MERAWEX

Power supplies for fire protection systems

Power supplies for power engineering and automation systems

Power supply systems for ICT

Batteries

www.merawex.com.pl

November 2021

POWER SUPPLIES COMPLIANT WITH EN 54-4, EN 12101-10

POWER SUPPLIES FOR SECURITY SYSTEMS

POWER SUPPLIES FOR POWER ENGINEERING AND AUTOMATION SYSTEMS

POWER SUPPLY SYSTEMS FOR ICT

BATTERIES

MEAN WELL

SERVICES

MERAWEX

POWER SUPPLIES

DEVELOPMENT

ELECTRONICS

BATTERIES

MANUFACTURING

CONTRACT MANUFACTURING

MERAWEX was founded in 1989. Since its inception, the company has been developing and manufacturing switched-mode power supplies and uninterruptible power systems. Over time, our offer has expanded to include other electronic products, mechanical products and services. The company offers original power supplies and power systems for ICT and industrial automation systems. An important part of our manufacture consists of certified power supplies for automation and fire alarm systems, power supplies for voice alarm systems as well as many other specialised devices used in power engineering and transport. Our offer also includes a wide range of batteries dedicated for custom power supplies and other systems which require high quality and reliability.

The company aims to provide its partners with comprehensive service with respect to the supplied components and power systems. Key customers represent the fire protection industry as well as energy, telecommunications and transport sectors. Many companies valued in both Polish and foreign markets are our partners and customers. Our product offer is complemented by services, which include: contract manufacturing of electronic components using surface-mount and through-hole technologies, contract manufacturing of electromechanical components, design and manufacture of mechanical elements as well as commissioning and on-site inspections of power supply systems. The company is able to comprehensively design and prototype non-standard power supplies and industrial automation systems, including mechanical elements.

MERAWEX facilities include a production department, our own R&D department, a testing laboratory, a modern quality control department and a service department. The company has at its disposal qualified engineering staff, whose knowledge is supported by many years of experience. As a result, our customers are companies which primarily care about long-term and reliable cooperation. Employees of the company nurture relationships with their customers and make sure that the supplied products provide real and long-term value to the purchaser. An integrated ISO 9001 / 14001 quality and environment management system has been functioning in the organisation for many years. Frequent and regular internal audits, second-party audits (e.g. conducted by customers) and third-party audits (conducted by certification bodies, such as DNV, CNBOP-PIB, VdS) result in changes in the company's projects and infrastructure, which directly contributes to the primary goal of MERAWEX, i.e. the pursuit of constant quality improvement and provision of the best solutions to our partners

Should you have any questions, feel free to contact our representatives.

We are looking forward to doing business with you!

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CNBOP-PIB
Certificate
1438-CPR-0454

Approval
Certificate
4271 / 2021

EN 54-4+A1+A2

EN 12101-10

WARRANTY 36 months

ZSP100

Power supplies for fire protection systems

Intended use:

- fire alarm systems
- smoke and heat control systems
- fire protection and fire automation systems

Version	Maximum output current Imax b	Nominal output current Imax a	Maximum battery capacity	Dimensions (W × H × D) [mm]
ZSP100-1.5A-07	1.5 A	1.1 A	2 × 12 V 9 Ah	340 × 250 × 80
ZSP100-1.5A-18	1.5 A	0.7 A	2 × 12 V 20 Ah	395 × 356 × 96
ZSP100-2.5A-07	2.5 A	2.1 A	2 × 12 V 9 Ah	340 × 250 × 80
ZSP100-2.5A-18	2.5 A	1.7 A	2 × 12 V 20 Ah	395 × 356 × 96
ZSP100-4.0A-07	4.0 A	3.6 A	2 × 12 V 9 Ah	340 × 250 × 80
ZSP100-4.0A-18	4.0 A	3.2 A	2 × 12 V 20 Ah	395 × 356 × 96
ZSP100-4.0A-40	4.0 A	2.3 A	2 × 12 V 45 Ah	455 × 356 × 186
ZSP100-5.5A-07	5.5 A	5.1 A	2 × 12 V 9 Ah	340 × 250 × 80
ZSP100-5.5A-18	5.5 A	4.7 A	2 × 12 V 20 Ah	395 × 356 × 96
ZSP100-5.5A-40	5.5 A	3.8 A	2 × 12 V 45 Ah	455 × 356 × 186
ZSP100-7.5A-18	7.5 A	6.6 A	2 × 12 V 20 Ah	395 × 356 × 96
ZSP100-7.5A-40	7.5 A	5.6 A	2 × 12 V 45 Ah	455 × 356 × 186
ZSP100-7.5A-75	7.5 A	4.3 A	2 × 12 V 75 Ah	555 × 406 × 187
ZSP100-10A-18	10 A	9.1 A	2 × 12 V 20 Ah	395 × 356 × 96
ZSP100-10A-40	10 A	8.1 A	2 × 12 V 45 Ah	455 × 356 × 186
ZSP100-10A-75	10 A	6.8 A	2 × 12 V 75 Ah	555 × 406 × 187
ZSP100-12A-18	12 A	11.1 A	2 × 12 V 20 Ah	395 × 356 × 96
ZSP100-12A-40	12 A	10.1 A	2 × 12 V 45 Ah	455 × 356 × 186
ZSP100-12A-75	12 A	8.8 A	2 × 12 V 75 Ah	555 × 406 × 187

Compliance with requirements

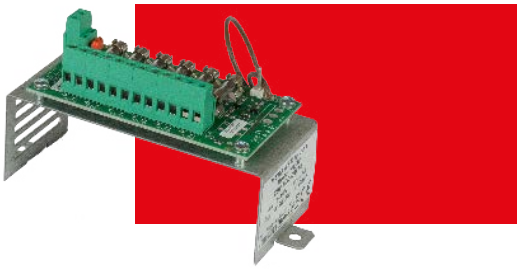
- EN 54-4:1997 + A1:2002 + A2:2006
- EN 12101-10:2005
- Directives: LVD, EMC, RoHS
- CPR Regulation
- Regulation of the Minister of the Interior and Administration of 20.06.2007, Dz. U. (Journal of Laws) No. 143, item1002 (as amended on 27.04.2010)

Features:

- compliance with multiple normative documents – one power supply type can be used in various fire protection devices
- high performance under load and low quiescent current
- wide range of supply voltages: 93 ... 253 Vac
- two or five independent, fuse-protected outputs
- number of outputs can be increased after (optional) installation of one or two additional output modules inside the power supply
- visual and relay signalization
- RS232 / 485 communication interface
- external alarm input
- internal deep discharge disconnect device
- internal temperature probe for temperature compensation of battery charging
- battery input resistant to short-circuiting and reverse battery connection

Accessories

- **ZSP100-OUT6** Module intended for increasing the number of separately protected power supply outputs.



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ZŁOTY MEDAL 2012

EN 54-4+A1+A2

EN 12101-10

WARRANTY 36 months

CNBOP-PIB

Certificate
1438 / CPD / 0163

Approval
Certificate
3647 / 2019

VdS

Certificate
G 511007

Applied
VdS Guidelines:
2344, 2203, 2541,
2593, 2824, 2882

ZSP135-DR

Power supplies for fire protection systems

Intended use:

- fire alarm systems
- smoke and heat control systems
- fire protection and fire automation systems

Version	Maximum output current Imax b	Nominal output current Imax a	Maximum battery capacity	Dimensions (W × H × D) [mm]
ZSP135-DR-2A-1	2.0 A	1.0 A	2 × 12 V 18 Ah	395 × 356 × 96
ZSP135-DR-3A-1	3.0 A	2.0 A	2 × 12 V 18 Ah	395 × 356 × 96
ZSP135-DR-3A-2	3.0 A	1.5 A	2 × 12 V 28 Ah	395 × 356 × 144
ZSP135-DR-5A-1	5.0 A	4.0 A	2 × 12 V 18 Ah	395 × 356 × 96
ZSP135-DR-5A-2	5.0 A	3.5 A	2 × 12 V 28 Ah	395 × 356 × 144
ZSP135-DR-5A-3	5.0 A	3.0 A	2 × 12 V 40 Ah	455 × 356 × 186
ZSP135-DR-7A-1	7.0 A	6.0 A	2 × 12 V 18 Ah	395 × 356 × 96
ZSP135-DR-7A-2	7.0 A	5.5 A	2 × 12 V 28 Ah	395 × 356 × 144
ZSP135-DR-7A-3	7.0 A	5.0 A	2 × 12 V 40 Ah	455 × 356 × 186

Compliance with requirements

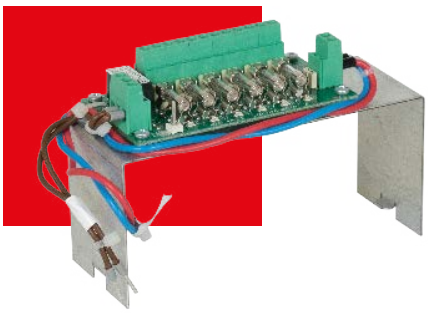
- EN 54-4:1997 + A1:2002 + A2:2006
- EN 12101-10:2005
- Directives: LVD, EMC, RoHS
- CPR Regulation
- Regulation of the Minister of the Interior and Administration of 20.06.2007, Dz. U. (Journal of Laws) No. 143, item1002 (as amended on 27.04.2010)

Features:

- **Certificate VdS**
- compliance with multiple normative documents – one power supply type can be used in various fire protection devices
- two independent, fuse-protected outputs
- number of outputs can be increased after installation of an optional additional output module inside the power supply
- visual and relay signalization
- RS232 / 485 communication interface
- internal deep discharge disconnect device
- internal temperature probe for temperature compensation of battery charging
- battery input resistant to short-circuiting and reverse battery connection

Accessories

- **ZSP135-OUT6** Module intended for increasing the number of separately protected power supply outputs.



- **ZSP135-TST** Tester is a device which makes it possible to perform diagnostics of all ZSP135-DR series power supplies during their operation. It enables diagnosing and determining the potential fault without removing the power supply.

MERAWEX

CS-ZSP135

Control panel for fire protection equipment

Intended use:

- control of double-acting actuators
- control of spring actuators
- control of electromagnets used in fire partitions, e.g. door holders
- control of fire curtains

The CS-ZSP135 control panel is intended to work with the ZSP135-DR type power supply. It passed a National Technical Assessment, no. CNBOP-PIB-KOT-2019 / 0138-1009, and complies with prEN 12101-9.

