

Switching & Metering PDUs

Switching PDUs

NETIO

Networked power sockets



PRODUCTS OVERVIEW 2024

NETIO

Networked power sockets

ABOUT NETIO

NETIO Products a.s. is a Czech producer of remotely controlled networked power sockets (PDUs) which can be used in several ways; standalone as an independent device or connected to NETIO Cloud as a part of complete remote restarting solution. NETIO smart PDUs can also be integrated with 3rd party systems and extended with local automation features. NETIO PDUs are connected to the LAN (WiFi), their outputs can be measured & controlled via LAN, Cloud, Mobile App, Scheduler, WatchDog, AV drivers.

WHO ARE OUR PRODUCTS FOR?

Our PDUs are dedicated mainly for businesses (B2B). A typical user is a system integrator that uses our products in various industrial projects. Our products can be found in demonstration booths, shops, showrooms, digital signage screens, hospitals, and many other M2M and IoT applications.

We offer many PDU variants and different form factors for different application areas (PDUs for datacenter racks, DIN versions for smart building and electromobility applications, cables for compact solutions).

WHAT MAKES NETIO UNIQUE?



Industrial Quality

Quality is the number one priority: Long-life products with Zero Current Switching, well documented API standards, firmware updates, backwards compatibility and support - that is NETIO.



Remote WEB Control

Control and configuration via web interface, where you can easily switch ON, OFF or REBOOT. Simple functions, such as Scheduler, IP Watchdog, Power-Up State and more...



Easy Integration using Open API

Control your NETIO power socket via any interoperable device, software or cloud. NETIO products support many Open API standards such as MQTT, Modbus/TCP, JSON over HTTP, SNMP, ...

NETIO Cloud (secured service)

NETIO Cloud is a perfect solution for remote restarting - one screen to control multiple devices from anywhere!

Have you tried turning it OFF and ON again remotely?



Precise Power Metering

NETIO power socket models with metering support measure: Current [A], Output Power [W], Energy [Wh], True Power Factor, Voltage [V] and more...

A great data source for your power analysis!



AV Drivers Ready

To make integration even simpler, our partners develop amazing drivers for home automation and AV controllers - Control 4, ELAN, Crestron, RTI, Utelogy, Brightsign and many more...





LAN

Ethernet 10/100 Mbit interface (RJ-45) for wired connection to LAN (Local Area Network).



WEB INTERFACE

NETIO devices include their own web server. Each output can be controlled (switch on/off/restart) and configured over the web interface.



MOBILE APPLICATION

NETIO Mobile 2 is a mobile application, which allows you to control multiple NETIO smart PDUs, strips, sockets and cables from a single screen.



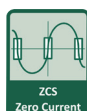
DI (Digital Input)

Digital Input is an interface, which allows to detect binary signals (0 or 1). A digital input (DI) can be used to control the outputs or count SO pulses.



SERIAL PORT (RS-232)

Some NETIO devices include a (3-pin) RS-232 serial port. The serial port (serial console) can be connected to a specified TCP/IP port.



ZCS (ZERO CURRENT SWITCHING)

The relay contacts switch the output on or off when the current crosses the zero level. This reduces the negative effect of Inrush Current.



POWERUP STATE

This parameter defines the output state (On/Off/Last) after powering up the device or when power is restored after a power outage.



IP WATCHDOG (PING)

Function, that checks the availability of another device in the network using the "ping" command (ICMP protocol).



SCHEDULER

The Scheduler function (also known as Planner or Calendar) allows to specify a time plan for switching individual electrical sockets on and off.



JSON over HTTP(s)

JavaScript Object Notation (JSON) is a platform-independent data transfer format. A JSON data structure is transferred over HTTP(s).



SNMP v1/v2

SNMP v1/v2 (Simple Network Management Protocol) is a UDP-based protocol for monitoring and management of networks and services.



MQTT-flex

The MQTT-flex version of the MQTT protocol can be configured in detail thanks to the "flex" extension.



Telnet

Telnet is a TCP/IP-based protocol used in computer networks that allows the user to connect to a remote computer using a Telnet application (console).



HTTP(s) Push JSON

NETIO devices can periodically connect to the specified server over http/https and send data in a .json (JavaScript Object Notation) structure.



WiFi

Ethernet 10/100 Mbit interface (RJ-45) for wired connection to LAN (Local Area Network).



NETIO CLOUD

NETIO Cloud is a service for controlling multiple NETIO devices from one screen. It is well-secured and reliable. It is accessible via any web browser.



19" RACK

Some NETIO devices fit into 19" cabinet (1U). Metal brackets (Rack Mount Kits) are available as an accessory.



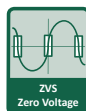
SENSOR T1

NETIO Sensor T1 is an external temperature sensor on 3m cable. It is compatible with NETIO products equipped by DI (Digital input).



POWER METERING

Some NETIO devices can measure electrical values – [A], [W], [Wh], TPF (True Power Factor), [V], [Hz], [°], ...



ZVS (ZERO VOLTAGE SWITCHING)

The relay contacts switch the output on or off when the voltage crosses the zero level. This reduces the negative effect of Inrush Current.



CONDITION & RULES

NETIO Condition (PAB & WatchDog) & Rules are pre-defined detections (Conditions) and related actions. Running in NETIO PDU devices.



POWER WATCHDOG

PDU based autonomous monitoring of connected (powered) electrical device system. Power consumption drops-down can be used for autonomous restart.



HTTPS

NETIO devices are configured via an internal web server. All communication with the device, which is HTTP-based, can be encrypted using HTTPS and custom certificates.



MODBUS/TCP

Modbus/TCP is a communication protocol designed for industrial applications - exchanging data messages in a master-slave mode.



SNMP v3

SNMP version 3 supports secure communication. Unlike SNMP v1 and v2, it uses username and password authentication and SSL encryption.



MQTT

MQTT (Message Queuing Telemetry Transport) is a simple protocol for exchanging messages among devices. It is frequently used in IoT applications.



XML over HTTP(s)

XML stands for eXtensible Markup Language. It is a language that uses tags in a defined structure. A XML data structure is transferred over HTTP(s).



URL API (http get)

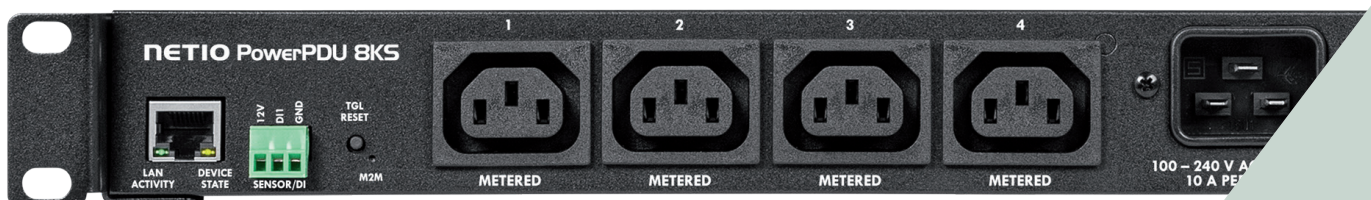
Simple method for passing parameters as a part of a URL address (http get). In this way, it is easy to turn on/off or toggle each individual socket.

PRODUCT FAMILIES

PowerBOX family



PowerPDU family

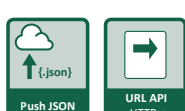
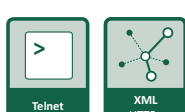
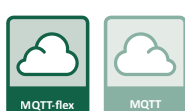
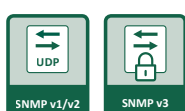
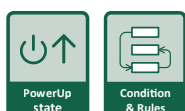
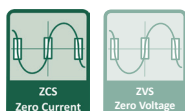
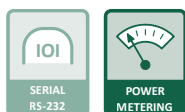
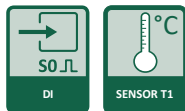
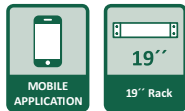
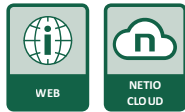


PowerDIN family



PowerCable family

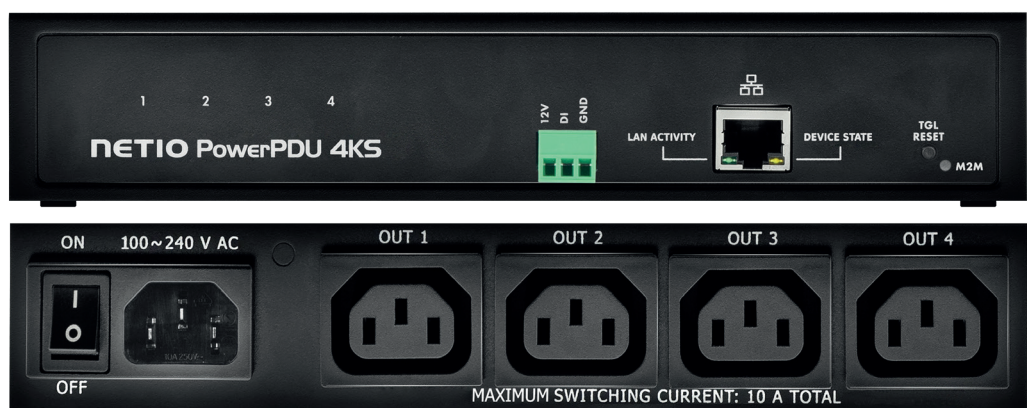




PowerPDU 4KS

PowerPDU 4KS is a metered PDU with four IEC-320 C13 power outlets, LAN port and 1x DI (Digital Input). PowerPDU 4KS measures electrical parameters (A, kWh, TPF, W, V, Hz) on each power outlet individually. Each output is controllable via device web, NETIO Cloud service (not mandatory) or NETIO Mobile 2 App. Integrations are simple thanks to its Open API and ready to use AV drivers (Crestron, Extron, Savant, RTI, Utelogy, ELAN and more).

