Power Distribution and Automation Systems

Power Distribution and Automation Systems

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.
As part of automation systems for a Data Center, we offer hardware solutions allowing you to monitor environmental conditions of telecommunications cabinets and server rooms, as well as access control systems for cabinets and server kiosks, and the System Manager SM4DC software for IT infrastructure visualiation and management.

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	10A (2500W)
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 (3680W)
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 (3680W)
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	10A (2300W)
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	2,5 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 (3680W)		
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	2,5 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 (3680W)		
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	2,5 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 (3680W)
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	2,5 m H05VV-F 3 x 1,5 mm²
Outlets	9 x DIN 49440 (schuko) 16A/250V
Additional Elements	LED indicator
Maximum Current-load	16A (3680W)
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	2,5 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 (2300W)
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	2,5 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 (3680W)		
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 (3680W)	
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	2,5 m H05VV-F 3 x 1,5 mm²
Outlets	8 x IEC320 C13 10A/250V
Additional Elements	Lighted switch
Maximum Current-load	10A (2300W)
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 (2300W)
Size L x W x H [mm]	482.6 x 44.4 x 60
Casing	1U, 19″ , anodized aluminum, fixed holders

19″ PDUs with IEC320 C13 Outlets

Index	11341004.08-2,08-2
Input Connector	DIN 49441 (unischuko) 16A/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 (3680W)
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 (3680W)
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 (7360W)
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 (3680W)
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 (3680W)
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 (7360W)
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 (3680W)
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

Single-phase Vertical Power Distribution Units

Index	11340040
Input Connector	DIN49441 (unischuko) 16A/250V
Cable	2,5 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 (3600W)
Size L x W x H [mm]	676 x 68 x 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 (7360W)
Size L x W x H [mm]	1182 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 (3600W)
Size L x W x H [mm]	1042 x 68 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 (3680W)
Size L x W x H [mm]	1172,5 x 68 x 44.4
Casing	0U, anodized aluminum, fixed holders

Index	11341010.18-1
Input Connector	DIN 49441 16A/250V
Cable	3 m H05VV-F 3 x 1.5 mm²
Outlets	18 x NF C61-314 16A/250V
Additional Elements	Illuminated switch
Maximum Current-load	16A (3680W)
Size L x W x H [mm]	925 x 44.4 x 44.4
Casing	0U, anodized aluminum, fixed holders

Index	11341060.12-2,02-6
Input Connector	DIN 49441 16A/250V
Cable	3 m H05VV-F 3 x 1.5 mm²
Outlets	12 x IEC320 C13 10A/250V 2 x IEC320 C19 16A/250V
Additional Elements	Over-current circuit breaker
Maximum Current-load	16A (3680W)
Size L x W x H [mm]	779 x 44.4 x 44.4
Casing	0U, anodized aluminum, fixed holders

Three-phase Vertical Power Distribution Units

Index	11341B30.21-2,03-6
Input Connector	IEC 60309 32A/400V
Cable	3 m H05VV 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	3 x 32A (3 x 7360W)
Size L x W x H [mm]	1078 x 68 x 44.4
Casing	0U, black aluminum, adjustable holders

Index	11342B03.24-0
Input Connector	IEC 60309 32A/400V
Cable	3 m H05VV 5 x 6.0 mm²
Outlets	24 x DIN49440 (schuko) 16A/250V
Additional Elements	over-current circuit breaker
Maximum Current-load	3 x 32A (3 x 7360W)
Size L x W x H [mm]	1545 x 68 x 44.4
Casing	0U, black aluminum, adjustable holders

Index	11342B60.24-6
Input Connector	IEC 60309 32A/400V
Cable	3 m H05VV 5 x 6.0 mm²
Outlets	24 x IEC320 C19 16A/250V
Additional Elements	3 over-current circuit breakers
Maximum Current-load	3 x 32A (3 x 7360W)
Size L x W x H [mm]	1823 x 68 x 44.4
Casing	0U, black aluminum, adjustable holders

Index	11341B30.24-1
Input Connector	IEC 60309 32A/400V
Cable	3 m H05VV 5 x 6.0 mm²
Outlets	24 x NF C61-314 (standard PL, FR) 16A/250V
Additional Elements	3 x LED indicator
Maximum Current-load	3 x 32A (3 x 7360W)
Size L x W x H [mm]	1257 x 68 x 44.4
Casing	0U, black aluminum, adjustable holders

Index	11341B65.18-2,06-6
Input Connector	IEC 60309 32A/400V
Cable	3 m H05VV 5 x 6.0 mm²
Outlets	18 x IEC320 C13 10A/250V + 6 x IEC320 C19 16A/250V
Additional Elements	3 phase ammeter 3 over-current circuit breakers
Maximum Current-load	3 x 32A (3 x 7360W)
Size L x W x H [mm]	1611 x 68 x 44.4
Casing	0U, black aluminum, adjustable holders

Index	11341B65.24-0
Input Connector	IEC 60309 32A/400V
Cable	3 m H05VV 5 x 6.0 mm²
Outlets	24 x DIN49440 (schuko) 16A/250V
Additional Elements	3 ammeter 3 phase ammeter
Maximum Current-load	3 x 32A (3 x 7360W)
Size L x W x H [mm]	1880 x 68 x 44.4
Casing	0U, black aluminum, adjustable holders

Index	11342A00.18-1
Input Connector	IEC 60309 32A/400V
Cable	3 m H05VV 5 x 2.5 mm²
Outlets	18 x NF C61-314 16A/250V
Additional Elements	none
Maximum Current-load	3 x 16A (3 x 3680W)
Size L x W x H [mm]	953 x 68 x 44.4
Casing	0U, black aluminum, adjustable holders

Power cables

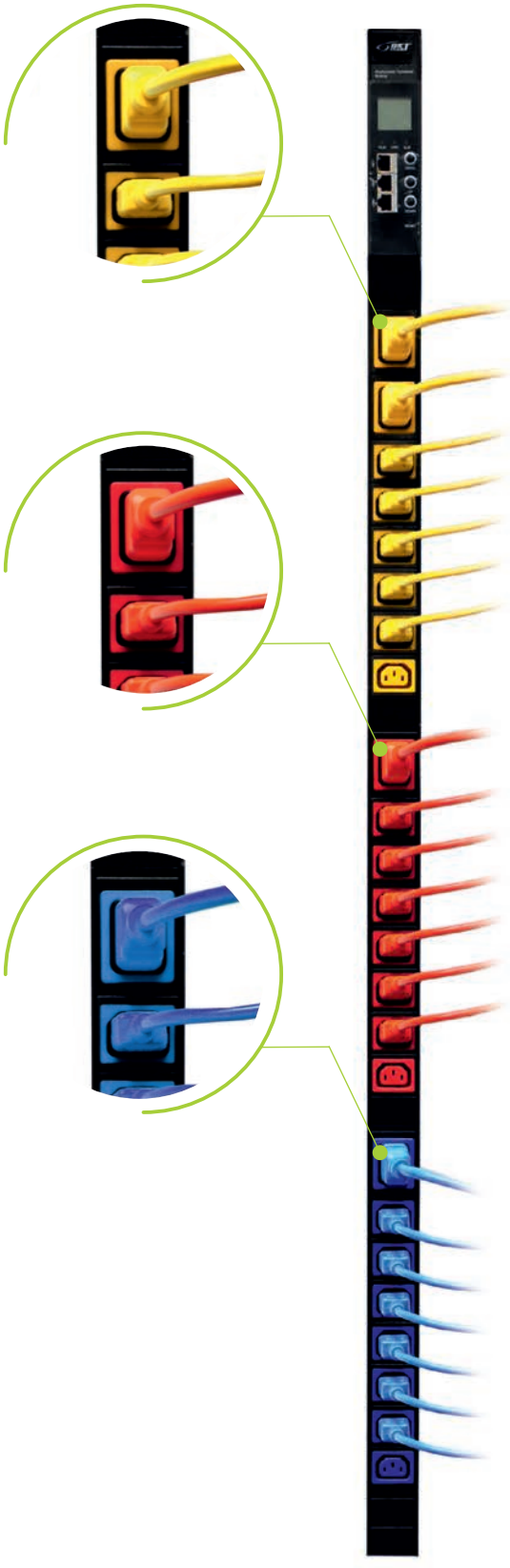
General-use power cables designed to supply low power receivers such as computers, servers, network devices working in offices, households and server rooms with IEC320 C13 and IEC320 C19 sockets, and IEC320 C14, IEC 320 C20 and DIN 49441 plugs.
Colour power cables ensure easier power distribution in a server cabinet, in particular a three phase power supply. Furthermore, they increase safety of supported equipment when reconfiguring the power supply. They also facilitate power cabling management, protect the devices from unintentional disconnection which may occur when using power cables of the same colour.
With power cables of different colours, the administrator is able to safely mark connections for new equipment or devices in a test phase.

Available models

Rated voltage	Test voltage	Socket	Plug	Color	Index
300V/500V	2000V	IEC320 C13 10A/250V 	IEC320 C14 10A/250V 	Red	11402785.X
300V/500V	2000V	IEC320 C19 16A/250V 	IEC320 C20 16A/250V 	Red	11402797.X
300V/500V	2000V	IEC320 C13 10A/250V 	IEC320 C14 10A/250V 	Yellow	11401785.X
300V/500V	2000V	IEC320 C19 16A/250V 	IEC320 C20 16A/250V 	Yellow	11401797.X
300V/500V	2000V	IEC320 C13 10A/250V 	IEC320 C14 10A/250V 	Blue	11403785.X
300V/500V	2000V	IEC320 C19 16A/250V 	IEC320 C20 16A/250V 	Blue	11403797.X
300V/500V	2000V	IEC320 C13 10A/250V 	DIN 49441 16A/250V 	Black	11480784.X
300V/500V	2000V	IEC320 C13 10A/250V 	IEC320 C14 10A/250V 	Black	11480785.X
300V/500V	2000V	IEC320 C19 16A/250V 	DIN 49441 16A/250V 	Black	11480796.3
300V/500V	2000V	IEC320 C19 16A/250V 	IEC320 C20 16A/250V 	Black	11480797.X

11480797.X cable length (m)

*Available color cable lengths: 2m, 3m
**Available lengths of black cables: 2m, 3m, 5m (exception 11480796.3 - 3m)



Functionality of monitoring and control power distribution units

A list of selected functions of the monitoring and control power distribution units

Properties	Functionality	IPD1000	IP-PDU	PGDS	NPM-V	IP-PDU universal power supply monitoring module	NPM-V universal power supply monitoring module
General	Mounting method	19"	Vertical (0U)	Vertical (0U)	19", Vertical (0U)	Vertical (0U)	Vertical (0U)
	Monitoring of the entire unit	A,V	A, V, kW, kWh, PF, kVA, Hz	A, V	A, V, kW, kWh, PF	A, V, kW, kWh, PF, kVA, Hz	A, V, kW, kWh, PF
	Socket monitoring	—	—	—	A, kW, kWh	—	—
	Socket activation /deactivation	✓	—	—	✓	—	—
	Group socket activation /deactivation	✓	—	—	✓	—	—
	Socket activation delay	✓	—	—	✓	—	—
	Input power supply: One-phase 250V / Three-phase 400V	One-phase 250V	✓	✓	✓	✓	✓
	Available sockets at the output	IEC C13 DIN 49440 NF C61-314	IEC C13 IEC C19 DIN 49440 NF C61-314	IEC C13 IEC C19 DIN 49440 NF C61-314	Version 19": IEC C13 & IEC C19 Version 0U: IEC C13 & IEC C19 DIN 49440, NF C61-314	IEC 60309	IEC 60309
Communication	Display: LED, LCD	LED	LCD	LCD	LCD: Vertical version (0U) LED: Version 19"	LCD	LCD
	Web interface	✓	✓	✓	✓	✓	✓
	Chain connection - concatenation (Master/Slave)	—	max 5 1xMaster + 4xSlave	max 10 1xMaster + 9xSlave	max 10 1xMaster + 9xSlave	max 5 1xMaster + 4xSlave	max 10 1xMaster + 9xSlave
	Environmental module* Sensor port Temperature/humidity	1 port	1 port	2 ports	2 ports	1 port	2 ports
	Environmental module** Sensor ports Door opening - 2 ports Smoke - 1 port Water - 1 port	—	—	smoke sensor – 1 port water sensor - 1 port	✓	—	✓
	Communication: LAN, WiFi	LAN	LAN	LAN	✓	LAN	✓
Control	Alarms and alarm thresholds	✓	✓	✓	✓	✓	✓
	Alarm logs	—	—	✓	✓	—	✓
	Alarm logs - records	—	—	—	✓	—	✓
Network/ administration	HTTP, HTTPS	HTTP	HTTP	HTTP	✓	HTTP	✓
	SMTP	✓	✓	✓	✓	✓	✓
	SNMP V1, V2c, V3	V1	V1	V1	✓	V1	✓
	DHCP	✓	—	—	✓	—	✓
	ModBus RTU	✓	✓	—	—	✓	—
	Command line: Telnet, SSH	Telnet	Telnet	✓	✓	Telnet	✓
	Additional authorisation: RADIUS	—	—	—	✓	—	✓
	Syslog remote server	—	—	—	✓	—	✓
	Time server: NTP	—	—	—	✓	—	✓
	User management (access rights)	—	—	—	✓	—	✓

* standard equipment
** optional equipment

Management IP-PDU

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).

