Power Distribution System
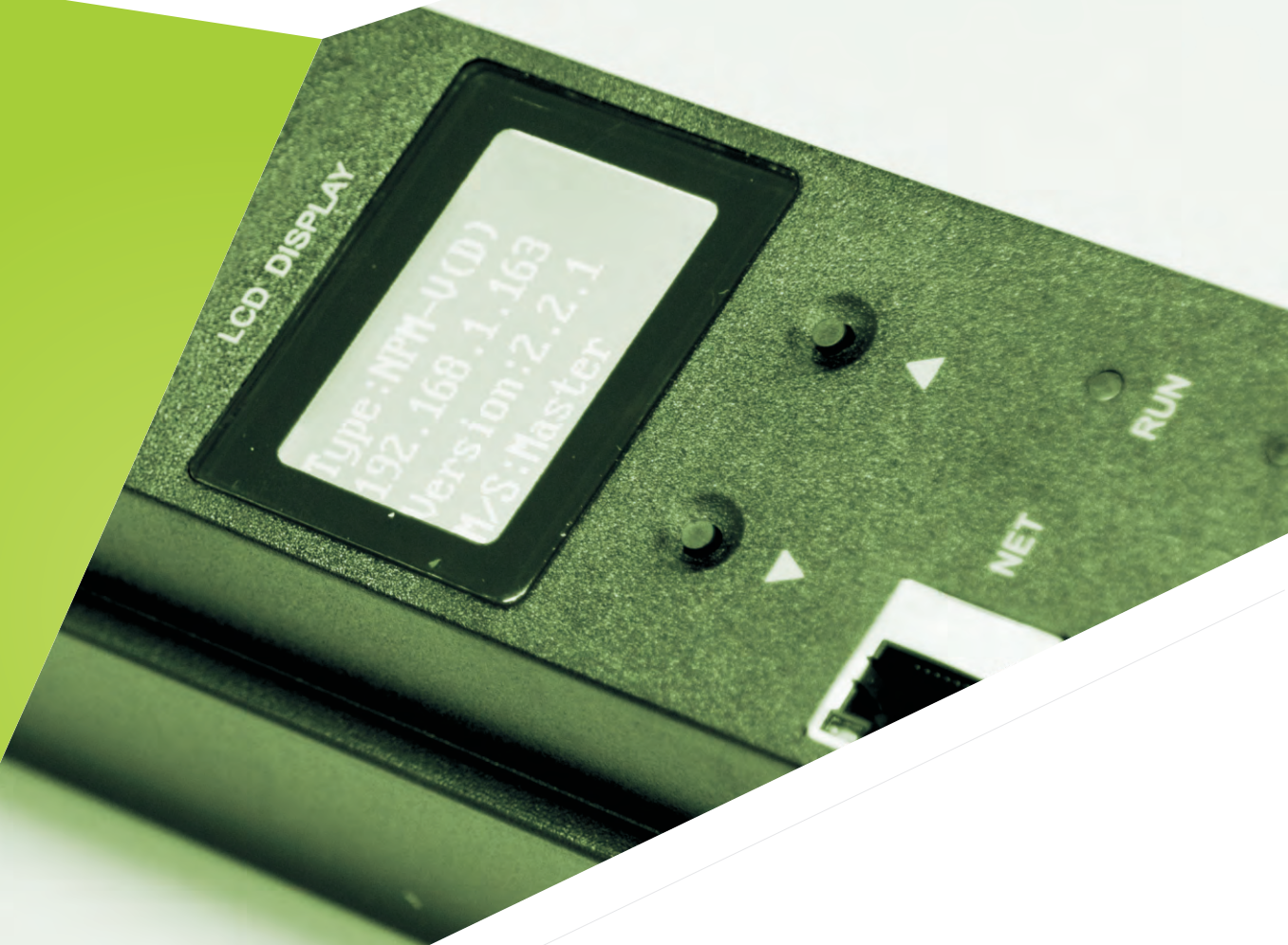
v I

BKT Elektronik - The Company and Our References

BKT Elektronik - The Company and Our References

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Structural Cabling System

Structural Cabling System

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Power Distribution System

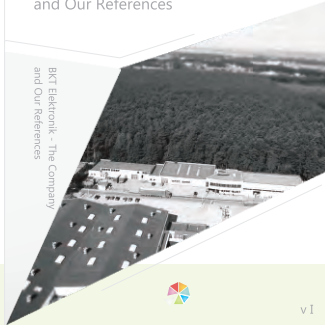Power Distribution System

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Broadband

Broadband

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Outdoor Cabinets

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Racks and Accessories

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Guidebook for Designers

Guidebook for Designers

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With growing demand for power supply to distribution cabinets, manufacturers of power distribution units should offer a very wide range of products in order to meet the growing requirements of the market.

Innovative solutions, development of products providing modern power supply to server rooms and continuous expansion of the offer are the means of BKT Elektronik to meet all the needs of our Customers.

Power distribution units from our offer have numerous applications in information technology and telecommunications.

They were designed for small hanging cabinets, as well as for standing 19" distribution cabinets.

You can now choose the right model thanks to our rich and diverse offer of input connectors, outlets, control and protection modules used in 19" power distribution units.

We expanded our offer concerning server rooms, adding three-phase power distribution units, whose modular and multifunctional structure has enabled us to sell ready-to-use products from our offer, as well as to create one- or three-phase distribution units with current-carrying capacity of 32 A with a Customer to fulfill particular requirements of Investors.

Building a power distribution unit from scratch, we can adopt the existing electric infrastructure, adjust the number and type of outlets for particular devices and add protection units and ammeters in configuration that is in line with the current requirements of Data Center market.

Development and unlimited access to network infrastructure has forced a natural development of power distribution units. Thanks to it, NPM units have now the feature of remote monitoring of voltage [V], current [A], power [kW] and total power usage [kWh], including the monitoring of an individual outlet of a power distribution unit.

We can now improve the safety through monitoring of distribution cabinets and server rooms environment and determining alarm thresholds for installed sensors with the feature of remote reporting (E-mail, SNMP trap).

The latest generation of maintainable power distribution units can be controlled through Ethernet, WiFi, Web interface (http, https), Telnet, SSH, SNMP (V1, V2c, V3). What is more, you can also remotely authorize users through RADIUS server.

If a bigger number of power distribution units is installed, they can be series connected (Master-Slave), which significantly reduces the need for IP network resources.

Network Power Manager units allow the management of one- and three-phase power supply from 16 to 32 A. They increase the security, monitoring the conditions in server cabinet in case there are unwanted physical and chemical environmental factors, such as temperature, humidity, water and smoke. They also inform the maintainers through TCP/IP protocol about unauthorized access to the equipment inside a cabinet.

BKT Elektronik has also launched a product that provides redundancy and uninterruptable operation of network devices. Automatic Transfer Switch (ATS) is a device that switches between power lines in less than 16 ms at current-load of 16 and 32 A and does not interrupt the operation of equipment connected to it.

Contents

19" Power Distribution Units

Power Distribution Units offered by BKT Elektronik has been specially designed for 19" distribution cabinets. Their modular, multifunctional structure will meet the needs of every Customer. You can choose between many standards of input connectors, outlets, and control and protection modules. Their casing is made of white aluminum. PDUs are panel-mounted in 19" standard.

19" PDUs with NF C61-314 Outlets

Index	1134L010.05-1
Input Connector	DIN 49441 (unischuko)/ 16A, 250V
Cable	1,8 m H05VV-F 3 x 1,5 mm2
Outlets	5 x NF C61-314 (PL, FR Standard)/16A, 250V
Additional Elements	Lighted switch
Maximum Current-load	16A (3500W)
Size L x W x H [mm]	482.6 x 44.4 x 44.4
Casing	1U, 19", black plastic, fixed holders

19" PDUs with NF C61-314 Outlets

Index	1134L030.09-1
Input Connector	DIN 49441 (unischuko)/16A, 250V
Cable	2,3 m H05VV-F 3 x 1,5 mm2
Outlets	9 x NF C 61-314 (PL, FR Standard)/16A, 250V
Additional Elements	LED indicator
Maximum Current-load	16A (4000W)
Size L x W x H [mm]	482.6 x 44.4 x 44.4
Casing	1U, 19", anodized aluminum, fixed holders

19" PDUs with NF C61-314 Outlets

Index	1134L010.09-1
Input Connector	DIN 49441 (unischuko)/16A, 250V
Cable	2,3 m H05VV-F 3 x 1,5 mm2
Outlets	9 x NF C 61-314 (PL, FR Standard)/ 16A, 250V
Additional Elements	Lighted switch with a cover
Maximum Current-load	16A (4000W)
Size L x W x H [mm]	482.6 x 44.4 x 44.4
Casing	1U, 19", anodized aluminum, fixed holder

19" PDUs with NF C61-314 Outlets

Index	1134L230.09-1
Input Connector	IEC320 C14/10A, 250V
Cable	2,3 m H05VV-F3 x 1,5mm2
Outlets	9 x NF C61-314 (PL, FR Standard)
Additional Elements	LED indicator
Maximum Current-load	10 A (2500W)
Size L x W x H [mm]	482.6 x 44.4 x 44.4
Casing	1U, 19", anodized aluminum, fixed holders

19" PDUs with NF C61-314 Outlets

Index	1134L012.07-1	
Input Connector	DIN 49441 (unischuko)/16A, 250V	
Cable	2,3 m H05VV-F 3 x 1,5 mm2	
Outlets	7 x NF C61-314 (PL, FR Standard)/16A, 250V	
Additional Elements	Lighted switch with a cover	
Additional Elements	LED indicator Un: 250 V~ 50/60 Hz IL: 16A Uc: 320V~ In (8/20 µS): 3 kA	Imax (8/20) Mp: L-N, L-PE, N-PE
Maximum Current-load	16A (4000W)	
Size L x W x H [mm]	482.6 x 44.4 x 44.4	
Casing	1U, 19", anodized aluminum, fixed holders	

19" PDUs with NF C61-314 Outlets

Index	1134L016.06-1	
Input Connector	DIN 49441 (unischuko)/16A, 250V	
Cable	2,3 m H05VV-F 3 x 1,5 mm2	
Outlets	6 x NF C61-314 (PL, FR Standard)/16A, 250V	
Additional Elements	Lighted switch with a cover	
Surge Protection with a Filter	3 x LED indicator UN: 250V ~ 50/60Hz IL: 16A Uc: 320V ~ In (8/20) µs: 5kA	Imax (8/20) µs: 10kA Up: <1 kV tA: < 25 ns EN type: T3
Maximum Current-load	16A (4000W)	
Size L x W x H [mm]	482.6 x 44.4 x 44.4	
Casing	1U, 19", anodized aluminum, fixed holders	

19" PDUs with NF C61-314 Outlets

Index	1134L630.09-1
Input Connector	IEC320 C20/16A, 250V
Cable	2,3 m H05VV-F3 x 1,5mm2
Outlets	9 x NF C61-314 (PL, FR Standard)/16A, 250V
Additional Elements	LED indicator
Maximum Current-load	16A (4000W)
Size L x W x H [mm]	482.6 x 44.4 x 44.4
Casing	1U, 19", anodized aluminum, fixed holders

19" PDUs with DIN 49440 Outlets

Index	1134L030.09-0
Input Connector	DIN 49441 (unischuko)/16A, 250V
Cable	2,3 m H05VV-F 3 x 1,5 mm2
Outlets	9 x DIN 49440 (schuko)/16A, 250V
Additional Elements	LED indicator
Maximum Current-load	16A (4000W)
Size L x W x H [mm]	482.6 x 44.4 x 44.4
Casing	1U, 19", anodized aluminum, fixed holders

19" PDUs with DIN 49440 Outlets

Index	1134L010.09-0
Input Connector	DIN 49441 (unischuko)/16A, 250V
Cable	2,3 m H05VV-F 3 x 1,5 mm2
Outlets	9 x DIN 49440 (schuko)/16A, 250V
Additional Elements	Lighted switch with a cover
Maximum Current-load	16A (4000W)
Size L x W x H [mm]	482.6 x 44.4 x 44.4
Casing	1U, 19", anodized aluminum, fixed holders