Power Metering & Switching



SPECIFICATIONS

- Switching & metering each power output independently
- **4x power metering (A, W, kWh, TPF, V, Hz)**
- Power input: IEC-320 C14 (110/230 V AC) 10A
- Power output: 4x IEC-320 C13 / 10A
- 1x RJ45 Ethernet
- 1x DI - Digital Input
- ZCS (Zero Current Switching)

FEATURES

- **Thermostat feature**
(Ext. temperature sensor support)
- Ping + Power WatchDog
- Week Scheduler function
- PowerUp State
- PowerUp Delay
- AV Drivers ready

CONTROL OPTIONS

- **Web Interface (HTTPs)**
- Open API
- **NETIO Cloud**
- NETIO Mobile 2
- 1x DI (Digital Input)

OPEN API

- Telnet
- SNMP v1/v3
- Modbus/TCP
- MQTT-flex
- URL API - HTTP(s) get
- JSON over HTTP(s)
- & more

PowerPDU 4PS

PowerPDU 4PS is a managed PDU (Power Distribution Unit) with four power outlets (4x IEC 320 C13). Each output can be switched on/off individually. NETIO PowerPDU 4PS can be mounted in rack cabinets – horizontally, vertically, or as a 1U device. Integration into third-party systems is possible by using various protocols (JSON over HTTP(s), Modbus/TCP, NMP, MQTT-flex, Telnet, ...). With the NETIO Cloud service, the outputs can be controlled from anywhere. Drivers for AV systems are available (Crestron, Utelogy, ELAN and many more).

Power Switching



SPECIFICATIONS

- Switching each power output independently
- Power input: IEC-320 C14 (110/230 V AC) 10A
- Power output: 4x IEC-320 C13 / 10A
- 1x RJ45 Ethernet
- ZVS (Zero Voltage Switching)

FEATURES

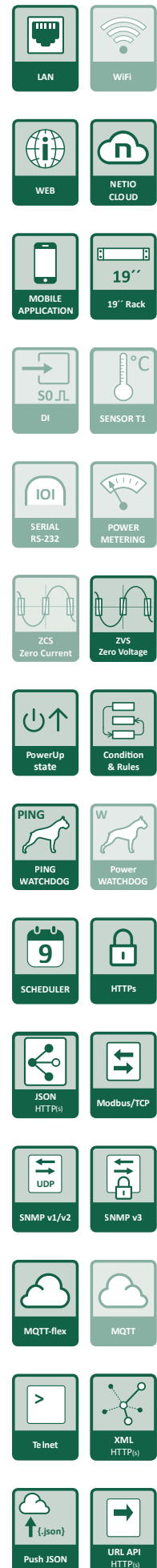
- Ping WatchDog
- Week Scheduler function
- PowerUp State
- PowerUp Delay
- AV Drivers ready

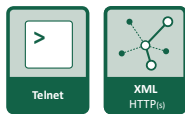
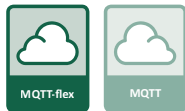
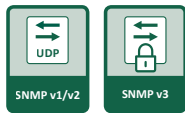
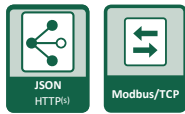
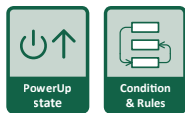
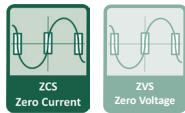
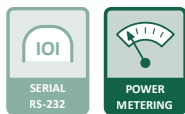
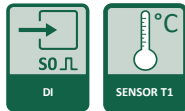
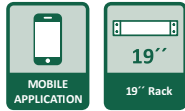
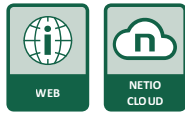
CONTROL OPTIONS

- **Web Interface (HTTPs)**
- Open API
- **NETIO Cloud**
- NETIO Mobile 2

OPEN API

- Telnet
- SNMP v1/v3
- Modbus/TCP
- MQTT-flex
- URL API - HTTP(s) get
- JSON over HTTP(s)
- & more

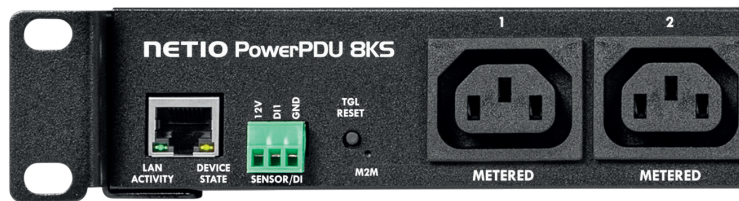




PowerPDU 8KS

PowerPDU 8KS is a PDU (Power Distribution Unit) with eight power outputs controlled and metered over LAN. Each output can be switched on/off and metered individually. It fits into a 19" cabinet (1U). A Digital Input (DI) can be used to control the outputs or count 50 pulses. With the NETIO Cloud service, the outputs can be controlled from anywhere. Drivers for AV systems are available (Crestron, Extron, Savant, RTI, Utelogy, ELAN and more).

Power Metering & Switching



SPECIFICATIONS

- Switching & metering each power output independently
- 8 power metering channels (A, W, kWh, TPF, V, Hz)
- Power input: IEC-320 C14 (110/230 V AC) 10A
- Power output: 8x IEC-320 C13 / 10A
- 1x RJ45 Ethernet
- 1x DI - Digital Input
- ZCS (Zero Current Switching)

FEATURES

- **Thermostat feature**
(Ext. temperature sensor support)
- Ping + Power WatchDog
- Week Scheduler function
- PowerUp State
- PowerUp Delay
- AV Drivers ready

CONTROL OPTIONS

- **Web Interface (HTTPS)**
- Open API
- NETIO Cloud
- NETIO Mobile 2
- 1x DI (Digital Input)

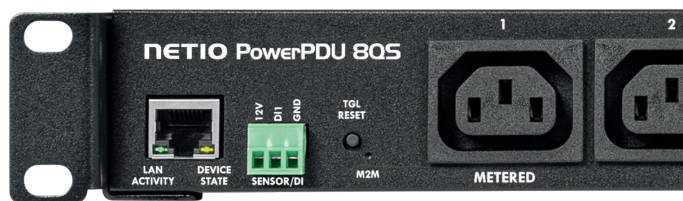
OPEN API

- Telnet
- SNMP v1/v3
- Modbus/TPC
- MQTT-flex
- URL API - HTTP(s) get
- JSON over HTTP(s)
- & more

PowerPDU 8QS

PowerPDU 8QS is a PDU (Power Distribution Unit) with eight power outputs controlled and metered over LAN. Each output can be switched on/off individually. It fits into a 19" cabinet (1U). PowerPDU 8QS supports two channels for electrical measurements: the PDU as a whole (all outputs combined), and the first output separately (Output1). A Digital Input (DI) can be used to control the outputs or count S0 pulses. With the NETIO Cloud service, the outputs can be controlled from anywhere. Drivers for AV systems are available (Crestron, Extron, Savant, RTI, Utelogy, ELAN and more).

Power Metering & Switching



SPECIFICATIONS

- Switching each power output independently
- 2 power metering channels (Total + Output 1)
- Power input: IEC-320 C14 (110/230 V AC) 10A
- Power output: 8x IEC-320 C13 / 10A
- 1x RJ45 Ethernet
- 1x DI - Digital Input
- ZVS (Zero Voltage Switching)

FEATURES

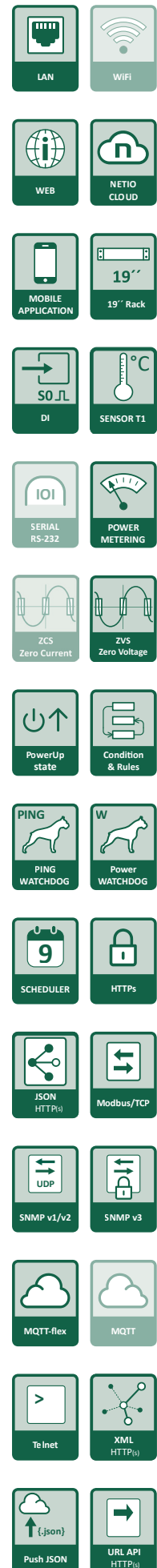
- **Thermostat feature**
(Ext. temperature sensor support)
- Ping + Power WatchDog
- Week Scheduler function
- PowerUp State
- PowerUp Delay
- AV Drivers ready

CONTROL OPTIONS

- **Web Interface (HTTPs)**
- Open API
- NETIO Cloud
- NETIO Mobile 2
- 1x DI (Digital Input)

OPEN API

- Telnet
- SNMP v1/v3
- Modbus/TCP
- MQTT-flex
- URL API - HTTP(s) get
- JSON over HTTP(s)
- & more

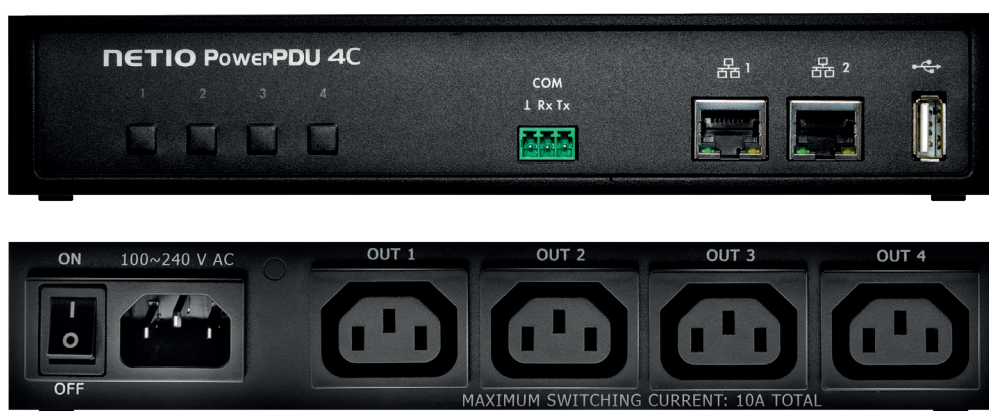




PowerPDU 4C (Linux based)

PowerPDU 4C is a metered PDU with four IEC-320 C13 power outlets, 2 LAN ports (embedded Ethernet switch) and a serial port (RS-232). PowerPDU 4C measures electrical parameters (A, kWh, TPF, W, V, Hz) on each power outlet individually. Each output is controllable via its web interface over the local network or, when used with the NETIO Cloud service, integrators can easily access it remotely. Integrations are simple thanks to its Open API and ready AV drivers (Crestron, Extron, Savant, RTI, Biamp, ELAN and more).

