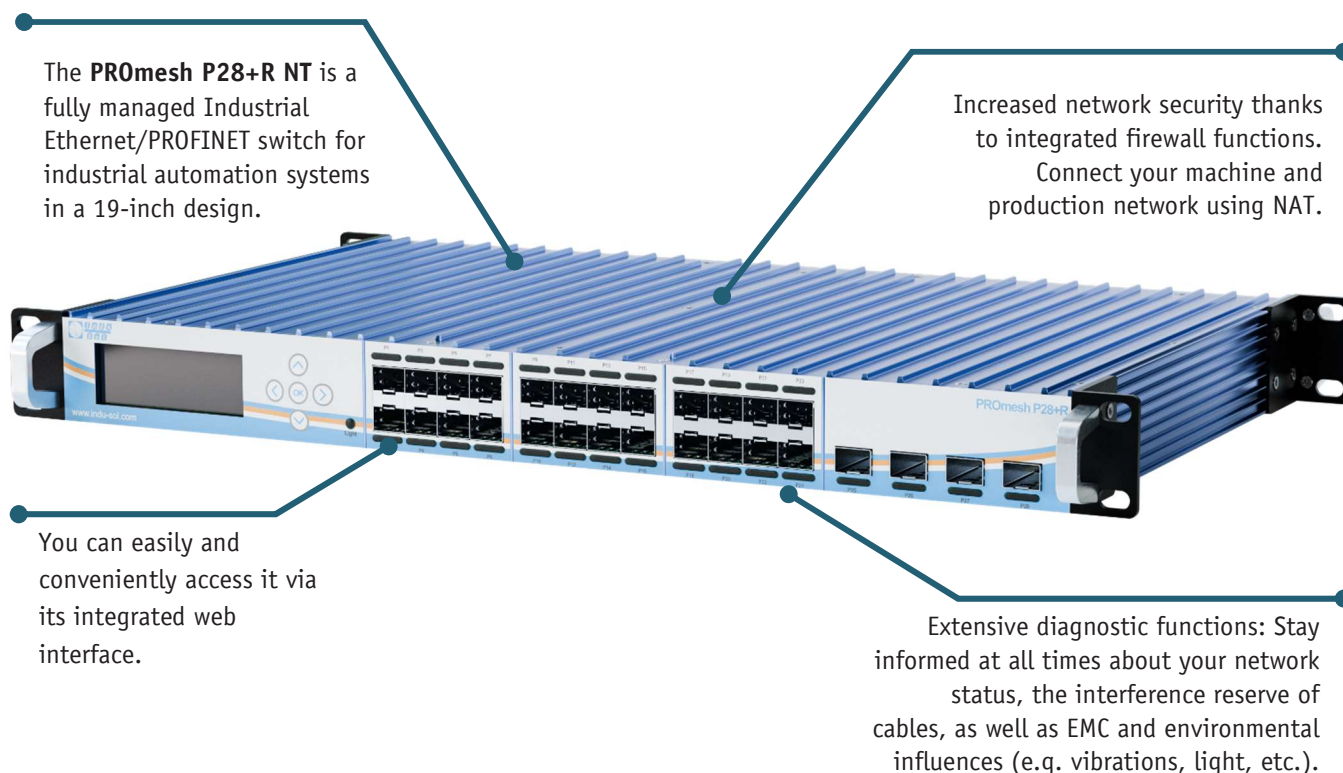


## DIAGNOSTIC-SWITCH PROmesh P28+R NT



|                 |                     |                               |                    |
|-----------------|---------------------|-------------------------------|--------------------|
| Article Number  | 114110262           | 114110272                     | 114110282          |
| Model Typ       | Full RJ45           | Mixed RJ45/SFP                | Full SFP           |
| Port Assignment | 24x RJ45<br>4x SFP+ | 16x RJ45<br>8x SFP<br>4x SFP+ | 24x SFP<br>4x SFP+ |