19" PDUs with DIN 49440 Outlets

Index	1134L210.09-0
Input Connector	IEC320 C14/10A, 250V
Cable	2,3 m H05VV-F 3 x 1,5 mm2
Outlets	9 x DIN 49440 (schuko)/16A, 250V
Additional Elements	Lighted switch with a cover
Maximum Current-load	10A (2500W)
Size L x W x H [mm]	482.6 x 44.4 x 44.4
Casing	1U, 19", anodized aluminum, fixed holders

19" PDUs with DIN 49440 Outlets

Index	1134L012.07-0	
Input Connector	DIN 49441 (unischuko)/16A, 250V	
Cable	2,3 m H05VV-F 3 x 1,5 mm2	
Outlets	7 x DIN 49440 (schuko)/16A, 250V	
Additional Elements	Lighted switch with a cover	
Surge Protection	LED indicator UN: 250V ~ 50/60Hz IL: 16A Uc: 320V ~ In (8/20)µs: 3kA Imax (8/20) µs: 5kA	Uoc: 4 kV Up: <1 kV tA: < 25 ns EN type: T3 Mp: L-N L-PE N-PE
Maximum Current-load	16A (4000W)	
Size L x W x H [mm]	482.6 x 44.4 x 44.4	
Casing	1U, 19", anodized aluminum, fixed holders	

19" PDUs with DIN 49440 Outlets

Index	1134L016.06-0	
Input Connector	DIN 49441 (unischuko)/16A, 250V	
Cable	2,3 m H05VV-F 3 x 1,5 mm2	
Outlets	6 x DIN 49440 (schuko)/16A, 250V	
Additional Elements	Lighted switch with a cover	
Surge Protection	3 x LED indicator UN: 250V ~ 50/60Hz IL: 16 A Uc: 320V ~ In (8/20) µs: 5kA Imax (8/20) µs: 10kA	Up: <1 kV tA: < 25 ns EN type: T3
Maximum Current-load	16A (4000W)	
Size L x W x H [mm]	482.6 x 44.4 x 44.4	
Casing	1U, 19", anodized aluminum, fixed holders	

19" Power Distribution Units

19" PDUs with IEC320 C13 Outlets

Index	1134L010.08-2
Input Connector	DIN 49441 (unischuko)/16A, 250V
Cable	2,3 m H05VV-F 3 x 1,5 mm2
Outlets	8 x IEC320 C13/10A, 250V
Additional Elements	Lighted switch
Maximum Current-load	10A (2500W)
Size L x W x H [mm]	482.6 x 44.4 x 62
Casing	1U, 19" , anodized aluminum, fixed holders

19" PDUs with IEC320 C13 Outlets

Index	1134L230.09-2
Input Connector	IEC320 C14/10A, 250V
Cable	2,3 m H05VV-F 3 x 1,5 mm2
Outlets	9 x IEC320 C13/ 10A, 250V
Additional Elements	LED indicator
Maximum Current-load	10A (2500W)
Size L x W x H [mm]	482.6 x 60 x 44.4
Casing	1U, 19" , anodized aluminum, fixed holders

19" PDUs with IEC320 C13 Outlets

Index	11341004.08-2,08-2
Input Connector	DIN 49441 (unischuko)/16 A, 250V
Cable	3 m H05VV-F 3 x 1,5 mm2
Outlets	Front 8 x IEC320 C13/10A, back 8 x IEC320 C13/10A, 250 V
Additional Elements	Ammeter with an overload sound alarm
Maximum Current-load	16A (4000W)
Size L x W x H [mm]	482.6 x 116 x 44,4
Casing	1U, 19", black aluminum, fixed holders

19" PDUs with IEC320 C13 Outlets

Index	11341704.08-2,06-6
Input Connector	IEC 60309/16A, 250V
Cable	3 m H05VV-F 3 x 2,5 mm2
Outlets	Front 8 x IEC320 C13/10A, back 6 x IEC320 C19/16A, 250V
Additional Elements	Ammeter with an overload sound alarm
Maximum Current-load	16A (4000W)
Size L x W x H [mm]	482.6 x 116 x 44,4
Casing	1U, 19", black aluminum, fixed holders

19" PDUs with IEC320 C13 Outlets

Index	11341804.08-2,06-6
Input Connector	IEC 60309/32A, 250V
Cable	3 m H05VV-F 3 x 6.0 mm2
Outlets	Front 8 x IEC320 C13/10A, back 6 x IEC320 C19/16A, 250V
Additional Elements	Ammeter with an overload sound alarm
Maximum Current-load	32A (8000W)
Size L x W x H [mm]	482.6 x 116 x 44,4
Casing	1U, 19", black aluminum, fixed holders

19" PDUs with IEC320 C13 Outlets

Index	11341704.04-2,06-6
Input Connector	IEC 60309/16A, 250V
Cable	3 m H05VV-F 3 x 2,5 mm2
Outlets	Front 4 x IEC320 C13/10A, back 6 x IEC320 C19/16A, 250V
Additional Elements	Ammeter with an overload sound alarm
Maximum Current-load	16A (4000W)
Size L x W x H [mm]	482.6 x 116 x 44,4
Casing	1U, 19", black aluminum, fixed holders

Available 19" PDU models with IEC320 C13 outlets, without the ammeter

Model	Input Connector	Outlets	Index
BKT 19" Power Distribution Unit	DIN49441(unischuko)	front 8xIEC320 C13 back 8xIEC320 C13	11341000.08-2,08-2
BKT 19" Power Distribution Unit	IEC 60309/16A, 250V	front 8xIEC320 C13 back 6xIEC320 C19	11341700.08-2,06-6
BKT 19" Power Distribution Unit	IEC 60309/32A, 250V	front 8xIEC320 C13 back 6xIEC320 C19	11341800.08-2,06-6
BKT 19" Power Distribution Unit	IEC 60309/16A, 250V	front 4xIEC320 C13 back 6xIEC320 C19	11341700.04-2,06-6

19" PDUs with IEC320 C19 Outlets

Index	11341704.08-2,06-6
Input Connector	IEC 60309/16A, 250V
Cable	3 m H05VV-F 3 x 2,5 mm2
Outlets	Front 8 x IEC320 C13/10A, back 6 x IEC320 C19/16A, 250V
Additional Elements	Ammeter with an overload sound alarm
Maximum Current-load	16A (4000W)
Size L x W x H [mm]	482.6 x 116 x 44,4
Casing	1U, 19", black aluminum, fixed holders

19" PDUs with IEC320 C19 Outlets

Index	11341804.08-2,06-6
Input Connector	IEC 60309/32A, 250V
Cable	3 m H05VV-F 3 x 6.0 mm2
Outlets	Front 8 x IEC320 C13/10A, back 6 x IEC320 C19/16A, 250V
Additional Elements	Ammeter with an overload sound alarm
Maximum Current-load	32A (8000W)
Size L x W x H [mm]	482.6 x 116 x 44,4
Casing	1U, 19", black aluminum, fixed holders

19" PDUs with IEC320 C19 Outlets

Index	11341704.04-2,06-6
Input Connector	IEC 60309/16A, 250V
Cable	3 m H05VV-F 3 x 2,5 mm2
Outlets	Front 4 x IEC320 C13/10A, back 6 x IEC320 C19/16A, 250V
Additional Elements	Ammeter with an overload sound alarm
Maximum Current-load	16A (4000W)
Size L x W x H [mm]	482.6 x 116 x 44,4
Casing	1U, 19", black aluminum, fixed holders

Available 19" PDU models with IEC320 C19 outlets, without the ammeter

Model	Input Connector	Outlets	Index
BKT 19" Power Distribution Unit	IEC 60309/16A, 250V	Front 8xIEC320 C13; back 6xIEC320 C19	11341700.08-2,06-6
BKT 19" Power Distribution Unit	IEC 60309/16A, 250V	Front 8xIEC320 C13; back 6xIEC320 C19	11341800.08-2,06-6
BKT 19" Power Distribution Unit	IEC 60309/16A, 250V	Front 4xIEC320 C13; back 6xIEC320 C19	11341700.04-2,06-6

Vertical (0U) Power Distribution Units

Single-phase Vertical Power Distribution Units

Index	11340040
Input Connector	DIN49441 (universal)/16A, 250V
Cable	2,3 m H05VV-F 3 x 1,5 mm2
Outlets	12 x NF C61-314 (PL, FR Standard)/16A, 250V
Additional Elements	LED indicator
Maximum Current-load	16A (4000W)
Size L x W x H [mm]	705 x 62x 44,4
Casing	0U, anodized aluminum, fixed holders

Index	11340844.24-2
Input Connector	IEC 60309/32A, 250V
Cable	3 m H05VV-F 3 x 6.0 mm2
Outlets	24 x IEC320 C13/10A, 250V
Additional Elements	Ammeter with an overload sound alarm 2 automatic circuit breakers with LED indicator
Maximum Current-load	32A (8000W)
Size L x W x H [mm]	1237 X 68 X 44,4
Casing	0U, anodized aluminum, fixed holders

Index	11341630.20-3,04-6
Input Connector	IEC 60320 C20/16A, 250V
Cable	3 m H05VV-F 3 x 2.5 mm2
Outlets	20 x IEC320 C13/10A, 250V + 4 x IEC320/C19/16A, 250V
Additional Elements	LED indicator
Maximum Current-load	16A (4000W)
Size L x W x H [mm]	1139 x 62 x 44.4
Casing	0U, anodized aluminum, fixed holders

Index	11341730.24-1
Input Connector	IEC 60309/16A, 250V
Cable	3 m H05VV-F 3 x 2.5 mm2
Outlets	24 x NF C61-314/16A, 250V
Additional Elements	LED indicator
Maximum Current-load	16A (4000W)
Size L x W x H [mm]	1210 X 68 X 44.4
Casing	0U, anodized aluminum, fixed holders

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Index	11341B30.24-1
Input Connector	IEC 60309/32A, 400V
Cable	3 m, 5 x 6.0 mm2
Outlets	24 x NF C61-314 (PL, FR Standard)/16A, 250V
Additional Elements	3 x LED indicator
Maximum Current-load	12160W
Size L x W x H [mm]	1469 x 62 x 44,4
Casing	0U, black aluminum, adjustable holders

Index	11341B30.24-2
Input Connector	IEC 60309/32A, 400V
Cable	3 m, 5 x 6.0 mm2
Outlets	24 x IEC320 C13/10A, 250V
Additional Elements	3 x LED indicator
Maximum Current-load	12160W
Size L x W x H [mm]	1313 x 62 x 44,4
Casing	0U, black aluminum, adjustable holders

Index	11341B30.21-2,03-6
Input Connector	IEC 60309/32A, 400V
Cable	3 m, 5 x 6.0 mm2
Outlets	21 x IEC320 C13/10A, 250V, 3 x IEC320 C19/16A, 250V
Additional Elements	3 x LED indicator
Maximum Current-load	12160W
Size L x W x H [mm]	1313 x 62 x 44,4
Casing	0U, black aluminum, adjustable holders

Index	11342B03.24-0
Input Connector	IEC 60309/32A, 400V
Cable	3 m, 5 x 6.0 mm2
Outlets	24 x DIN49440 (schuko)/16A, 250V
Additional Elements	3 over-current circuit breakers
Maximum Current-load	12160W
Size L x W x H [mm]	1635 x 68 x 44,4
Casing	0U, black aluminum, adjustable holders

Index	11341B61.24-0
Input Connector	IEC 60309/32A, 400V
Cable	3 m, 5 x 6.0 mm2
Outlets	24 x DIN49440 (schuko)/16A, 250V
Additional Elements	3 surge protection units 3 over-current circuit breakers
Maximum Current-load	12160W
Size L x W x H [mm]	1827.5 x 68 x 44,4
Casing	0U, black aluminum, adjustable holders