Power Metering & Switching



SPECIFICATIONS

- Switching & metering each power output independently
- 4x power metering (A, W, kWh, TPF, V, Hz)
- Power input: IEC-320 C14 (110/230 V AC) 10A
- Power output: 4x IEC-320 C13 / 10A
- 2x RJ45 Ethernet
- **Serial Port (RS-232)**
- ZCS (Zero Current Switching)

FEATURES

- Ping WatchDog
- Week Scheduler function
- PowerUp State
- PowerUp Delay
- AV Drivers ready
- **Lua scripting**
- **Custom HTTPs Certificate**

CONTROL OPTIONS

- Web Interface
- Open API
- NETIO Cloud
- NETIO Mobile 2
- Lua Script

OPEN API

- Telnet
- SNMP v1/v3
- Modbus/TCP
- MQTT
- URL API - HTTP(s) get
- JSON over HTTP(s)
- & more

PowerDIN 4PZ

PowerDIN 4PZ is a dual 230V/16A electricity meter with LAN/WiFi and I/O, designed to fit on a DIN rail. Each of the 4 outputs can be switched on or off independently using the Web interface, Open API or NETIO Cloud. Power Outputs 1 & 2 are metered (A, W, kWh, TPF, V, Hz). Energy (Wh) is metered in both directions (consumed / supplied energy). States of 2x DI (Digital Input) with S0 pulse counter (32 bit) can be also read remotely.

Power Metering & Switching



SPECIFICATIONS

- 1 phase (power input 230V / max 16A)
- Switching each power output independently
- 2x Power metering (Output 1 & 2)
- 1x RJ45 Ethernet
- ZCS (Zero Current Switching) on Power Output 1 & 2

- Power Outputs 1 & 2 – independently-metered and switched channels (230V/max 16A AC)
- Relay Outputs 3 & 4 – relay outputs NO/NC (max 230VAC/2A or 48VDC/2A)
- DI (Digital Inputs) In1 & In2 – connect switch (dry contact), S0 pulse meter or Temperature sensor

CONTROL OPTIONS

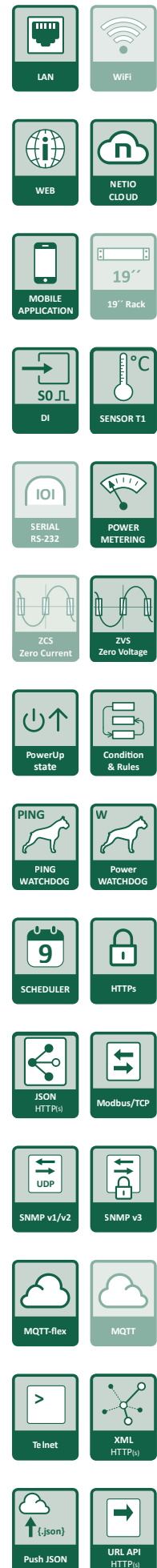
- **Web Interface (HTTPs)**
- Open API
- NETIO Cloud
- NETIO Mobile 2
- 2x DI (Digital Input)

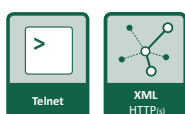
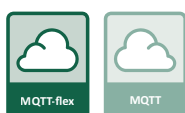
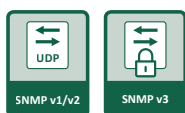
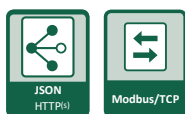
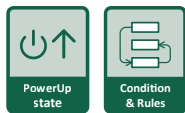
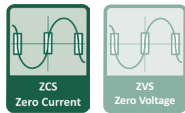
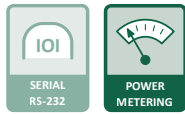
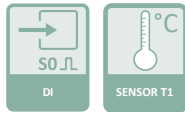
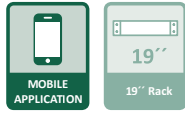
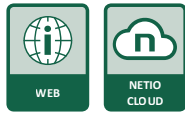
FEATURES

- **Thermostat feature**
(Ext. temperature sensor support)
- Ping + Power WatchDog
- Week Scheduler function
- PowerUp State
- PowerUp Delay
- AV Drivers ready

OPEN API

- Telnet
- SNMP v1/v3
- Modbus/TCP
- MQTT-flex
- URL API - HTTP(s) get
- JSON over HTTP(s)
- & more





PowerBOX 4Kx

NETIO PowerBOX 4Kx is a LAN-enabled smart power strip with 4 outputs. Each output socket can be switched on or off individually over the web interface. Integration with 3rd party systems using various protocols (JSON over HTTP(s), Modbus/TCP, SNMP, MQTT-flex, Telnet, ...) is possible. With the secure NETIO Cloud service, the outputs can be controlled from anywhere. Drivers for AV systems are available (Crestron, Extron, Savant, RTI, Utelogy, ELAN and more).

Power Metering & Switching



SPECIFICATIONS

- Switching & metering each power output independently
- 4x power metering (A, W, kWh, TPF, V, Hz)
- Power input: 230V / 16A (13A for 4KG)
- Power output: 4x max 16A per output (13A for 4KG)
- 1x RJ45 Ethernet
- ZCS (Zero Current Switching)

FEATURES

- Ping + Power WatchDog
- Week Scheduler function
- PowerUp State
- PowerUp Delay
- AV Drivers ready

CONTROL OPTIONS

- Web Interface (HTTPs)
- Open API
- NETIO Cloud
- NETIO Mobile 2

OPEN API

- Telnet
- SNMP v1/v3
- Modbus/TCP
- MQTT-flex
- URL API - HTTP(s) get
- JSON over HTTP(s) & more

PowerBOX 4Kx with WiFi

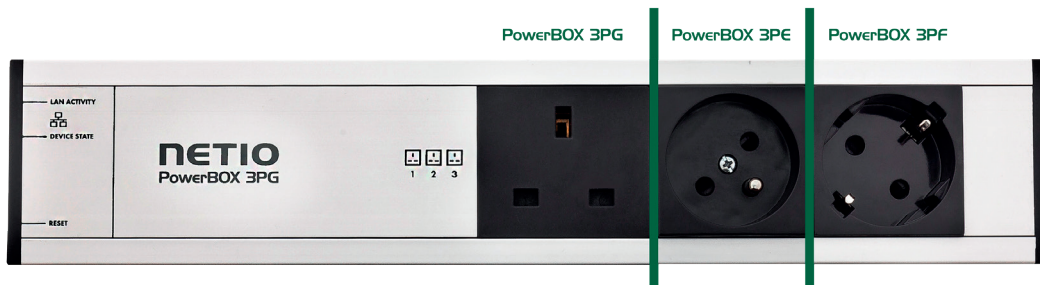
From 2024 an option of PowerBOX 4Kx **with WiFi** is available. It comes in all three Types of sockets (G, F, E).



PowerBOX 3Px

NETIO PowerBOX 3Px is a professional electrical socket device with 3 outputs and LAN connectivity. Each output socket can be separately switched on or off over the web interface. Integration into 3rd party systems using various protocols (JSON over HTTP(s), Modbus/TCP, SNMP, MQTT-flex, Telnet, ...). With the NETIO Cloud service, the outputs can be controlled from anywhere. Drivers for AV systems are available (Crestron, Extron, Savant, RTI, Utology, ELAN and many more).