CNBOP-PIB
Certificate
063-UWB-0204

Approval
Certificate
3821 / 2019

Basic parameters

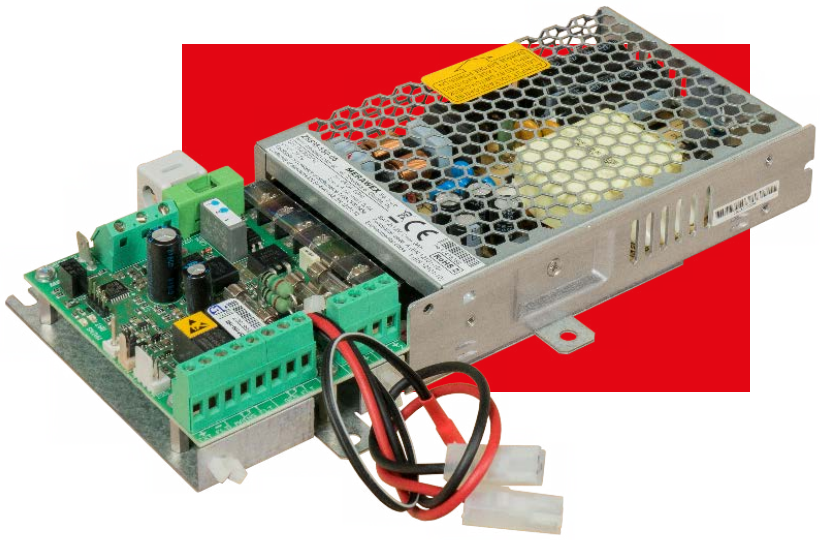
Rated supply voltage	24 V
Permissible supply voltage	21.0...28.0 V
Maximum current drawn from an external power supply (with external devices connected)	6 A
Output voltage	20.0...27.0 V
Number of separately controlled device groups	2
Number of outputs per group	2
Maximum load capacity for each output group	3 A
Maximum load of the auxiliary output	16 A / 230 VAC
Maximum load for the fault signal relay	1 A / 30 V
Dimensions (W × H × D)	150 × 190 × 77 mm

Features:

- automatic or manual control
- two separate 24 V power supply lines can be connected
- a fire alarm from the fire alarm system can be received by a surveillance line
- control of two groups with two 24 V DC outputs
- potential-free relay for controlling actuating devices
- continuity monitoring of control lines for electromechanical drives
- remote relay signal of collective fault fire alarm
- actuating devices can be triggered via a single line module
- different types of flaps can be controlled

ZSPM

Built-in power supplies



Intended use:

- fire alarm systems
- smoke and heat control systems
- fire protection and fire automation systems

The certified ZSPM power supplies are an excellent range of power supplies for self-installation in enclosures (rated at least IP30) together with other devices operating in fire protection systems

CNBOP-PIB
Certificate
1438-CPR-0486

EN 54-4+A1+A2

EN 12101-10

WARRANTY 36 months

Version	Charging current	Maximum output current Imax b	Nominal output current Imax a	Intended batteries*
ZSPM-75-05	0.5 A	2.5 A	2.1 A	2 × 12 V 7 ... 9 Ah
ZSPM-75-10	1.0 A	2.5 A	1.7 A	2 × 12 V 7 ... 20 Ah
ZSPM-150-05	0.5 A	5.5 A	5.1 A	2 × 12 V 7 ... 9 Ah
ZSPM-150-10	1.0 A	5.5 A	4.7 A	2 × 12 V 7 ... 20 Ah
ZSPM-150-20	2.0 A	5.5 A	3.8 A	2 × 12 V 17 ... 45 Ah
ZSPM-200-18	1.8 A	7.5 A	6.6 A	2 × 12 V 7 ... 40 Ah
ZSPM-200-33	3.3 A	7.5 A	4.3 A	2 × 12 V 17 ... 75 Ah
ZSPM-320-18	1.8 A	12 A	10.1 A	2 × 12 V 7 ... 40 Ah
ZSPM-320-33	3.3 A	12 A	8.8 A	2 × 12 V 17 ... 75 Ah

* Maximum capacities values shown comply with requirements of EN 54-4

Features:

- one power supply type can be used in various fire protection devices
- wide range of supply voltages: 93 ... 253 Vac
- high performance under load and low quiescent current
- two or five independent, fuse-protected outputs
- visual (optional) and relay signalization
- RS232 / 485 communication interface
- external alarm input
- internal deep discharge disconnect device
- temperature probe for temperature compensation of battery charging
- battery input resistant to short-circuiting and reverse battery connection

CNBOP-PIB
Certificate
1438-CPR-0761

Approval Certificate
4300 / 2021

GUARANTEED VOLTAGE
sinus
230 Vac

EN
54-4+A1+A2

EN
12101-10

ZUP-230V-BM

Power supplies for fire gates and fire automation systems

The ZUP-230V-BM power supplies are designed to work with a fire alarm control panel and intended to control the opening of gates which, in the event of a fire, help remove smoke from the building by acting as air gates. They can also be used as independent devices supplying an uninterruptible 230V power (UPS).

All power supplies can also be equipped with an external emergency power off (EPO) switch, which makes it possible to disconnect the 230V power regardless of the operating status of the power supply.

Version	Output power 230Vac	Battery capacity	Dimensions (W × H × D) [mm]	Maximum weight with battery
ZUP-230V-BM-400S	400 W	2 × 12 V 18 / 22 Ah	272 × 457 × 205	19 kg
ZUP-230V-BM-700S	700 W	2 × 12 V 18 / 22 Ah	272 × 457 × 205	21 kg
ZUP-230V-BM-1000S	1000 W	2 × 12 V 18 / 22 Ah	272 × 457 × 205	22 kg
ZUP-230V-BM-700M	700 W	2 × 12 V 33 Ah	455 × 406 × 205	31 kg
ZUP-230V-BM-1000M	1000 W	2 × 12 V 45 Ah	455 × 406 × 205	38 kg
ZUP-230V-BM-1500L	1500 W	2 × 12 V 45 Ah	555 × 456 × 205	41 kg

Intended use:

- 230 V power supply for air gates of natural smoke ventilation systems
- power supply for other devices which require an uninterruptible 230 V, and optionally 24 Vdc (M and L versions), power

Features:

- uninterruptible 230 V power output protected by a fuse with an additional relay output (e.g. for a gate controller to raise the gate)
- full battery support, including deep discharge protection, battery voltage dependent on temperature and battery circuit resistance monitoring (EN 54-4 + A2 requirements)
- **a set of two 12 V batteries with a capacity matching power supply requirements included**
- visual indication of the operating status on cabinet doors and diagnostic indication inside the power supply
- a fire alarm from a fire alarm control panel or a central warning system can be received by a parameterized or regular two-state line
- external relay output for indicating power supply failure
- manual gate opening switch input
- internal test button which makes it possible to start the power supply also on batteries alone, without mains power (cold start)

Basic parameters	
Mains power supply voltage	230 V -15% +10% 50 Hz
230 Vac output voltage: • with mains power (>184 V) • without mains powe	 equal to supply voltage 230 V ±10% 50 Hz
Short-circuit protection (fuse)	10AT 5 × 20 mm
Rated 24 Vdc output voltage at 25°C	27.1 V
Change in 24 Vdc voltage depending on battery charge	19.0...28.8 V
Maximum charging current for batteries with a capacity between 18 Ah and 45 Ah	2.0 A
Operating temperature	-5...+40°C
IP rating	IP30

CNBOP-PIB
Certificate
1438-CPR-0593

Approval Certificate
3183 / 2018

GUARANTEED VOLTAGE
sinus
230 Vac

EN
54-4+A1+A2

EN
12101-10

ZUP-230V

Power supplies for fire protection systems with 230 Vac and 24 Vdc outputs

The ZUP-230V power supply with battery backup supplies uninterruptible 230 V power from the mains or, in the event of a power outage, 230 Vac from a DC / AC inverter powered by an internal 24 V battery bank.

The power supply makes it possible to distribute 230 V power between 4 different types of receivers which require that power be fed, switched or disconnected at a specific time, depending on their function, after receiving an external signal (e.g. a fire alarm). Reaction times and output operating times can be set by the user over a wide range using slide switches.

Version	Output power 230 Vac	Battery capacity	Dimensions (W × H × D) [mm]	Weight with battery
ZUP-230V-400	400 W	2 × 12 V 45 Ah	455 × 406 × 207	42 kg
ZUP-230V-700	700 W	2 × 12 V 45 Ah	455 × 406 × 207	42 kg
ZUP-230V-1000	1000 W	2 × 12 V 45 Ah	455 × 406 × 207	42 kg
ZUP-230V-1500	1500 W	2 × 12 V 75 Ah	555 × 456 × 207	65 kg

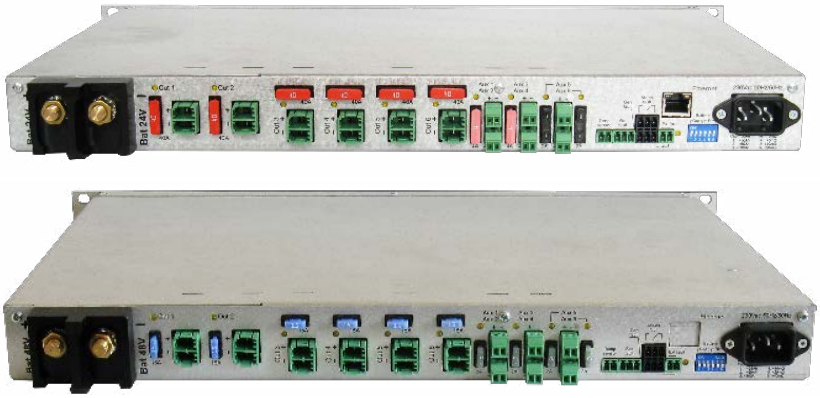
Intended use:

- air gates
- self-braking double-acting actuators for fire dampers
- drives for gates separating fire zones
- spring actuators for fire dampers
- roller shutters for ceiling smoke tanks
- single-phase fans for smoke ventilation with a power of up to 1.2 kW*
- single-phase fans for aeration with a power of up to 1.2 kW*
- devices activated in a cascade to reduce inrush current

* when using a 1ph 230 V / 3ph 3 x 230 V inverter, the power supplies can service three-phase fans with a power of up to 1.2 kW, provided motor windings can be switched to 3 x 230 V operation
In addition, uninterruptible 24 Vdc, 100 W power is also available for powering other fire protection devices

Features:

- receiving a fire alarm from a fire alarm control panel, a central warning system or through manual control from multiple locations
- remote output relay signal related to collective fault to the fire alarm control panel
- surveillance for up to 72 hours following outage of the 230 V mains power – fire protection function
- powering devices after a mains power outage – UPS function for a specific time set in the power supply
- starting on batteries, without mains power
- setting a delay for the 230 V power supply from the moment a fire alarm occurs
- temperature compensation for floating operation voltage and bulk charging voltage
- battery circuit resistance monitoring
- an IP42 metal wall-mounted cabinet with a lock; accommodates a bank of two 12 V batteries with a maximum capacity of 75 Ah
- LED indicator assembly for showing the operating status of the power supply
- internal deep discharge disconnect device
- external fire alarm input
- internal button which simulates a fire alarm for testing purposes
- can be equipped with the ZUP-MS soft start system



CNBOP-PIB

ZDSO400-DR1
Certificate
1438-CPR-0496

ZDSO400-ER1
Certificate
1438-CPR-0533

ZDSO400 (DR1 • ER1)

Power supplies for voice alarm systems

Intended use:

- voice alarm systems
- fire alarm systems (applies to the 24 V version)
- smoke and heat control systems for environmental class 1 (applies to the 24 V version)

Basic parameters	ZDSO400-DR1	ZDSO400-ER1
Output parameters:		
Maximum power	400 W	400 W
Load capacity of main amplifier outputs		
Version 1	2 × 60 A + 4 × 40 A	6 × 15 A
Version 2	6 × 40 A	4 × 15 A
Version 3	4 × 40 A	—
Load capacity of additional outputs [1]	4 × 5 A (2 × 5 A) [2]	4 × 2 A (2 × 2 A)[3]
Optional additional converter	no	24 V / 5 A
Operation with a battery bank		
Number of battery banks	1 × 24 V	1 × 48 V
Voltage at 25°C	27.1 V	54.2 V
Maximum battery capacity	270 Ah	200 Ah
Charging current [4]	4…16 A	2…8 A
Maximum resistance of battery circuit [5]	15…50 mΩ	100 mΩ

1) Four outputs are connected in pairs sharing a common fuse. Each of the other two outputs has its own fuse.
2) For version 3.
3) For version 2.
4) Maximum charging current depends of the capacity of the battery bank.
5) A specific value within the given range can be set via a user-accessible slide switch.

Features:

- installed in a standard 19” rack
- a microprocessor control system
- a front panel with:
  - » a LED indicator of the power supply’s operating status
  - » a “cold start” and alarm reset button
  - » a USB connector for digital communication
- a power distribution back panel with:
  - » 6 high-current outputs for powering voice alarm system amplifiers
  - » 6 outputs for powering voice alarm system control elements
  - » direct access to fuses of all outputs
  - » status indicator for each fuse
- 3 relays for signalling the operating status of the power supply with NO-C-NC contacts:
  - » battery failure
  - » mains power failure
  - » collective fault signal

Basic parameters	ZDSO400-DR1 ZDSO400-ER1
Supply voltage	230 V +10% -15%
Frequency	47 … 53 Hz
Power factor	0.94
Efficiency	84%
Maximum current drawn	2.7 A
Operating temperature range	-5°C … +40°C
IP rating [1]	IP20
Dimensions (W × H × D) [mm]	483(19”) × 45(1 U) × 283
Weight	5.2 kg

1) For compliance with EN 54-4 + A2, power supplies should be installed in IP30-rated 19” racks.

ZDSO400 (DR2 / DR4 • ER2 / ER4)

Power supplies for voice alarm systems with a display

CNBOP-PIB

ZDSO400-DR2 / DR4
Certificate
1438-CPR-0319

ZDSO400-ER2 / ER4
Certificate
1438-CPR-0320

Intended use:

- voice alarm systems
- fire alarm systems (applies to the 24 V version)
- smoke and heat control systems for environmental class 1 (applies to the 24 V version)

Basic parameters	ZDSO400-DR2 ZDSO400-ER2	ZDSO400-DR4 ZDSO400-ER4
Supply voltage	230 V +10% -15%	230 V +10% -15%
Frequency	47…53 Hz	47…53 Hz
Power factor	0.94	0.94
Efficiency	84%	84%
Maximum current drawn	2.7 A	5.4 A
Operating temperature range	-5°C…+40°C	-5°C…+40°C
IP rating [1)]	IP20	IP20
Dimensions (W × H × D) [mm]	483(19") × 45(1 U) × 283	483(19") × 90(2 U) × 283
Weight	5.2 kg	8.5 kg

1) For compliance with EN 54-4 + A2, power supplies should be installed in IP30-rated 19" racks.

Basic parameters	ZDSO400-DR2	ZDSO400-DR4	ZDSO400-ER2	ZDSO400-ER4
Output parameters				
Maximum power	400 W	800 W	400 W	800 W
Load capacity of outputs:				
Amplifier outputs [1]	6 × 30 A	12 × 30 A	6 × 15 A	12 × 15 A
Additional 24 V outputs [2]	1 × 6 A	2 × 6 A	1 × 5 A	2 × 5 A
Additional 48 V outputs [2]	–	–	1 × 3 A	2 × 3 A
Rated output voltage (at 25°C)	27.1 V	27.1 V	54.2 V	54.2 V
Battery operation				
Maximum charging current	16 A	32 A	8 A	16 A
Maximum battery capacity	320 Ah	640 Ah	160 Ah	320 Ah
Maximum number of battery banks	2	4	2	4
Permissible resistance increase of each battery bank	50 mΩ	50 mΩ	100 mΩ	100 mΩ

1) For 1000 W amplifiers, two outputs connected in parallel are used.
2) Each output allows connection of two devices whose total current cannot exceed the indicated value.

Features:

- built-in power distribution panel and deep discharge disconnect device
- built-in meter for measuring battery circuit resistance
- UI type of batteries charging characteristics
- 1-phase power supply with power factor correction (PFC)
- microprocessor control
- can be used with various acid batteries
- temperature probe for compensation of floating operation and bulk charging voltage
- bulk charging of batteries with charging current limitation
- low and high battery voltage monitoring
- continuity monitoring and measurement of battery circuit resistance
- protection against deep discharge of batteries
- load monitoring of outputs for powering amplifiers before switching on and during operation
- output fuse status monitoring
- monitoring of the correct operation of the rectifier
- internal temperature monitoring
- digital measurement of voltage, current and temperature
- visual, audible and remote fault indication
- two external fault signals can be received and processed
- voltages of individual batteries in a bank can be equalised

CNBOP-PIB

ZDSO400D-AK3
Certificate 1438-CPR-0129
Approval Certificate
3505 / 2019

ZDSO400E-AK3
Certificate 1438 / CPD / 0213
Approval Certificate
3277 / 2018

ZDSO400-AK3

Rack-mounted power supplies for the Praesideo, Plena and Paviro voice alarm systems by BOSCH

The ZDSO400-AK3 power supplies are complete power systems equipped with a ZDSO400 power supply, batteries, a connection and protection area and shelves for sound system elements.

The entire system is placed in a rack matching the configuration of the voice alarm system.

Basic parameters	ZDSO400D-AK3	ZDSO400E-AK3
Output parameters:		
Nominal output voltage	24 V	48 V
Maximum number of voice alarm system amplifiers	up to 12	up to 16
Battery operation:		
Maximum charging current	up to 32 A	up to 16 A
Maximum capacity	up to 640 Ah	up to 430 Ah
Maximum number of battery banks	4	2
Backup power time	typically 6 or 24h	typically 6 or 24h
Permissible resistance of each battery circuit	25...50 mΩ	50...150 mΩ

Features:

- distribution of mains and backup power to voice alarm system modules
- generation of fault signals if system operation errors are detected
- information about failures can be sent to the control panel of the fire system
- precise floating operation voltage – temperature-dependent
- bulk charging of batteries with current limitation
- low and high battery voltage monitoring
- battery circuit continuity monitoring and deep discharge protection
- overvoltage protection for mains power supply – visual, audible and remote fault indication
- event history stored in non-volatile memory
- no limitation on the number of cabinets in the system
- indication of high resistance of battery banks and connected circuit elements, separately for each battery bank (max 4 banks)
- the 48 V system can be expanded with an additional power supply (ZDSOR-400-E or ZDSOT-400-E) to increase the number of outputs for powering amplifiers and support large battery capacities.

ZSP25

Firefighter's microphone power supply

The ZSP25 series power supplies are designed to provide uninterruptible power to firefighter's microphone stand in voice alarm systems.

Basic parameters	ZSP25-DR-MS ZSP25-DRV-MS	ZSP25-ER-MS
Nominal output voltage	24 V	48 V
Maximum output current	0.4 A	0.3 A
Installable battery	12 V / 28 Ah	

MST • MSP

Universal housings for alarm control panels

These housings are intended for mounting alarm control panels and additional modules. A power transformer is mounted in the MST housings. Space for battery installation is also provided.

Thanks to holes adapted to specific types of control units, the housings can be fitted with modules from such manufacturers as SATEL, DSC, PARADOX, RISCO, ROGER, PYRONIX

Version	Transformer	Power output	Installable battery	Dimensions (W × H × D) [mm]
MST-00-20-07	20 VA	16 V / 1.2 A or 18 V / 1 A	7 Ah / 12 V	245 × 240 × 75+8
MST-00-40-07	40 VA	16 V / 2.2 A or 18 V / 2 A	7 Ah / 12 V	245 × 240 × 75+8
MST-10-40-17	40 VA	16 V / 2.2 A or 18 V / 2 A	17 Ah / 12 V	315 × 300 × 85+8
MST-15-40-07	40 VA	16 V / 2.2 A or 18 V / 2 A	17 Ah / 12 V	285 × 265 × 80+8
MST-20-40-17	40 VA	16 V / 2.2 A or 18 V / 2 A	7 Ah / 12 V	315 × 395 × 85+8
MSP-00-07	–	–	7 Ah / 12 V	245 × 240 × 75+8
MSP-10-17	–	–	17 Ah / 12 V	315 × 300 × 85+8
MSP-15-07	–	–	7 Ah / 12 V	285 × 265 × 80+8
MSP-20-17	–	–	17 Ah / 12 V	315 × 395 × 85+8

Features:

- ability to fit control panels and modules from various manufacturers
- space for a battery
- housings are powder-coated and locked with screws
- tamper sensor
- wall distancing

ZKD • ZBS

Power supplies for access control systems

Version	Output voltage	Maximum output current	Installable battery	Dimensions (W × H × D) [mm]
ZKD-12V3A	13.6 V	2 A	7 Ah to 18 Ah	394 × 354 × 86
ZKD-12V6A	13.6 V	5 A	7 Ah to 18 Ah	394 × 354 × 86
ZKD-24V1.5A	27.1 V	1 A	2 × 7 Ah	394 × 354 × 86
ZKD-24V3A	27.1 V	2.5 A	2 × 7 Ah	394 × 354 × 86
ZBS12V3A-18	13.8 V	2.6 A	18 Ah	212 × 300 × 90+10
ZBS12V5A-18	13.8 V	5 A	18 Ah	212 × 300 × 90+10
ZBS24V1.5A-7	27.6 V	1.5 A	2 × 7 Ah	212 × 300 × 90+10
ZBS24V2.5A-7	27.6 V	2.5 A	2 × 7 Ah	212 × 300 × 90+10

The ZKD / ZBS are designed to provide uninterruptible 12 V or 24 V power to following devices:

- access control systems
- CCTV systems
- intrusion detection systems
- other devices which require backup power in case of mains power outage

MRB

Universal casings for mounting a video recorder and a monitor

The MRB series housings are intended for the installation of a DVR / NVR video recorder and a monitor. They protect installed devices against unauthorized access and theft, which is important for the security of recording and protection of image and personal data.