## HIGHLIGHTS

### Integrated diagnosis:



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

### High Performance:



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

## DIAGNOSTIC-SWITCH PROmesh P28+R NT | Technical Details

|                                             |                                                   |
|---------------------------------------------|---------------------------------------------------|
| Typ 1 Full RJ45 Switch – Network interfaces |                                                   |
| Article Number                              | 114110262                                         |
| RJ45 Ports                                  |                                                   |
| Interfaces                                  | 24 (designation P1 – P24)                         |
| Transfer rates                              | 10 Mbit/s<br>100 Mbit/s<br>1 Gbit/s               |
| Status LED                                  | Link + data exchange                              |
| SFP+ -Ports                                 |                                                   |
| Interfaces                                  | 4 (designation P25 – P28)                         |
| Transfer rates                              | 100 Mbit/s<br>1 Gbit/s<br>2,5 Gbit/s<br>10 Gbit/s |
| Status LED                                  | Link + data exchange                              |
| Typ 2 Mixed Switch – Network interfaces     |                                                   |
| Article Number                              | 114110272                                         |
| RJ45 Ports                                  |                                                   |
| Interfaces                                  | 16 (designation P1 – P16)                         |
| Transfer rates                              | 10 Mbit/s<br>100 Mbit/s<br>1 Gbit/s               |
| Status LED                                  | Link + data exchange                              |
| SFP-Ports                                   |                                                   |
| Interfaces                                  | 8 (designation P17 – P24)                         |
| Transfer rates                              | 100 Mbit/s<br>1 Gbit/s                            |
| Status LED                                  | Link + data exchange                              |
| SFP+ -Ports                                 |                                                   |
| Interfaces                                  | 4 (designation P25 – P28)                         |
| Transfer rates                              | 100 Mbit/s<br>1 Gbit/s<br>2,5 Gbit/s<br>10 Gbit/s |
| Status LED                                  | Link + data exchange                              |
| Typ 3 Full SFP Switch – Network interfaces  |                                                   |
| Article Number                              | 114110282                                         |
| SFP-Ports                                   |                                                   |
| Interfaces                                  | 24 (designation P1 – P24)                         |
| Transfer rates                              | 100 Mbit/s<br>1 Gbit/s                            |
| Status LED                                  | Link + data exchange                              |
| SFP+ -Ports                                 |                                                   |
| Interfaces                                  | 4 (designation P25 – P28)                         |
| Transfer rates                              | 100 Mbit/s<br>1 Gbit/s<br>2,5 Gbit/s<br>10 Gbit/s |
| Status LED                                  | Link + data exchange                              |

## DIAGNOSTIC-SWITCH PROmesh P28+R NT | Technical Details

|                                                                |                               |
|----------------------------------------------------------------|-------------------------------|
| Further device interfaces                                      |                               |
| LED                                                            | Port LED                      |
| Additional LEDs, visible via screen                            | Status<br>Error<br>VDC        |
| Data memory                                                    | SD-card                       |
| Reset                                                          | Button                        |
| Sensors                                                        | Light<br>Air humidity         |
| Supply voltage, current consumption, power loss, alarm contact |                               |
| Connections                                                    |                               |
| Power supply                                                   | Cold device plug IEC60320 C14 |
| Redundant power supply                                         | Cold device plug IEC60320 C14 |
| Functional earthing (FE)                                       | Earthing screw                |
| Alarm contact                                                  | 2 x 0,2 – 2,5 mm²             |
| Operating parameters                                           |                               |
| Supply voltage (nominal value)                                 | 230 VAC                       |
| Supply voltage (min.)                                          | 110 VAC                       |
| Supply voltage (max.)                                          | 240 VAC                       |
| Design, dimensions, weight                                     |                               |
| Material (housing)                                             | Metal                         |
| Mounting                                                       | 19 inch                       |
| Width                                                          | 437 mm                        |
| Height                                                         | 44 mm                         |
| Depth                                                          | 271 mm                        |
| Installation distance (vertical)                               | 50 mm                         |
| Installation distance (horizontal)                             | 50 mm                         |
| Environmental conditions                                       |                               |
| Operating temperature                                          | -40 – 75°C                    |
| Storage temperature                                            | -40 – 85°C                    |
| Humidity, rel.                                                 | 5 – 95% non-condensing        |
| Protection class                                               | IP30                          |
| Functions                                                      |                               |
| Basic parameters                                               |                               |
| Switching technology                                           | Store-and-Forward             |
| MAC address table                                              | 16 k                          |
| Packet memory                                                  | 2 MBit                        |
| Backplane capacity                                             | 128 Gbps                      |
| Throughput                                                     | 100 Mpps                      |
| MTBF                                                           | 50 Years                      |