Power Switching



SPECIFICATIONS

- Switching each power output independently
- Power input: 230V / 16A (13A for 3PG)
- Power output: 3x max 16A per output (13A for 3PG)
- 1x RJ45 Ethernet
- ZVS (Zero Voltage Switching)

FEATURES

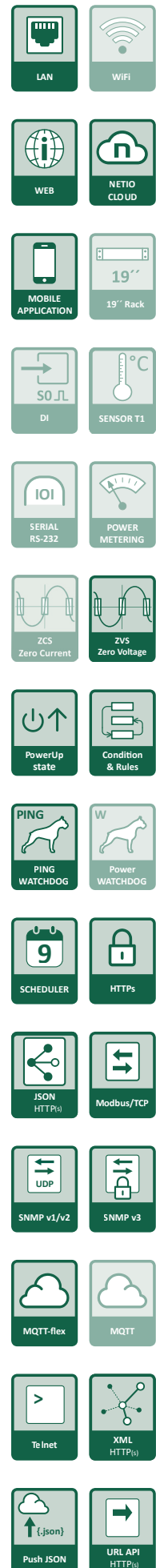
- Ping WatchDog
- Week Scheduler function
- PowerUp State
- PowerUp Delay
- AV Drivers ready

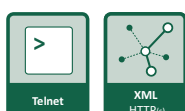
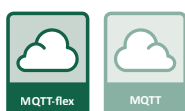
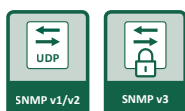
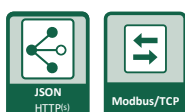
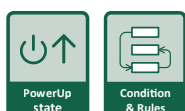
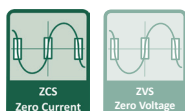
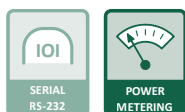
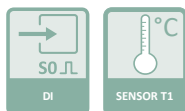
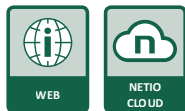
CONTROL OPTIONS

- **Web Interface (HTTPs)**
- Open API
- NETIO Cloud
- NETIO Mobile 2

OPEN API

- Telnet
- SNMP v1/v3
- Modbus/TCP
- MQTT-flex
- URL API - HTTP(s) get
- JSON over HTTP(s)
- & more





PowerCable REST 101x

NETIO PowerCable REST 101x is a smart WiFi power socket for integration with 3rd party systems. Use PowerCable REST to measure electrical parameters (A, W, kWh, TPF, V, Hz) and switch its output on/off using one of the 10 Open API protocols, the web interface, NETIO Cloud, or the mobile app. Drivers for AV systems are available (Crestron, Extron, Savant, RTI, Utelogy, ELAN and more).

Power Metering & Switching



SPECIFICATIONS

- Switching & metering the power output
- 1x power metering (A, W, kWh, TPF, V, Hz)
- Power input: Depending on the model
- Power output: 110/230V 10-16A (by model 101x)
- **WiFi Connection**
- ZCS (Zero Current Switching)

FEATURES

- Ping + Power WatchDog
- Week Scheduler function
- PowerUp State
- PowerUp Delay
- AV Drivers ready

CONTROL OPTIONS

- **Web Interface (HTTPS)**
- Open API
- NETIO Cloud
- NETIO Mobile 2

OPEN API

- Telnet
- SNMP v1/v3
- Modbus/TCP
- MQTT-flex
- URL API - HTTP(s) get
- JSON over HTTP(s)
- & more

Available Models



PowerCable REST 101F



PowerCable REST 101E



PowerCable REST 101J



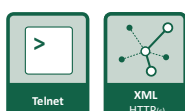
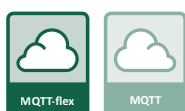
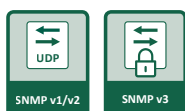
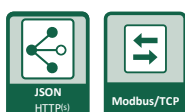
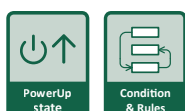
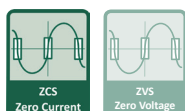
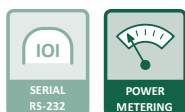
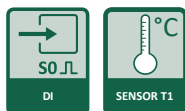
PowerCable REST 101S



PowerCable REST 101Y



PowerCable REST 101G



PowerCable 2KZ / 2KF

NETIO PowerCable 2Kx is LAN & WiFi based flat PDU with 2 power outputs & 2x DI (Digital Input) for external devices. Device measures electrical parameters (A, W, kWh, TPF, V, Hz) and switches individually both outputs ON/OFF/restart. 2x DI (Digital Input) with 50 pulse counter (32 bit) can be used to connect external devices or energy meters. Integration with 3rd party systems (Open API + AV drivers) is possible.

Power Metering & Switching



SPECIFICATIONS

- Switching & metering both power outputs independently
- 2x power metering (A, W, kWh, TPF, V, Hz)
- Power input: 230V / 16A
- Power output: 2x Power switching + metering
- 1x RJ45 Ethernet + WiFi
- 2x DI - Digital Input
- ZCS (Zero Current Switching)

FEATURES

- **Thermostat feature**
(Ext. temperature sensor support)
- Ping + Power WatchDog
- Week Scheduler function
- PowerUp State
- PowerUp Delay
- AV Drivers ready

CONTROL OPTIONS

- **Web Interface (HTTPs)**
- Open API
- **NETIO Cloud**
- NETIO Mobile 2
- 2x DI (Digital Input)

OPEN API

- Telnet
- SNMP v1/v3
- Modbus/TCP
- MQTT-flex
- URL API - HTTP(s) get
- JSON over HTTP(s)
- & more

DEVICE TYPE OPTIONS

- PowerCable **2KF** - power cables included: EU plug, 2x power socket (Type F, E or G)
- PowerCable **2KZ** - no power cables, terminal block inside

PowerCable 2PZ

NETIO PowerCable 2PZ is cost effective version of the flat PDU. LAN & WiFi based PDU with 2 switched power outputs. Device switches both outputs individually ON/OFF/restart. Integration with 3rd party systems (Open API + AV drivers) is possible.

Power Switching



SPECIFICATIONS

- Switching each power output independently
- Power input: 230V / 16A
- Power output: 2x Power switching
- 1x RJ45 Ethernet + WiFi
- ZVS (Zero Voltage Switching)

FEATURES

- Ping WatchDog
- Week Scheduler function
- PowerUp State
- PowerUp Delay
- AV Drivers ready

CONTROL OPTIONS

- **Web Interface (HTTPs)**
- Open API
- **NETIO Cloud**
- NETIO Mobile 2

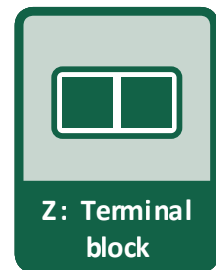
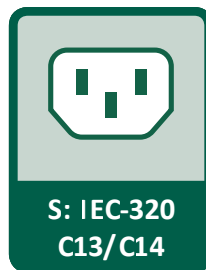
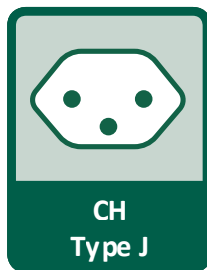
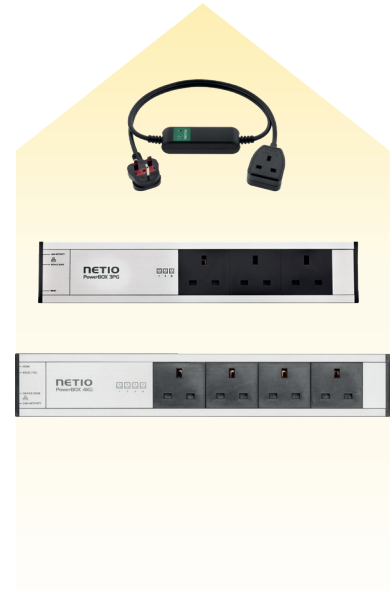
OPEN API

- Telnet
- SNMP v1/v3
- Modbus/TCP
- MQTT-flex
- URL API - HTTP(s) get
- JSON over HTTP(s)
- & more

DEVICE TYPE OPTIONS

- PowerCable **2PF** - power cables included: EU plug, 2x power socket (Type F, E or G)
- PowerCable **2PZ** - no power cables, terminal block inside

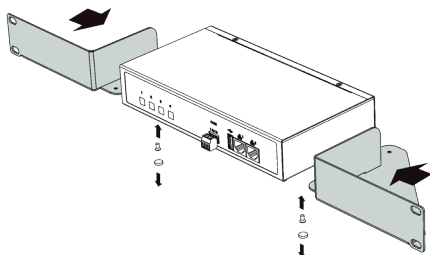




PowerPDU Family Accessories

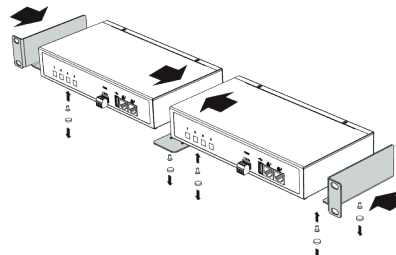
NETIO RM1 4C

Metal brackets to install one PowerPDU 4PS, 4KS or 4C device into a 1U space in a 19" rack frame.



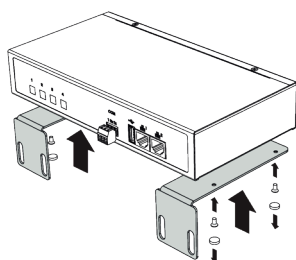
NETIO RM2 2x4C

Metal brackets to install two pieces of PowerPDU 4PS, 4KS or 4C devices into a 1U space in a 19" rack frame.



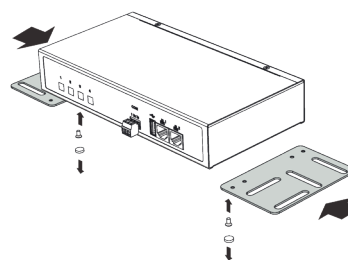
NETIO RM3 4C vertical

Metal brackets to fasten one NETIO PowerPDU device (PowerPDU 4PS, 4KS, 8QS or 4C) to a vertical bar in a rack frame.



NETIO RM4 4C universal

Universal metal brackets to fasten one PowerPDU 4PS, 4KS, 8QS or 4C devicee.g. to horizontal bars in a rack frame.