Vertical (0U) Power Distribution Units

Three-phase Vertical Power Distribution Units

Index	11341B65.18-2,06-6
Input Connector	IEC 60309/32A, 400V
Cable	3 m, 5 x 6.0 mm2
Outlets	18 x IEC320 C13/10A, 250V, 6 x IEC320 C19/16A, 250V
Additional Elements	Three-phase ammeter 3 over-current circuit breaker
Maximum Current-load	12160W
Size L x W x H [mm]	1801 x 62 x 44.4
Casing	0U, black aluminum, adjustable holders

Index	11341B65.24-0
Input Connector	IEC 60309/32A, 400V
Cable	3 m, 5 x 6.0 mm2
Outlets	24 x DIN49440 (schuko)/16 A, 250V
Additional Elements	3 ammeters 3 over-current circuit breakers
Maximum Current-load	12160W
Size L x W x H [mm]	1938 x 68 x 44,4
Casing	0U, black aluminum, adjustable holders

Power Cables

Available Models

Model	Input Connector	Outlets	Index
BKT Power Cable - 3 x 1mm2 black 2m	DIN49441 (unischuko)/16A, 250V	IEC320 C13/10A, 250V	11480784.2
BKT Power Cable - 3 x 1mm2 black 3m	DIN49441 (unischuko)/16A, 250V	IEC320 C13/10A, 250V	11480784.3
BKT Power Cable - 3 x 1mm2 black 5m	DIN49441 (unischuko)/16A, 250V	IEC320 C13/10A, 250V	11480784.5
BKT Power Cable - 3 x 1mm2 black 3m	IEC320 C14/10A, 250V	IEC320 C13/10A, 250V	11480785.3
BKT Power Cable - 3 x 1mm2 black 5m	IEC320 C14/10A, 250V	IEC320 C13/10A, 250V	11480785.5
BKT Power Cable - 3 x 1mm2 black 5m	DIN49441 (unischuko)/16A, 250V	IEC320 C19/16A, 250V	11480796.3
BKT Power Cable - 3 x 1,5mm2 black 3m	IEC 320 C20/16A, 250V	IEC320 C19/16A, 250V	11480797.3
BKT Power Cable - 3 x 1,5mm2 black 5m	IEC 320 C20/16A, 250V	IEC320 C19/16A, 250V	11480797.5

PDUs offered by BKT Elektronik have been extended and now can monitor basic parameters, such as supply voltage [V], total current-load of a unit [A], total power [kW], total energy consumption [kWh]. This has created a new set of products: IP-PDU (IP - Power Distribution Unit).

IP-PDUs are widely applicable in information technology and telecommunications. They have been designed to be used in small hanging cabinets, as well as in 19" standing distribution cabinets.

The IP-PDUs have been fitted with a new generation hot-swappable measuring module with a built-in LCD display. It displays information on supply voltage [V], current [A], power [kW] and energy consumption [kWh].

SNMP and MODBUS RTU protocols allow complete integration of IP-PDU with external management software.

Features:

- Input voltage 250 V/400 V; IEC 60309/16A/32A connector
- Output voltage 250 V
- Maximum current-load for outlets: IEC320 C13/10A, IEC320 C19/16A, DIN49440/16A, NF C61-314/16A
- Possible use of outlets: IEC320 C13, IEC320 C19, DIN49440, NF C61-314
- Can operate in Master/Slave system (max: 5)
- Vertical mounting
- Remote monitoring of IP-PDU's parameters over Ethernet
- Sending alarm information to defined e-mail addresses
- Hot-swappable LCD display
- Internal built-in alarm (buzzer)
- Connection with the IP-PDU through Web interface and SNMP(V1) and MODBUS RTU protocols
- Size of the vertical IP-PDU: (0U) LxWxH [mm]: X x 62 x 44.4
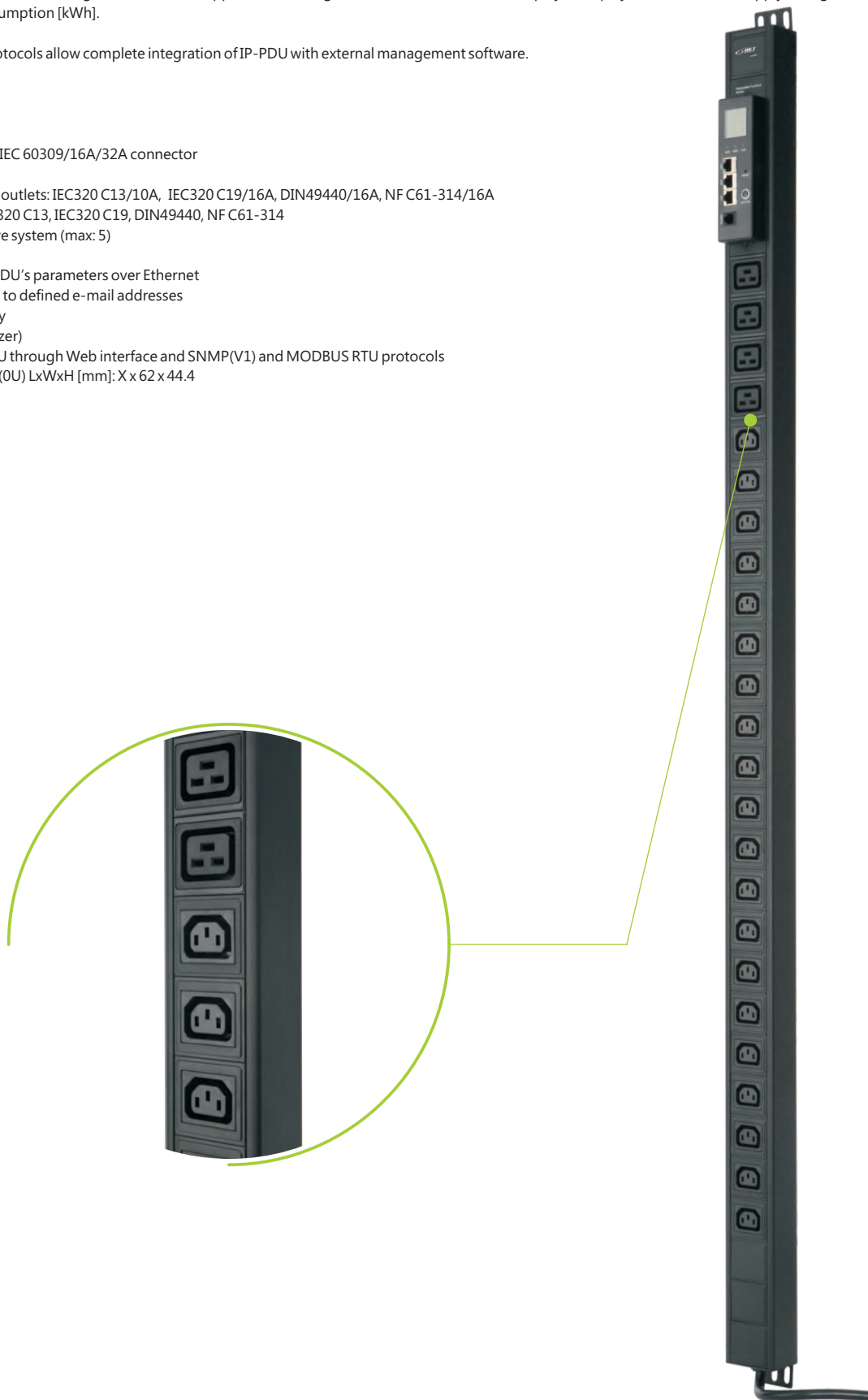
Monitoring and Management Power Distribution Unit

Management IP-PDU

Web interface

IP-PDU can be monitored through Web interface with most of the available web browsers. This enables the User to manage, monitor and control the state of devices connected to the unit using not only a computer, but even a smart phone or a tablet.

It allows:
• Verification of supply voltage of IP-PDU [V]
• Current total current-load [A]
• Total energy consumption [kWh]
• Total power of IP-PDU [kW]
• Setting up alarm threshold for supply voltage [V]
• Setting up alarm threshold for total current-load of IP-PDU [A]

It includes:
• Master/Slave work model config
• Ethernet settings
• SNMP settings
• SMTP settings
• E-mails and user accounts settings

Monitoring
IP-PDUs monitor the following parameters:

• Total current-load of the IP-PDU [A]
• Supply voltage [V]
• Total energy consumption [kWh]
• Total power of the IP-PDU [kW]
• System state
• Active alarms

Settings
IP-PDUs allow the setup of the following parameters:

• Total current-load of the IP-PDU [A]
• Work model: Master/Slave
• Ethernet interface (IP address, gate, mask, DNS)
• SNMP interface
• HTTP interface
• SMTP parameters
• E-mail addresses
• User accounts

Monitoring and Management Power Distribution Unit

Control and communication

IP-PDUs have been fitted with a replaceable module with a built-in LCD allowing a communication between users and the IP-PDU.

- LCD display can show supply voltage [V], total current-load of the IP-PDU [A], total power [kW], total energy consumption [kWh]
- Web interface available through Internet Explorer web browser
- Network – Ethernet 10/100 Mbit/s
- IP-PDU connection with external applications and devices through SNMP (V1) and MODBUS RTU protocols

Alarms

IP-PDUs allow monitoring of and alarming about parameters that have significant influence on proper operation of devices connected to the IP-PDU.

- IP-PDU alarms about:
- Min and max total current-load [A]
- Min and max supply voltage [V]

Ways and alarming

IP-PDUs offer several ways of notifying the User about a current alarm, which includes:

- Internal built-in alarm (buzzer)
- Displaying alarm information on LCD display
- Alarm at external port – RJ11 socket, NO-NC contact for connecting external alarming devices, such as sound or visual alarm
- Alarm notification over the Web interface
- Sending alarm information to e-mail address
- Sending SNMP Traps

System structure

IP-PDUs can be cascade-connected in a chain of up to 4 devices that use a single IP address.

Available outlets

IEC320 C13   IEC320 C19

Special order outlets
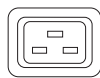
DIN49440   NF C61-314

Technical Parameters of the Hot-swappable Module

Item	Parameter	Value
Output	Ethernet Port	RJ45
	2 x Serial Port	RS485
	Alarm Port	RJ11
Supply Voltage	IP-PDU Working Voltage	110/250 VAC 50/60Hz
Digital Voltmeter	Maximum	255V
	Accuracy	± 1% +2
	Resolution	1V
Digital Ammeter	Maximum	32A
	Accuracy	± 1% +1
	Resolution	100mA
Power	Resolution	0,1kW
Electrical Energy Meter	Pulse Rate	1600imp/kWh
	Level	1
	Resolution	0,1 kWh
Casing	Size	144 ×44.4×44.4mm
	Color	Black
Operating Environment	Temperature	0°C~55°C
	Humidity	10%~90%

Monitoring and Management Power Distribution Unit

Vertical Single-phase IP-PDUs

Available Models

Model	Input Connector	Outlets	Index
BKT IP Power Distribution Unit	IEC 60309/16A, 250V	24 x IEC320 C13/10A, 250V	1134IP7V1.24-2
BKT IP Power Distribution Unit	IEC 60309/32A, 250V	24 x IEC320 C13/10A, 250V	1134IP8V1.24-2
BKT IP Power Distribution Unit	IEC 60309/16A, 250V	30 x IEC320 C13/10A, 250V	1134IP7V1.30-2
BKT IP Power Distribution Unit	IEC 60309/32A, 250V	30 x IEC320 C13/10A, 250V	1134IP8V1.30-2
BKT IP Power Distribution Unit	IEC 60309/16A, 250V	18 x IEC320 C13/10A, 250V + 6 x IEC320 C19/16A, 250V	1134IPAV1.18-2,06-6
BKT IP Power Distribution Unit	IEC 60309/32A, 250V	18 x IEC320 C13/10A, 250V + 6 x IEC320 C19/16A, 250V	1134IPBV1.18-2,06-6
BKT IP Power Distribution Unit	IEC 60309/16A, 250V	20 x IEC320 C13/10A, 250V + 4 x IEC320 C19/16A, 250V	1134IP7V1.20-2,04-6
BKT IP Power Distribution Unit	IEC 60309/32A, 250V	20 x IEC320 C13/10A, 250V + 4 x IEC320 C19/16A, 250V	1134IP8V1.20-2,04-6
BKT IP Power Distribution Unit	IEC 60309/16A, 250V	21 x IEC320 C13/10A, 250V + 3 x IEC320 C19/16A, 250V	1134IPAV1.21-2,03-6
BKT IP Power Distribution Unit	IEC 60309/32A, 250V	21 x IEC320 C13/10A, 250V + 3 x IEC320 C19/16A, 250V	1134IPBV1.21-2,03-6