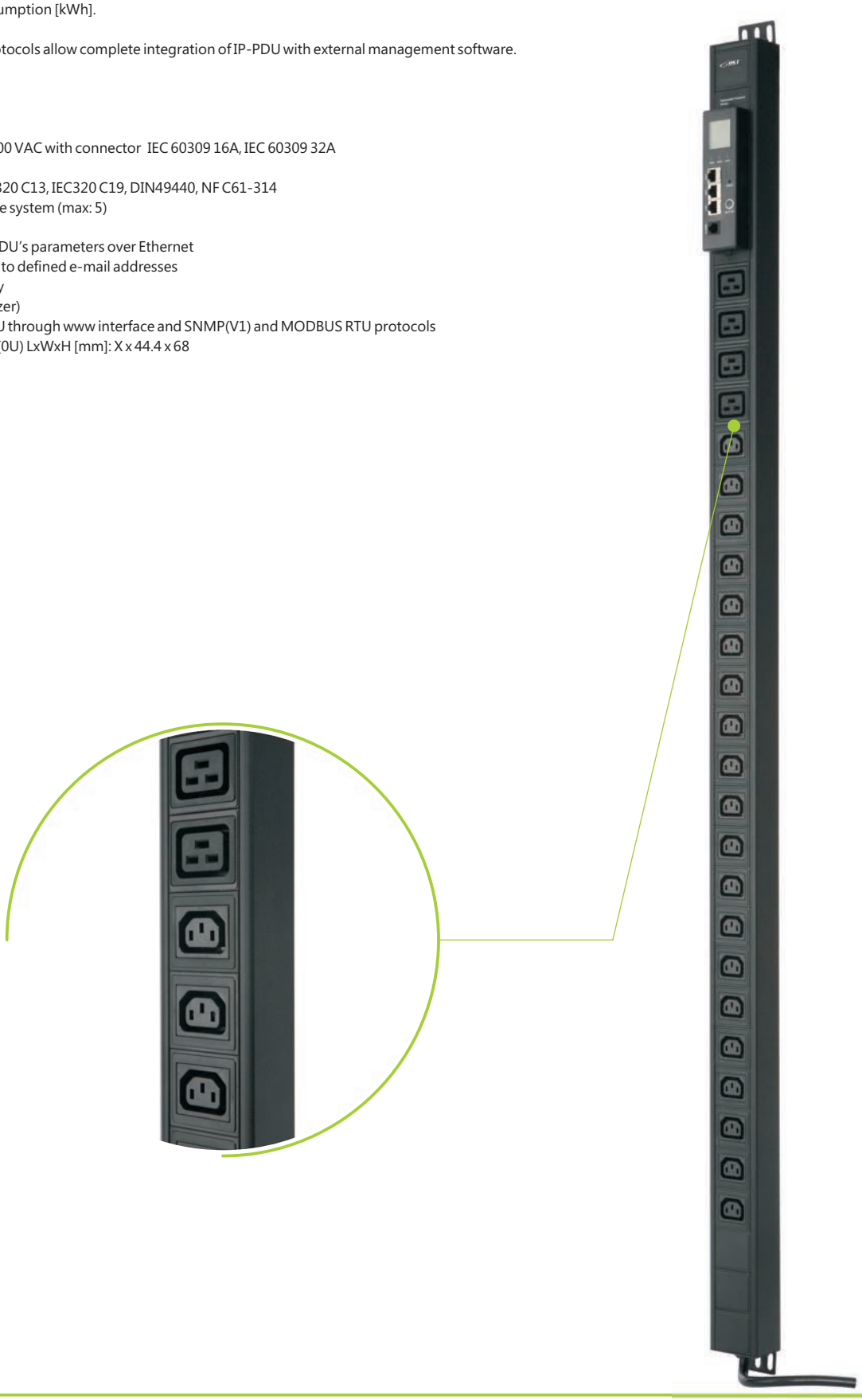
IP-PDUs are widely applicable in information technology and telecommunications. They have been designed to be used in small hanging cabinets, as well as in 19" standing distribution cabinets.

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 VAC or 400 VAC with connector IEC 60309 16A, IEC 60309 32A
- Output voltage 250 V
- 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 www interface and SNMP(V1) and MODBUS RTU protocols
- Size of the vertical IP-PDU: (0U) LxWxH [mm]: X x 44.4 x 68



Management IP-PDU

Web interface

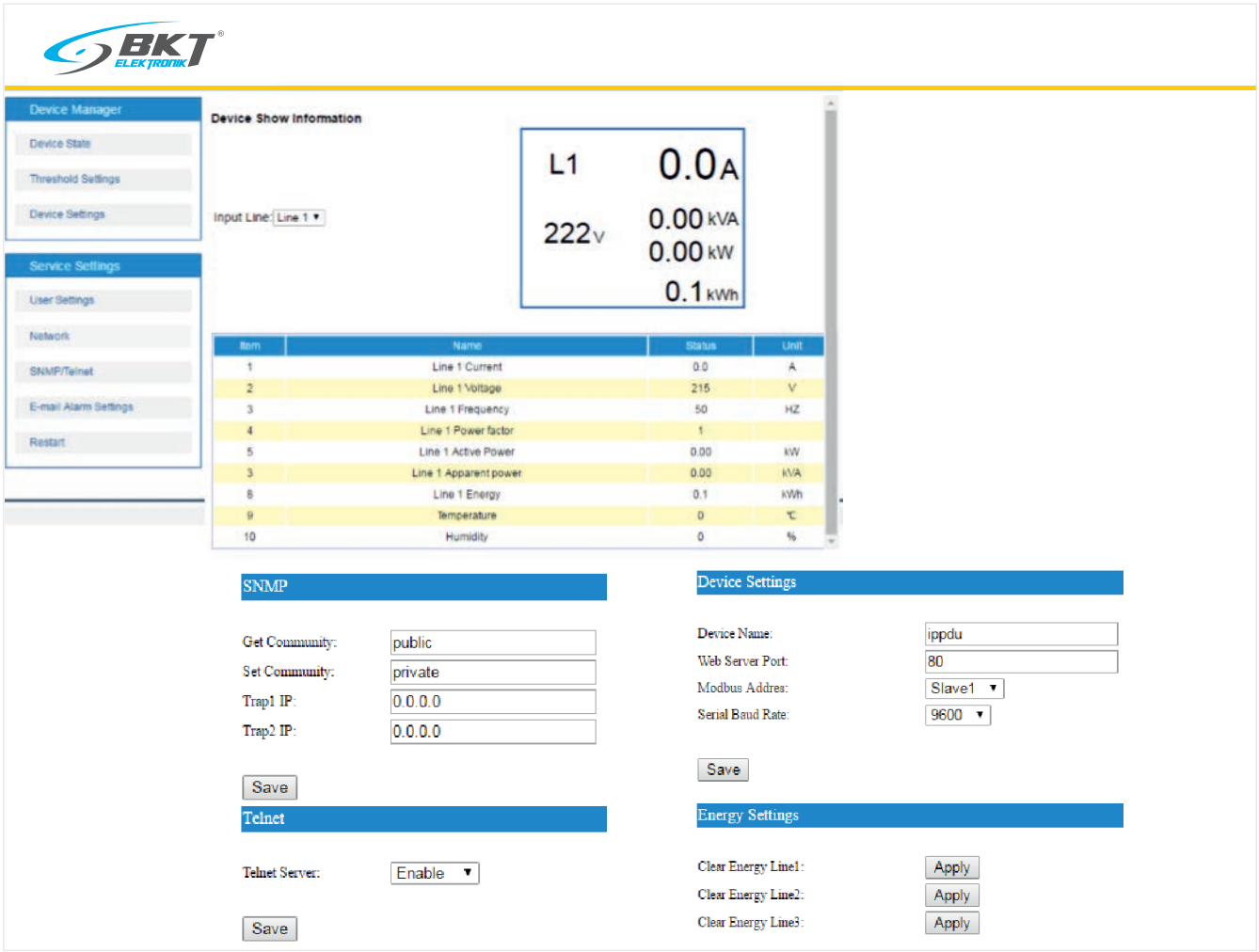
IP-PDU can be monitored through Web interface with most of the available web browsers. This enables the User to manage, monitor and control the state of devices connected to the unit using not only a computer, but even a mobile devices.

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]
- Software upgrade

It includes:

- Current status of the system
- 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]
- power factor PF
- apparent power [VA]
- frequencies [Hz]
- temperature / humidity
- 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

Management IP-PDU

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]

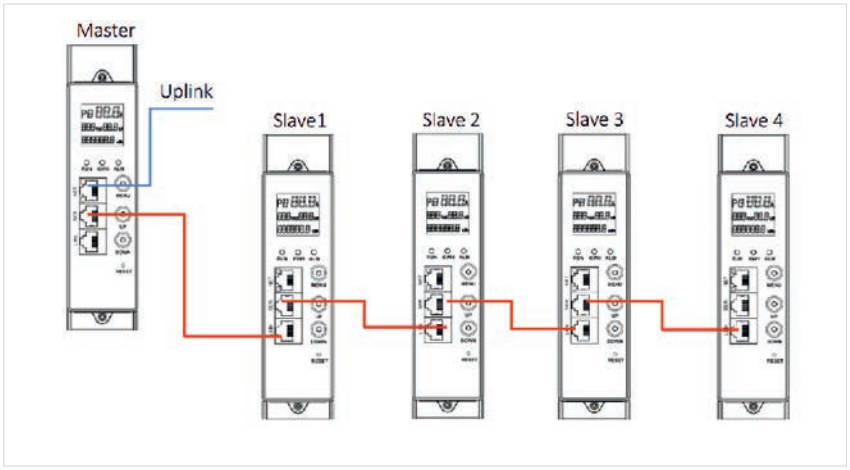
Ways and alarming

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

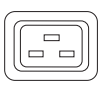
- Internal built-in alarm (buzzer)
- Displaying alarm information on LCD display
- Alarm at external port – RJ11 socket, NO-NC contact for connecting external alarming devices, such as sound or visual alarm
- Alarm notification over the Web interface
- Sending alarm information to e-mail address
- Sending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

IEC320 C13 10A/250V	IEC320 C19 16A/250V	DIN 49440 16A/250V	NF C61-314 16A/250V
			

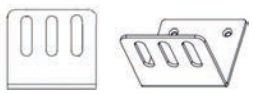
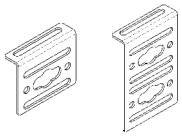
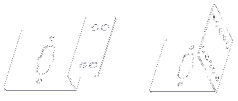
Management IP-PDU

Functionality table of the IP-PDU

Functions		Description
Monitoring		Total current load of the unit [A]
		Unit supply voltage [V]
		Total power consumption [kWh]
		Total input power for the entire unit [kW]
		Apparent power [VA]*
		Frequency [Hz]*
		Power factor [PF]*
		Sensor: temperature/humidity
Socket activation/deactivation		No
Socket group activation/deactivation		No
Control		Power meter for the entire unit [kWh] (reset function)
Configuration		Unit supply voltage [V] [min/max]
		Total current load of the unit [A]
		Unit operation mode: Master/Slave
		Ethernet TCP/IP v4 interface
		SMTP, SNMP, HTTP, Telnet interface
		User/administrator accounts and rights
		Temperature/humidity range
Communication		Web (HTTP) interface accessed through IE, OPERA, CHROME, FIREFOX browsers
		Ethernet TCP/IP v4
		SNMP (V1) protocol, ModBus (ModBus version available on the request)
Supported sensors		Temperature/humidity
Concatenation		Up to 5 units can be connected in Master/Slave configuration
Alarms	System alarms	Total current load of the unit [A]
		Unit supply voltage [V]
		Temperature/humidity [min/max]
	Alarm threshold definition	Total current load [A]
		Supply voltage [V] [min/max]
		Humidity
	Alarm methods	Built-in internal alarm (buzzer)
		Alarm information displayed on LCD
		Alarm indicator in the web interface
		Sending alarm information to an email address
		SNMP Traps

Accesories

Supported sensor	
Temperature and humidity sensor (1134CTH01)	

Mounting brackets	
Tool brackets	
Toolless brackets for BKT 4DC cabinets (ordered separately)	
Default toolless brackets type L-Z (includeed)	

Management IP-PDU

Available models

Model	Input Connector	Outlets	Max. load	Dimensions lendht x width x height [mm]	Casing	Index
BKT IP Power Distribution Unit	IEC 60309 16A/250V	24xIEC320 C13 10A/250V	16A	1173x44.4x68	0U	1134IP7V6.24-2
BKT IP Power Distribution Unit	IEC 60309 32A/250V	24xIEC320 C13 10A/250V	32A	1173x44.4x68		1134IP8V6.24-2
BKT IP Power Distribution Unit	IEC 60309 16A/250V	30xIEC320 C13 10A/250V	16A	1389x44.4x68		1134IP7V6.30-2
BKT IP Power Distribution Unit	IEC 60309 32A/250V	30xIEC320 C13 10A/250V	32A	1389x44.4x68		1134IP8V6.30-2
BKT IP Power Distribution Unit	IEC 60309 16A/250V	18xIEC320 C13/10A, 250V + 6xIEC320 C19 16A/250V	16A	1287x44.4x68		1134IP7V6.18-2,06-6
BKT IP Power Distribution Unit	IEC 60309 32A/250V	18xIEC320 C13/10A, 250V + 6xIEC320 C19 16A/250V	32A	1287x44.4x68		1134IP8V6.18-2,06-6
BKT IP Power Distribution Unit	IEC 60309 16A/250V	20xIEC320 C13/10A, 250V + 4xIEC320 C19 16A/250V	16A	1224x44.4x68		1134IP7V6.20-2,04-6
BKT IP Power Distribution Unit	IEC 60309 32A/250V	20xIEC320 C13/10A, 250V + 4xIEC320 C19 16A/250V	32A	1224x44.4x68		1134IP8V6.20-2,04-6
BKT IP Power Distribution Unit	IEC 60309 16A/250V	21xIEC320 C13/10A, 250V + 3xIEC320 C19 16A/250V	16A	1230x44.4x68		1134IP7V6.21-2,03-6
BKT IP Power Distribution Unit	IEC 60309 32A/250V	21xIEC320 C13/10A, 250V + 3xIEC320 C19 16A/250V	32A	1230x44.4x68		1134IP8V6.21-2,03-6
BKT IP Power Distribution Unit	IEC 60309 32A/250V	30xIEC320 C13/10A, 250V + 3xIEC320 C19 16A/250V	32A	1554x44.4x68		1134IP8V6.30-2,03-6

Available models

Model	Input Connector	Outlets	Max. load	Dimensions lendht x width x height [mm]	Casing	Index
BKT IP Power Distribution Unit	IEC 60309 16A/400V	24xIEC320 C13 10A/250V	3 x 16A	1173x44.4x68	0U	1134IPAV6.24-2
BKT IP Power Distribution Unit	IEC 60309 32A/400V	24xIEC320 C13 10A/250V	3 x 32A	1173x44.4x68		1134IPBV6.24-2
BKT IP Power Distribution Unit	IEC 60309 16A/400V	30xIEC320 C13 10A/250V	3 x 16A	1389x44.4x68		1134IPAV6.30-2
BKT IP Power Distribution Unit	IEC 60309 32A/400V	30xIEC320 C13 10A/250V	3 x 32A	1389x44.4x68		1134IPBV6.30-2
BKT IP Power Distribution Unit	IEC 60309 16A/400V	18xIEC320 C13 10A/250V + 6xIEC320 C19 16A/250V	3 x 16A	1287x44.4x68		1134IPAV6.18-2,06-6
BKT IP Power Distribution Unit	IEC 60309 32A/400V	18xIEC320 C13 10A/250V + 6xIEC320 C19 16A/250V	3 x 32A	1287x44.4x68		1134IPBV6.18-2,06-6
BKT IP Power Distribution Unit	IEC 60309 16A/400V	20xIEC320 C13 10A/250V + 4xIEC320 C19 16A/250V	3 x 16A	1224x44.4x68		1134IPAV6.20-2,04-6
BKT IP Power Distribution Unit	IEC 60309 32A/400V	20xIEC320 C13 10A/250V + 4xIEC320 C19 16A/250V	3 x 32A	1224x44.4x68		1134IPBV6.20-2,04-6
BKT IP Power Distribution Unit	IEC 60309 16A/400V	21xIEC320 C13 10A/250V + 3xIEC320 C19 16A/250V	3 x 16A	1230x44.4x68		1134IPAV6.21-2,03-6
BKT IP Power Distribution Unit	IEC 60309 32A/400V	21xIEC320 C13 10A/250V + 3xIEC320 C19 16A/250V	3 x 32A	1230x44.4x68		1134IPBV6.21-2,03-6
BKT IP Power Distribution Unit	IEC 60309 32A/400V	30xIEC320 C13 10A/250V + 3xIEC320 C19 16A/250V	3 x 32A	1554x44.4x68		1134IPBV6.30-2,03-6

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)
- Cconnection 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