PowerBOX Family Accessories



NETIO MK1 PowerBOX

Metal bracket for mounting 1 piece of PowerBOX 3Px or PowerBOX 4Kx on the wall, contains two metal pieces. Both parts slide into the aluminum profile (back side).



NETIO MK2 PowerBOX 19 horizontal

Metal brackets for 1 unit of NETIO PowerBOX 3Px / 4Kx into a 1.5U space in a 19" rack frame.

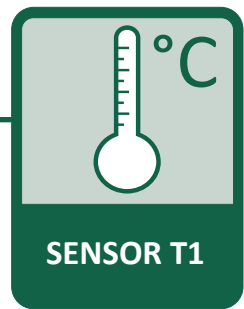


NETIO MK3 PowerBOX 19 vertical

Metal brackets to fasten 1 unit of NETIO PowerBOX 3Px/4Kx to a vertical bar in a rack frame.

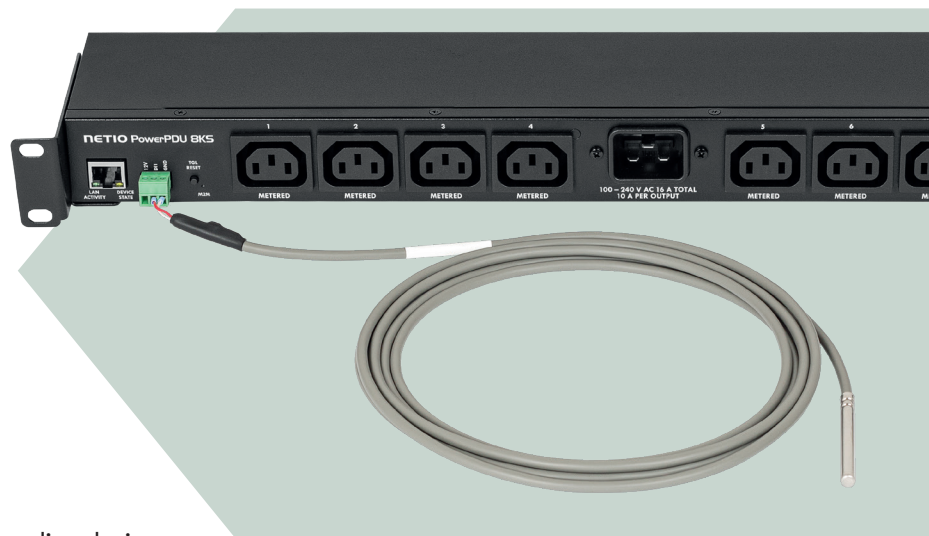
Sensor T1

NETIO Sensor T1 is an external temperature sensor on 3m cable. It is compatible with NETIO products equipped by DI (Digital input). Temperature value is indicated on the device web. Using the CR (Condition & Rules) and PAB features can be defined output switched autonomously based on measured temperature. Temperature value will be also supported by API protocols, mobile app NETIO Mobile 2, NETIO Cloud and other features during 2024.



Properties

- **Operating range:** -20 °C to +80 °C
- **Accuracy:** ± 0.4 °C
- **Interface:** DI terminal block
- **Cable:** PVC shielded cable, 3 m
- **Probe:** Stainless steel, 60 mm, \varnothing 6 mm
- **IP** 67

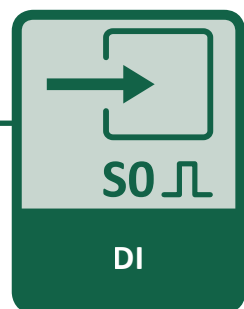


Application

- Thermostat switching power for heating / cooling device
- Indoor/outdoor temperature monitoring (warehouse, production, meeting rooms)
- **IT** – Temperature in rack, data center or server rooms
- **AV** – Studios, conference rooms, museums, cinemas, smart home, digital signature

Digital Input

Digital Input is 2 state input (0 or 1) for connecting dry contact (mechanical switch). Any push-button, mechanical switch or sensor/detector with relay output can be connected to the Digital Input. There is also a 12V power output available.

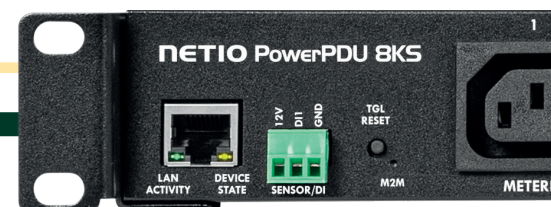


DI State Indication

- DI state (0 / 1) + pulse counter is shown on the device web page.
- DI state (0 / 1) + pulse counter is visible in NETIO Cloud.
- DI state (0 / 1) + pulse counter is available in the APIs (JSON, MQTT, SNMP, ...)

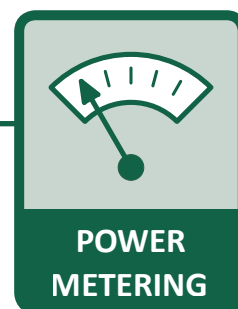
You can connect to NETIO DI

Mechanical switch, movement detector, temperature sensor T1, etc.



Accurate Power Metering

As a unique feature, NETIO power socket models that support power metering can measure electrical parameters with a high accuracy (1%) - each device is two-point calibrated at the factory, giving you a reliable data source for your power analysis!



All metered values are accessible via web interface and Open API.

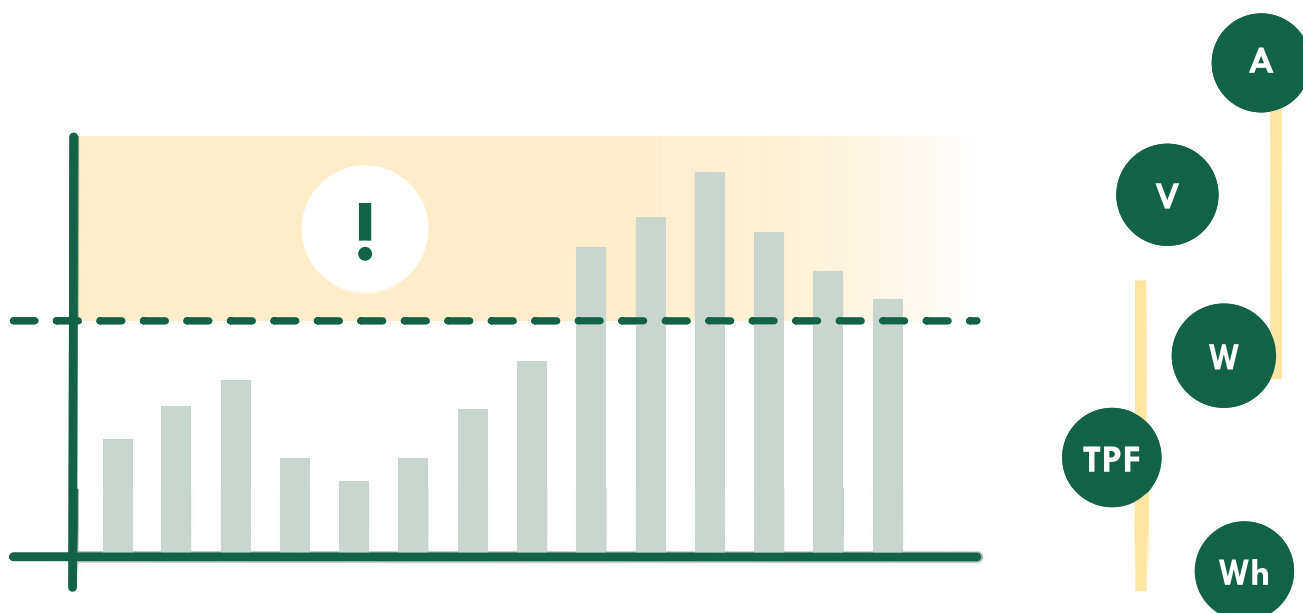
Metered values*

- Current [A]
- Output power [W]
- Phase shift [°]
- TPF (True Power Factor)
- Voltage [V]
- Grid frequency [Hz]
- Energy [Wh]
- Reverse Energy [Wh]

*Actual number of metered values depends on the product model

How can you use the data?

- **Power & Cost analysis** of your electrical appliance (TV screens, fridges etc.)
- Long-term behavior **monitoring and predictive maintenance**
- **Threshold warnings** when power is too high / too low
- **Monitoring fault conditions** (e.g. water pump is running dry)
- Power monitoring over SNMP in Zabbix / Nagios / Prometheus / Grafana etc.
- **Counting repeated work cycles** of a generic mechanical machine (e.g. gates, robots or vending machines)
- Download CSV file from NETIO Cloud per output.



NETIO Cloud



With NETIO Cloud, you can switch On/Off or restart (power cycle) any electrical appliance powered by NETIO PDU power output. Several NETIO PDUs can be connected to one company account. Users can control PDU output(s) from the Mobile App (iOS & Android) or the NETIO Cloud Service web page.

- Secured online service (TLS 1.3, HTTPs)
- Long-term stable & reliable
- User Roles & Access Rights
- Remote firmware update
- Project oriented (Multi-user feature)
- On Premise version available
- Open API mindset
- Mobile app NETIO Mobile 2 synchronization

ONE DASHBOARD

In NETIO cloud you see all of the outputs of your devices on one dashboard and easily control them from there. Each output you can switch On/Off, restart (short power off) or also activate/deactivate the Scheduler feature.

SEARCH FUNCTION

You can name outputs and devices. You can filter the words you like through the search bar and control a group based on names.

MULTI-USER

Basic cloud account is dedicated for organization (company). There can be several user accounts with different assigned roles within the company.