Vertical Three-phase IP-PDUs

Available Models

Model	Input Connector	Outlets	Index
BKT IP Power Distribution Unit	IEC 60309/16A, 400V	24 x IEC320 C13/10A, 250V	1134IPAV1.24-2
BKT IP Power Distribution Unit	IEC 60309/32A, 400V	24 x IEC320 C13/10A, 250V	1134IPBV1.24-2
BKT IP Power Distribution Unit	IEC 60309/16A, 400V	18 x IEC320 C13/10A, 250V + 6 x IEC320 C19/16A, 250V	1134IPAV1.18-2,06-6
BKT IP Power Distribution Unit	IEC 60309/32A, 400V	18 x IEC320 C13/10A, 250V + 6 x IEC320 C19/16A, 250V	1134IPBV1.18-2,06-6
BKT IP Power Distribution Unit	IEC 60309/16A, 400V	20 x IEC320 C13/10A, 250V + 4 x IEC320 C19/16A, 250V	1134IPAV1.20-2,04-6
BKT IP Power Distribution Unit	IEC 60309/32A, 400V	20 x IEC320 C13/10A, 250V + 4 x IEC320 C19/16A, 250V	1134IPBV1.20-2,04-6
BKT IP Power Distribution Unit	IEC 60309/16A, 400V	21 x IEC320 C13/10A, 250V + 3 x IEC320 C19/16A, 250V	1134IPAV1.21-2,03-6
BKT IP Power Distribution Unit	IEC 60309/32A, 400V	21 x IEC320 C13/10A, 250V + 3 x IEC320 C19/16A, 250V	1134IPBV1.21-2,03-6

Management PCDS

Maintainable monitoring PCDS units (Power Controlling Distribution System) offered by BKT Elektronik make up a new group of modular three-phase PDUs. It enables the User to randomly reconfigure the outlets and fully monitor the PDU operation along with its environment conditions thanks to connected external sensors.

Modular and multifunctional structure allows the assembly of three-phase PDUs with current-load of 32 A with a Customer according to particular investment requirements. Creating a PDU from scratch, we can adopt the existing electrical infrastructure, adjust the number and type of outlets to particular devices and fit it with protection modules and ammeters in configuration that is in line with particular requirements of the Data Center market.
Hot-swappable outlets modules allow reconfiguring PDU online i.e. without disconnecting it from power supply.

PCDS units are a perfect solution for Users, for whom security of powered devices and easy reconfiguration are the priorities.

Features:

- Input voltage 250V/400V, IEC 60309/16A/32A connector
- Output voltage 250V
- Maximum current-load for outlets: IEC320 C13/10A, IEC320 C19/16A, DIN49440/16A, NF C61-314/16A
- Possible use of outlets: IEC320 C13, IEC320 C19, DIN49440, NF C61-314
- PGDS rail current-load: up to 3x32A
- Can operate in Master/Slave system (max: 5)
- Vertical mounting
- Intelligent management or remote monitoring
- Sending alarm information to defined e-mail addresses
- Internal built-in alarm (buzzer)
- Connection with the PCDS unit through Web interface and SNMP(V1, V2c, V3) protocols
- Large LED display
- Hot-swappable modules
- High protection rate of switched modules
- Up to 6 PDUM modules can be installed
- Over-current protection of PCSM modules
- Size of the vertical PDU: LxWxH [mm]: 1692 x 71.5 x 38.6

Monitoring and Management Power Distribution Unit

Management PCDS

Web interface

The PCDS can be monitored through multi-user Web interface, which includes monitoring, management and administration.

It allows:

• Current monitoring of total current-load [A]
• Monitoring the state of connected temperature, humidity, water and smoke sensors

It includes:

• Indications and status of connected sensors
• Device operating system state
• State of alarms and alarm values
• Adding, removing and modifying users

Web interface is compatible with most of the available web browsers and enables the User to manage, monitor or control the state of devices connected to a PDU using not only a computer, but even a smart phone or a tablet.

PCDS Functionality

Monitoring
PCDS units monitor the following parameters:
• Total current-load of the unit [A]
• State of connected sensors
• System state
• Active alarms
• Alarm logs
• Temperature, humidity, presence of smoke and water

Environment conditions monitoring
PCDS units monitor environment conditions depending on sensors installed:
• Temperature, humidity, smoke, water

Settings
PCDS units allow the setup of the following parameters:
• Total current-load of the PCDS [A]
• Work model: Master/Slave
• Ethernet interface (IP address, gate, mask, DNS)
• SNMP interface
• HTTP interface
• Telnet and SSH interfaces
• SMTP parameters
• E-mail addresses
• Accounts and permissions of users and administrators
• SYSLOG server parameters
• Temperature range [min/max]
• Humidity range [min/max]

Control and communication
PCDS units have been fitted with modules that provide communication with the unit through various protocols, through various communication media and at various levels.
• Large LED display can show supply voltage and the PDU current-load and monitor connected sensors
• Web interface through Internet Explorer, Opera, Chrome, Firefox web browsers
• Network - Ethernet 10/100 Mbit/s
• Serial communication interface - RS232, RS485
• Communication protocols (command line) – Telnet, SSH
• PCDS connection with external applications and devices through SNMP (V1, V2c, V3) protocol

Alarms
PCDS units allow monitoring of and alarming about parameters that have significant influence on proper operation of devices connected to the unit and the installed sensors.
PCDS alarms about:
• Total current-load [A]
• Minimum and maximum temperature
• Minimum and maximum humidity
• Presence of water
• Presence of smoke

Ways of alarming
PCDS units offer several ways of notifying the User about a current alarm, which includes:
• Internal built-in alarm (buzzer)
• Displaying alarm information on LCD display
• Alarm notification over the Web interface
• Sending alarm information to e-mail address
• Sending SNMP Traps

System structure
PCDS can be cascade-connected in a chain of up to 10 devices that use a single IP address.

Available outlets

Special order outlets

IEC320 C13   IEC320 C19   DIN49440   NF C61-314

Monitoring and Management Power Distribution Unit

Management PCDS Units

Types of modules for PCDS
• PGDS - Power Generatrix Distribution System (rail for modules)
• PCSM - Power Controlling System Module
• PDUM - Power Distribution Unit Module

Detailed List of PCDS Features

Features		Description
Monitoring		Total current-load of PCDS [A]
		Temperature
		Humidity
		Water
		Smoke
Settings		Work model: Master/Slave
		Ethernet interface (IP address, gate, mask, DNS)
		SMTP parameters
		E-mail addresses
		Accounts and permissions of users and administrators
		HTTP interface
		Telnet and SSH interfaces
		Temperature range [min/max]
		Humidity range [min/max]
Alarms	System Alarms	Total current-load of PCDS [A]
		Temperature/humidity sensors
		Smoke sensor
		Water sensor
	Alarm Threshold Config	Total current-load [A]
		Temperature
		Humidity
	Ways of Alarming	Internal built-in alarm (buzzer)
		Alarm notification over the Web interface
		Sending alarm information to e-mail address
		Sending SNMP Traps
Communication		Web interface (HTTP) access through Internet Explorer, Opera, Chrome and Firefox web browsers
		Ethernet 10/100 Mbit/s
		SNMP (V1, V2c, V3)
		Telnet and SSH communications protocol
Available Sensors		Temperature/humidity (hybrid), water and smoke sensors
Cascade Connection		Possible to connect up to 10 units in Master/Slave configuration

Sensors for PCDS
• Temperature and humidity sensor (1134CTH01)
• Water sensor (1134CWS01)
• Smoke sensor (1134CSS01)

Vertical Single-phase PGDS Rails

Model	Input Connector	Index
BKT PGDS Module Rail for 6 PDUMs	IEC 60309/16A, 250V	1134PC7PG.06
BKT PGDS Module Rail for 6 PDUMs	IEC 60309/32A, 250V	1134PC8PG.06

Vertical Three-phase PGDS Rails

Model	Input Connector	Index
BKT PGDS Module Rail for 6 PDUMs	IEC 60309/16A, 400V	1134PCAPG.06
BKT PGDS Module Rail for 6 PDUMs	IEC 60309/32A, 400V	1134PCBPG.06

PCSMs to Be Mounted in Rails

Model	Index
BKT NPM Type A Module (factory configuration only)	1134PCNPM.A

PDUMs to Be Mounted in Rails

Model	Index
BKT Module for PGDS Rails 5 x IEC320 C13, LED indicator & fuse	1134PCPDA.05-3
BKT Module for PGDS Rails 4 x IEC320 C19, LED indicator & fuse	1134PCPDC.04-6
BKT Module for PGDS Rails 4 x DIN49440, LED indicator & fuse	1134PCPDD.04-0
BKT Module for PGDS Rails 4 x NFC61 (pin), LED indicator & fuse	1134PCPDE.04-0

MS-PDUs (Metered and Switched Power Distribution Units) offered by BKT Elektronik make up another group of power distribution units, which have been expanded with remote monitoring and management features. They are characterized by a new casing in comparison to PDUs and IP-PDUs and complex controlling and metering module. They can be applied in large institutions, as well as small companies providing the highest quality of uninterrupted power supply and control over devices.

Features:

- Input voltage 250V, IEC 60309/32A and DIN 49441/16A connectors
- Output voltage 250V
- Maximum current-load for outlets: IEC320 C13/10A, IEC320 C19/16A, DIN49440/16A and NFC 61-314/16A
- Possible to use outlets: IEC320 C13, IEC320 C19, DIN49440 and NF C61-314
- Horizontal and vertical mounting
- Remote monitoring and management over Ethernet
- Sending alarm information to defined e-mail addresses
- Internal built-in alarm (buzzer)
- Connection with the MS-PDUs through Web interface and SNMP(V1) protocol
- LED display for MS-PDU's supply voltage verification
- Built-in over-current circuit breaker (in 19" version)
- 19" MS-PDU size LxWxH [mm]: 482.6 x 216 x 44.4
- The vertical PDU size (0U) LxWxH [mm]: X x 66.6 x 44.4

Monitoring Managament and Controlling PDUs

Managament MS-PDU

Web interface

MS-PDU can be monitored through multi-user Web interface, which includes monitoring, management and administration.

It allows:
• Current verification of total current-load of MS-PDU [A]
• Current verification of current-load of each outlet with alarm threshold config
• State control (on/off) of every outlet

It includes:
• Sequential start-up programs of the entire PDU
• Time programmator of each output
• Indications and status of connected sensors
• Device operating system state
• State of alarms and alarm values
• Adding, removing and modifying users

Web interface is compatible with most of the available web browsers and enables the User to control the state of devices connected to the PDU using not only a computer, but even a smart phone or a tablet.