Management PCDS

Web interface

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

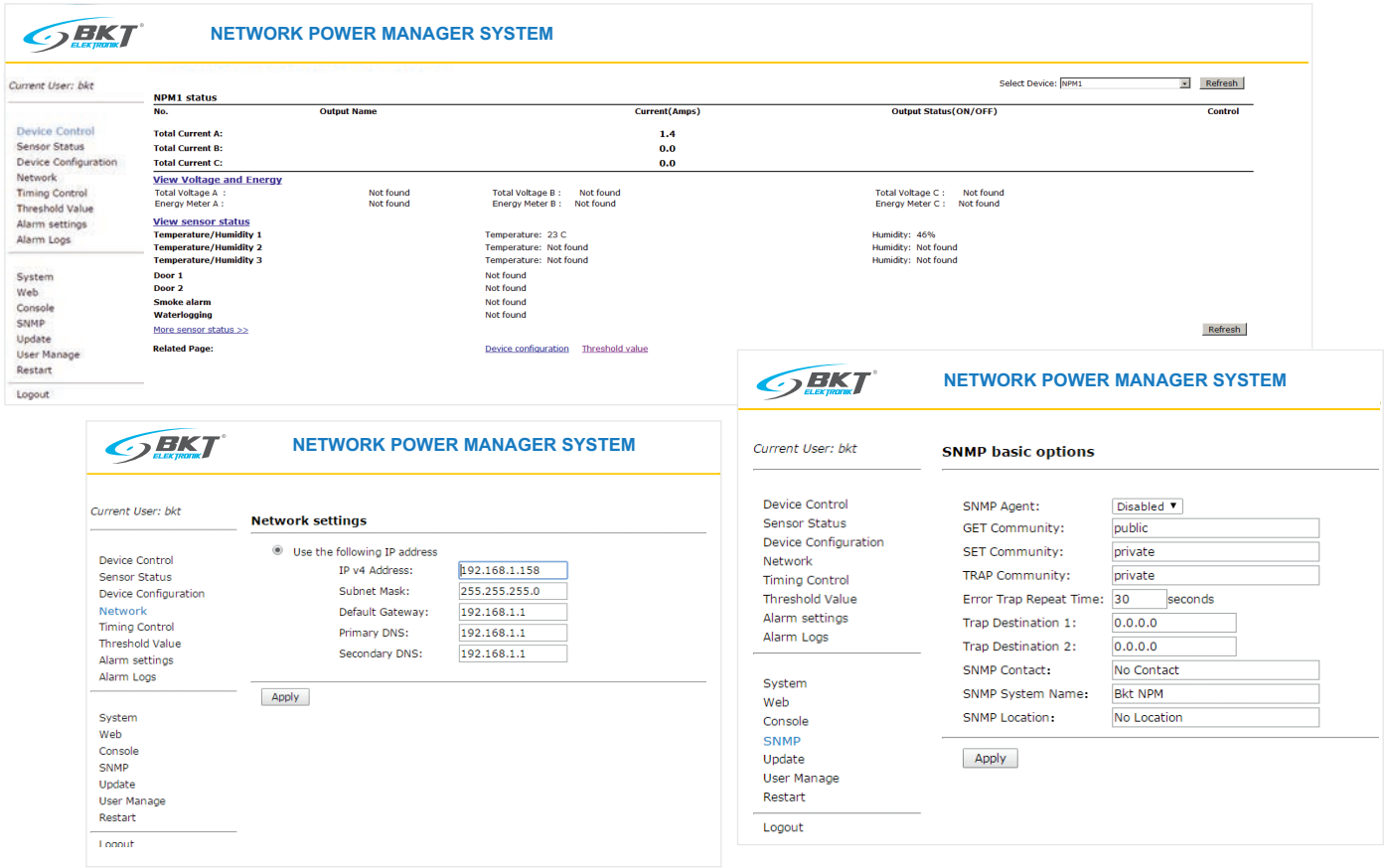
It allows:

- 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]

Management PCDS

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 slot models

IEC320 C13 10A/250V	IEC320 C19 16A/250V	DIN 49440 16A/250V	NF C61-314 16A/250V
			

Types of modules for power strips PCDS

Module 1134PCPDA.05-3 Max. module load 10A Sockets 5 x IEC320 C13 Dimensions 260 x 66.2 x 44 [mm]	
Module 1134PCPDC.04-6 Max. module load 16A Sockets 4 x IEC320 C19 Dimensions 260 x 66.2 x 44 [mm]	
Module 1134PCPDD.04-0 Max. module load 16A Sockets 4 x DIN 49440 Dimensions 260 x 66.2 x 44 [mm]	
Module1134PCPDE.04-1 Max. module load 16A Sockets 4 x NF C61-314 Dimensions 260 x 66.2 x 44 [mm]	

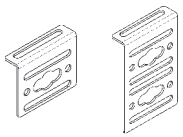
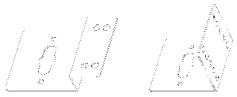
Management PCDS

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

Accesories

Supported sensor	
Temperature and humidity sensor (1134CTH01)	
Water sensor (1134CWS01)	
Smoke sensor (1134CSS01)	

Mounting brackets	
Tool brackets	
Toolless brackets for BKT 4DC cabinets (ordered separately)	
Default toolless brackets type L-Z (includeed)	

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

Management IPD 1000

IPD 1000 units offered by BKT Elektronik belong to the group of IPD (Intelligent Power Distribution) units. They have been extended with remote monitoring and management functions. The IPD 1000 unit is intended for monitoring basic parameters such as voltage [V], total current load of the unit and temperature/humidity.
The units are distinguished by a new housing as compared to the previous models and an extended control and measurement module. They are used in large institutions and small-size companies, ensuring faultless supply and top class monitoring of devices.

Product characteristics

- Input supply voltage 250VAC with IEC320 C20 16A (built-in) plug
- Output supply voltage 250VAC
- IEC320 C13, DIN49440, NF C61-314 sockets
- Horizontal installation
- Remote monitoring and management through an Ethernet network
- Sending alarm information to defined email addresses
- Built-in internal alarm (buzzer)
- Communication with the unit via a Web interface, SNMP (V1) protocol, Telnet and ModBus RTU protocol (ModBus RTU available on the request)





Managament IPD 1000

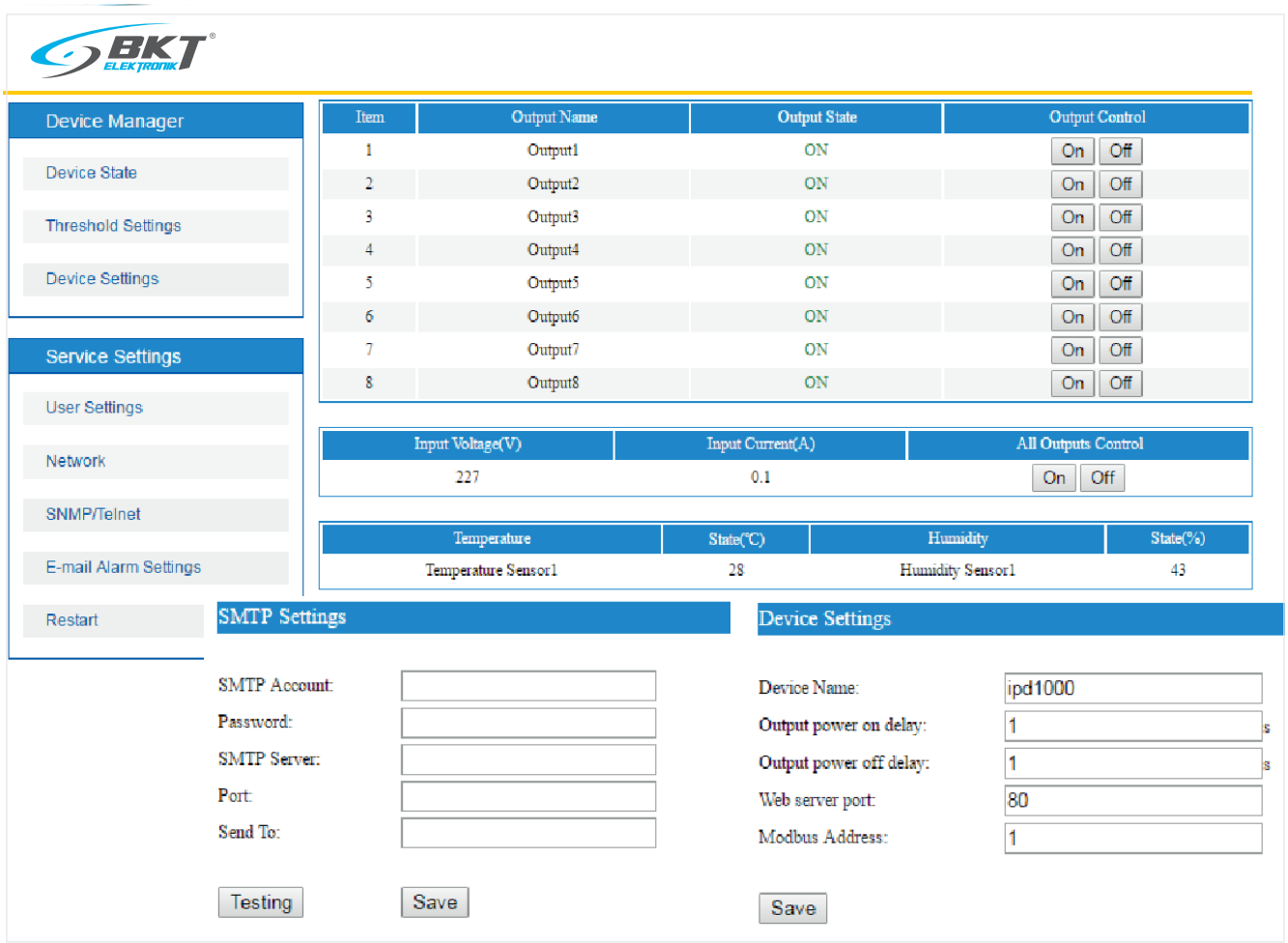
Web interface

Operation of the unit can be supervised with a multi-user web interface allowing for monitoring, management and administraton.

Ensures:
- Verification of the total unit load [A] and supply voltage
- Setting an alarm level for a load [A] of the entire unit
- Temperature/humidity sensor readings
- Setting an alarm level for temperature/humidity
- Control of the status (on/off) for each socket
- Activation/deactivation of a socket
- Activation/deactivation of a socket group
- Setting a socket activation/deactivation delay time
- Restarting the device and restoring it to the default settings

Includes:
- Indications and states of the temperature/humidity sensor
- Current status of the system
- Status of the alarms and alarm values

The web interface is compatible with the majority of available browsers used to control status of devices connected to the unit not only with a computer, but also with a smartphone or tablet.



Managament IPD 1000

Funcionality

Monitoring
- Total unit current load [A]
- Unit power supply voltage [V]
- Socket status on/of
- Current state of the system
- Active alarms

Environment conditions monitoring
IPD 1000 units can be used to monitor temperature/humidity using only one temperature/humidity sensor.

Configuration
- Total current load of the unit [A]
- Delay at sequential activation/deactivation of each socket
- Ethernet interface (IP address, gate, mask, DNS)
- SMTP interface
- SNMP interface
- HTTP interface
- Telnet interface
- Temperature range [min/max]
- Humidity range [min/max]

Control and communication
1. The LED indicates:
- Unit supply voltage [V]
- Total current load of the entire unit [A]
- Device IP address

2. Website interface
Support for Internet Explorer, Opera, Firefox, Chrome browsers
3. Ethernet 10/100 Mbit/s
4. SNMP (V1)
5. Telnet
6. ModBus RTU (ModBus version available on the request)

Alarms
- Total current load [A]
- Minimum and maximum temperature
- Minimum and maximum humidity

Alarm methods
- Built-in internal alarm (buzzer)
- Alarm indicator in a web interface
- Sending alarm information to an email address
- Sending SNMP Traps

Configuration maintenance
IPD 1000 units ensure maintenance of the socket configuration when restarting the unit, without any risk of losing the current configuration of active sockets.

Available slot models

IEC320 C13 10A/250V	DIN 49440 16A/250V	NF C61-314 16A/250V
		

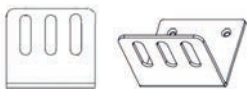
Managament IPD 1000

Detailed list of functions for the IPD 1000

Functions		Description
Monitoring		Total current load of the unit [A]
		Unit supply voltage [V]
		Socket state (on/off)
		Temperature/humidity sensor state
Socket activation/deactivation		Yes
Socket group activation/deactivation		Yes
Control		Visual control of socket activation/deactivation (LED)
Configuration		Total current load of the unit [A]
		Temperature/humidity range [min/max]
		Socket group activation/deactivation time
		Interface: Ethernet, SMTP, SNMP, HTTP, Telnet
Configuration maintenance		Maintenance of socket status when restarting the unit
Communication		We (HTTP) interface, access through IE, OPERA, CHROME, FIREFOX browsers
		Ethernet TCP/IP v4
		SNMP (V1), Telnet , ModBus (ModBus version available on the request)
Available sensors		Temperature/humidity sensor
Alarms	System alarms	Total current load of the unit [A]
		Temperature/humidity sensor
	Alarm threshold definition	Total current load [A]
		Temperature/humidity
	Alarm methods	Built-in internal alarm (buzzer)
		Alarm information displayed on LCD
		Alarm indicator in the web interface
		Sending alarm information to an email address
		Sending SNMP Traps

Accesories

Supported sensor:	
Temperature and humidity sensor (1134CTH01)	

Mounting brackets	
Tool brackets	

Available models for IPD 1000 19"

Model	Power plug (built-in)	Sockets	Max. unit load	Dimensions length x width x height [mm]	Housing	Index
BKT management power distributionunit 19" IPD 1000	IEC 320 C20 16A/250V	8xIEC320 C13	16A	480.5x139.8x44.4	1U 19"	1134IPD1.08-2
BKT management power distributionunit 19" IPD 1000	IEC 320 C20 16A/250V	6xNF C61-314	16A	490.5x169.8x88.8	2U 19"	1134IPD1.06-1
BKT management power distributionunit 19" IPD 1000	IEC 320 C20 16A/250V	8xNF C61-314	16A	490.5x169.8x88.8		1134IPD1.06-1,02-1
BKT management power distributionunit 19" IPD 1000	IEC 320 C20 16A/250V	6xDIN 49440	16A	490.5x169.8x88.8		1134IPD1.06-0
BKT management power distributionunit 19" IPD 1000	IEC 320 C20 16A/250V	8xDIN 49440	16A	490.5x169.8x88.8		1134IPD1.06-0,02-0