DEVICE GROUPING

Each device can be assigned to a defined group for clarity. You can sort the devices by different criteria (buildings, location, customer, purpose, ...).

TWO-FACTOR AUTHENTICATION

You can secure your account beyond just username and password with Two-Factor Authentication (2FA).

SINGLE SIGN-ON

You can use MS 365, Google or Octa to log in into your account. Domain login is possible for customers with Enterprise subscription plan.



On Premise Available.

CREDIT SYSTEM

NETIO Cloud is a paid service, charged in NETIO Cloud credits. These credits are then deducted per day based on the number of devices added to the organization according to the subscription plan chosen.

How to get NETIO Cloud credits?

- **Credit Voucher** - You can buy Credit Vouchers from our Distributors.
- **Welcome credit** - Once you add a new product to your NETIO Cloud organization, NETIO Cloud automatically adds 50 000 FREE credits one time per device.

SUBSCRIPTION PLANS

NETIO Cloud offers its customers 3 types of subscription, plus a custom one for bigger projects.

	BASIC	SMALL OFFICE	ENTERPRISE
Max. Users	1	5	50
User Roles	-	YES	YES
Device Limit	50	500	2000
Device Groups	-	YES	YES
Remote Schedule ON/OFF	-	YES	YES
NETIO Mobile 2	YES	YES	YES
Audit Log	-	YES	YES
MQTT API <small>(publish/day)</small>	-	5,000	10,000
PDU Connection Alert	YES	YES	YES
Connection Error Alert Reaction Time	30 min.	1 min.	1 min.
Historical Data Retention <small>(after an additional fee)</small>	1 Year	2 Years	4 Years
PAB & WatchDog Alerts	-	-	YES
Remote Firmware Update	YES	YES	YES
0 Credit Protection Period <small>(until the account is blocked)</small>	7 days	14 days	30 days

TRY NETIO CLOUD DEMO!

Test the NETIO cloud service even without NETIO PDU on the table.

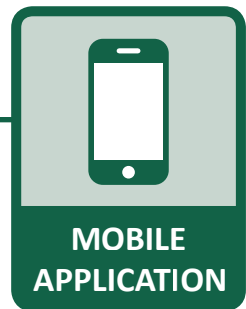
Go to: cloud.netio-products.com

Login: demo@netio.eu / password: demodemo

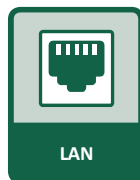


NETIO Mobile 2

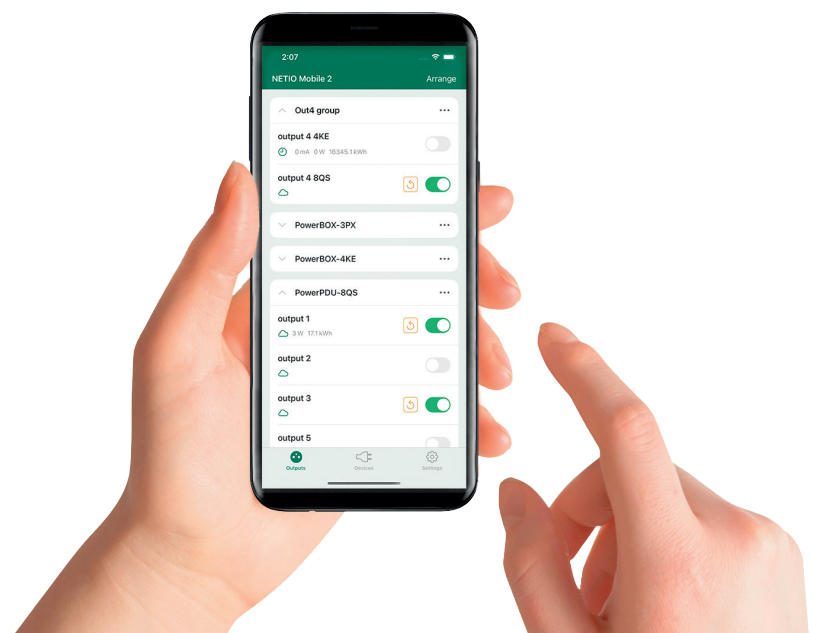
NETIO Mobile 2 is a mobile app to control all outputs on several NETIO devices over LAN (WiFi) or NETIO Cloud account from mobile phones and tablets. It is supported by all NETIO devices.



- **Control individual power outputs** – switch ON, switch OFF, RESET
- Mobile App control devices on **LAN** or all devices in defined **user account** (NETIO Cloud).
- **Read power consumption data** (A, W, Wh) from outputs that support energy metering
- Turn the Scheduler on / off for each output
- Outputs can be arranged into groups
- Group control - switch on/off all outputs in the group
- Group control - turn the Scheduler on/off for all outputs in the group
- Organize the outputs within groups (by function or location)
- Change output / device names (visible in the application)
- Add multiple devices to the mobile app
- Search your network for NETIO devices (LAN discover function)



Get our mobile app NETIO Mobile 2:

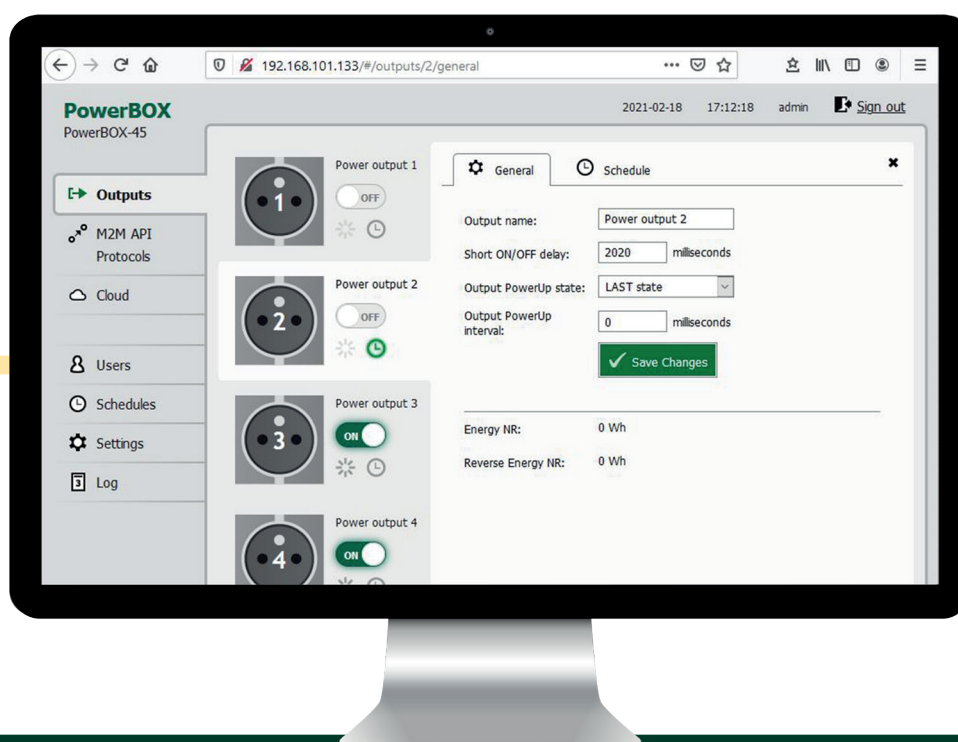


User-friendly Web Interface

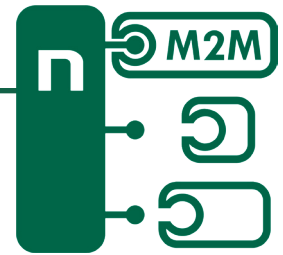
NETIO devices include their own web server and can be configured over the web interface. The web interface is accessible over the local network with any web browser at the device's IP address. Each output can be controlled independently and electrical metering data are visible for metered outputs.



- **Switching** each power output On / Off / Reset
- Electrical **metering** data visible
- **Open API** configuration
- **NETIO Cloud** connection
- **Scheduler function:** Time-based power switching for each output
- **IP WatchDog(s), Rules & Condition configuration.**
- **PowerUp state:** Define the behavior of the power output after the device is powered up (or after power is restored after power outage). Possible values: On / Off / Last state.
- **PowerUp delay:** Set a delay (in milliseconds) to wait before switching the output (e.g. when the power is restored after an outage). This prevents circuit breakers from tripping.



Open API



Monitor and control your NETIO power socket via any interoperable device, software or cloud. NETIO devices can be easily integrated into the systems you are already using. NETIO products support many Open API standards such as MQTT, Modbus/TCP, JSON over HTTP, SNMP, XML and more...



JSON
HTTP(s)



XML
HTTP(s)

JSON and XML over HTTP(s)

JSON and XML are popular thanks to their simplicity and human-readability. JSON is the most popular protocol, used in most integrations in the AV market – Crestron, Control4, RTI, Savant and more.



URL API
HTTP(s)

URL API (http get)

By accessing a certain WWW address, a socket can be switched on, switched off, or toggled. This method is often used in IP surveillance cameras, JAVA scripts, or other web technologies.



Push XML



Push JSON

HTTP(s) Push – JSON / XML

NETIO devices can periodically connect to the specified server over http / https and send data in a JSON or XML structure. It is useful in cases where the NETIO device is not accessible from the internet or the server (NETIO device is in a LAN behind a NAT).



MQTT



MQTT-flex

MQTT / MQTT-flex

MQTT is often used in IoT applications and related cloud services. It is designed for large networks with low data traffic to minimize data volumes. MQTT-flex is a text based configurable version of the standard MQTT protocol (broker details, topics, etc.).