MS-PDU Functionality

Monitoring

MS-PDUs monitor the following parameters:
• Total current-load of the MS-PDU [A]
• Current-load of each outlet [A]
• Supply voltage [V]
• Outlet state ON/OFF
• System state
• Active alarms
• Alarm logs

Environment conditions monitoring

MS-PDUs monitor environment conditions using one T/H sensor

Settings

• MS-PDUs allow the setup of the following parameters:
• Total current-load of the MS-PDU [A]
• Current-load of each outlet [A]
• Delays in sequential start-up/shutdown of each outlet
• Work model: Master/Slave
• Ethernet interface (IP address, gate, mask, DNS)
• SNMP interface
• HTTP interface
• SMTP parameters
• E-mail addresses
• User accounts
• Temperature range [min/max]
• Humidity range [min/max]

Control and communication

MS-PDUs allow communication with the User through the following interfaces and protocols:
• LED display showing supply voltage and total current-load of the MS-PDU
• Web interface through Internet Explorer, Firefox and Chrome web browsers
• Network - Ethernet 10/100 Mbit/s
• MS-PDU connection with external applications and devices through SNMP (V1) protocol

Alarms

MS-PDUs allow monitoring of and alarming about parameters that have significant influence on proper operation of devices connected to the unit and the installed sensors. MS-PDUS alarm about:
• Total current-load [A]
• Minimum and maximum current-load of each outlet [A]
• Supply voltage [V]
• Minimum and maximum temperature
• Minimum and maximum humidity

Ways of alarming

MS-PDUs offer several ways of notifying the User about a current alarm, which includes:
• Internal built-in alarm (buzzer)
• Alarm notification over the Web interface
• Sending alarm information to e-mail address
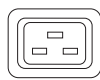• Sending SNMP Traps

Keeping settings

MS-PDUs allow keeping settings between their start-ups. You do not need to worry about losing the current configuration of the active outlets.

Available outlets

Special order outlets

IEC320 C13   IEC320 C19   DIN49440   NF C61-314

Monitoring Managament and Controlling PDUs

Managament MS-PDU

Detailed List of MS-PDU Features Depending on a Model

Features		Descroption	Type			
			Monitoring		Control	
			A	B	C	D
Monitoring		Total current-load of MS-PDU [A]	x	x	x	x
		Supply voltage of MS-PDU [V]	x	x	x	x
		Current-load of each outlet [A]		x		x
		Outlet state ON/OFF			x	x
		Temperature/humidity sensor	x	x	x	x
Control		Outlet state ON/OFF			x	x
Settings		Total current-load of MS-PDU [A]	x	x	x	x
		Current-load of each outlet [A]	x	x	x	x
		Delays in sequential start-up/ shutdown of each outlet			x	x
		Temperature/humidity thresholds	x	x	x	x
Keeping Settings		Keeping outlets state between MS-PDU start-ups			x	x
Alarms	System Alarms	Total current-load of MS-PDU	x	x	x	x
	Alarm Threshold Config	Total current-load of MS-PDU [A]	x	x	x	x
		Exceeded current-load of each outlet [A]		x		x
		Temperature/humidity	x	x	x	x

Sensor for MS-PDUs
• Temperature and humidity sensor (1134CTH01)

19" Metered and Switched Power Distribution Units

Available models

Model	Input Connector	Outlets	Index
19" BKT MS- PDU Type A	DIN49441(unischuko)/16A, 250V	8xIEC320 C13/10A, 250V	1134MS0H1.A.08-2
19" BKT MS- PDU Type B	DIN49441(unischuko)/16A, 250V	8xIEC320 C13/10A, 250V	1134MS0H1.B.08-2
19" BKT MS- PDU Type C	DIN49441(unischuko)/16A, 250V	8xIEC320 C13/10A, 250V	1134MS0H1.C.08-2
19" BKT MS- PDU Type D	DIN49441(unischuko)/16A, 250V	8xIEC320 C13/10A, 250V	1134MS0H1.D.08-2

Vertical (0U) Single-phase Metered and Switched Power Distribution Units

Available MS-PDU Type A Models

Model	Input Connector	Outlets	Index
BKT Vertical MS-PDU Type A	IEC 60309/32A, 250V	18 x IEC320 C13/10A, 250V +6 x IEC320 C19/16A, 250V	1134MS8V1.A.18-2,06-6
BKT Vertical MS-PDU Type A	IEC 60309/32A, 250V	24 x IEC320 C13/10A, 250V	1134MS8V1.A.24-2
BKT Vertical MS-PDU Type A	IEC 60309/32A, 250V	36 x IEC320 C13/10A, 250V	1134MS8V1.A.36-2
BKT Vertical MS-PDU Type A	IEC 60309/32A, 250V	21 x IEC320 C13/10A, 250V +3 x IEC320 C19/16A, 250V	1134MS8V1.A.21-2,03-6

Available MS-PDU Type B Models

Model	Input Connector	Outlets	Index
BKT Vertical MS-PDU Type B	IEC 60309/32A, 250V	18 x IEC320 C13/10A, 250V +6 x IEC320 C19/16A, 250V	1134MS8V1.B.18-2,06-6
BKT Vertical MS-PDU Type B	IEC 60309/32A, 250V	24xIEC320 C13/10A, 250V	1134MS8V1.B.24-2
BKT Vertical MS-PDU Type B	IEC 60309/32A, 250V	36 x IEC320 C13/10A, 250V	1134MS8V1.B.36-2
BKT Vertical MS-PDU Type B	IEC 60309/32A, 250V	21 x IEC320 C13/10A, 250V +3 x IEC320 C19/16A, 250V	1134MS8V1.B.21-2,03-6

Available MS-PDU Type C Models

Model	Input Connector	Outlets	Index
BKT Vertical MS-PDU Type C	IEC 60309/32A, 250V	18 x IEC320 C13/10A, 250V +6 x IEC320 C19/16A, 250V	1134MS8V1.C.18-2,06-6
BKT Vertical MS-PDU Type C	IEC 60309/32A, 250V	24 x IEC320 C13/10A, 250V	1134MS8V1.C.24-2
BKT Vertical MS-PDU Type C	IEC 60309/32A, 250V	36 x IEC320 C13/10A, 250V	1134MS8V1.C.36-2
BKT Vertical MS-PDU Type C	IEC 60309/32A, 250V	21 x IEC320 C13/10A, 250V +3 x IEC320 C19/16A, 250V	1134MS8V1.C.21-2,03-6

Available MS-PDU Type D Models

Model	Input Connector	Outlets	Index
BKT Vertical MS-PDU Type D	IEC 60309/32A, 250V	18 x IEC320 C13/10A, 250V +6 x IEC320 C19/16A, 250V	1134MS8V1.D.18-2,06-6
BKT Vertical MS-PDU Type D	IEC 60309/32A, 250V	24 x IEC320 C13/10A, 250V	1134MS8V1.D.24-2
BKT Vertical MS-PDU Type D	IEC 60309/32A, 250V	36 x IEC320 C13/10A, 250V	1134MS8V1.D.36-2
BKT Vertical MS-PDU Type D	IEC 60309/32A, 250V	21 x IEC320 C13/10A, 250V +3 x IEC320 C19/16A, 250V	1134MS8V1.D.21-2,03-6

NPM V - Network Power Manager

NPM V (Network Power Manager) power distribution units offered by BKT Elektronik allow the management of single- and three-phase power supply from 16 to 32 A. They increase safety by monitoring conditions inside a server cabinet in case there are unwanted physical and chemical environment conditions, such as temperature, humidity, water and smoke, and protect against them. They also inform the maintainers of the telecommunications infrastructure about unauthorized access to the inside of a cabinet. NPM V units allow remote monitoring of voltage [V], current [A], power [kW] and total energy consumption [kWh], also in a single outlet of the power distribution unit.
The installed devices in server cabinets are now much safer thanks to monitoring of environment conditions in distribution cabinets and server rooms, and defining alarm thresholds for the installed sensors with remote reporting (E-mail, SNMP Trap).

Features:
- Input voltage 250V/400V, IEC 60309/16A/32A and DIN 49441/16A connectors
- Output voltage 250V
- Maximum current-load for outlets: IEC320 C13/10A, IEC320 C19/16A, DIN49440/16A and NF C61-314/16A
- Possible use of outlets: IEC320 C13, IEC320 C19, DIN49440 and NFC 61-314
- Horizontal and vertical mounting
- Remote monitoring and management through Ethernet/WiFi
- Sending alarm information to defined e-mail addresses
- Internal built-in alarm (buzzer)
- Connection with the NMP V unit through Web interface and SNMP(V1,V2c,V3), Telnet and SSH protocols
- User authorization through RADIUS server
- Possibility of having up to 20 users logged up with selected permissions
- Can operate in Master/Slave system (max: 5)
- Built-in energy meters for each outlet
- Built-in over-current circuit breaker (in 19'' version)
- Large LCD graphic display (128x64) for vertical version and LED display for 19'' versions to verify NPM V unit's
  operation parameters and alarms
- 19" NPM V unit size LxWxH [mm]: 482.6 x 216 x 44.4
- Vertical (0U) NPM V unit size LxWxH [mm]: X x 66.6 x 44.4

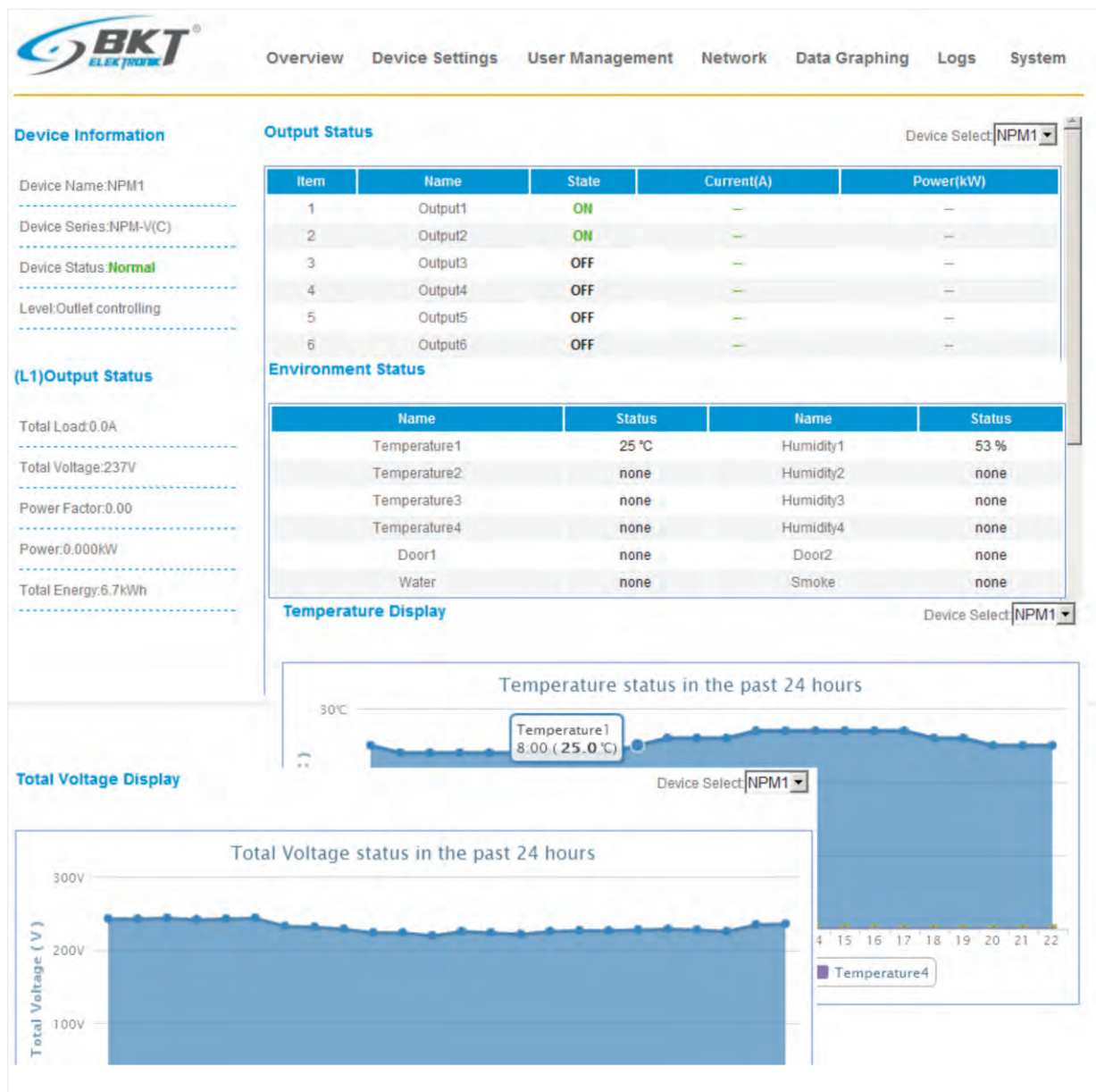# Monitoring Managament and Controlling PDUs

NPM V - Network Power Management

Web interface

NPM V unit can be monitored through multi-user Web interface, which includes monitoring, management and administration. Current verification of total current-load of NPM unit [A]. Current verification of current-load of each outlet with alarm threshold config, state control of each outlet (on/off) and the memory of the last state in case of the device restart.