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

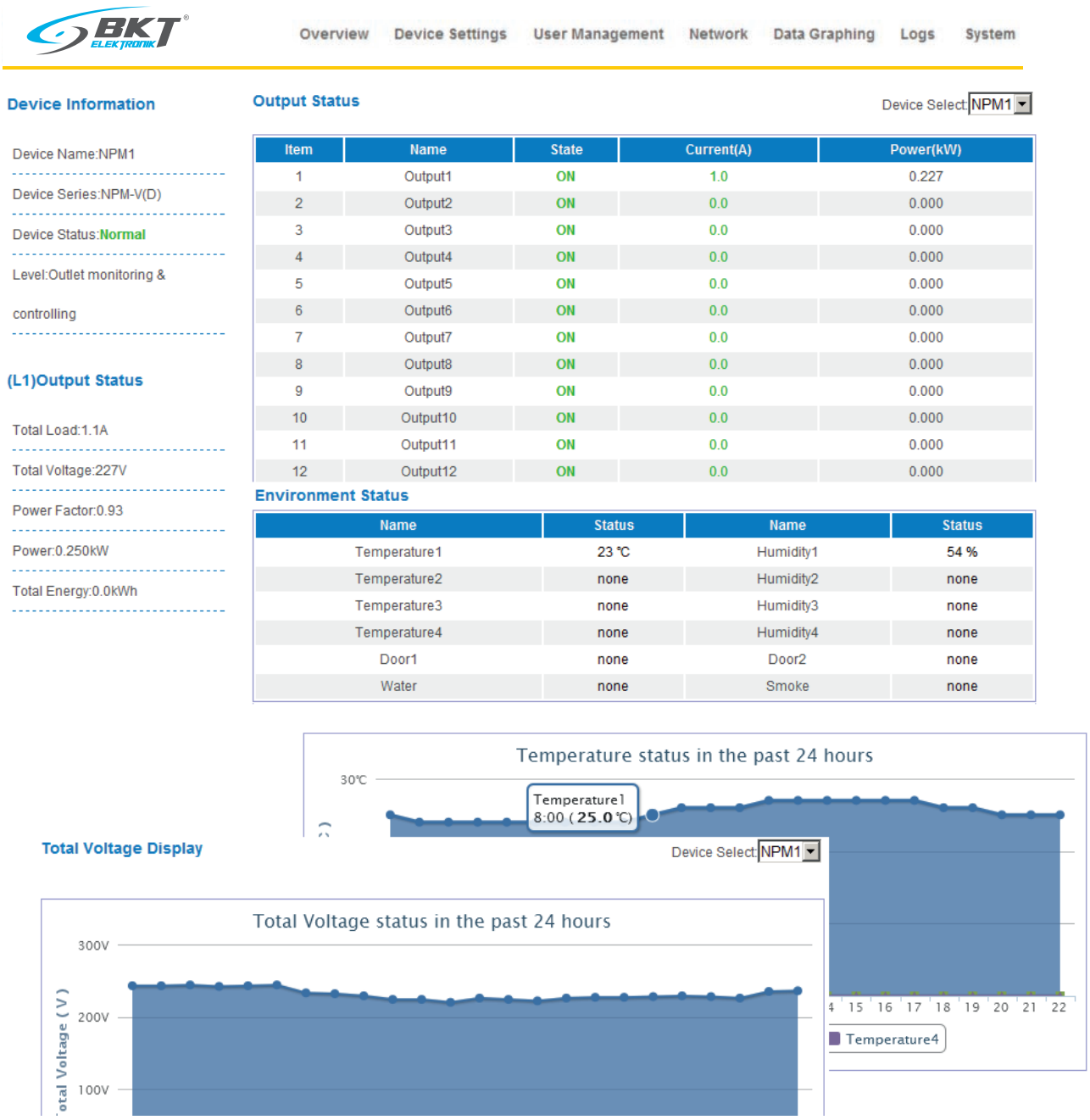
NPM V - Network Power Management

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.

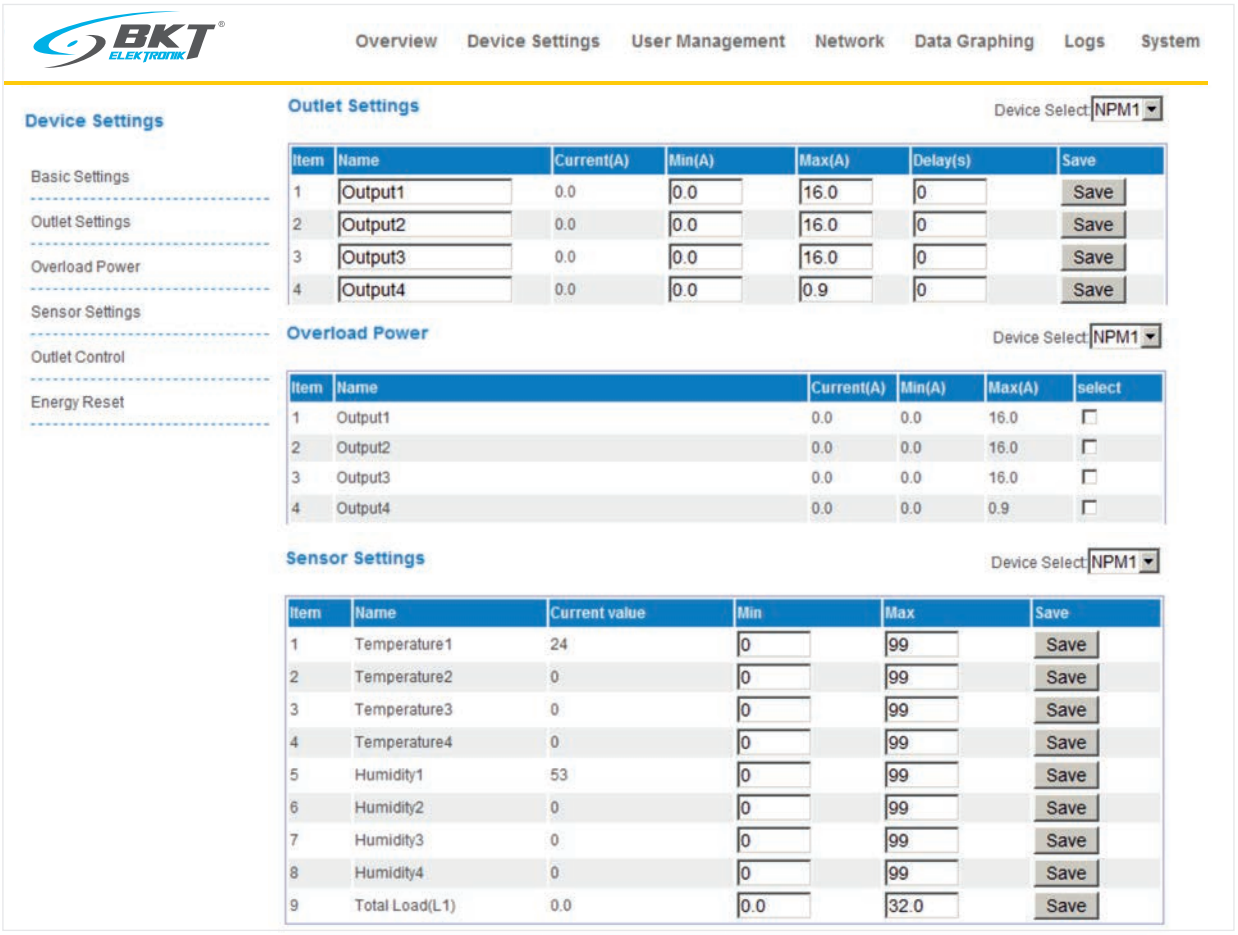
It includes:

- 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

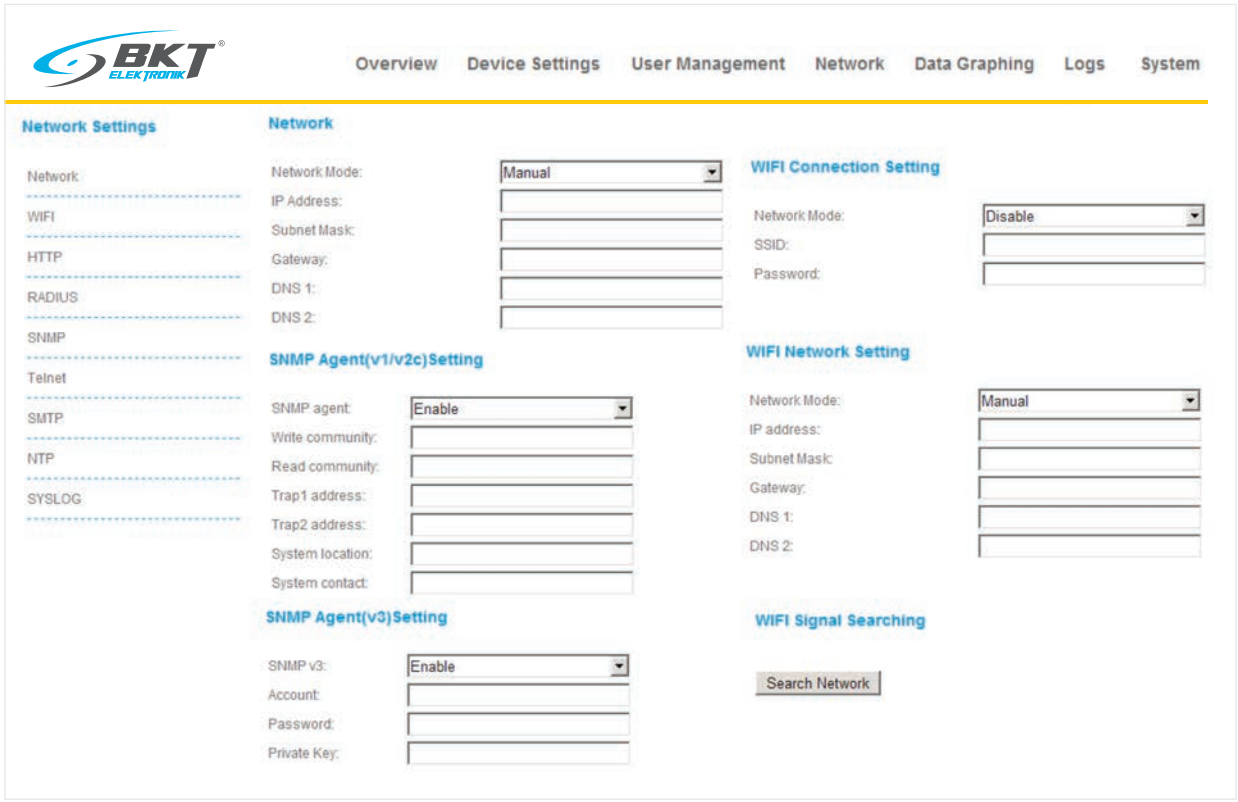


NPM V - Network Power Manager

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.



NPM V - Network Power Manager

NPM-V functionality

Monitoring

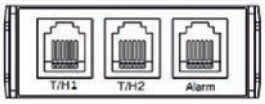
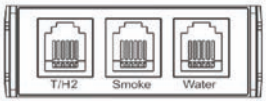
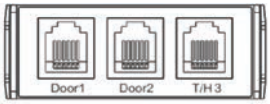
NPM-V units monitor the following parameters:
- Total current-load of the NPM-V [A]
- Current-load of each outlet [A]
- Supply voltage of the NPM-V [V]
- Total energy consumption [kWh]
- Energy consumption of each outlet [kWh]
- Power Factor
- Power of the entire NPM-V [kW]
- Power of each outlet [kW]
- 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:

Extension modules for the NPM-V uni	Module view	Supported sensors
Internal, built into the NPM-V unit * standard equipment		Temperature and humidity sensor (2 ports) Alarm port - potential-free output 1A/50VDC
Internal, built into the NPM-V unit *available only for the 0U vertical version * optional equipment		Temperature and humidity sensor Smoke sensor Water sensor
Internal, built into the NPM-V unit * available only for the 0U vertical version * optional equipment		Temperature and humidity sensor Door opening sensor (2 ports)
External Sensor Box - Index:1134SBX01.0		Temperature and humidity sensor (2 ports) Door opening sensor (2 ports) Smoke sensor Water sensor

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
- Network - Ethernet 10/100 Mbit/s, WiFi
- RJ45/RS232 serial communication interface
- Communication with external applications and devices through SNMP (V1, V2c, V3) protocols

NPM V - Network Power Manager

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

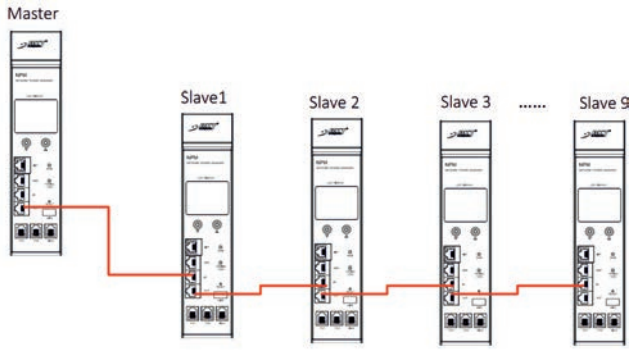
Ways of alarming

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 slot models

IEC320 C13 10A/250V	IEC320 C19 16A/250V	DIN 49440 16A/250V	NF C61-314 16A/250V
			

NPM V - Network Power Manager

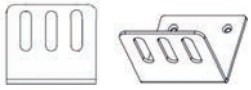
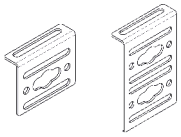
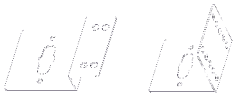
Detailed list of functions depending on the model of the NPM V unit

Functions		Description	Type			
			Monitoring		Control	
			A	B	C	D
Monitoring		Total current load of the unit [A]	x	x	x	x
		Unit supply voltage [V]	x	x	x	x
		Total power consumption [kWh]	x	x	x	x
		Power consumption per socket [kWh]		x		x
		Power factor	x	x	x	x
		Total input power for the entire unit [kW]	x	x	x	x
		Input power per socket [kW]		x		x
		Current load per socket [A]		x		x
		Socket state (ON/OFF)			x	x
		Temperature, humidity	x	x	x	x
		Water, smoke, door opening (extension with an additional module)	x	x	x	x
Control		Power meter for the entire unit [kWh] (reset function)	x	x	x	x
		Power meter per socket [kWh] (reset function)		x		x
		Socket overload		x		x
		Socket activation/deactivation			x	x
		Socket group activation/deactivation			x	x
		Visual control of socket activation/deactivation (LED)			x	x
Configuration		Unit supply voltage [V] [min/max]	x	x	x	x
		Total current load of the unit [A] [min/max]	x	x	x	x
		Current load per socket [A] [min/max]		x		x
		Delay at sequential activation/deactivation of each socket			x	x
		Unit operation mode: Master/Slave	x	x	x	x
		Ethernet, DHCP, WiFi interface	x	x	x	x
		NTP, RADIUS, SYSLOG, SMTP, SNMP, HTTP, HTTPS, Telnet, SSH interface	x	x	x	x
		Accounts and rights for users and administrators	x	x	x	x
		Temperature, humidity range [min/max]	x	x	x	x
Configuration maintenance		Maintenance of socket status when restarting the unit			x	x
Communication		Web interface (HTTP, HTTPS) accessed through IE, OPERA, CHROME, FIREFOX browsers			x	x
		Ethernet, WiFi	x	x	x	x
		SNMP (V1, V2c, V3), Telnet, SSH, RS232 protocol	x	x	x	x
Supported sensors		Door opening, water, smoke (after extending it with an additional module)	x	x	x	x
Concatenation		Up to 10 units can be connected in Master/Slave configuration	x	x	x	x
Alarms	System alarms	Total current load of the unit [A]	x	x	x	x
		Unit supply voltage [V]	x	x	x	x
		Current load per socket [A]		x		x
		Temperature/humidity, smoke, door opening, water sensor	x	x	x	x
	Alarm threshold definition	Total current load [A]	x	x	x	x
		Supply voltage [V]	x	x	x	x
		Current load per socket [A]		x		x
		Temperature, humidity	x	x	x	x
	Alarm methods	Built-in internal alarm (buzzer)	x	x	x	x
		Alarm information displayed on LCD	x	x	x	x
		Alarm at the external port - RJ12 (NO-NC)	x	x	x	x
		Alarm indicator in the web interface	x	x	x	x
		Sending alarm information to an email address	x	x	x	x
		Sending SNMP Traps	x	x	x	x