SNMP v1/v2



SNMP v3

SNMP v1/v2, SNMP v3

NETIO sockets can be controlled via SNMP v1/v2 or the more secure SNMP v3. Popular SNMP applications are: Nagios, Zabbix, Cacti, Paessler PRTG Network Monitor and more.



Modbus/TCP

Modbus/TCP

Modbus/TCP is very common in industry, where it is a de-facto standard for communication on a local level. It does not support any security. Thanks to Modbus/TCP support, NETIO sockets can be controlled from PLCs or various SCADA applications.



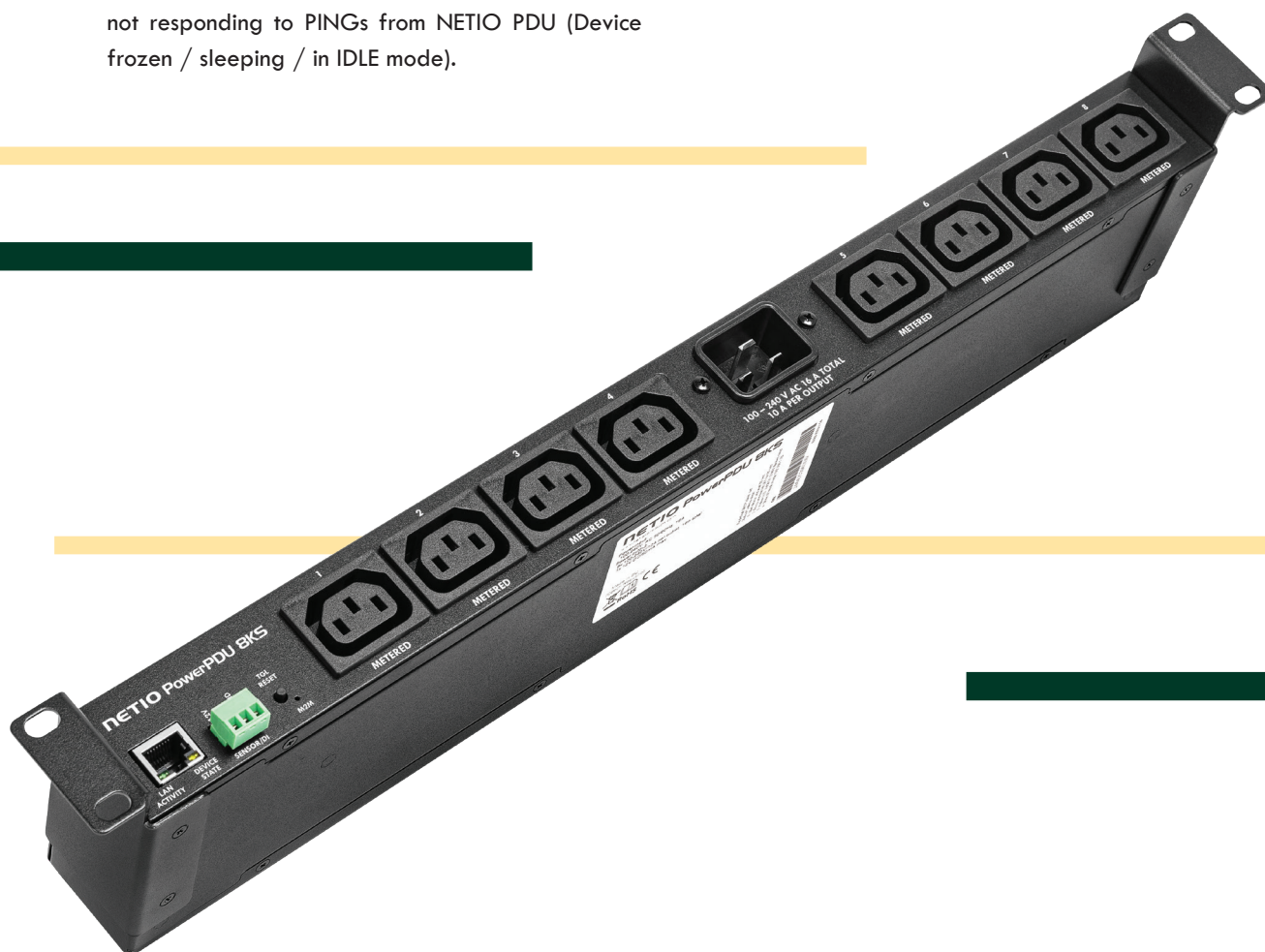
Telnet

Telnet

NETIO sockets can be controlled with commands sent over a Telnet connection. We maintain Telnet command compatibility with the KShell (Koukaam Shell) instruction set to ensure backward compatibility with Koukaam products.

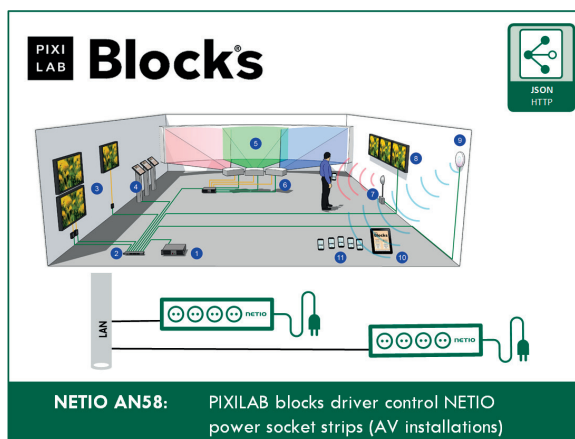
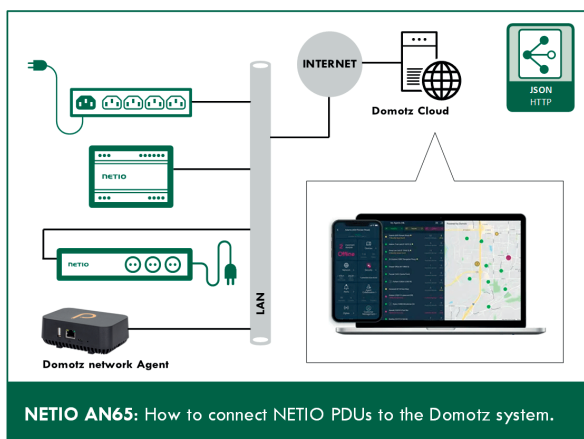
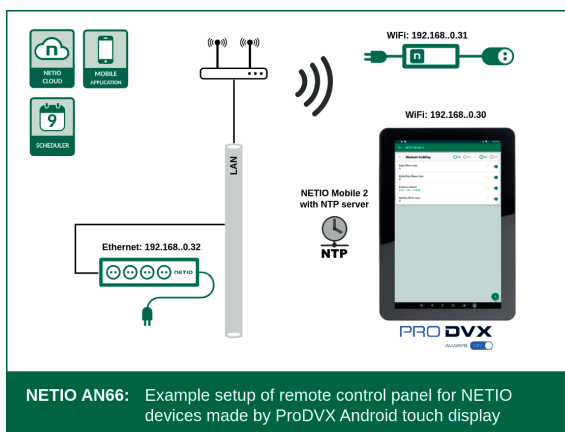
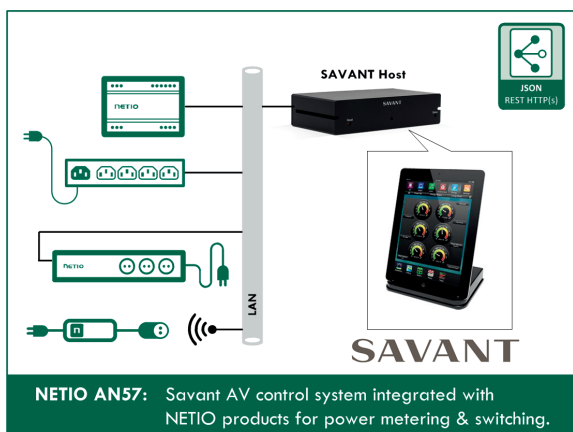
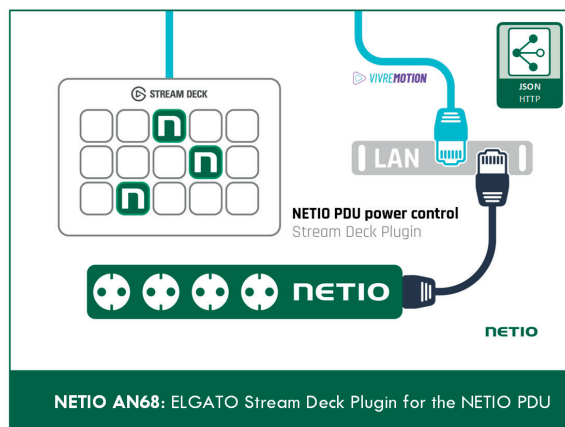
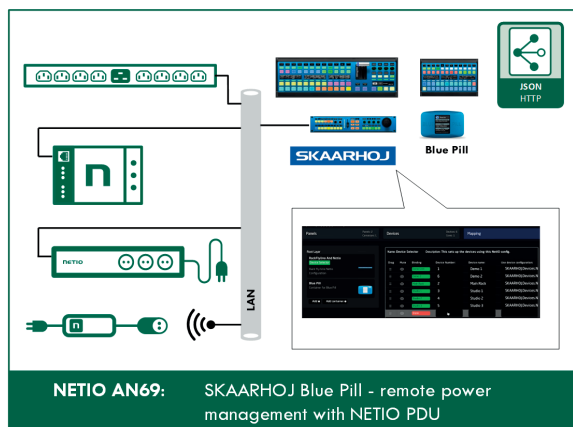
11 options how to control NETIO device:

- 1) From the device's web (it can be different than Admin's username/psw for that).
- 2) Using the NETIO Mobile 2 on LAN.
- 3) Using NETIO Cloud service from anywhere.
- 4) Using the NETIO Mobile 2 (NETIO Cloud user account).
- 5) Using AV drivers you can control Outputs from many Audio Video SW (Crestron, Control4, Neets, BrightSign, ...).
- 6) Using built in Week-Scheduler function you can define several On/Off intervals per each output. It requires time NTP synchronization.
- 7) With built in PING WatchDog function, you can restart (by power output) any LAN device when not responding to PINGs from NETIO PDU (Device frozen / sleeping / in IDLE mode).
- 8) With built in Power consumption WatchDog function, you can restart (by power output) any device powered from metered NETIO PDU output. Device frozen / sleeping / IDLE mode is detected by power consumption drop for several times.
- 9) Each DI input on the NETIO device can be assigned by Rules to Switch On/Off/Toggle any power output(s) on the same device.
- 10) There are several Open APIs (protocols) to control outputs/meter power consumption in M2M applications: JSON over HTTP, XML, SNMP, Modbus/TCP, MQTT, URL-API (http get), and others.
- 11) Using FLIC 2 button (BT + LAN gw) you can control up to 3 outputs (group of outputs) inside building.



Application Notes

A huge library of Application Notes helps with a better understanding of using NETIO products in your applications. Visit www.netio-products.com – to learn about “How to API”, browse examples of integrations, setups and more...



Integration Partners

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Product Comparison

PowerPDU 4C PowerPDU 4KS PowerPDU 4PS PowerPDU 8KS PowerPDU 8QS PowerBOX 4KF PowerBOX 4KE PowerBOX 4KG PowerBOX 3PF PowerBOX 3PE PowerBOX 3PG

Power input type	C14	C14	C14	C20	C20	Europlug	Europlug	Type G	Europlug	Europlug	Type G
Power input voltage	100-240 V	100-240 V	100-240 V	100-240 V	100-240 V	100-240 V	100-240 V	100-240 V	100-240 V	100-240 V	100-240 V
Power input current	max. 10 A	max. 10 A	max. 10 A	max. 10 A	max. 10 A	max. 16 A	max. 16 A	max. 13 A	max. 16 A	max. 16 A	max. 13 A
Power output type	4x C13	4x C13	4x C13	8x C13	8x C13	4x Type F	4x Type E	4x Type G	3x Type F	3x Type E	3x Type G
Switched channels	4	4	4	8	8	4	4	4	3	3	3
ZCS/ZVS	ZCS	ZCS	ZVS	ZCS	ZVS	ZCS	ZCS	ZCS	ZVS	ZVS	ZVS
Metered channels	4	4	-	8	1+Total	4	4	4	-	-	-
Surge protection (SPD Type 3)	●	●	●	●	●	●	●	●	●	●	●
Internal consumption	2-5 W	1-2 W	1-2 W	1-3 W	1-3 W	1-2 W	1-2 W	1-2 W	1-2 W	1-2 W	1-2 W
RS-232 (serial port)	●	-	-	-	-	-	-	-	-	-	-
PAB (Power Analyze Block)	-	●	-	●	●	●	●	●	-	-	-
Relay outputs (NO/NC)	-	-	-	-	-	-	-	-	-	-	-
Digital Inputs (DI) + SO counter	-	●	-	●	●	-	-	-	-	-	-
Temperature sensor “Sensor T1”	-	○	-	○	○	-	-	-	-	-	-
LAN	●	●	●	●	●	●	●	●	●	●	●
LAN switch	2 ports	-	-	-	-	-	-	-	-	-	-
WiFi	-	-	-	-	-	○	○	○	-	-	-
Web interface	●	●	●	●	●	●	●	●	●	●	●
Open API	●	●	●	●	●	●	●	●	●	●	●
PowerUp state	●	●	●	●	●	●	●	●	●	●	●
PowerUp delay	●	●	●	●	●	●	●	●	●	●	●
Week Scheduler function	●	●	●	●	●	●	●	●	●	●	●
PING WatchDog	●	●	●	●	●	●	●	●	●	●	●
Power WatchDog	-	●	-	●	●	●	●	●	-	-	-
Condition & Rules	-	●	●	●	●	●	●	●	●	●	
Lua scripting	●	-	-	-	-	-	-	-	-	-	-
NETIO Cloud support	●	●	●	●	●	●	●	●	●	●	●
Mobile App	●	●	●	●	●	●	●	●	●	●	●
SNMP v1/v2/v3	●	●	●	●	●	●	●	●	●	●	●
Modbus/TCP	●	●	●	●	●	●	●	●	●	●	●
MQTT-flex	-	●	●	●	●	●	●	●	●	●	●
MQTT	●	-	-	-	-	-	-	-	-	-	-
JSON over HTTP (XML)	●	●	●	●	●	●	●	●	●	●	●
Telnet	●	●	●	●	●	●	●	●	●	●	●
URL API (http get)	●	●	●	●	●	●	●	●	●	●	●
HTTP(s) Push - JSON	-	●	●	●	●	●	●	●	●	●	●
HTTP(s) Push - XML	-	●	●	●	●	●	●	●	●	●	●
HTTPs	○	●	●	●	●	●	●	●	●	●	●
19” rack mount	○	○	○	●	●	○	○	○	○	○	○

Product Comparison

PowerDIN 4PZ	PowerCable 2KZ	PowerCable 2KF	PowerCable 2PZ	PowerCable 2PF	PowerCable REST 101F	PowerCable REST 101E	PowerCable REST 101G	PowerCable REST 101S	PowerCable REST 101J	PowerCable REST 101Y	
Term. b.	Term. b.	Europlug	Term. b.	Europlug	Europlug	Europlug	Type G	Type S	Type J	Europlug	Power input type
100-240 V	100-240 V	100-240 V	100-240 V	100-240 V	100-240 V	100-240 V	100-240 V	100-240 V	100-240 V	100-240 V	Power input voltage
max. 16 A	max. 16 A	max. 16 A	max. 16 A	max. 16 A	max. 16 A	max. 16 A	max. 13 A	max. 10 A	max. 10 A	max. 10 A	Power input current
4x Term. b.	2x Term. b.	2x Type F	2x Term. b.	2x Type F	1x Type F	1x Type E	1x Type G	1x Type S	1x Type J	1x Type Y	Power output type
4	2	2	2	2	1	1	1	1	1	1	Switched channels
ZVS	ZCS	ZCS	ZVS	ZVS	ZCS	ZCS	ZCS	ZCS	ZCS	ZCS	ZCS/ZVS
4	2	2	-	-	1	1	1	1	1	1	Metered channels
●	●	●	●	●	●	●	●	●	●	●	Surge protection (SPD Type 3)
1-2 W	1-2 W	1-2 W	1-2 W	1-2 W	1-2 W	1-2 W	1-2 W	1-2 W	1-2 W	1-2 W	Internal consumption
-	-	-	-	-	-	-	-	-	-	-	RS-232 (serial port)
●	●	●	●	●	●	●	●	●	●	●	PAB (Power Analyze Block)
2	-	-	-	-	-	-	-	-	-	-	Relay outputs (NO/NC)
2	2	2	●	●	-	-	-	-	-	-	Digital Inputs (DI) + S0 counter
○	○	○	-	-	-	-	-	-	-	-	Temperature sensor “Sensor T1”
●	●	●	●	●	●	●	●	●	●	●	LAN
-	-	-	-	-	-	-	-	-	-	-	LAN switch
●	●	●	●	●	●	●	●	●	●	●	WiFi
●	●	●	●	●	●	●	●	●	●	●	Web interface
●	●	●	●	●	●	●	●	●	●	●	Open API
●	●	●	●	●	●	●	●	●	●	●	PowerUp state
●	●	●	●	●	●	●	●	●	●	●	PowerUp delay
●	●	●	●	●	●	●	●	●	●	●	Week Scheduler function
●	●	●	●	●	●	●	●	●	●	●	PING WatchDog
●	●	●	-	-	●	●	●	●	●	●	Power WatchDog
-	●	●	●	●	●	●	●	●	●		Condition & Rules
-	-	-	-	-	-	-	-	-	-	-	Lua scripting
●	●	●	●	●	●	●	●	●	●	●	NETIO Cloud support
●	●	●	●	●	●	●	●	●	●	●	Mobile App
●	●	●	●	●	●	●	●	●	●	●	SNMP v1/v2/v3
●	●	●	●	●	●	●	●	●	●	●	Modbus/TCP
●	●	●	●	●	●	●	●	●	●	●	MQTT-flex
-	-	-	-	-	-	-	-	-	-	-	MQTT
●	●	●	●	●	●	●	●	●	●	●	JSON over HTTP (XML)
●	●	●	●	●	●	●	●	●	●	●	Telnet
●	●	●	●	●	●	●	●	●	●	●	URL API (http get)
●	●	●	●	●	●	●	●	●	●	●	HTTP(s) Push - JSON
●	●	●	●	●	●	●	●	●	●	●	HTTP(s) Push - XML
●	●	●	●	●	●	●	●	●	●	●	HTTPs
-	-	-	-	-	-	-	-	-	-	-	19” rack mount

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NETIO products a.s.

**U Pily 103/3
143 00 Praha 4 - Modrany
Czech Republic**

 www.netio-products.com

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 **+420 211 150 111**

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