Version	Max video recorder dimensions (W × H × D) [mm]	Max monitor dimension (W × H × D) [mm]	Housing dimensions (W × H × D) [mm]	Weight without equipment [kg]
MRB-L	440 × 67 × 490	495 × 450	528 × 614 × 200	13.9
MRB-M	336 × 67 × 334	392 × 250	425 × 456 × 163	9.2
MRB-S	266 × 67 × 280	–	320 × 430 × 84	4.5
MRB-W	486 × 130 × 380	–	560 × 530 × 150	9.6

Characteristics:

- possibility of installing an NVR / DVR video recorder (in all housing versions) and a monitor (in MRB-L, MRB-M versions)
- powder coated housing (RAL 7035) made of sheet metal:
  - » 1.2 mm (MRB-L, MRB-M)
  - » 1.0 mm (MRB-S, MRB-W)
- enclosure door closed with two locks with keys of different codes
- door secured with two anti-tamper sensors (opening and detaching from the wall)
- distance from the wall 8 mm
- possibility of installing two fans (in versions MRB-L and MRB-W)
- the possibility of mounting the device in a 19" rack spacing with a height of 1U (option in the MRB-L version)
- warranty – 2 years

OA

Battery housings

They are designed for hanging, placing on the floor or mounting on a TS-35 rail (OA7D version) of batteries with capacities of up to 100 Ah. Housings with batteries are a complementary element in power supply systems for devices used in security systems as well as industrial automation and telecommunications.

Version	Installable battery	Dimensions (W × H × D) [mm]
OA7D	1 × 7 Ah or 2 × 5 Ah	200 × 131 × 86
OA65	1 × 65 Ah or 1 × 100 Ah	406 × 246 × 208
OA2x65	2 × 65 Ah or 2 × 100 Ah or 4 × 40 Ah or 8 × 18 Ah	406 × 486 × 208

MZB

GRADE 2 floating operation power supplies

The MZB power supplies are manufactured in compliance with grade 2 requirements specified by the latest version of EN 50131-6

Intended use:

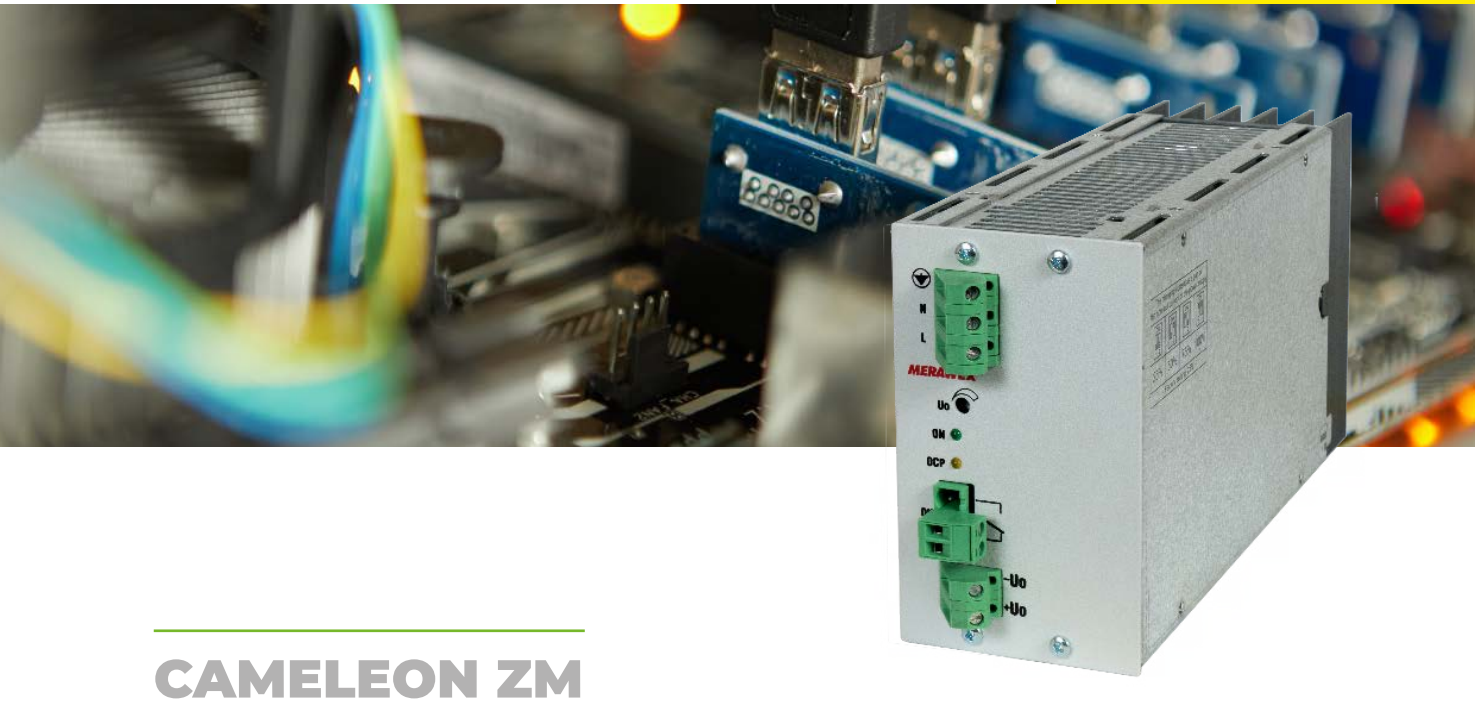
- access control systems
- CCTV systems
- intrusion detection systems
- other devices which require backup power in case of mains power outage

Version	Output voltage	Maximum output current	Charging current	Installable battery	Dimensions (W × H × D) [mm]
MZB-212-07	13.8 V	2 A	0.5 A or 1 A	7 Ah	200 × 160 × 85+8
MZB-212-17	13.8 V	2 A	0.5 A or 1 A	17 Ah	230 × 230 × 90+8
MZB-312-17	13.8 V	3 A	0.5 A or 1 A	17 Ah	230 × 230 × 90+8
MZB-412-17	13.8 V	4 A	0.5 A or 1 A	17 Ah	230 × 230 × 90+8

The solutions used in the power supply are characterised by very low quiescent current, which greatly extends the time for which the powered devices can run in battery operation

Features:

- wide range of mains supply voltage: 85 ... 264 Vac
- very low quiescent current
- stable and adjustable output voltage
- two independent and protected outputs
- battery charge and maintenance monitoring
- two levels of battery charging current limitation
- power supply can be started on batteries – “cold start” function
- protection against battery overdischarge – can be locked with a jumper
- visual indicators
- technical outputs: low battery voltage (LoB), mains outage or power supply failure (EPS)
- output protected against short-circuiting or reverse battery connection
- output overvoltage protection – no need to use additional systems when powering access control, CCTV or intrusion detection systems
- short-circuit protection, overload protection, overvoltage protection and tamper protection
- metal cabinet locked with screws



CAMELEON ZM

Single-output modular power supplies

Cameleon universal modular power supplies are a family of power supplies with a unified design, covering a power range of 150 to 600 W. They are intended to provide DC power to electrical devices which require a stable power source.

Nominal output voltage	Nominal output current / variants (without designation of installation version)		
12 V	**10 A** ZM12V10A-151	**16 A** ZM12V16A-300	**32 A** ZM12V32A-600
24 V	**6 A** ZM24V6A-151	**12 A** ZM24V12A-300	**24 A** ZM24V24A-600
48 V	**3 A** ZM48V3A-151	**6 A** ZM48V6A-300	**12 A** ZM48V12A-600
External dimensions [mm]	66 × 111 × 203+17 (connectors)	66 × 111 × 203+17 (connectors)	66 × 111 × 262+17 (connectors)
Weight [kg]	1.2	1.3	1.7

Intended use:

- electronics and industrial automation
- telecommunications
- power engineering
- security systems

Features:

- AC or DC power supply
- active PFC circuit (versions above 150 W)
- output voltage adjustment
- relay and visual indication of correct power supply operation
- choice of front panel connection type (screw terminals or a socket / plug assembly)
- modular design with option to mount on a DIN rail or in a Eurocard 3 U enclosure

CAMELEON ZM-R

Controllable power supplies for parallel operation

The ZM-R modular power supplies for parallel operation are designed to provide DC power to electrical devices which require a stable power source. They are used in systems where redundancy is essential.

Nominal output voltage	Nominal output current / variants (without designation of installation version)		
12 V	**10 A** ZM12V10A-151R	**16 A** ZM12V16A-300R	**32 A** ZM12V32A-600R
24 V	**6 A** ZM24V6A-151R	**12 A** ZM24V12A-300R	**24 A** ZM24V24A-600R
48 V	**3 A** ZM48V3A-151R	**6 A** ZM48V6A-300R	**12 A** ZM48V12A-600R
External dimensions [mm]	66 × 111 × 203+17 (connectors)	66 × 111 × 203+17 (connectors)	66 × 111 × 262+17 (connectors)
Weight [kg]	1.2	1.3	1.7

Intended use:

- electronics and industrial automation
- telecommunications
- power engineering
- security systems

Features:

- AC or DC power supply
- active PFC circuit (versions above 150 W)
- output voltage adjustment, also via an external signal
- up to 15 power supplies can be connected in parallel with guaranteed equal load current distribution
- relay and visual indication of correct power supply operation
- choice of front panel connection type (screw terminals or a socket / plug assembly)
- modular design with option to mount on a DIN rail or in a Eurocard 3 U enclosure

CAMELEON ZM-B

Power supplies for battery operation

The ZM-B Cameleon power supplies are used in uninterruptible DC power supply systems and for operation with battery banks. In the event of a mains power outage, they ensure an uninterrupted switchover to battery operation.

