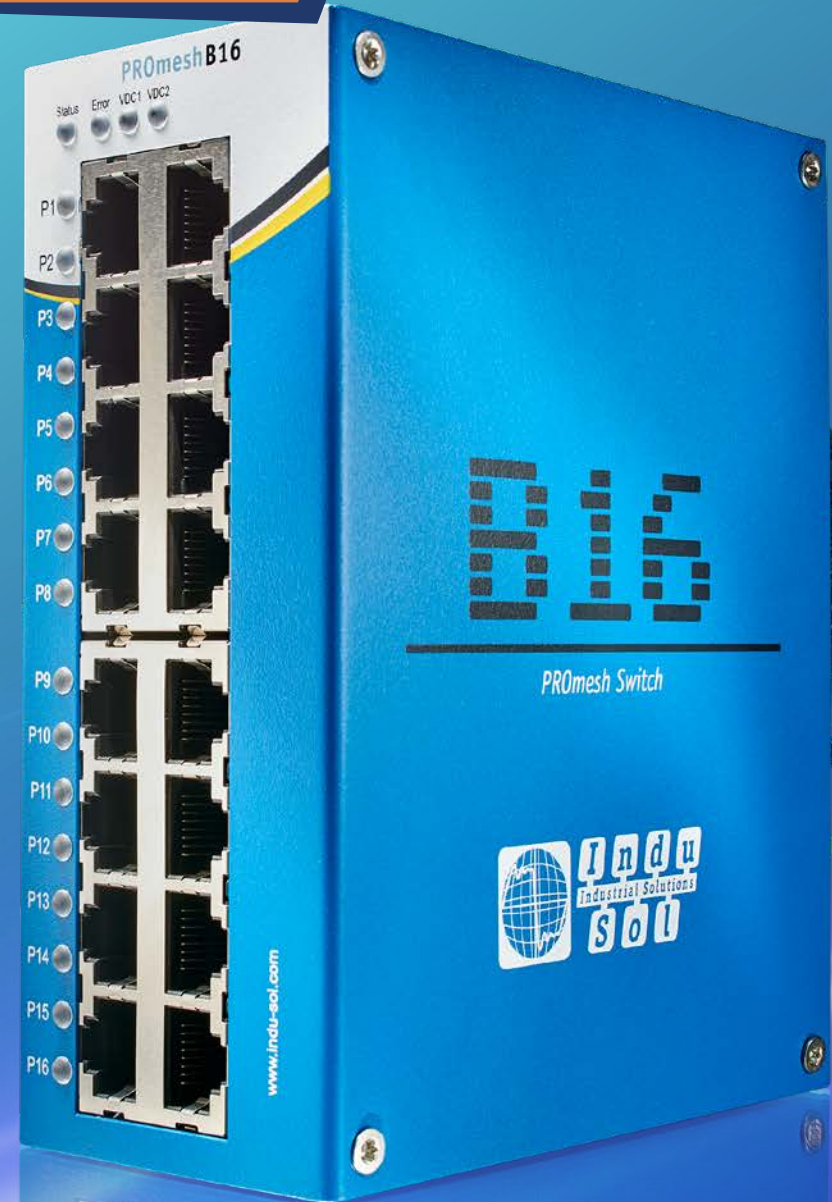
PROmesh B product family

Managed industrial switches for a strong network

Our PROmesh B switches function with convincingly high-performance and provide unbeatable value for money.