NPM V - Network Power Manager

Accesories

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

Mounting brackets	
Tool brackets	
Toolless brackets for BKT 4DC cabinets (ordered separately)	
Default toolless brackets type L-Z (includeed)	

19" BKT Network Power Manager V 1U

Model	Type	Input Connector	Outlets	Max. unit load	Dimensions length x width x height [mm]	Housing	Index
19" BKT Network Power Manager V	A	DIN49441 16A/250V	8xIEC320 C13	16A	482.6x216x44.4	1U 19"	1134N06V.A.08-2
19" BKT Network Power Manager V		IEC 60309 32A/250V	8xIEC320 C13+ 4xIEC320 C19	32A	482.6x216x44.4		1134N86V.A.08-2,04-6
19" BKT Network Power Manager V	B	DIN49441 16A/250V	8xIEC320 C13	16A	482.6x216x44.4		1134N06V.B.08-2
19" BKT Network Power Manager V		IEC 60309 32A/250V	8xIEC320 C13+ 4xIEC320 C19	32A	482.6x216x44.4		1134N86V.B.08-2,04-6
19" BKT Network Power Manager V	C	DIN49441 16A/250V	8xIEC320 C13	16A	482.6x216x44.4		1134N06V.C.08-2
19" BKT Network Power Manager V		IEC 60309 32A/250V	8xIEC320 C13+ 4xIEC320 C19	32A	482.6x216x44.4		1134N86V.C.08-2,04-6
19" BKT Network Power Manager V	D	DIN49441 16A/250V	8xIEC320 C13	16A	482.6x216x44.4		1134N06V.D.08-2
19" BKT Network Power Manager V		IEC 60309 32A/250V	8xIEC320 C13+ 4xIEC320 C19	32A	482.6x216x44.4		1134N86V.D.08-2,04-6

19" BKT Network Power Manager V 2U

Model	Type	Input Connector	Outlets	Max. unit load	Dimensions length x width x height [mm]	Housing	Index
19" BKT Network Power Manager V	A	IEC 60309 32A/400V	12xIEC320 C13+ 4xIEC320 C19	3 x 32A	482.6x216x88.8	2U 19"	1134NB8V.A.12-2,04-6
19" BKT Network Power Manager V	B	IEC 60309 32A/400V	12xIEC320 C13+ 4xIEC320 C19	3 x 32A	482.6x216x88.8		1134NB8V.B.12-2,04-6
19" BKT Network Power Manager V	C	IEC 60309 32A/400V	12xIEC320 C13+ 4xIEC320 C19	3 x 32A	482.6x216x88.8		1134NB8V.C.12-2,04-6
19" BKT Network Power Manager V	D	IEC 60309 32A/250V	12xIEC320 C13+ 4xIEC320 C19	3 x 32A	482.6x216x88.8		1134NN8V.D.12-2,04-6

NPM V - Network Power Manager

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

Model	Type	Input Connector	Outlets	Max. unit load	Dimensions length x width x height [mm]	Housing	Index
Vertical BKT Network Power Manager V	A	IEC 60309 16A/250V	24xIEC320 C13	16A	1022x66x44.4	0U	1134N77V.A.24-2
Vertical BKT Network Power Manager V		IEC 60309 32A/250V	24xIEC320 C13	32A	1022x66x44.4		1134N87V.A.24-2
Vertical BKT Network Power Manager V		IEC 60309 32A/250V	21xIEC320 C13+ 3xIEC320 C19	32A	1077x66x44.4		1134N87V.A.21-2,03-6
Vertical BKT Network Power Manager V		IEC 60309 32A/250V	18xIEC320 C13 + 6xIEC320 C19	32A	1130x66x44.4		1134N87V.A.18-21-06-6
Vertical BKT Network Power Manager V		IEC 60309 32A/250V	36xIEC320 C13	32A	1343x66x44.4		1134N87V.A.36-2
Vertical BKT Network Power Manager V		IEC 60309 32A/250V	36xIEC320 C13 + 6xIEC320 C19	32A	1595x66x44.4		1134N87V.A.36-2,06-6
Vertical BKT Network Power Manager V		IEC 60309 32A/250V	30xIEC320 C13 + 12xIEC320 C19	32A	1706x66x44.4		1134N87V.A.30-2,12-6
Vertical BKT Network Power Manager V	B	IEC 60309 16A/250V	24xIEC320 C13	16A	1672x66x44.4	0U	1134N77V.B.24-2
Vertical BKT Network Power Manager V		IEC 60309 32A/250V	24xIEC320 C13	32A	1672x66x44.4		1134N87V.B.24-2
Vertical BKT Network Power Manager V		IEC 60309 32A/250V	21xIEC320 C13+ 3xIEC320 C19	32A	1682x66x44.4		1134N87V.B.21-2,03-6
Vertical BKT Network Power Manager V		IEC 60309 32A/250V	18xIEC320 C13+ 6xIEC320 C19	32A	1738x66x44.4		1134N87V.B.18-2,06-6
Vertical BKT Network Power Manager V	C	IEC 60309 16A/250V	24xIEC320 C13	16A	1672x66x44.4	0U	1134N77V.C.24-2
Vertical BKT Network Power Manager V		IEC 60309 32A/250V	24xIEC320 C13	32A	1672x66x44.4		1134N87V.C.24-2
Vertical BKT Network Power Manager V		IEC 60309 32A/250V	21xIEC320 C13+ 3xIEC320 C19	32A	1682x66x44.4		1134N87V.C.21-2,03-6
Vertical BKT Network Power Manager V		IEC 60309 32A/250V	18xIEC320 C13+ 6xIEC320 C19	32A	1738x66x44.4		1134N87V.C.18-2,06-6
Vertical BKT Network Power Manager V	D	IEC 60309 16A/250V	24xIEC320 C13	16A	1777x66x44.4	0U	1134N77V.D.24-2
Vertical BKT Network Power Manager V		IEC 60309 32A/250V	24xIEC320 C13	32A	1777x66x44.4		1134N87V.D.24-2
Vertical BKT Network Power Manager V		IEC 60309 32A/250V	21xIEC320 C13+ 3xIEC320 C19	32A	1832x66x44.4		1134N87V.D.21-2,03-6
Vertical BKT Network Power Manager V		IEC 60309 32A/250V	18xIEC320 C13+ 6xIEC320 C19	32A	1888x66x44.4		1134N87V.D.18-2,06-6

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

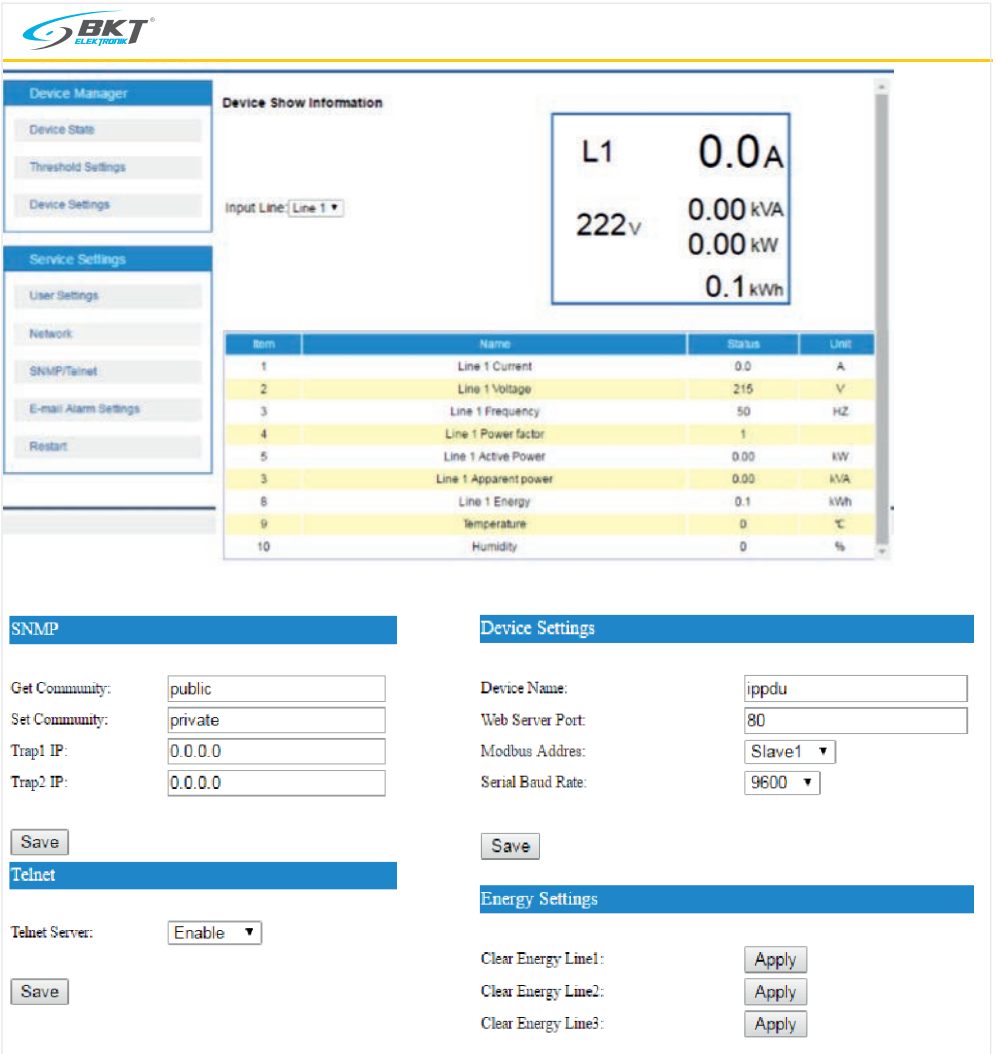
Model	Type	Input Connector	Outlets	Max. unit load	Dimensions length x width x height [mm]	Housing	Index
Vertical BKT Network Power Manager V	A	IEC 60309 32A/400V	24 x IEC320 C13	3 x 32A	1022x66x44.4	0U	1134NB8V.A.24-2
Vertical BKT Network Power Manager V		IEC 60309 32A/400V	21 x IEC320 C13 +3 x IEC320 C19	3 x 32A	1077x66x44.4		1134NB8V.A.21-2,03-6
Vertical BKT Network Power Manager V		IEC 60309 32A/400V	18 x IEC320 C13 +6 x IEC320 C19	3 x 32A	1130x66x44.4		1134NB8V.A.18-2,06-6
Vertical BKT Network Power Manager V		IEC 60309 32A/400V	36 x IEC320 C13	3 x 32A	1343x66x44.4		1134NB8V.A.36-2
Vertical BKT Network Power Manager V		IEC 60309 32A/400V	36 x IEC320 C13 + 6 x IEC320 C19	3 x 32A	1595x66x44.4		1134NB8V.A.36-2,06-6
Vertical BKT Network Power Manager V		IEC 60309 32A/400V	30 x IEC320 C13 + 12 x IEC320 C19	3 x 32A	1706x66x44.4		1134NB8V.A.30-2,12-6
Vertical BKT Network Power Manager V	B	IEC 60309 32A/400V	24 x IEC320 C13	3 x 32A	1672x66x44.4		1134NB8V.B.24-2
Vertical BKT Network Power Manager V		IEC 60309 32A/400V	21 x IEC320 C13 +3 x IEC320 C19	3 x 32A	1682x66x44.4		1134NB8V.B.21-2,03-6
Vertical BKT Network Power Manager V		IEC 60309 32A/400V	18 x IEC320 C13 +6 x IEC320 C19	3 x 32A	1738x66x44.4		1134NB8V.B.18-2,06-6
Vertical BKT Network Power Manager V	C	IEC 60309 32A/400V	24 x IEC320 C13	3 x 32A	1672x66x44.4		1134NB8V.C.24-2
Vertical BKT Network Power Manager V		IEC 60309 32A/400V	21 x IEC320 C13 +3 x IEC320 C19	3 x 32A	1679x66x44.4		1134NB8V.C.21-2,03-6
Vertical BKT Network Power Manager V		IEC 60309 32A/400V	18 x IEC320 C13 +6 x IEC320 C19	3 x 32A	1738x66x44.4		1134NB8V.C.18-2,06-6
Vertical BKT Network Power Manager V	D	IEC 60309 32A/400V	24 x IEC320 C13	3 x 32A	1777x66x44.4		1134NB8V.D.24-2
Vertical BKT Network Power Manager V		IEC 60309 32A/400V	21 x IEC320 C13 +3 x IEC320 C19	3 x 32A	1832x66x44.4		1134NB8V.D.21-2,03-6
Vertical BKT Network Power Manager V		IEC 60309 32A/400V	18 x IEC320 C13 +6 x IEC320 C19	3 x 32A	1888x66x44.4		1134NB8V.D.18-2,06-6

BKT IP-PDU universal module for monitoring

A universal module for monitoring of a single phase power supply extends the functionality of PDU Basic, PCDS module units with additional monitoring and management options. Small dimensions of the module and use of 2 m module supply cables allow for any installation, both vertical 0U and horizontal.
It is designed for monitoring the power supply voltage [V], the actual load current [A], the actual power [kW] and power consumption [kWh]. An additional port for connecting a temperature/humidity sensor for monitoring environmental conditions in a telecommunications cabinet.
With SNMP and MODBUS RTU protocols, the IP PDU can be completely integrated with external management software.

Product characteristics

- Input supply voltage 250VAC or 400VAC with IEC 60309 16A, IEC 60309 32A plugs
- Output supply voltage 250VAC or 400VAC
- Sockets which can be installed: IEC 60309 16A, IEC 60309 32A
- Possible operation in the Master/Slave arrangement (max: 5)
- Vertical or horizontal installation
- Remote monitoring and management via an Ethernet/WiFi network
- Sending alarm information to defined email addresses
- Built-in internal alarm (buzzer)
- Communication with the unit via a web interface and SNMP(V1), MODBUS RTU protocols
- Dimensions of the universal power supply monitoring unit (LxWxH) [mm]: 430 x 44.4 x 68



Web interface

Operation of the module can be supervised through a web site compatible with most browsers allowing the user to manage, monitor or control the state of devices connected to the module. Not only using a computer, but also other mobile devices.

Functions:

- Supply voltage [V] verification
- Total load [A] verification
- Total power consumption [kWh] verification.
- Total power input verification [kW]
- Temperature/humidity sensor readings
- Setting an alarm level for supply voltage [V]
- Setting an alarm level for total current load [A]
- Setting an alarm level for temperature/humidity (min/max)

Includes:

- Current system status
- Configuration of the Master/Slave arrangement
- Configuration of settings for the Ethernet network
- Configuration of the SNMP interface
- Configuration of the SMTP server
- Definition of email addresses and user accounts

BKT IP-PDU universal module for monitoring

Monitoring
- Total current load [A]
- Supply voltage [V]
- Total power consumption [kWh]
- Total power input [kW]
- Apparent power [VA]
- Power factor
- Frequency
- Temperature/humidity
- System status
- Active alarms

Control and communication
1. The LCD indicates:
- Supply voltage [V]
- Total current load [A]
- Total power input [kW]
- Total power consumption [kWh]

2. Web interface
Support for IE, Opera, Chrome, Firefox browsers
3. Ethernet 10/100 Mbit/s
4. SNMP (V1)
5. MODBUS RTU

Alarm methods
- Built-in internal alarm (buzzer)
- Alarm information displayed on LCD
- Alarm indicator in the web interface
- Sending alarm information to an email address
- Sending SNMP Traps

System design
IP-PDUs can be connected in stacks up to 5 devices using the same IP address.