Nominal output voltage	Nominal output current / variants (without designation of installation version)		
12 V	**10 A** ZM12V10A-151B	**16 A** ZM12V16A-300B	**32 A** ZM12V32A-600B
24 V	**6 A** ZM24V6A-151B	**12 A** ZM24V12A-300B	**24 A** ZM24V24A-600B
48 V	**3 A** ZM48V3A-151B	**6 A** ZM48V6A-300B	**12 A** ZM48V12A-600B
External dimensions [mm]	66 × 111 × 203+17 (connectors)	66 × 111 × 203+17 (connectors)	66 × 111 × 262+17 (connectors)
Weight [kg]	1.2	1.3	1.7

Intended use:

- electronics and industrial automation
- telecommunications
- power engineering
- security systems

Features:

- AC or DC power supply
- active PFC circuit (versions above 150 W)
- operation with a battery bank in a floating operation system with direct temperature compensation (temperature probe included)
- adjustable battery charging current limitation
- relay and visual indication of the power supply's operating status
- additional terminals for connecting an external battery
- internal battery disconnecting relay for protection against overdischarge
- choice of front panel connection type (screw terminals or a socket / plug assembly)
- modular design with option to mount on a DIN rail or in a Eurocard 3 U enclosure

CAMELEON ZM-A

Power supplies for battery operation – with additional signalling

The Cameleon ZM-A power supplies are used in uninterruptible DC power supply systems and for battery operation. In the event of a mains power outage, they ensure an uninterrupted switchover to battery operation. In addition to basic functions related to battery operation, they monitor the connected battery.

Nominal output voltage	Nominal output current / variants (without designation of installation version)		
12 V	**10 A** ZM12V10A-151A	**16 A** ZM12V16A-300A	**32 A** ZM12V32A-600A
24 V	**6 A** ZM24V6A-151A	**12 A** ZM24V12A-300A	**24 A** ZM24V24A-600A
48 V	**3 A** ZM48V3A-151A	**6 A** ZM48V6A-300A	**12 A** ZM48V12A-600A
External dimensions [mm]	66 × 111 × 203+17 (connectors)	66 × 111 × 203+17 (connectors)	66 × 111 × 262+17 (connectors)
Weight [kg]	1.2	1.3	1.7

Intended use:

- electronics and industrial automation
- telecommunications
- power engineering
- security systems

Features:

- AC or DC power supply
- active PFC circuit (versions above 150 W)
- operation with a battery bank in a floating operation system with direct temperature compensation (temperature probe included)
- adjustable battery charging current limitation
- relay and visual indication of the operating status of the power supply and batteries
- additional terminals for connecting LED indicators
- additional terminals for connecting an external battery and an internal battery disconnecting relay for protection against overdischarge
- choice of front panel connection type (screw terminals or a socket / plug assembly)
- modular design with option to mount on a DIN rail or in a Eurocard 3 U enclosure

CAMELEON ZM-AZ, ZM-AZC, ZM-PZ

CNBOP-PIB
Certificate
1438-CPR-0484
for the 24 V versions

EN 54-4+A1+A2

EN 12101-10

Power supplies for battery operation with resistance measurement and communication functions

The Cameleon ZM-AZ, ZM-AZC and ZM-PZ power supplies are intended to operate with battery banks in uninterruptible DC power systems. They monitor the battery, controlling its presence, the continuity of its circuit and its voltage. They also monitor battery circuit resistance and signal if it's too high.

Nominal output voltage	Nominal output current / variants (without designation of installation version)		
12 V	**10 A** ZM12V10A-151AZ ZM12V10A-151AZC	**16 A** ZM12V16A-300AZ ZM12V16A-300AZC	**32 A** ZM12V32A-600AZ ZM12V32A-600AZC
24 V CNBOP-PIB Certificate no. 1438-CPR-0484	**6 A** ZM24V6A-151AZ ZM24V6A-151AZC ZM24V6A-151PZ	**12 A** ZM24V12A-300AZ ZM24V12A-300AZC ZM24V12A-300PZ	**24 A** ZM24V24A-600AZ ZM24V24A-600AZC ZM24V24A-600PZ
48 V	**3 A** ZM48V3A-151AZ ZM48V3A-151AZC	**6 A** ZM48V6A-300AZ ZM48V6A-300AZC	**12 A** ZM48V12A-600AZ ZM48V12A-600AZC
External dimensions [mm]	66 × 111 × 203+17 (connectors)	66 × 111 × 203+17 (connectors)	66 × 111 × 262+17 (connectors)
Weight [kg]	1.2	1.3	1.7

Intended use:

- fire automation and alarm systems
- smoke and heat control systems
- telecommunications
- power engineering
- telemetric, surveillance, monitoring systems
- dispatching systems for rescue and hazard warning centres
- retransmission stations for radio communication systems

Features:

- compliance with requirements of: EN 54-4+A1+A2 and EN 12101-10 (full compliance when installed in an IP30 rated cabinet equipped with a battery bank)
- AC or DC power supply
- active PFC circuit (versions above 150 W)
- battery circuit resistance monitoring
- operation with a battery bank in a floating operation system with direct temperature compensation (temperature probe included)
- remote relaying of a collective fault signal (ZM-PZ only)
- can receive an external fault signal (ZM-PZ only)
- remote relaying of a backup power source fault state (ZM-AZ and ZM-AZC only)
- additional LEDs can be connected to the power supply to indicate mains outage and a collective fault signal (ZM-AZ and ZM-AZC only)
- adjustable battery charging current limitation
- relay and visual indication of the power supply's operating status
- additional terminals for connecting an external battery and an internal battery disconnecting relay for protection against overdischarge
- RS232 or RS485 digital communication (ZM-AZC only)
- modular design with option to mount on a DIN rail or in a Eurocard 3 U enclosure

CAMELEON ZM110V and ZM220V

Modular power supplies with an output voltage of 110 Vdc and 220 Vdc

Cameleon power supplies with an output voltage of 110 Vdc and 220 Vdc are designed to supply direct current to electrical equipment or for operation with station batteries. Depending on the version, they can be connected in parallel, which makes it possible to increase the maximum output current and to work in a system with redundancy.

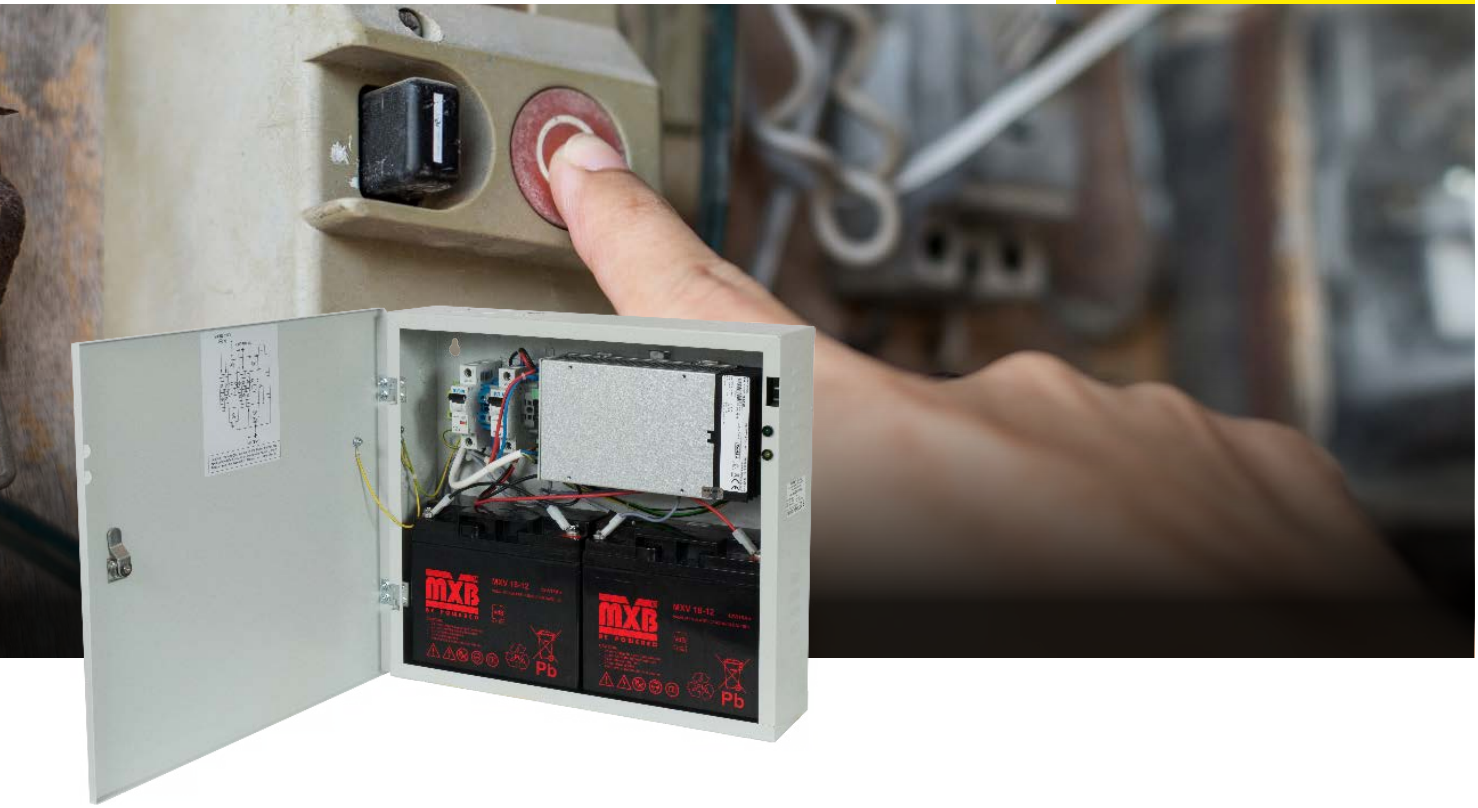
Nominalne Output / Output current	Basic version	Version for parallel operation
110 V / 5 A	ZM110V5A-600	ZM110V5A-600R
220 V / 2.5 A	ZM220V2.5A-600	ZM220V2.5A-600R
External dimensions [mm]	66 × 111 × 262+17 (connectors)	66 × 111 × 262+17 (connectors)
Weight [kg]	1.7	1.7

Intended use:

- rail industry
- electrical substations
- industrial automation
- telecommunications
- emergency indication
- uninterruptible power supply systems compatible with battery banks
- protection and control systems

Features:

- 230 V AC or 220 V DC power supply
- active PFC circuit
- the power supply can be connected to already live systems – no current surge
- optical indication of correct operation and current limitation
- relay signalling of correct operation (three potential-free contacts)
- all inputs and outputs located on the front panel
- three-state input voltage switch available: base voltage, voltage for battery operation with a VRLA battery and voltage for charging a traditional lead-acid battery
- additional ±5% output voltage adjustment
- choice of front panel connection type (screw terminals or a socket / plug assembly)
- modular design with option to mount on a DIN rail or in a Eurocard 3 U enclosure



CAMELEON BOX ZMS

Uninterruptible power supply stations in a wall-mounted cabinet

The ZMS battery backed-up power supplies provide uninterruptible power from the mains or, in the event of an outage, from an internal bank of sealed lead-acid VRLA AGM batteries. When switching from mains power to battery power and vice-versa, there are no momentary voltage drops at the output.