» secure and stable

» Netload class III certified

* massive price advantage of up to 15% compared to your current source

General data	PROmesh B8	PROmesh B16	PROmesh B12 PoE	PROmesh B28-R	PROmesh B28-RL
Line diagnosis	×	×	×	×	×
EMC monitoring	×	×	×	×	×
TCP/IP retransmission	×	×	×	×	×
Environment monitoring	24 V, temperature	24 V, temperature	×	×	×
Performance monitoring	✓	✓	×	×	×
Ports	8 x 100 Mbit/s	16 x 100 Mbit/RJ45	8 x 1 Gbit/s RJ45 2 x 1 Gbit/s SFP 2 x 2,5 Gbit/s SFP	16 x 1 Gbit/s RJ45 8 x 1 Gbit/s Combo Ports 4 x 1 Gbit/SFP	16 x 1 Gbit/s RJ45 8 x 1 Gbit/s Combo Ports 4 x 10 Gbit/SFP
PROFINET standard	V 2.4	V 2.4	×	×	×
PROFINET Conformance class	B	B	A	A	A
Netload class	III	III	×	×	×
Routing	×	×	×	×	NAT, VRRP, RIP, OSPF, BGP
Firewall	×	×	×	×	✓
PoE	×	×	30 W (max. 120 W)	×	×
VLAN	✓	✓	✓	✓	✓
Redundancy	MRP, RSTP	MRP, RSTP	RSTP, MSTP	MRP, RSTP, MSTP	MRP, RSTP, MSTP
SNMP	v1, v2c, v3	v1, v2c, v3	v1, v2c, v3	v1, v2, v3	v1, v2, v3
Protection rating	IP 20	IP 20	IP40	IP 30	IP 30
Operating temperature	-10°C to 60°C	-10°C to 60°C	-40°C to 75°C	-40°C to 75°C	-40°C to 75°C
Voltage supply	24 VDC	24 VDC	24 VDC	100 – 240 VAC	100 – 240 VAC
Dimensions (W x H x D) in mm	53 x 138 x 110	53 x 138 x 110	53 x 138 x 110	440 x 44 x 305	440 x 44 x 305
Weight	700 g	800 g	780 g	3940 g	3940 g
Type of assembly	Top hat rail	Top hat rail	Top hat rail	19-inch rack	19-inch rack
Backplane [Gbps]	6,3	13,4	30	56	128
Throughput [Mpps]	1,6	3,7	22, 32	65,5	95,2
Shared buffer [Mbit]	2	2	4	12	12
Article number	114110501	114110510	114110251	114110100	114110110

*15 % price advantage

*15 % price advantage

PROmesh B16

PROmesh B8

PROmesh B12 PoE

PROmesh B28-R

PROmesh B28-RL

PROmesh U product family

Unmanaged industrial switches for reliable network connections

PROmesh U rounds off the range with strong switch performance and is used wherever managed switches are not required.

» for smaller networks

» plug-and-play,
   simply plug in and off you go

PROmesh U3

PROmesh U5

PROmesh U8

PROmesh U16

General data	PROmesh U3	PROmesh U5	PROmesh U8	PROmesh U16
Line diagnosis	×	×	×	×
EMC monitoring	×	×	×	×
TCP/IP retransmission	×	×	×	×
Environment monitoring	×	×	×	×
Performance monitoring	×	×	×	×
Ports	2 x 100 Mbit/s RJ45 1x 100 Mbit/s LWL MM	5 x 100 Mbit/s RJ45	8 x 100 Mbit/s RJ45	16 x 100 Mbit/s RJ45
PROFINET standard	×	×	×	×
PROFINET conformance class	A	A	A	A
Netload class	×	×	×	×
Routing	×	×	×	×
Firewall	×	×	×	×
PoE	×	×	×	×
VLAN	✓	✓	✓	×
Redundancy	×	×	×	×
SNMP	×	×	×	×
Protection rating	IP40	IP40	IP40	IP40
Operating temperature	-40°C to +75°C	-40°C to +75°C	-40°C to +75°C	-40°C to +75°C
Voltage supply	24 VDC	24 VDC	24 VDC	24 VDC
Dimensions (W x H x D) in mm	31 x 110 x 95	28 x 103 x 78	41 x 103 x 78	53 x 138 x 110
Weight	352 g	170 g	220 g	677 g
Type of assembly	Top hat rail	Top hat rail	Top hat rail	Top hat rail
Backplane [Gbps]	1	1	1,6	3,2
Throughput [Mpps]	0,75	0,75	1,19	2,4
Shared buffer [Mbit]	1	1	1	1
Article number	114110130	114110120	114110122	114110124

State 02/2023

Video: How does a switch work?

Use the QR code or simply enter „indu-sol switch film" in your browser.