## DIAGNOSTIC-SWITCH PROmesh P28+R NT | Technical Details

|                             |                                                                                                                                            |
|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| Routing, Firewall, Security |                                                                                                                                            |
| NAT-Routing                 | Yes                                                                                                                                        |
| Firewall                    | IP-based<br>Port-based<br>Black-/White-List                                                                                                |
| 802.1X                      | Port- and MAC-based                                                                                                                        |
| Quality of Service (QoS)    |                                                                                                                                            |
| Queues per port             | 8                                                                                                                                          |
| Prioritization functions    | Port-based<br>Class of Service (CoS)<br>Type of Service (ToS)                                                                              |
| Prioritization methods      | Strict prioritization<br>Weighted prioritization                                                                                           |
| Bandwidth control           | Inbound and outbound                                                                                                                       |
| VLAN                        |                                                                                                                                            |
| Protocol function           | Port-based                                                                                                                                 |
| Quantity                    | 4096                                                                                                                                       |
| Protocols/Services          |                                                                                                                                            |
| Management access           | http<br>https                                                                                                                              |
| Network access              | SNMPv1<br>SNMPv2c<br>SNMPv3<br>DHCP Client<br>DHCP Server                                                                                  |
| E-mail                      | SMTP Client                                                                                                                                |
| Time synchronization        | SNTP Client<br>SNTP Server                                                                                                                 |
| Neighborhood                | LLDP                                                                                                                                       |
| IP setting                  | Static<br>PROFINET<br>DHCP                                                                                                                 |
| Multicast/Broadcast         | Broadcast Limitation<br>IGMP Snooping (max multicast group is 512)                                                                         |
| Redundancy                  | MRP Master<br>MRP Client<br>MRP Interconnection<br>Multi MRP<br>STP<br>RSTP<br>MSTP<br>Static link aggregation<br>Dynamic link aggregation |
| Event log                   | Syslog                                                                                                                                     |

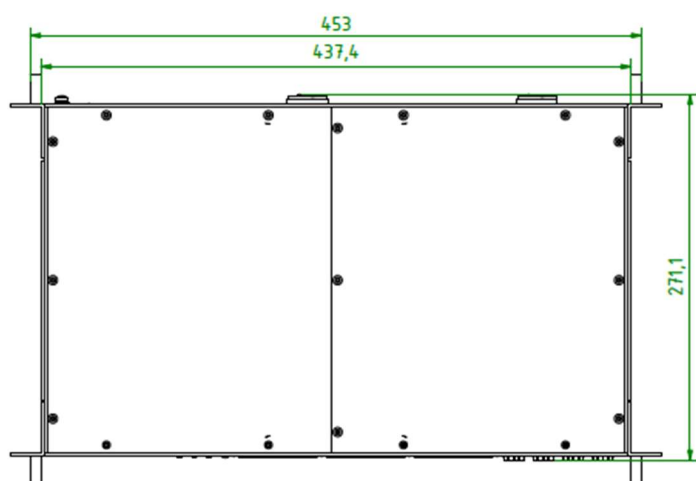
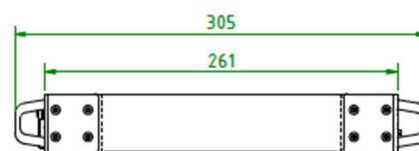
## DIAGNOSTIC-SWITCH PROmesh P28+R NT | Technical Details

|                            |                                                                                                                                                                            |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Applications</b>        |                                                                                                                                                                            |
| <b>PROFINET</b>            |                                                                                                                                                                            |
| Standard                   | PROFINET 2.4                                                                                                                                                               |
| Device class               | Device                                                                                                                                                                     |
| Conformity class           | B                                                                                                                                                                          |
| Netload Class              | III                                                                                                                                                                        |
| Realtime Class             | 1                                                                                                                                                                          |
| <b>EtherNet/IP</b>         |                                                                                                                                                                            |
| EtherNet/IP                | EDS-file                                                                                                                                                                   |
| <b>Diagnosis</b>           |                                                                                                                                                                            |
| <b>Functions</b>           |                                                                                                                                                                            |
| Line diagnostics           | Online quality analysis                                                                                                                                                    |
| Port statistics            | Erros<br>Discards<br>Network load/ms + Network load/s<br>Neighborhood                                                                                                      |
| Leakage current monitoring | Sampling rate 18 kHz<br>Bandwidth 25,6 kHz<br>Measuring range 0-10 A<br>Resolution 1mA                                                                                     |
| Temperature                | Measuring range -40 – 75°C<br>Resolution 1°C                                                                                                                               |
| Port Mirroring             | Incoming or incoming and outgoing packets<br>Multiple source ports possible                                                                                                |
| <b>Alerting</b>            |                                                                                                                                                                            |
| Trigger                    | Port (up, down, status change)<br>Line quality<br>Network load<br>Leakage current<br>Sensors (light, humidity)<br>Neighborhood<br>Temperature<br>MRP<br>Discards<br>Errors |
| Receiver                   | PROFINET<br>E-mail<br>SNMP Trap<br>Alarm contact                                                                                                                           |

## DIAGNOSTIC-SWITCH PROmesh P28+R NT | 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 P28+R NT | Technical Drawing



( 1 : 5 )