Configuration
- Total current load [A]
- Unit operation mode selection: Master/Slave
- Ethernet interface (IP address, gate, mask, DNS)
- SNMP interface
- HTTP interface
- SMTP server parameters
- Email addresses
- User account

Alarms
- Total current load [A] – min and max
- Supply voltage [V] – min and max
- Temperature/humidity – min and max

Available slot models

IEC60309 400V	IEC60309 250V
	

Accesories

Supported sensor	
Temperature and humidity sensor (1134CTH01)	

Mounting brackets	
Tool brackets	

Available single-phase

Model	Input Connector	Outlets	Max. unit load	Dimensions length x width x height [mm]	Index
Universal module for monitoring IP-PDU	IEC 60309 16A/250V	IEC 60309 16A/250V	16A	430 x 44.4 x 68	1134UIP7V6.01-7
Universal module for monitoring IP-PDU	IEC 60309 32A/250V	IEC 60309 32A/250V	32A	430 x 44.4 x 68	1134UIP8V6.01-8

Available three-phase

Model	Input Connector	Outlets	Max. unit load	Dimensions length x width x height [mm]	Index
Universal module for monitoring IP-PDU	IEC 60309 16A/400V	IEC 60309 16A/400V	3 x 16A	430 x 44.4 x 68	1134UIPAV6.01-A
Universal module for monitoring IP-PDU	IEC 60309 32A/400V	IEC 60309 32A/400V	3 x 32A	430 x 44.4 x 68	1134UIPBV6.01-B

BKT NPM-V Universal modules for monitoring

A universal module for monitoring of a three phase power supply extends the functionality of PDU Basic, PCDS module units with additional monitoring and management options. Small dimensions of the module and use of 2 m module supply cables allow for any installation, both vertical 0U and horizontal. It is designed for monitoring the power supply voltage [V], the actual load current [A], the actual power [kW], power consumption [kWh] and the power factor. It improves safety by monitoring conditions in a server cabinet. In the event of undesirable physical and chemical factors of the environment such as temperature/humidity, water or smoke, it provides protection by notifying telecommunications infrastructure administrators of unauthorised access to devices installed inside the cabinet.

Product characteristics

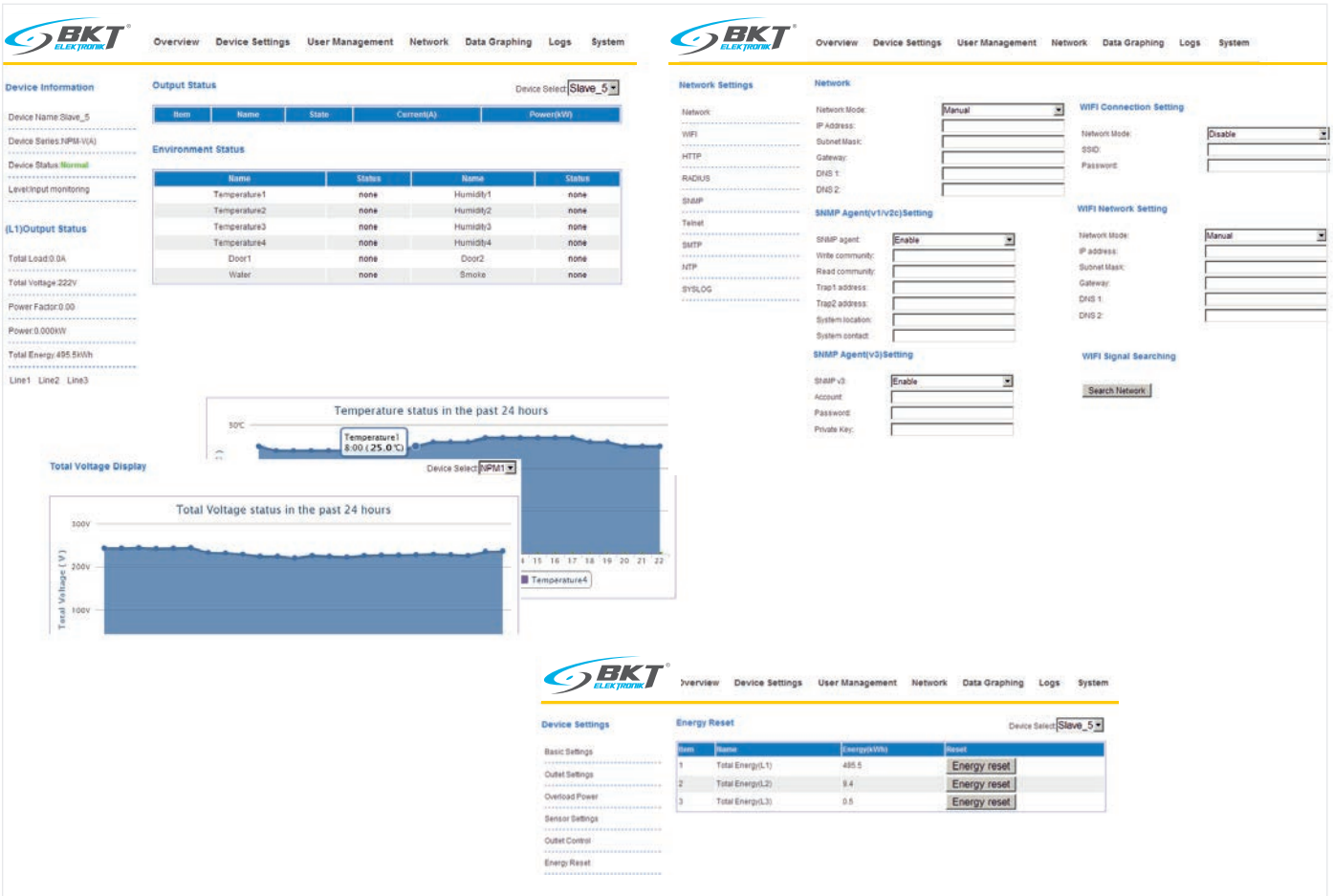
- Module input supply voltage 250VAC or 400VAC with IEC 60309 16A, IEC 60309 32A plugs
- Output supply voltage 250VAC or 400VAC
- Sockets which can be installed at the output: IEC 60309 16A, IEC 60309 32A
- Horizontal or vertical installation
- Remote monitoring and management via an Ethernet/WiFi network
- Sending alarm information to defined email addresses
- Built-in internal alarm (buzzer)
- Communication with the unit via a Web interface and SNMP (V1, V2c, V3), Telnet, SSH and RS232 protocols
- User authentication via the RADIUS server
- Up to 20 users can log in (incl. authorisation selection)
- Possible Master/Slave arrangement operation (max 10)
- Large LCD (128x64) for verification of module operating parameters and alarms

Web interface

Operation of the module can be supervised through a multi-user web site which ensures monitoring, management and administration. It allows for verification of the current total load [A], power supply [V], total power consumption [kWh], total power input [kW] or power factor.

Includes

- Programmes for sequential activation of the entire unit
- Programmable timer of each output
- Indications and status of connected sensors
- Device operating system status
- Status of alarms and alarm values
- Adding, removing and editing users
- Graphic charts of current load, voltage, temperature/humidity



BKT NPM-V Universal modules for monitoring

A web interface compatible with most website browsers allowing the user to manage, monitor and control the state of connected devices and power consumption. Not only using a computer, but also other mobile devices.

Monitoring

- Total current load [A]
- Supply voltage [V]
- Total power consumption [kWh]
- Power factor
- Total power input [kW]
- Active alarms
- Alarm logs

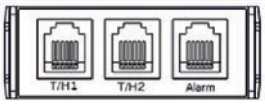
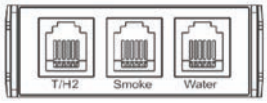
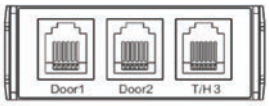
Power consumption monitoring

A power supply monitoring module equipped with a power meter to monitor and record:

- Total power consumption [kWh]

Monitoring of environmental conditions

The basic configuration of the universal power supply module is equipped with two sockets (T/H1, T/H2) for connecting 2 temperature/humidity sensors (T/H1, T/H2). It can be extended with another modules of sensors built in the power supply monitoring module. The external Sensor Box module can be applied as well – as per table below:

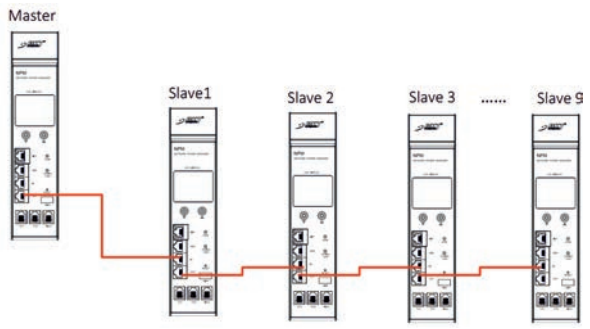
Extension modules for the NPM-V unit	Module view	Supported sensors
Internal, built into the NPM-V unit * standard equipment		Temperature and humidity sensor (2 ports) Alarm port - potential-free output 1A/50VDC
Internal, built into the NPM-V unit *available only for the 0U vertical version * optional equipment		Temperature and humidity sensor Smoke sensor Water sensor
Internal, built into the NPM-V unit * available only for the 0U vertical version * optional equipment		Temperature and humidity sensor Door opening sensor (2 ports)
External Sensor Box - Index:1134SBX01.0		Temperature and humidity sensor (2 ports) Door opening sensor (2 ports) Smoke sensor Water sensor

Configuration

- Total current load [A]
- Operation mode selection: Master/Slave
- Ethernet or DHCP interface (IP address, gate, mask, DNS)
- SNMP, HTTP, HTTPS, Telnet, SSH, SYSLOG interface
- WiFi interface
- Parameters for RADIUS, SMTP servers and for the NTP time server
- Email addresses
- Accounts and rights for users and administrators
- Temperature/humidity range [min/max]

Alarms

- Total current load [A]
- Minimum and maximum temperature
- Minimum and maximum humidity
- Water presence
- Smoke presence



Control and communication

1. The LCD indicates:
   - Total current load
   - Supply voltage [V]
   - Total power consumption [kWh]
   - Power factor
   - Total power input [kW]
   - IP address
2. Web interface
   - Support for browsers: Internet Explorer, Opera, Chrome, Firefox
   - Telnet, SSH
   - Ethernet 10/100 Mbit/s, WiFi, RJ45 <> RS232
   - SNMP (V1, V2c, V3)
   - CLI (Telnet, SSH)

Alarm methods

- Built-in internal alarm (buzzer)
- Alarm information displayed on LCD
- Alarm on the external port - RJ12 (NO-NC)
- Alarm indicator in the web interface
- Sending alarm information to an email address
- Sending SNMP Traps
- Via the SYSLOG server

BKT NPM-V Universal modules for monitoring

Detailed list of functions

Functions	Description
Monitoring	Total current load of the unit [A]
	Unit supply voltage [V]
	Total power consumption [kWh]
	Power factor [PF]*
	Total power input for the entire unit [kW]
	Sensor: temperature/humidity
	Sensors: water, smoke, door opening (extension with an additional module)
Socket activation/deactivation	No
Socket group activation/deactivation	No
Control	Power meter for the entire unit [kWh] (reset function)
Configuration	Unit supply voltage [V] [min/max]
	Total current load of the unit [A]
	Unit operation mode: Master/Slave
	Ethernet, DHCP, WiFi interface
	NTP, RADIUS, SYSLOG, SMTP, SNMP, HTTP, HTTPS, Telnet, SSH interface
	Accounts and rights for users and administrators
	Temperature/humidity range [min/max]
Communication	Web interface (HTTP, HTTPS), access through IE, OPERA, CHROME, FIREFOX browsers
	Ethernet TCP/IP v4, WiFi
	SNMP (V1, V2c, V3), Telnet, SSH, RS232 protocols
Supported sensors	Temperature/humidity
	Door opening, water, smoke (after extending it with an additional module)

System design

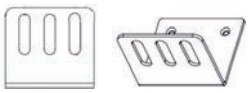
The module can be connected in stacks up to 10 devices using the same IP address.

Available slot models

IEC60309 400V	IEC60309 250V
	

Accesories

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

Mounting brackets	
Tool brackets	

Available single-phase

Model	Input Connector	Outlets	Max. unit load	Dimensions length x width x height [mm]	Index
BKT NPM V universal modules for monitoring single-phase	IEC 60309 16A/250V	IEC 60309 16A/250V	16A	518 x 66.6 x 44.4	1134UN7V.A.01-7
BKT NPM V universal modules for monitoring single-phase	IEC 60309 32A/250V	IEC 60309 32A/250V	32A	518 x 66.6 x 44.4	1134UN8V.A.01-8
BKT NPM V universal modules for monitoring three-phase	IEC 60309 16A/400V	IEC 60309 16A/400V	3 x 16A	518 x 66.6 x 44.4	1134UNAV.A.01-A
BKT NPM V universal modules for monitoring three-phase	IEC 60309 32A/400V	IEC 60309 32A/400V	3 x 32A	518 x 66.6 x 44.4	1134UNBV.A.01-B