Version	Output voltage	Maximum output current	Battery bank capacity	Cabinet dimensions (W × H × D) [mm]
ZMS-1-12V10A	12 V	10 A	up to 36 Ah*	395 × 356 × 96
ZMS-1-12V16A	12 V	16 A	up to 36 Ah*	395 × 356 × 96
ZMS-3-12V10A	12 V	10 A	up to 80 Ah*	455 × 356 × 187
ZMS-3-12V16A	12 V	16 A	up to 80 Ah*	455 × 356 × 187
ZMS-1-24V6A	24 V	6 A	18 Ah	395 × 356 × 96
ZMS-1-24V12A	24 V	12 A	18 Ah	395 × 356 × 96
ZMS-3-24V6A	24 V	6 A	40 Ah	455 × 356 × 187
ZMS-3-24V12A	24 V	12 A	40 Ah	455 × 356 × 187
ZMS-1-48V3A	48 V	3 A	5 Ah	395 × 356 × 96
ZMS-1-48V6A	48 V	6 A	5 Ah	395 × 356 × 96
ZMS-3-48V3A	48 V	3 A	18 Ah	455 × 356 × 187
ZMS-3-48V6A	48 V	6 A	18 Ah	455 × 356 × 187

* parallel connection possibl

Cabinets with ZM-AZ or ZM-AZC power supplies certified by CNBOP-PIB (Certificate no. 1438-CPR-0484) for the 24 V versions can be ordered.

ZM-UPS

Compact power system – UPS DC

The ZM-UPS compact power systems are based on the ZM Cameleon modular power supplies. A Eurocard 3 U enclosure contains a single floating operation power supply module and a bank consisting of up to four 12 Ah batteries. The ZM-UPS systems provide a complete source of uninterruptible DC power for mounting in a 19” rack.

Intended use:

- power engineering and telecommunications
- uninterruptible power supply systems
- security systems

Features:

- 230 Vac, 220 Vdc supply voltage
- installed in a Eurocard 3 U enclosure
- remote signalling of alarm states, including related to high resistance of battery bank (option)
- LED indicator of the power supply’s operating status
- remote signalling of alarm states
- overload protection for output circuits and batteries
- internal deep discharge disconnect device
- internal temperature probe
- a 4 x 12 Ah battery bank inside the enclosure

Version	Output voltage	Maximum output current	Battery bank capacity
ZM-UPS-12V10A-AK12-48	12 V	10 A	48 Ah
ZM-UPS-12V16A-AK12-48	12 V	16 A	48 Ah
ZM-UPS-12V32A-AK12-48	12 V	32 A	48 Ah
ZM-UPS-24V6A-AK24-24	24 V	6 A	24 Ah
ZM-UPS-24V12A-AK24-24	24 V	12 A	24 Ah
ZM-UPS-24V24A-AK24-24	24 V	24 A	24 Ah
ZM-UPS-48V3A-AK48-12	48 V	3 A	12 Ah
ZM-UPS-48V6A-AK48-12	48 V	6 A	12 Ah
ZM-UPS-48V12A-AK48-12	48 V	12 A	12 Ah

Other battery capacities possible

ZM-PS

High-power power supplies

The ZM-PS series power supplies consist of several ZM-R modules connected in parallel with guaranteed equal load current distribution. This increases the maximum output current and allows the power supply to be used as a redundant device.

With correctly set output voltage, these power supplies can be used as battery power supplies.

Version	Output voltage	Maximum output current
ZM-PS2-12V32A	12 V	32 A
ZM-PS2-12V64A	12 V	64 A
ZM-PS3-12V48A	12 V	48 A
ZM-PS3-12V96A	12 V	96 A
ZM-PS2-24V24A	24 V	24 A
ZM-PS2-24V48A	24 V	48 A
ZM-PS3-24V36A	24 V	36 A
ZM-PS4-24V96A	24 V	96 A
ZM-PS5-24V120A	24 V	120 A
ZM-PS6-24V72A	24 V	72 A
ZM-PS6-24V144A	24 V	144 A
ZM-PS2-48V12A	48 V	12 A
ZM-PS3-48V24A	48 V	24 A
ZM-PS3-48V18A	48 V	18 A
ZM-PS3-48V36A	48 V	36 A
ZM-PS4-48V48A	48 V	48 A
ZM-PS5-48V60A	48 V	60 A
ZM-PS6-48V72A	48 V	72 A
ZM-PS2-110V10A	110 V	10 A
ZM-PS3-110V15A	110 V	15 A
ZM-PS4-110V20A	110 V	20 A
ZM-PS5-110V25A	110 V	25 A
ZM-PS6-110V30A	110 V	30 A
ZM-PS2-220V5A	220 V	5 A
ZM-PS3-220V7,5A	220 V	7.5 A
ZM-PS4-220V10A	220 V	10 A
ZM-PS5-220V12,5A	220 V	12.5 A
ZM-PS6-220V15A	220 V	15 A

Intended use:

- telecommunications systems
- power supply for own needs
- industrial automation systems
- control devices

Features:

- single- or three-phase AC power supply
- power supply from a DC power source (e.g. a 220 Vdc or 110 Vdc battery bank)
- an external temperature probe can be connected
- a deep discharge contactor can be connected

ZM-DC

High-power DC / DC converters

The ZM-DC series converters convert 220 Vdc (110 Vdc) power to direct current with voltage between 24 Vdc and 220 Vdc.

Version	Output voltage	Maximum output current *
ZM-DC2-24V12A	24 V	12 A (24 A)
ZM-DC2-24V24A	24 V	24 A (48 A)
ZM-DC4-24V48A	24 V	48 A (96 A)
ZM-DC6-24V72A	24 V	72 A (144 A)
ZM-DC2-48V6A	48 V	6 A (12 A)
ZM-DC2-48V12A	48 V	12 A (24 A)
ZM-DC4-48V24A	48 V	24 A (48 A)
ZM-DC6-48V36A	48 V	36 A (96 A)
ZM-DC2-110V5A	110 V	5 A (10 A)
ZM-DC4-110V10A	110 V	10 A (20 A)
ZM-DC6-110V15A	110 V	15 A (30 A)
ZM-DC2-220V2,5A	220 V	2.5 A (5 A)
ZM-DC4-220V5A	220 V	5 A (10 A)
ZM-DC6-220V7,5A	220 V	7.5 A (15 A)

* output current of one module group. Maximum output current of the converter is given in parentheses

Intended use:

- telecommunications systems
- power supply for own needs
- industrial automation systems
- control devices

Features:

- easy expansion with additional modules
- can be powered with DC or AC power
- galvanic isolation between input and output
- can be powered from several independent sources (220 Vdc or 110 Vdc battery bank and mains)
- separate input terminals for each converter group
- drawing current from a selected input can be prioritised

ZEM100-DBS

Floating operation power supplies with signalling

The ZEM100-DBS power supplies are designed to operate with battery banks in uninterruptible DC power systems. They have three types of stabilised voltage outputs. Voltage at the first output depends on the voltage of the connected battery, the second output provides voltage of at least 24 V, even in battery operation, while the third output stabilises output voltage at 13.2 V.

Input parameters	
Supply voltage	184…253 Vac
Frequency	50 Hz

Output parameters	
Uout1 voltage	21…27.1…28.8 V / 4.5 A
Uout2 voltage	24…27.1…28.8 V / 3.0 A
Uout3 voltage	13.2 V / 6 A *
Maximum output power	130 W
Efficiency	min. 85%
Cooling	convection
Battery bank capacity	17…28 Ah
Minimum battery voltage – output disconnecting voltage	21 V
External dimensions [mm]	150 × 101 × 79
Weight [kg]	0.65

* instantaneous current Imax of 8 A

Intended use:

- powering of transmission devices in telecommunications
- powering of systems in power engineering

Features:

- direct floating operation at the first output
- voltage stabilisation at the second and third outputs
- dedicated output for working with radiotelephones (e.g. TETRA MTM5400)
- delayed output connecting function for battery pre-charging
- power supply output power reduction in case of overheating
- “cold start” function which makes it possible to activate outputs on batteries, without mains power
- RS485 communication (ZEM100-DBS-RS485 version)
- LED indicators: mains, fault, battery
- relay signalling: mains outage, probe failure, battery failure, low battery voltage
- microprocessor control
- temperature compensation of battery charging voltage
- wide operating temperature range (-10 to +55°C)
- IP20 metal housing
- mounted on a DIN (TS35) rail

EL25, EL50

Floating operation power supplies for DIN rail mounting

The EL25 and EL50 floating operation power supplies, with power ratings of 25 and 50 W respectively, are designed to work with battery banks in uninterruptible power systems in direct floating operation.

	EL25-B	EL25-D	EL50-B	EL50-D
Output voltage	13.2 V	26.4 V	13.6 V	27.2 V
Nominal output current	1.4 A	0.7 A	2.8 A	1.4 A
External dimensions [mm]	47 × 82 × 123+5			
Weight [kg]	0.35	0.35	0.46	0.46

Intended use:

- electronics and industrial automation
- telecommunications
- rail industry
- measuring systems

Features:

- charging current limitation
- protection against deep discharge of batteries
- power supply can be started on battery – “cold start”
- mounted on a DIN (TS35) rail
- overload and short-circuit protection (UI Voltage adjustment range)
- visual indication of the presence of output voltage
- battery operation indication (OC type output)
- battery discharge indication (OC type output)
- output voltage can be disconnected from terminals remotely

SI48D-2U5

High-performance 48 V DC power systems in 2U enclosures

SI48D-2U5 power systems are designed for an uninterrupted 48 V DC power supply of up to 150 A in a system with a common positive bus. All connections of the power system are made within the rear panel, while fuses and the control panel can be accessed from the front panel.

The power system supports 2 batteries and 9 individually protected output circuits.