It includes:
• Sequential start-up program of the entire unit
• Time programmator for each outlet
• Indications and status of connected sensors
• Device operating system state
• State of alarms and alarm values
• Adding, removing and modifying users
• Diagrams of current-load, voltage, temperature and humidity

Web interface is compatible with most of the available web browsers and enables the User to manage, monitor or control the state of devices connected to a PDU, as well as energy consumption for the entire PDU and for each outlet, using not only a computer, but even a smart phone or a tablet.

Setting up such network parameters as IP addresses, RADIUS, SMTP and NTP (and many more) allow, from the side of the management, random configuration of NPM V unit according to the User's or Administrator's needs.

Monitoring Managament and Controlling PDUs

NPM V - Network Power Manager

NPM-V functionality

Monitoring
NPM-V units monitor the following parameters:
• Total current-load of the NPM-V [A]
• Current-load of each outlet [A]
• Supply voltage of the NPM-V [V]
• Total energy consumption [kWh]
• Energy consumption of each outlet [kWh]
• Power Factor
• Power of the entire NPM-V [kW]
• Power of each outlet [kW]
• Outlet state ON/OFF
• Active alarms
• Alarm logs

Energy consumption monitoring
NPM-V units have been fitted with energy meters which monitor and record:
• Total energy consumption of the entire NPM-V [kWh]
• Energy consumption of each outlet [kWh]

Environment conditions monitoring
NPM-V units allow monitoring various environment conditions depending on the selected model (vertical/horizontal). They monitor temperature, humidity, presence of smoke, door (access control) and presence of water.
• 19'' models monitor temperature and humidity using two T/H sensors
• Vertical (0U) models in basic configuration monitor temperature and humidity using two T/H sensors
• Vertical (0U) models in extended configuration (selected at the order) – two additional sensor modules that allow monitoring:
   - water, presence of smoke, temperature and humidity (1xWater, 1xSmoke, 1xT/H)
   - door, temperature and humidity (2xDoor, 1xT/H)

Parameters settings
In NPM-V units we can set up the following parameters:
• Total current-load of the NPM-V [A]
• Current-load of each outlet [A]
• Delays in sequential start-up/shutdown of each outlet [s]
• Work model: Master/Slave
• Delays of OFF/ON or ON/OFF/ON cycles in each outlet
• Ethernet interface (IP address, gate, mask, DNS) or DHCP
• SNMP interface
• HTTP and HTTPS interface
• Telnet and SSH interface
• SYSLOG server interface
• WiFi interface
• NTP time server parameters
• RADIUS server parameters
• SMTP server parameters
• E-mail addresses
• Accounts and permissions of users and administrators
• Temperature range [min/max]
• Humidity range [min/max]

Control and communication
NPM-V units have been fitted with modules allowing communication with the unit through various protocols, various communication media and at various level.
• LED & LCD Displays
   - 19" versions have LED displays
   - Vertical (0U) versions have LCD displays
• Web interface available through: Internet Explorer, Opera, Chrome or Firefox
• Communication protocols (command line) – Telnet, SSH
• INetwork - Ethernet 10/100 Mbit/s, WiFi
• RJ45/RS232 serial communication interface
• Communication with external applications and devices through SNMP (V1, V2c, V3) protocols

Alarms

Extended functionality of NPM-V allows monitoring of and alarming about many parameters that have significant influence on proper operation of devices connected to the unit and the installed sensors.
NPM-V unit alarms about:

• Total current-load [A]
• Minimum and maximum current-load of each outlet [A]
• Minimum and maximum temperature
• Minimum and maximum humidity
• Presence of water
• Presence of smoke
• Opened door or side covers of a cabinet

Ways of alarming

NPM-V offer several ways of notifying the User about a current alarm, which includes:
• Internal built-in alarm (buzzer)
• Displaying alarm information on LCD display
• Alarm at external RJ11 (NO-NC) port
• Alarm notification over the Web interface
• Sending alarm information to e-mail address
• Sending SNMP Traps
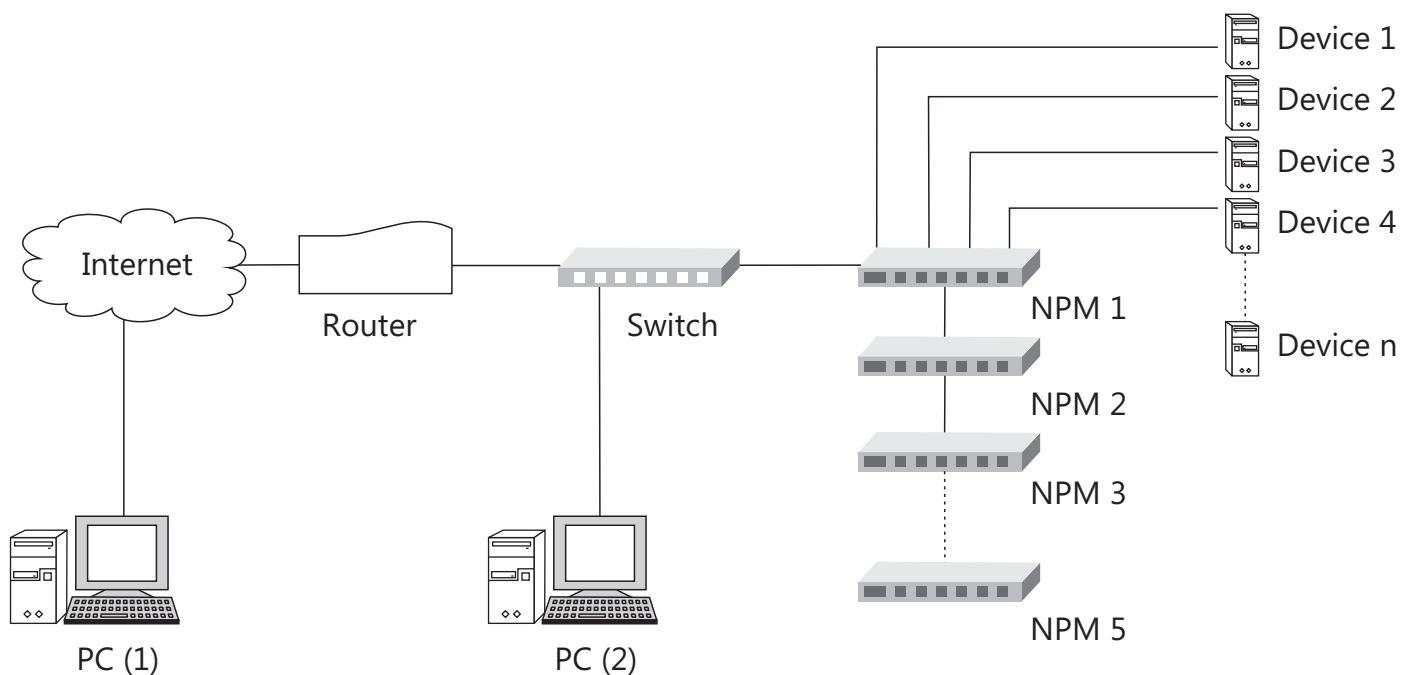• Through SYSLOG server

System structure

NPM-V can be cascade-connected in a chain of up to 5 devices that use a single IP address.

Keepings settings

NPM-V units allow keeping settings between their start-ups. You do not need to worry about losing the current configuration of the active outlets.

Available outlets

IEC320 C13   IEC320 C19   DIN49440   NF C61-314

Internet   Router   Switch   NPM 1   Device 1

Device 2

Device 3

Device 4

NPM 2   Device n

NPM 3

PC (1)   PC (2)   NPM 5

Monitoring Managament and Controlling PDUs

NPM V - Network Power Manager

Detailed List of NPM-V Features Depending on the Model

Features	Description	Monitoring A	Monitoring B	Control C	Control D
Monitoring	Total current-load of the NPM-V [A]	x	x	x	x
	Supply voltage of the NPM-V [V]	x	x	x	x
	Total energy consumption [kWh]	x	x	x	x
	Energy consumption of each outlet [kWh]		x		x
	Power Factor	x	x	x	x
	Total power for entire NPM-V [kW]	x	x	x	x
	Power of each outlet [kW]		x		x
	Current-load of each outlet [A]		x		x
	Outlet state ON/OFF			x	x
	Temperature	x	x	x	x
	Humidity	x	x	x	x
	Water (additional module)	x	x	x	x
	Smoke (additional module)	x	x	x	x
	Door (additional module)	x	x	x	x
Control	Energy meter for the entire NPM-V [kWh]	x	x	x	x
	Energy meter for each outlet [kWh]		x		x
	Outlet state ON/OFF			x	x
Settings	Total current-load of the NPM-V [A]	x	x	x	x
	Current-load of each outlet [A]		x		x
	Delays of OFF/ON or ON/OFF/ON cycle of each outlet			x	x
	Delays in sequential start-up/shutdown of each outlet			x	x
	Work model selection: Master/Slave	x	x	x	x
	Ethernet (IP address, gate, mask, DNS) or DHCP	x	x	x	x
	WiFi	x	x	x	x
	NTP time server parameters	x	x	x	x
	RADIUS server parameters	x	x	x	x
	SYSLOG server parameters	x	x	x	x
	SMTP server interface	x	x	x	x
	SNMP interface	x	x	x	x
	E-mail addresses	x	x	x	x
	Accounts and permissions of users and administrators	x	x	x	x
	HTTP and HTTPS interfaces	x	x	x	x
	Telnet and SSH interfaces	x	x	x	x
	Temperature range [min/max]	x	x	x	x
	Humidity range [min/max]	x	x	x	x
Keeping Settings	Outlets state memory during the unit restart			x	x
Alarms — System Alarms	Total current-load of the NPM-V [A]	x	x	x	x
	Exceeded current-load of each outlet [A]		x		x
	Temperature/humidity sensor	x	x	x	x
	Smoke sensor	x	x	x	x
	Door sensor	x	x	x	x
	Water sensor	x	x	x	x
Alarms — Alarm Threshold Config	Total current-load of the NPM-V [A]	x	x	x	x
	Exceeded current-load of each outlet [A]		x		x
	Temperature	x	x	x	x
	Humidity	x	x	x	x
Alarms — Ways of Alarming	Internal built-in alarm (buzzer)	x	x	x	x
	Displaying alarm information on LCD display	x	x	x	x
	Alarm at external port – RJ11 (NO-NC)	x	x	x	x
	Alarm notification over Web interface	x	x	x	x
	Sending alarm information to an e-mail address	x	x	x	x
	Sending SNMP Traps	x	x	x	x
	Through SYSLOGS protocols	x	x	x	x
Communication	Web interface (HTTP and HTTPS) through IE, OPERA, CHROME and FIREFOX web browsers			x	x
	Ethernet, WiFi	x	x	x	x
	SNMP (V1, V2c, V3)	x	x	x	x
	RADIUS user authorization protocol	x	x	x	x
	Telnet and SSH communication protocols	x	x	x	x
	RS232 serial data transmission protocol	x	x	x	x
Available Sensors	Temperature/humidity (hybrid), door, water and smoke sensors	x	x	x	x
Cascade Connections	Possible to connect up to 5 units in Master/Slave system	x	x	x	x

Sensors for NPM-V units
- Temperature and humidity sensor (1134CTH01)
- Water sensor (1134CWS01)
- Smoke sensor (1134CSS01)
- Door sensor (1134CBS01)