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

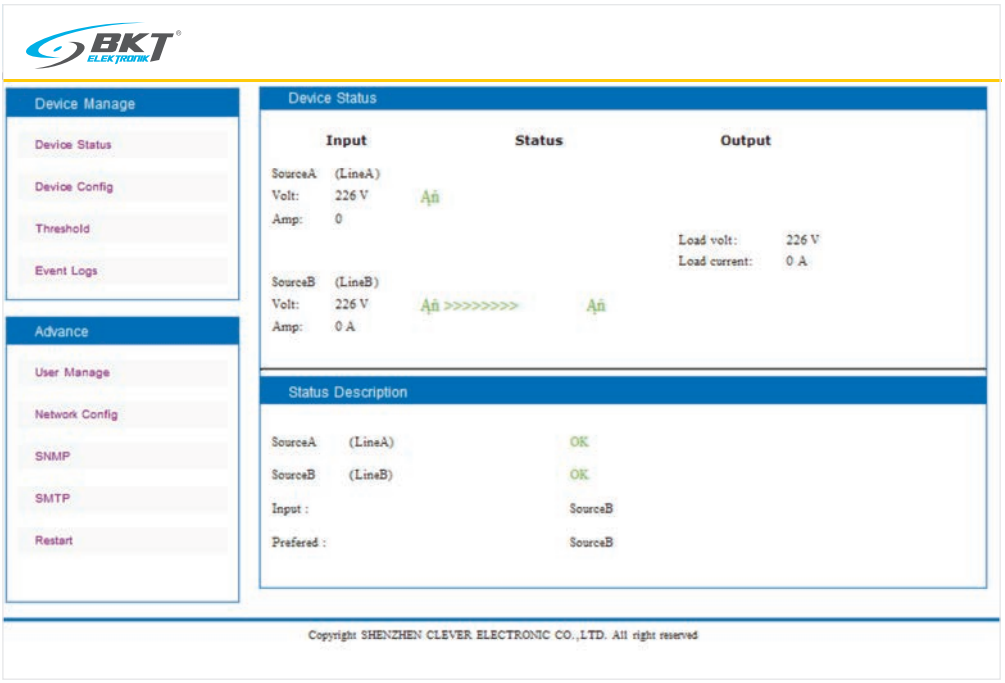
ATS-Automatic Transfer Switch

Web interface

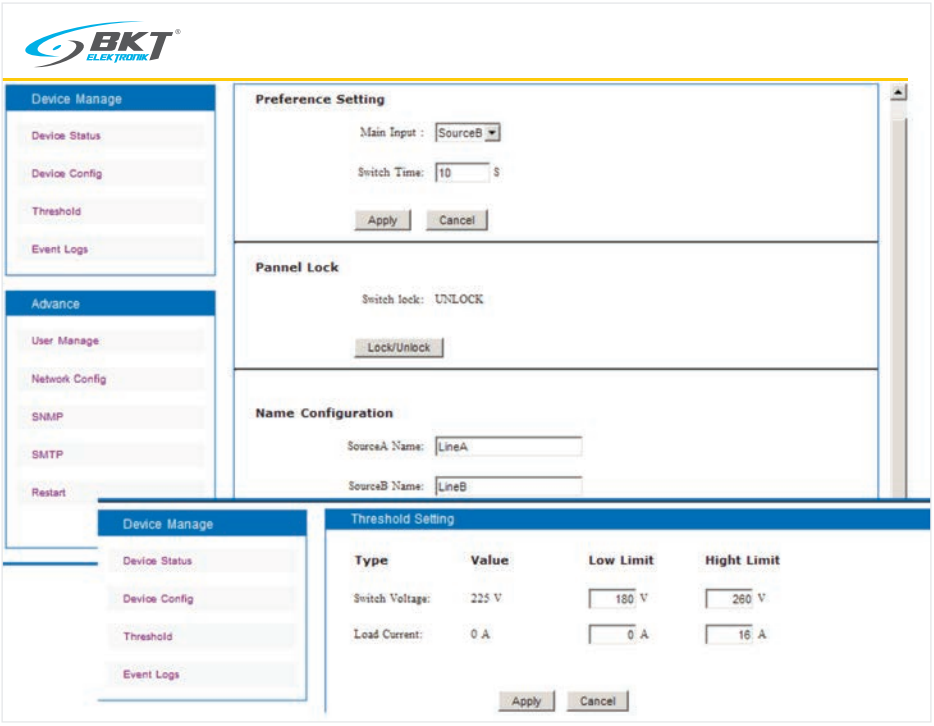
ATS unit can be monitored through multi-user Web interface, which includes monitoring, management and administration.

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.



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:

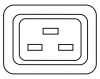
- Minimum and maximum current-load [A]
- Minimum and maximum supply voltage [V]
- Power supply failure at one of the inputs

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 slot models

IEC320 C13 10A/250V	IEC320 C19 16A/250V	IEC60309 250V
		

Mounting brackets	
Tool brackets	

Available models

Model	Cable	Input Connector	Outlets	Max. unit load	Dimensions length x width x height [mm]	Housing	Additional elements	Index
ATS Basic BKT 1U 19"	Not included	2xIEC 320 C14 10A/250V	12xIEC320 C13 10A/250V	10A	482x220x44.4	1U, 19" aluminium, movable brackets	BKT HOT-swappable SNMP/WEB Card, for ATS expansion	1134A3.12-2S
ATS Basic BKT 1U 19"	Not included	2xIEC 320 C20 16A/250V	8xIEC320 C13 10A/250V, 1xIEC320 C19 16A/250V	16A	482x220x44.4	1U, 19" aluminium, movable brackets	BKT HOT-swappable SNMP/WEB Card, for ATS expansion	1134A4.08-2,01-6S
ATS Basic BKT 1U 19"	3x2.5mm², 2.0m	2xIEC 60309 16A/250V (on cable)	1xIEC 60309 16A/250V (na kablu)	16A	482x220x44.4	1U, 19" aluminium, movable brackets	BKT HOT-swappable SNMP/WEB Card, for ATS expansion	1134A5.01-7S
ATS Basic BKT 1U 19"	Not included	2xIEC 320 C20 16A/250V	6xIEC320 C13 10A/250V 2xIEC320 C19 16A/250V	16A	482x220x44.4	1U, 19" aluminium, movable brackets	BKT HOT-swappable SNMP/WEB Card, for ATS expansion	1134A4.06-2,02-6S
ATS Basic BKT 2U 19"	3x6.0mm², 2.0m	2xIEC 60309 32A/250V (on cable)	12xIEC320 C13 10A/250V 4xIEC320 C19 16A/250V	32A	482x220x88.8	2U, 19" aluminium, movable brackets	BKT HOT-swappable SNMP/WEB Card, for ATS expansion	1134A9.12-2,04-6S
ATS Basic BKT 2U 19"	3x6.0mm², 2.0m	2xIEC 60309 32A/250V (on cable)	1xIEC 60309 32A/250V	32A	482x220x88.8	2U, 19" aluminium, movable brackets	BKT HOT-swappable SNMP/WEB Card, for ATS expansion	1134A9.01-8S
ATS Basic BKT 2U 19"	3x2.5mm², 2.0m	2xIEC 60309 16A/250V (on cable)	12xIEC320 C13 10A/250V 4xIEC320 C19 16A/250V	16A	482x220x88.8	2U, 19" aluminium, movable brackets	BKT HOT-swappable SNMP/WEB Card, for ATS expansion	1134A4.12-2,04-6S
ATS Basic BKT 2U 19"	3x6.0mm², 2.0m	2xIEC 320 C20 32A/250V	16xIEC320 C13 10A/250V 2xIEC320 C19 16A/250V	32A	482x220x88.8	2U, 19" aluminium, movable brackets	BKT HOT-swappable SNMP/WEB Card, for ATS expansion	1134A9.16-2,02-6S

EMS-Environment Monitoring System

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

MPD

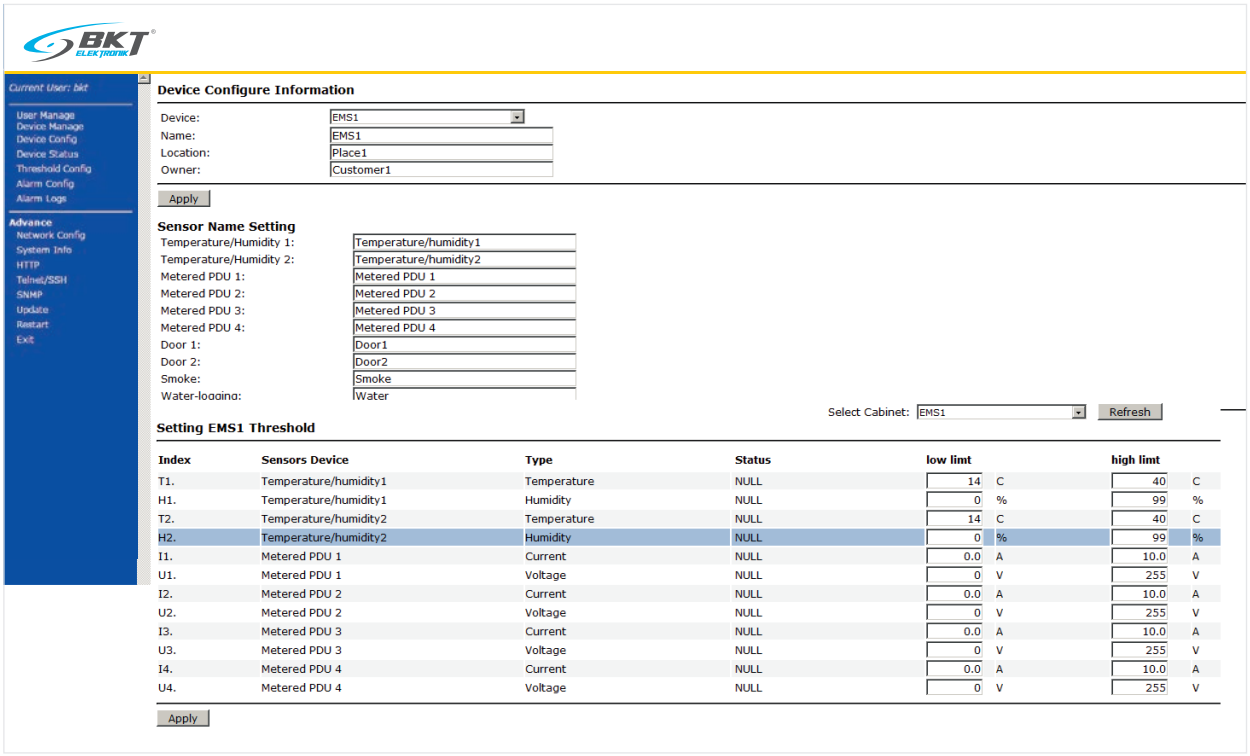
EMS-Environment Monitoring System

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
- SNMP interface 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 consumtion 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.

EMS-Environment Monitoring System

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.

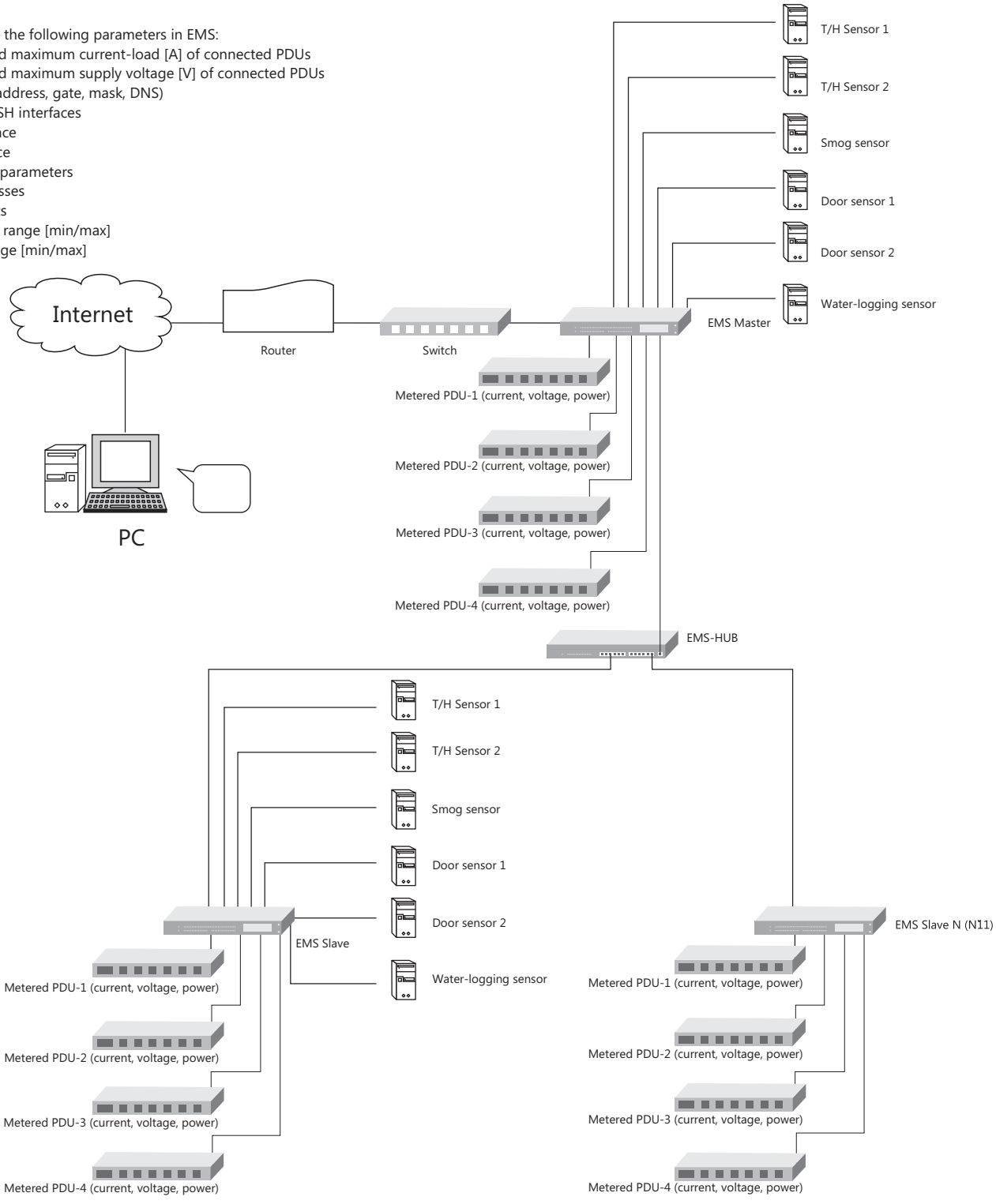
- You can connect the following sensors to the Master unit and monitor them:
  - two temperature and humidity sensors: T/H1 and T/H2
  - two door sensors: Door1 and Door2
  - one smoke sensor
  - one water sensor

- 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]



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

BKT 19" Matering power distribution Unit with MPD matering module

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].

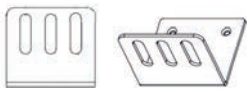
EMS-Environment Monitoring System

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%

Accesories

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

Mounting brackets	
Tool brackets	

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

Available outlets for Power Distribution Units with MPD Matering Module

DIN 49440 16A/250V	NF C61-314 16A/250V
	

EC335 4DC Environmental Condition Controller

The controller is designed to monitor environmental parameters (temperature, humidity, etc.) in a telecommunications cabinet or in small rooms. Its purpose is to warn users about a potential hazard and report any failures. 28 analogue sensors, 36 sensors with a potential-contact output and two signalling devices can be connected to the controller.