Intended use:

- specialised telecommunications systems (telephone exchanges and access systems)
- teletransmission
- subscriber telecommunications
- industrial automation systems

Features:

- high efficiency, minimum 93.5%
- small dimensions: 2 U / 19" enclosure with 341 mm depth (max. 370 mm with connectors)
- option of connection of two rechargeable battery banks
- factory settings for AGM batteries
- can be used with various acid batteries
- includes PFC circuits
- output power up to 8000 W (UPI characteristic)
- supply from 1 or 3 phases
- possibility of power supply from DC voltage
- wide operating temperature range (−33...+55°C)
- microprocessor control
- digital communication
- remote information about events
- record of event history
- graphics display controller
- terminals for the connection of 2 battery banks with separate overcurrent disconnect switch
- additional disconnector for low priority outputs (except LVDD) enabling the division of loads into 2 groups: with high and low priority
- remote signalling: up to 6 alarms, including three declared as urgent, non-urgent and power failure alarms
- option to connect up to 6 external alarms
- internal audible signal
- inputs for up to 3 external temperature probes
- forced cooling - independent for each rectifier
- USB communication interface for local operation
- RS-485 digital communication interface and Ethernet / web / SNMP communication card (optional)

Version	Output current	Output power	Communication	Rectifier	Weight
SI48D-2U5-152	30 A	1600 W	USB	2 × ZPA-48/15	12 kg
SI48D-2U5-152-ET	30 A	1600 W	USB + RS485 + Ethernet	2 × ZPA-48/15	12 kg
SI48D-2U5-153	45 A	2400 W	USB	3 × ZPA-48/15	13.5 kg
SI48D-2U5-153-ET	45 A	2400 W	USB + RS485 + Ethernet	3 × ZPA-48/15	13.5 kg
SI48D-2U5-154	60 A	3200 W	USB	4 × ZPA-48/15	15 kg
SI48D-2U5-154-ET	60 A	3200 W	USB + RS485 + Ethernet	4 × ZPA-48/15	15 kg
SI48D-2U5-155	75 A	4000 W	USB	5 × ZPA-48/15	16.5 kg
SI48D-2U5-155-ET	75 A	4000 W	USB + RS485 + Ethernet	5 × ZPA-48/15	16.5 kg
SI48D-2U5-302	60 A	3200 W	USB	2 × ZPA-48/30	12 kg
SI48D-2U5-302-ET	60 A	3200 W	USB + RS485 + Ethernet	2 × ZPA-48/30	12 kg
SI48D-2U5-303	90 A	4800 W	USB	3 × ZPA-48/30	13.5 kg
SI48D-2U5-303-ET	90 A	4800 W	USB + RS485 + Ethernet	3 × ZPA-48/30	13.5 kg
SI48D-2U5-304	120 A	6400 W	USB	4 × ZPA-48/30	15 kg
SI48D-2U5-304-ET	120 A	6400 W	USB + RS485 + Ethernet	4 × ZPA-48/30	15 kg
SI48D-2U5-305	150 A	8000 W	USB	5 × ZPA-48/30	16.5 kg
SI48D-2U5-305-ET	150 A	8000 W	USB + RS485 + Ethernet	5 × ZPA-48/30	16.5 kg

Functions:

- precise floating operation voltage
- bulk charging of batteries with charging current limitation
- low and high battery voltage monitoring
- protection against deep discharge of batteries (LVDD)
- battery symmetry monitoring
- overload monitoring of power system outputs
- output and battery fuses status monitoring
- monitoring of correct operation of rectifiers
- internal temperature monitoring
- visual, audible and remote indication of alarm states
- possibility to assign various events as alarm states
- possibility of receiving and handling external alarms
- digital communications
- recording event history in non-volatile memory (memory >1000 events)

Basic parameters	
Supply voltage	3 × 230 V 90 – 265 VAC 160 – 280 VDC
Frequency	45…65 Hz
Power factor	>0.99
Output voltage adjustment range	42.0…54.2…58.8 V
Output characteristics	UPI
Output voltage stabilisation	0.6%
Efficiency	min 93.5%
Operating temperature range	-33°C … +55°C
IP rating	IP20
Dimensions (W × H × D)	483(19") × 89(2 U) × 430 mm

SI48D-1U2

High-efficiency 48 V DC power systems in 1U enclosures

SI48D-1U2 power systems are designed for an uninterrupted 48 V DC power supply of up to 60A in a system with a common positive bus.

The power system supports 2 battery banks and 5 individually protected output circuits. The power system layout provides operation in a floating operation system.

The power system allows for the installation of one or two rectifiers in two versions – 800 W or 1600 W (15 A or 30 A output current).

Intended use:

- specialised telecommunications systems (telephone exchanges and access systems)
- subscriber telecommunications
- teletransmission
- industrial automation systems

Version	Output current	Output power	Communication	Rectifier	Weight
SI48D-1U2-151	15 A	800 W	USB	1 × ZPA-48/15	7.5 kg
SI48D-1U2-151-ET	15 A	800 W	USB + RS485 + Ethernet	1 × ZPA-48/15	7.5 kg
SI48D-1U2-152	30 A	1600 W	USB	2 × ZPA-48/15	8.8 kg
SI48D-1U2-152-ET	30 A	1600 W	USB + RS485 + Ethernet	2 × ZPA-48/15	8.8 kg
SI48D-1U2-301	30 A	1600 W	USB	1 × ZPA-48/30	7.6 kg
SI48D-1U2-301-ET	30 A	1600 W	USB + RS485 + Ethernet	1 × ZPA-48/30	7.6 kg
SI48D-1U2-302	60 A	3200 W	USB	2 × ZPA-48/30	8.9 kg
SI48D-1U2-302-ET	60 A	3200 W	USB + RS485 + Ethernet	2 × ZPA-48/30	8.9 kg

Features:

- high efficiency, minimum 93.5%
- small dimensions: 1 U / 19" enclosure with 341 mm depth (max. 370 mm with connectors)
- option of connection of two rechargeable battery banks
- factory settings for AGM batteries
- can be used with various acid batteries
- includes PFC circuits
- output power up to 3200 W (UPI characteristic)
- supply from 1 or 3 phases
- possibility of power supply from DC voltage
- wide operating temperature range (–33...+55°C)
- microprocessor control
- digital communication
- remote information about events
- record of event history
- graphics display controller
- terminals for the connection of 2 battery banks with separate overcurrent disconnect switch
- additional disconnector for low priority outputs (except LVDD) enabling the division of loads into 2 groups: with high and low priority
- remote signalling: up to 6 alarms, including three declared as urgent, non-urgent and power failure alarms
- option to connect up to 6 external alarms
- internal audible signal
- inputs for up to 3 external temperature probes
- forced cooling - independent for each rectifier
- USB communication interface for local operation
- RS-485 digital communication interface and Ethernet / web / SNMP communication card (optional)

Functions:

- precise floating operation voltage
- bulk charging of batteries with charging current limitation
- low and high battery voltage monitoring
- protection against deep discharge of batteries (LVDD)
- battery symmetry monitoring
- overload monitoring of power system outputs
- output and battery fuses status monitoring
- monitoring of the correct operation of rectifiers
- internal temperature monitoring
- visual, audible and remote indication of alarm states
- possibility to assign various events as alarm states
- possibility of receiving and handling external alarms
- digital communications
- recording event history in non-volatile memory (memory >1000 events)

Basic parameters	
Supply voltage	3 × 230 V 90 – 265 VAC 160 – 280 VDC
Frequency	45...65 Hz
Power factor	>0.99
Output voltage adjustment range	42.0...54.2...58.8 V
Output characteristics	UPI
Output voltage stabilisation	0.6%
Efficiency	min. 93.5%
Operating temperature range	-33°C ... +55°C
IP rating	IP20
Dimensions (W × H × D)	483(19") × 44 (1 U) × 354 mm

SI48-28 • SI48-48

48 V DC power systems in 3U enclosures

SI48-28 and SI48-48 power systems are designed for an uninterrupted 48 V DC power supply of up to 48 A in a system with a common positive bus. The power system layout provides operation in a floating operation system. All connections of the power system are made within the rear panel, while fuses and the control panel can be accessed from the front panel. The power station can fit a maximum of four rectifiers.

Intended use:

- specialised telecommunications (telephone exchanges and access systems)
- teletransmission
- subscriber telecommunications
- industrial automation systems

Version	Output current	Output power	Communication	Rectifier	Weight
SI48-28-32	21 A	1050 W	RS232	3 × ZPA-48/7	10.7 kg
SI48-28-33	21 A	1050 W	RS485	3 × ZPA-48/7	10.7 kg
SI48-28-42	28 A	1400 W	RS232	4 × ZPA-48/7	12.5 kg
SI48-28-43	28 A	1400 W	RS485	4 × ZPA-48/7	12.5 kg
SI48-48-32	36 A	1800 W	RS232	3 × ZPA-48/12	11.0 kg
SI48-48-33	36 A	1800 W	RS485	3 × ZPA-48/12	11.0 kg
SI48-48-42	48 A	2400 W	RS232	4 × ZPA-48/12	13.0 kg
SI48-48-43	48 A	2400 W	RS485	4 × ZPA-48/12	13.0 kg

Features:

- dimensions: 3 U / 19” enclosure with 320 mm depth
- factory settings for AGM batteries
- compatible with two battery banks
- includes PFC circuits
- 1- or 3-phase power supply
- wide operating temperature range (−33...+70°C)
- microprocessor control
- digital communication
- remote information about events
- record of event history
- high resistance to a power system fault
- low emission of radio interference

Functions:

- precise floating operation voltage
- temperature dependence of floating operation voltage
- bulk charging of batteries with charging current limitation
- low and high battery voltage monitoring
- battery circuit continuity monitoring,
- protection against deep discharge of batteries
- battery symmetry monitoring
- overload monitoring of power system outputs
- output and battery fuses status monitoring
- monitoring of the correct operation of rectifiers
- internal temperature monitoring
- visual, audible and remote indication of alarm states
- possibility to assign various events as alarm states
- possibility of receiving and handling two external alarms
- digital communications
- recording event history in non-volatile memory (memory – 400 events)

Basic parameters	
Supply voltage	3 × 230 Vac (+10% −20%)
Frequency	47...53 Hz
Power factor	0.95
Output voltage adjustment range	46...54.2...56 V
Output characteristics	UPI
Output voltage stabilisation	0.5%
Efficiency	87%
Operating temperature range	−33°C...+70°C
IP rating	IP20
Dimensions (W × H × D)	483(19”) × 133(3 U) × 274 mm

SI48-1U

48 V DC power systems in 1U enclosures

SI48-1U power systems are designed for an uninterrupted 48 V DC power supply of up to 16 A (SI48-1U-16) or 8 A (SI48-1U-8) in a system with a common positive bus.