19'' NPM-V Units

Available Type A Models

Model	Input Connector	Outlets	Index
19" BKT Network Power Manager V Type A	DIN 49441 (unischuko)/16A, 250V	8xIEC320 C13/10A, 250V	1134N06V.A.08-2
19" BKT Network Power Manager V Type A	IEC 60309/32A, 250V	8 x IEC320 C13/10A, 250V +4 x IEC320 C19/16A, 250V	1134N86V.A.08-2,04-6

Available Type B Models

Model	Input Connector	Outlets	Index
19" BKT Network Power Manager V Type B	DIN 49441 (unischuko)/16A, 250V	8xIEC320 C13/10A, 250V	1134N06V.B.08-2
19" BKT Network Power Manager V Type B	IEC 60309/32A, 250V	8 x IEC320 C13/10A, 250V +4 x IEC320 C19/16A, 250V	1134N86V.B.08-2,04-6

Available Type C Models

Model	Input Connector	Outlets	Index
19" BKT Network Power Manager V Type C	DIN 49441 (unischuko)/16A, 250V	8 x IEC320 C13/10A, 250V	1134N06V.C.08-2
19" BKT Network Power Manager V Type C	IEC 60309/32A, 250V	8 x IEC320 C13/10A, 250V +4 x IEC320 C19/16A, 250V	1134N86V.C.08-2,04-6

Available Type D Models

Model	Input Connector	Outlets	Index
19" BKT Network Power Manager V Type D	DIN 49441 (unischuko)/16A, 250V	8 x IEC320 C13/10A, 250V	1134N06V.D.08-2
19" BKT Network Power Manager V Type D	IEC 60309/32A, 250V	8 x IEC320 C13/10A, 250V +4 x IEC320 C19/16A, 250V	1134N86V.D.08-2,04-6

Vertical (0U) Single-phase NPM-V Units

Available Type A Models

Model	Input Connector	Outlets	Index
Vertical BKT Network Power Manager V Type A	IEC 60309/16A, 250V	24 x IEC320 C13/10A, 250V	1134N77V.A.24-2
Vertical BKT Network Power Manager V Type A	IEC 60309/32A, 250V	24 x IEC320 C13/10A, 250V	1134N87V.A.24-2
Vertical BKT Network Power Manager V Type A	IEC 60309/32A, 250V	21 x IEC320 C13/10A, 250V +3 x IEC320 C19/16A, 250V	1134N87V.A.21-2,03-6
Vertical BKT Network Power Manager V Type A	IEC 60309/32A, 250V	18 x IEC320 C13/10A, 250V +6 x IEC320 C19/16A, 250V	1134N87V.A.18-2,06-6
Vertical BKT Network Power Manager V Type A	IEC 60309/32A, 250V	36 x IEC320 C13/10A, 250V	1134N87V.A.36-2

Available Type B Models

Model	Input Connector	Outlets	Index
Vertical BKT Network Power Manager V Type B	IEC 60309/16A, 250V	24 x IEC320 C13/10A, 250V	1134N77V.B.24-2
Vertical BKT Network Power Manager V Type B	IEC 60309/32A, 250V	24 x IEC320 C13/10A, 250V	1134N87V.B.24-2
Vertical BKT Network Power Manager V Type B	IEC 60309/32A, 250V	21 x IEC320 C13/10A, 250V +3 x IEC320 C19/16A, 250V	1134N87V.B.21-2,03-6
Vertical BKT Network Power Manager V Type B	IEC 60309/32A, 250V	18 x IEC320 C13/10A, 250V +6 x IEC320 C19/16A, 250V	1134N87V.B.18-2,06-6

Available Type C Models

Model	Input Connector	Outlets	Index
Vertical BKT Network Power Manager V Type C	IEC 60309/16A, 250V	24 x IEC320 C13/10A, 250V	1134N77V.C.24-2
Vertical BKT Network Power Manager V Type C	IEC 60309/32A, 250V	24 x IEC320 C13/10A, 250V	1134N87V.C.24-2
Vertical BKT Network Power Manager V Type C	IEC 60309/32A, 250V	21 x IEC320 C13/10A, 250V +3 x IEC320 C19/16A, 250V	1134N87V.C.21-2,03-6
Vertical BKT Network Power Manager V Type C	IEC 60309/32A, 250V	18 x IEC320 C13/10A, 250V +6 x IEC320 C19/16A, 250V	1134N87V.C.18-2,06-6

Available Type D Models

Model	Input Connector	Outlets	Index
Vertical BKT Network Power Manager V Type D	IIEC 60309/16A, 250V	24 x IEC320 C13/10A, 250V	1134N77V.D.24-2
Vertical BKT Network Power Manager V Type D	IEC 60309/32A, 250V	24 x IEC320 C13/10A, 250V	1134N87V.D.24-2
Vertical BKT Network Power Manager V Type D	IEC 60309/32A, 250V	21 x IEC320 C13/10A, 250V +3 x IEC320 C19/16A, 250V	1134N87V.D.21-2,03-6
Vertical BKT Network Power Manager V Type D	IEC 60309/32A, 250V	18 x IEC320 C13/10A, 250V +6 x IEC320 C19/16A, 250V	1134N87V.D.18-2,06-6

NPM V - Network Power Manager

Vertical (0U) Three-phase NPM-V Units

Available Type A Models

Model	Input Connector	Outlets	Index
Vertical BKT Network Power Manager V Type A	IEC 60309/32A, 400V	24 x IEC320 C13/10A, 250V	1134NB8V.A.24-2
Vertical BKT Network Power Manager V Type A	IEC 60309/32A, 400V	21 x IEC320 C13/10A, 250V +3 x IEC320 C19/16A, 250V	1134NB8V.A.21-2,03-6
Vertical BKT Network Power Manager V Type A	IEC 60309/32A, 400V	18 x IEC320 C13/10A, 250V +6 x IEC320 C19/16A, 250V	1134NB8V.A.18-2,06-6
Vertical BKT Network Power Manager V Type A	IEC 60309/32A, 400V	36 x IEC320 C13/10A, 250V	1134NB8V.A.36-2

Available Type B Models

Model	Input Connector	Outlets	Index
Vertical BKT Network Power Manager V Type B	IEC 60309/32A, 400V	24 x IEC320 C13/10A, 250V	1134NB8V.B.24-2
Vertical BKT Network Power Manager V Type B	IEC 60309/32A, 400V	21 x IEC320 C13/10A, 250V +3 x IEC320 C19/16A, 250V	1134NB8V.B.21-2,03-6
Vertical BKT Network Power Manager V Type B	IEC 60309/32A, 400V	18 x IEC320 C13/10A, 250V +6 x IEC320 C19/16A, 250V	1134NB8V.B.18-2,06-6

Available Type C Models

Model	Input Connector	Outlets	Index
Vertical BKT Network Power Manager V Type C	IEC 60309/32A, 400V	24 x IEC320 C13/10A, 250V	1134NB8V.C.24-2
Vertical BKT Network Power Manager V Type C	IEC 60309/32A, 400V	21 x IEC320 C13/10A, 250V +3 x IEC320 C19/16A, 250V	1134NB8V.C.21-2,03-6
Vertical BKT Network Power Manager V Type C	IEC 60309/32A, 400V	18 x IEC320 C13/10A, 250V +6 x IEC320 C19/16A, 250V	1134NB8V.C.18-2,06-6

Available Type D Models

Model	Input Connector	Outlets	Index
Vertical BKT Network Power Manager V Type D	IEC 60309/32A, 400V	24 x IEC320 C13/10A, 250V	1134NB8V.D.24-2
Vertical BKT Network Power Manager V Type D	IEC 60309/32A, 400V	21 x IEC320 C13/10A, 250V +3 x IEC320 C19/16A, 250V	1134NB8V.D.21-2,03-6
Vertical BKT Network Power Manager V Type D	IEC 60309/32A, 400V	18 x IEC320 C13/10A, 250V +6 x IEC320 C19/16A, 250V	1134NB8V.D.18-2,06-6

Environment Monitoring System is an intelligent system for monitoring environment and power supply in one or several distribution cabinets. Based on advanced technologies, it provides effectiveness, reliability and safety of installed and working devices. EMS can be applied in server rooms, telecommunications, computer networks, although it is most frequently used in small or medium Data Centers.

You can easily monitor the environment and power supply in a cabinet over Ethernet using this system. It consists of a main unit (Master), subunit (Slave) and a Hub.

EMS can also monitor the status of PDUs, thanks to replaceable MPD module with LCD display.

Features

• Supply voltage of Master and Slave – 250V, IEC320 C14/10A connector
• Supply voltage of Hub – 12VDC/RJ45
• Horizontal mounting
• Remote monitoring and management of environment in one or several cabinets through Ethernet
• Sending alarm information to defined e-mail addresses
• Internal built-in alarm (buzzer)
• Communication with a PDU through Web interface and SNMP(V2), Telnet and SSH protocols
• Can operate in Master/Slave/Hub system; maximum 11 Slave units with a use of Hub
• Possible to connect and control the status of up to 4 PDUs connected to the Master unit and up to 4 PDUs connected to a Slave unit
• Possible to control sensors connected to the Master and Slave units
• LCD display in the Master unit to verify the parameters of installed devices and reported alarms
• LED indicators in the Master and Slave units informing about connected sensors
• Master, Slave, Hub unit size LxWxH [mm]: 482.6 x 131.8 x 44.4

Master

Slave

Hub

System for Monitoring Environmental Conditions

EMS-Environment Monitoring System

Web interface

WEB INTERFACE of devices connected to a PDU using not only a computer, but also a smart phone or a tablet.

It allows:
- Supply voltage monitoring [V] of the Master
- Current-load monitoring [A] of the Master
- Power monitoring [kW] of PDUs with MPD modules
- EMS may be monitored through Web interface compatible with most of the available web browsers that enables you to manage, monitor and control the status connected to the Master
- Energy consumption monitoring [kWh] of PDUs with MPD modules connected to the Master
- Monitoring of the status of connected temperature/humidity, water, smoke and door sensors in Master and Slave units
- Operating system status control in Master/Slave units
- Adding, removing and modifying users
- Controlling state of alarms and alarm values
- Alarm threshold config for temperature and humidity sensors
- Ethernet config
- SMTP server config

EMS functionality

EMS consists of a main unit (Master) and up to 11 Slave units connected with a use of Hub. Such a system enables you to monitor environment in 12 cabinets.
The system also includes PDUs with hot-swappable LCD display. Parameters monitored in each unit: voltage and current of PDUs (max 4), temperature, humidity, smoke, water and door. Alarms are sent in the case of exceeded defined thresholds or the occurrence of controlled events. Every event is saved in a log. There is a possibility of assigning user permissions to particular units.