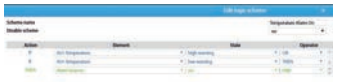
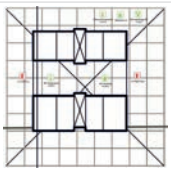
Device characteristics and technical parameters

Hardware	
Analogous inputs	4 inputs (RJ12 sockets) for specific analogous sensors. Any combination of 4 sensors can be connected to the device. Some sensors can be connected in stacks. The type of a sensor is detected automatically.
Potential-free inputs	4 inputs (removable terminal strip) for any sensors with output and potential-free contacts.
Outputs	2 voltage outputs (removable terminal strip) 12V/250mA
CAN connector	Connector for up to 8 extension modules for additional EA321 analogous inputs and additional EE322 potential-free inputs
Other connectors	10/100Mbps Ethernet port (RJ45 socket) USB 2.0 port (Mini-B socket)
Other	Optional card of a GSM module
Power supply	External plug adapter 12V/1A, power consumption ≤ 10W
Dimensions	180x80x33 (width x depth x height)
Operating conditions	Temperature: 0°C - 60°C Humidity: 0% - 90% RH (no condensation)
Weight	700g
Index	122EC003350

Software	
Operating system	Linux
Configuration	Through a web interface
Supported protocols	HTTP, HTTPS, PING, DHCP, RADIUS, SYSLOG, FTP, SNTP, SMTP, SNMP (v1,v2,v3)
Alarm notifications	Email, SNMP trap, SMS (optionally)
Functionality	See tables below

Index: 122EC003350

Basic functionality

Automatic sensor presence and type detection		4 alarm thresholds for the sensor	
Adjustable logic functions		PSMS, email, SNMP Trap notofications	
Monitoring of conditions of other devices in a network through PING, SNMP Get protocols		Support for a USB camera (e.g. Logitech C210) for remote monitoring of IT infrasturcture	
Access to a limited history of measurement values		Creating users of different access rights	
Loading an object map for the device		Visualisation of device status from external software, e.g. SM4DC	

EC335 4DC Environmental Condition Controller

Analogue sensors

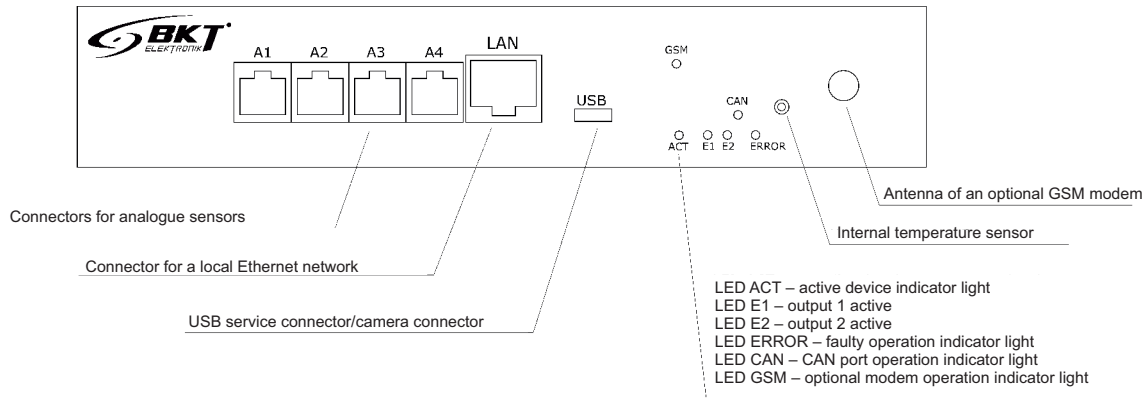
Type	Description	Index
	ES350 – Temperature sensor Measurement range: -10°C - +100°C Dimensions: 60x18x18 Maximum length of a connection cable: 100m	122ES003500
	ES351 – Humidity sensor Measurement range: 10% - 95% RH Dimensions: 60x18x18 Maximum length of a connection cable: 50m	122ES003510
	ES352 – Voltage sensor 230V AC Measurement range: 90VAC - 250VAC Dimensions: 63x66x30 Maximum length of a connection cable: 100m	122ES003520
	ES353 – Door sensor (reed relay + magnet) Possible stack connection of up to 10 sensors Dimensions: 60x18x18 Maximum length of a connection cable: 150m	122ES003530
	ES354 – Vibration sensor Possible stack connection of up to 10 sensors Dimensions: 60x18x18 Maximum length of a connection cable: 150m	122ES003540
	ES356 – Optical smoke sensor Possible stack connection of up to 10 sensors Dimensions: 100x45 Maximum length of a connection cable: 150m	122ES003560
	ES357 – Passive infrared sensor Movement detection range: 100° x 12m Dimensions: 105x57x40 Maximum length of a connection cable: 50m	122ES003570
	ES358 – External temperature sensor Measurement range: -40°C - +100°C Dimensions: 7x30 + 15m cable Maximum length of a connection cable: 100m	122ES003580
	ES359 – Flood sensor Detection delay: 1s Dimensions: 60x18x18 Maximum length of a connection cable: 100m	122ES003590
	ES360 – Flood sensor for a water detection cable For connection of an ES361 water detection cable Dimensions: 60x18x18 Maximum length of a connection cable: 100m	122ES003600
	ES361 - Sensor detecting water and other conductive liquids An ES360 sensor is required for connection Dimensions: 60x18x18 Available lengths: 6m, 10m, 25m, 50m	122ES003610
	ES362 - 4-20mA sensor Any sensors with 4-20mA output can be connected to the controller Galvanic insulation 1kV between the input and output Dimensions: 60x18x18	122ES003620
	ES363 - 60V DC voltage sensor Galvanic insulation 1kV between the input and output. Measurement range: 0VDC - 60VDC Dimensions: 60x18x18	122ES003630

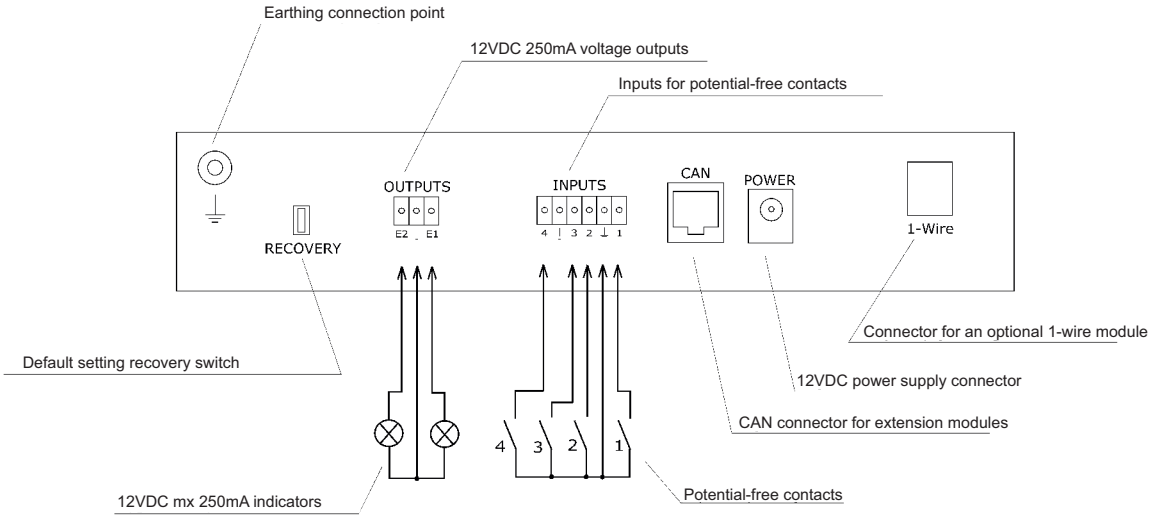
EC335 4DC Environmental Condition Controller

Extension modules and accessories

Type	Description	Index
	EE321 – Extension module with additional 8 analogous inputs The module is connected to a CAN controller connector. The controller supports up to 28 analogous sensors. The module has no 19″ brackets. Dimensions: 110x68x40	122EE003210
	EE322 – Extension module with additional 32 potential-free inputs The module is connected to a CAN controller connector. The controller supports up to 32 additional potential-free inputs 19″ brackets included. Dimensions: 215x40x40	122EE003220
	EA311 - 1U bracket for a 19'' cabinet for EC335 4DC Dimensions: 482x44x80	122EA003110
	EA315 - Light indicator Power voltage 12V, 80mA Dimensions: ϕ73x45 Flashing frequency: 1Hz	122EA003150
	EA317 - GSM modem for EC300 4DC Dimensions: 60x50x15 A modem for SMS communication operating in GSM 850/900/1800/1900 MHz networks.	122EA003170

Connection diagram

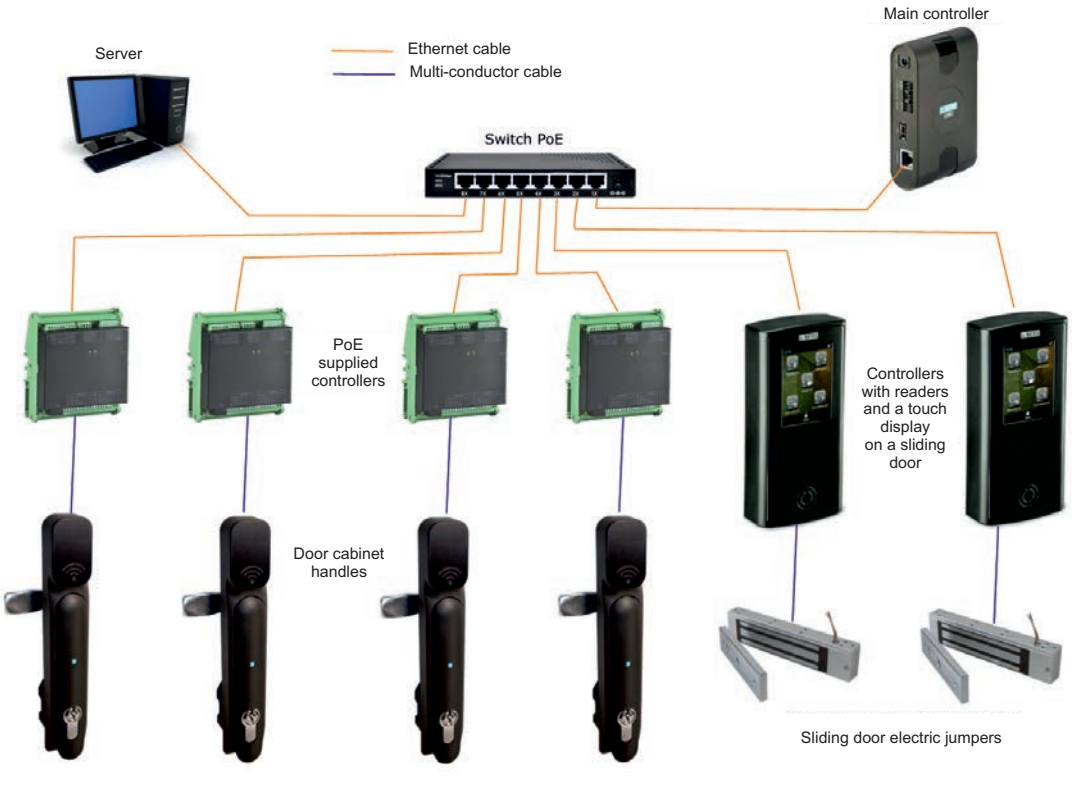




Control of access to telecommunications cabinets and kiosks

This system provides authorised users with controllable access to devices installed in cabinets. It allows you to define which person is authorised to open a particular cabinet door and at what exact moment. Implementation of this system requires additional cabinet door fittings to be provided, i.e. handles with an electromagnetic lock, a door opening magnetic sensor and active devices: door controllers, a main controller, a software server. The drawing below shows a sample access control system using devices supplied by and communicating via a computer network.

A sample structural scheme of an access control system for a server kiosk



The presented devices are for reference only

System Manager for Data Center SM4DC

SM4DC software (System Manager for Data Center) is intended to visualise status and control devices installed in server rooms and Data Processing Ceners. The System Manager is based on market-proven SCADA (Supervisory Control and Data Acquisition) industrial software. It guarantees transparent, effective and safe management (monitoring and control) of telecommunications infrastructure installed in a building.

Application range

Server room telecommunications infrastructure
- Power supply systems
- Cooling systems
- Safety systems: SSP, CCTV, SSWIN, KD, etc.
- Active IT devices

External cabinets
- Monitoring of environmental conditions inside a cabinet
- Support of installed active devices

Functionality

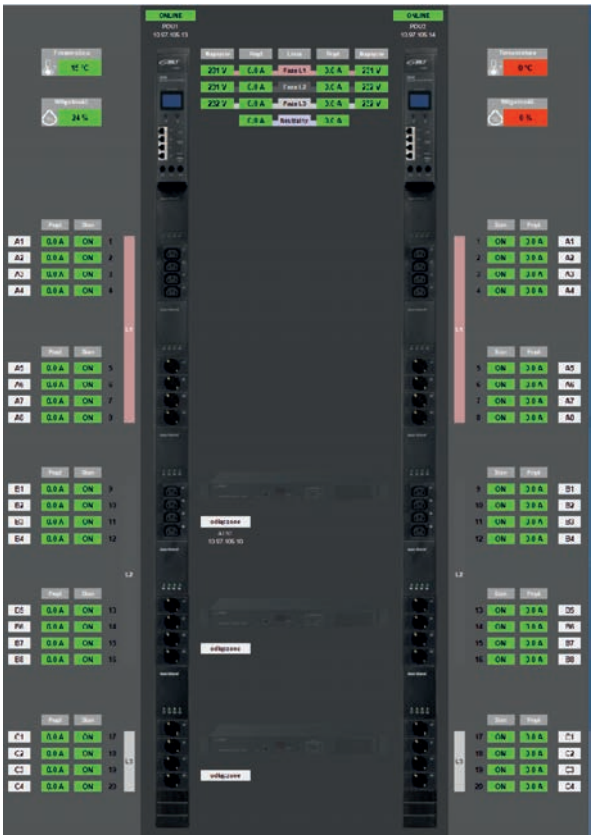
Easy and effective management
- Visualisation of status and management of individual infrastructure components from one common platform
- Creation of visualisation screens adopted to user's needs
- Remote access to view and control the system, e.g. from a mobile device through a web browser
- System operating in the Windows environment
- Possible installation on virtual machines

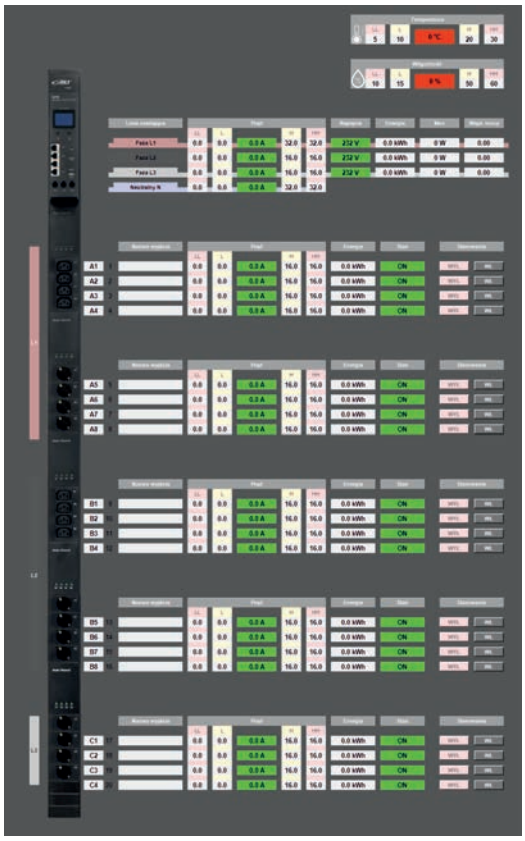
System openness

- Possible integration with Building Management Systems
- Communication with devices using the following protocols: SNMP, Modbus, MBus, BACnet and other
- Communication with programmable logic controllers: Siemens Simatic, Allen Bradley, Mitsubishi, ADAM, FATEK, Omron and other
- Possible cooperation with data bases: dBase, MS SQL Serwer, Oracle, MySql, FireBird, Microsoft Access, Excel, Calc, Paradox, SYBASE, OPC server

Safety

- Access for users protected with passwords
- Distribution of rights for administrators and system users
- Possible encryption of remote connection with an https protocol
- Control of an executed application with a programmed Watchdog
- Possible protection against hard drive overfilling by cyclical overwriting of alerts, trends and events
- Support for operation in a redundant system
- Display and storage of alarm states





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