Monitoring
EMS can monitor the following parameters:
- Total current-load [A] for PDUs connected to EMS
- Energy consumption [kWh] for PDUs connected to EMS
- Supply voltage [V] for PDUs connected to EMS
- Master/Slave units status
- Active alarms
- Alarm logs

Energy consumption monitoring
EMS can monitor energy consumption thanks to the installation of MPD modules in PDUs.
Energy consumption may be controlled through Web interface and LED display in MPD modules.
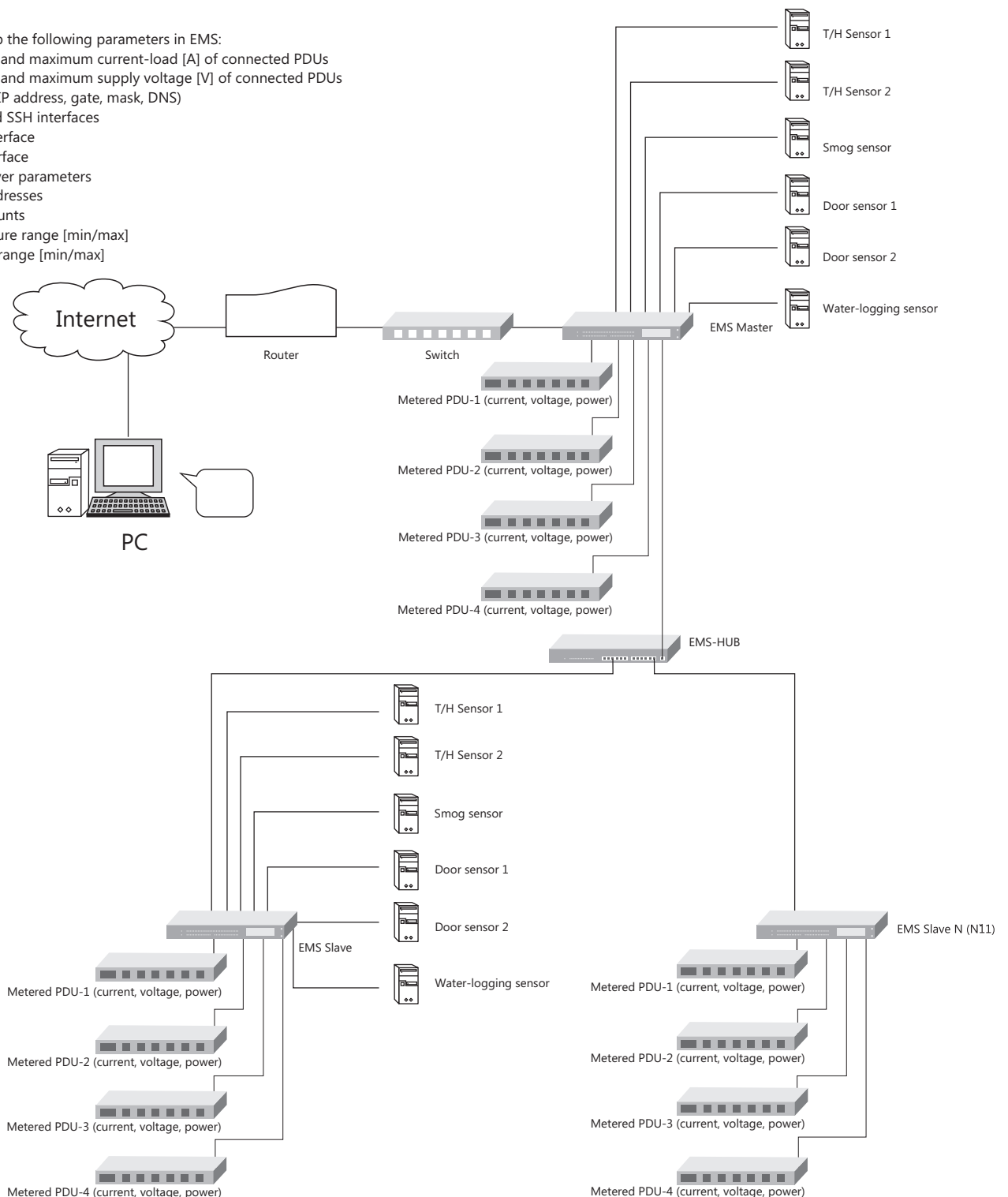
Environment conditions monitoring

EMS allows monitoring various environment conditions depending on the installed sensors. These include: temperature, humidity, smoke, door (access control) and water sensors.

- You can connect the following sensors to the Master unit and monitor them:
  - two temperature and humidity sensors: T/H1 and T/H2
  - two door sensors: Door1 and Door2
  - one smoke sensor
  - one water sensor

- You can connect the following sensors to a Slave unit:
  - two temperature and humidity sensors: T/H1 and T/H2
  - two door sensors: Door1 and Door2
  - one smoke sensor
  - one water sensor

Settings

You can set up the following parameters in EMS:

- Minimum and maximum current-load [A] of connected PDUs
- Minimum and maximum supply voltage [V] of connected PDUs
- Ethernet (IP address, gate, mask, DNS)
- Telnet and SSH interfaces
- SNMP interface
- HTTP interface
- SMTP server parameters
- E-mail addresses
- User accounts
- Temperature range [min/max]
- Humidity range [min/max]

System for Monitoring Environmental Conditions

EMS-Environment Monitoring System

Control and communication
- LCD display & LED indicator
  - Master unit has been fitted with LCD display and LED indicators.
  - LCD display provides the view of system status, supply voltage, current-load and energy consumption of connected PDUs. You can also verify the sate of connected temperature and humidity, door, water and smoke sensors.
  - LED indicators in the Master unit inform about a number and type of installed sensors and PDUs, as well as ports they are connected to. You can also check how many Slave units there are in the EMS.
  - Slave unit has been fitted with LED indicators, which inform about a number and type of installed sensors and PDUs, as well as ports they are connected to.
- Web interface accessible through Internet Explorer, Opera, Chrome and Firefox web browsers
- Ethernet 10/100 Mbit/s
- PDU connection to external applications and devices through SNMP (V1) protocol
- Communication between Master/Slave/Hub units through RS485/RJ45 protocol

Alarms
EMS allows monitoring of and alarming about parameters that have significant influence on proper operation of devices connected to a PDU and installed sensors. EMS can alarm about the following parameters:
- Minimum and maximum current-load [A] of connected PDUs
- Minimum and maximum supply voltage [V] of connected PDUs
- Minimum and maximum temperature
- Minimum and maximum humidity

Ways of alarming
EMS offers several ways of notifying a user about a current alarm, which includes:
- Internal built-in alarm (buzzer)
- Displaying alarm information on LCD display
- Alarm notification over the Web interface
- Sending alarm information to e-mail address
- Sending SNMP Traps

MPD Metering Module
Replaceable MPD metering modules inform about PDU's parameters with a possibility of sending this information through RJ45 port to Master and Slave units of EMS. MPD metering module is the latest designed and patented hot-swappable device with a multipurpose modular structure.

Its LCD display informs you about supply voltage [V] and current of a PDU and sends this information through RJ45 port (RS485) to EMS. It also displays information about the current power [kW] and has built-in energy meter [kWh].

Basic Features
The modules are hot-swappable, and their failure does not influence the operation of a PDU, which increases reliability of the power distribution system.

Hot-swappable Module Technical Parameters

Item	Parameter	Value
Supply Voltage	PDU Working Voltage	110/250 VAC, 50/60Hz
Output	Output Port	RJ45
	Communication Protocol	RS485
Digital Voltmeter	Maximum	255V
	Accuracy	±1% +3
	Resolution	1V
Digital Ammeter	Maximum	32V
	Accuracy	±1% +1
	Resolution	100mA
Power	Resolution	0,1kW
Electrical Energy Meter	Pulse Rate	1000imp/kWh
	Level	1
	Resolution	0,1 kWh
Casing	Size	110 x 41 x 56mm
	Colour	Czarny
Operation Environment	Temperature	0°C~55°C
	Humidity	10%~90%

Sensors for EMS

- Temperature and humidity sensor (1134CTH01)
- Water sensor (1134CWS01)
- Smoke sensor (1134CSS01)
- Door sensor (1134CBS01)

Available EMS Models

Model	Index
EMS (Master)	1134EM01
EMS (Slave)	1134ES01
EMS (HUB)	1134EH01

19" MPD Metering Power Distribution Units for EMS with a Socket for an MPD Metering Module

Model	Input Connector	Outlets	Index
19" MPD Unit with a Socket for an MPD Module	DIN49441 (unischuko)/16A, 250V	6 x NF C61-314 (PL, FR standard)/ 16A, 250V	11342050.06-1
19" MPD Unit with a Socket for an MPD Module	DIN49441 (unischuko)/16A, 250V	6 x DIN 49440 (schuko)/16A, 250V	11342050.06-0
MPD module for MPD units of EMS metering voltage, current and energy consumption, with a built-in meter and LCD display.			11342050.06-0

We can adjust the number and type of outlets in MPD unit to the Customer requirements.

Automatic Transfer Switch

ATS-Automatic Transfer Switch

BKT Elektronik has launched a product that provides redundancy and uninterrupted operation of network devices. ATS switches between power lines in no more than 16 ms at 16A and 32A current, not interrupting the operation of connected devices. When there is a power cut at Input A, the ATS automatically switches to power supply from Input B. ATS can be applied in server rooms, data centers, telecommunication and many other areas where uninterrupted power supply is a must.
ATS offered by BKT Elektronik is highly reliable and stable and switches between power sources very quickly.

Features

- Supply voltage 250V; IEC320 C20/16A, 250V and IEC60309 /16A, 250V connectors
- Output supply voltage 250V
- Maximum time of switching between power sources: ≤16 ms
- Maximum current-load for outlets: IEC320 C13/10A, IEC320 C19/16A
- Possible to use outlets: IEC320 C13, IEC320 C19
- Horizontal mounting
- Hot-swappable SNMP card allowing monitoring and remote management through Ethernet
- Sending alarm information to defined e-mail addresses
- Internal built-in alarm (buzzer)
- Communication with a PDU through Web interface, SNMP(V1), Ethernet and Telnet
- Quick and easy power source switch
- Available in 19" 1U or 2U casing
- Size [mm]: 482.6 x 220 x 44.4/88.8

Web interface

ATS unit can be monitored through multi-user Web interface, which includes monitoring, management and administration.

It iallows:
• Verification of input and output supply voltage
• Verification of current-load of each power source
• Power source control
• Changing power sources switching time
• Power source switch lock of the power source available at the front panel
• Changing names of power sources
• Min and max supply voltage [V] config
• Min and max current-load [V] config
• State of alarms and alarm values
• SNMP and Ethernet config

Web interface is compatible with most of the available web browsers and enables you to manage, monitor or control the state of devices connected to the PDU, as well as energy consumption for the PDU and for each outlet, using not only a computer, but even a smart phone or a tablet.

Automatic Transfer Switch

ATS-Automatic Transfer Switch

ATS Functionality

Monitoring
ATS can monitor the following parameters:
* Total current-load [A] of Input A and Input B
* Output total current-load [A]
* Supply voltage [V] of Input A and Input B
* Output supply voltage [V]
* Current status of power source
* Power supply failure
* Active alarms
* Alarm logs

Settings
In ATS you can set up the following parameters:
* Minimum and maximum current-load [A]
* Minimum and maximum supply voltage [V]
* Power source switch time for each power source [sec]
* Ethernet (IP address, gate, mask, DNS)
* SNMP interface
* HTTP interface
* SMTP server parameters
* E-mail addresses
* User accounts

Control and communication
• LED 3-digit display allows the control of supply voltage and current-load for active power source and IP addresses
• Web interface through Internet Explorer, Opera, Chrome, Firefox
• Network – Ethernet 10/100 Mbit/s using SNMP Card
• Serial communication interface (Telnet) – RJ45/RS232
• ATS connection to external applications and devices through SNMP (V1) protocol

Alarms
ATS allows monitoring of and alarming about parameters that have significant influence on proper operation of connected devices.
ATS can alarm about the following parameters:
* Minimum and maximum current-load [A]
* Minimum and maximum supply voltage [V]
* Power supply failure at one of the inputs

Ways of alarming
EMS offers several ways of notifying a user about a current alarm, which includes:
* Internal built-in alarm (buzzer)
* Displaying alarm information on LCD display
* Alarm notification over the Web interface
* Sending alarm information to e-mail address
* Sending SNMP Traps

Available output sockets
• 19" 1U version – IEC320 C13, C19 – built-in, IEC60309/16A, 250V – cable
• 19" 2U version – IEC320 C13, C19 – built-in, IEC60309/32A, 250V – cable

Available models

Model	Input Socket	Output Socket	Indeks
ATS Basic BKT 1U 19"	2 x IEC320 C20/16A, 250V (built-in), no cables included	6 x IEC320 C13/10A 2 x IEC320 C16/16A	1134A4.06-2,02-6S
ATS Basic BKT 1U 19"	2 x IEC60309/16A, 250V (cable)	1 x IEC 60309/16A, 250V (cable)	1134A5.01-7S
ATS Basic BKT 2U 19"	2 x IEC 60309/32A, 250V (cable)	12 x IEC320 C13/10A 4 x IEC320 C19/16A	1134A9.12-2,04-6S
ATS Basic BKT 2U 19"	2 x IEC 60309/32A, 250V (cable)	1 x IEC 60309/32A, 250V (cable)	1134A9.01-8S
BKT Hot-swappable SNMP/WEB Card, for ATS expansion			1134A.SNMP