Intended use:

- specialised telecommunications (telephone exchanges and access systems)
- teletransmission
- subscriber telecommunications
- industrial automation systems
- fiber optic and conventional transmission systems

Version	Output current	Output power	Communication	Weight
SI48-1U-8-2	8 A	400 W	RS232	4.2 kg
SI48-1U-8-3	8 A	400 W	RS485	4.2 kg
SI48-1U-16-2	16 A	800 W	RS232	5.1 kg
SI48-1U-16-3	16 A	800 W	RS485	5.1 kg

Features:

- dimensions: 1 U / 19” enclosure with 300 mm depth
- compatible with two battery banks
- possibility of operation without batteries
- 1-phase power supply
- precise floating operation voltage
- temperature dependence of floating operation voltage
- bulk charging of batteries
- with charging current limitation
- microprocessor control
- cooling - automatic activation of internal fans
- remote information about events
- record of event history
- high resistance to a power system fault
- low emission of radio interference

Functions:

- low and high battery voltage monitoring
- battery circuit continuity monitoring,
- protection against deep discharge of batteries
- battery symmetry monitoring
- overload monitoring of power system outputs
- monitoring and visual indication of the status of the output and battery fuses
- monitoring of the correct operation of rectifiers
- internal temperature monitoring
- visual, audible and remote indication of alarm states
- digital indication of voltages, currents and temperature on the display
- possibility to assign various events as alarm states
- possibility of receiving and handling external alarms

Basic parameters	
Supply voltage	230 V (+10% −20%)
Frequency	47 ... 53 Hz
Power factor	0.95
Output voltage adjustment range	46 ... 54.2 ... 56 V
Output characteristics	UPI
Output voltage stabilisation	0.5%
Efficiency	87%
Operating temperature range	−33°C ... +70°C
IP rating	IP20
Dimensions (W × H × D)	483(19”) × 45(1 U) × 270 mm

SI24-30 • SI24-40

24 V DC power systems in 3U enclosures

SI24-30 and SI24-40 power systems are designed for an uninterrupted 24 V DC power supply of up to 40 A in a system with a common positive bus. All connections of the power system are made within the rear panel, while fuses and the control panel can be accessed from the front panel.

Intended use:

- telecommunications systems
- industrial automation systems

Version	Output current	Output power	Communication	Rectifier	Weight
SI24-30-32	30 A	750 W	RS232	3 × ZPA-24/10	10.7 kg
SI24-30-33	30 A	750 W	RS485	3 × ZPA-24/10	10.7 kg
SI24-40-42	40 A	960 W	RS232	4 × ZPA-24/10	12.5 kg
SI24-40-43	40 A	960 W	RS485	4 × ZPA-24/10	12.5 kg

Features:

- small dimensions: 3 U / 19" enclosure with 320 mm depth
- compatible with two battery banks
- factory settings for AGM batteries
- can be used with various acid batteries
- includes PFC circuit
- 1- or 3-phase power supply
- wide operating temperature range (−33...+70°C)
- microprocessor control
- remote information about events
- record of event history
- high resistance to a power system fault
- low emission of radio interference

Functions:

- precise floating operation voltage
- temperature dependence of floating operation voltage
- bulk charging of batteries with charging current limitation
- low and high battery voltage monitoring
- battery circuit continuity monitoring,
- protection against deep discharge of batteries
- battery symmetry monitoring
- overload monitoring of power system outputs
- output and battery fuses status monitoring
- monitoring of the correct operation of rectifiers
- internal temperature monitoring
- visual, audible and remote indication of alarm states
- possibility to assign various events as alarm states
- possibility of receiving and handling two external alarms
- digital communications
- recording event history in non-volatile memory (memory – 400 events)

Basic parameters	
Supply voltage	3 × 230 Vac (+10% −20%)
Frequency	47...53 Hz
Power factor	0.95
Output voltage adjustment range	23...26.8...28 V
Output characteristics	UPI
Output voltage stabilisation	0.5%
Efficiency	87%
Operating temperature range	−33°C ...+70°C
IP rating	IP20
Dimensions (W × H × D)	483(19") × 133(3 U) × 314 mm

DZR
OR-ing diode units

DZR OR-ing diode units enable safe connection of two power sources which ensures uninterrupted operation of the supplied device in the event of loss of one of the input voltages.

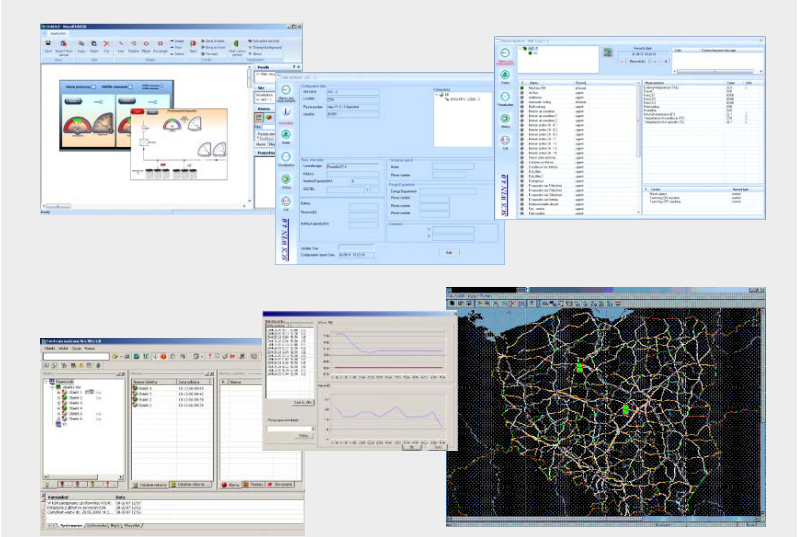
Basic parameters	DZR-10A DZR-10A-R	DZR-20A DZR-20A-R	DZR-40A DZR-40A-R	DZR-50A DZR-50A-R
Input voltage range	20...60 V	20...60 V	10...30 V	20...60 V
Maximum output current	10 A	20 A	40 A	50 A
Weight	0.8 kg	0.8 kg	0.9 kg	0.9 kg
Dimensions (W × H × D)	124 × 104 × 82 + 14 mm		124 × 104 × 82 + 24 mm	

Features:

- wide range of input voltages
- visual indication
- snap-on mounting for TS35 rail
- common negative (A version) or positive (A-R version) rail

SIMON4

Monitoring system



The SIMON 4 remote monitoring system is designed to monitor the operation and parameters of power supply devices such as telecommunication power systems, UPS power supplies and other elements of telecommunications infrastructure, including: air conditioners, fans and heaters. The system also enables supervision of devices ensuring the safety of people and property (fire alarm systems, fire extinguishing systems, intrusion detection systems, access control systems, CCTV systems, network encapsulation systems, flood warning systems).

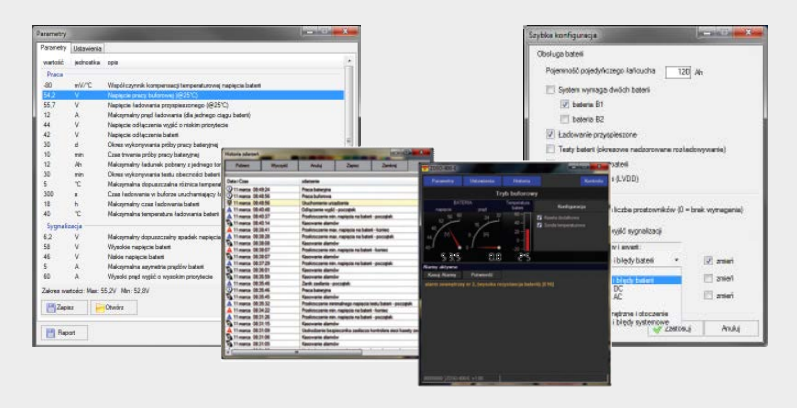
Functions:

- immediate notification of relevant services in the event of a defined alarm state,
- warning in the event of a possible alarm state,
- collection of data concerning event history enabling analysis of previous situations
- occurrence of an alarm state,
- monitoring and analysis of equipment operation.

MeraSI

Surveillance system

MeraSI is free software that enables remote supervision of MERAWEX products. The devices can be connected directly to a computer or, using additional communication modules, controlled via the Internet.



The program continuously shows the operating status of the monitored device:

- operating mode
- output voltage and current
- voltage and current of battery banks
- operating temperature
- output power

All alarm states are displayed in the main window and the event history stored in the memory can be read from the device and saved as a file. In addition, the software makes it possible to change operating parameters and define alarm priorities.

MK-ETH-1

Communication module

The MK-ETH-1 module is compatible with the MERAWEX devices such as:

- Telecommunication power systems 3 U: SI48 and SI24
- Telecommunication power systems 1 U: SI48-1U
- ZM power supplies with communication interface
- ZSP135-DR power supplies
- ZSP100 power supplies

MK-ETH-1 modules enable access to devices via computer networks based on TCP / IP. To monitor devices, an RS232 or RS485 interface is used (depending on the version). Basic information on the status of the device is available via a web browser and the SNMP protocol agent. Additionally, the module offers access via ModbusTCP protocol. The module is designed to be mounted on a TS-35 rail.

AK

Battery enclosures

Battery enclosures are designed for operation with MERAWEX power systems. 3 U enclosures mounted in 19" racks.

Features:

- ability to fit 12 V/ 12 Ah batteries
- 24 Vdc or 48 Vdc voltage

Version	Batteries	Intended use
AK48-12S	12 Ah / 48 V	SI48-1U
AK48-12-1	12 Ah / 48 V	SI48-28, SI48-48
AK24-12-1	2 x 12 Ah / 24 V	SI24

PO

Voltage distribution panels

The PO panels are designed to distribute the DC output voltage from the power system or power supply to several loads.

Version	Number of outputs	Operating voltage *	Maximum current of a single output	Maximum total current	Height
PO-48S	8	48 V	15 A	120 A	1 U
PO-48S2	8	48 V	12 A	96 A	1 U
PO-05U	8	48 V	2.5 A	20 A	0.5 U
PO-48-12	12	48 V	10 A	100 A	1 U

* version for other voltages possible

Features:

- each output is protected by a separate fuse
- relay and visual (LED) indication of any output failure.
- surge protectors in power supply circuit (PO-48S2)

MX series

Airtight maintenance-free general purpose batteries

Version	Output [V]	Nominal capacity [Ah]	Width [mm]	Height [mm]	Total height [mm]	Depth [mm]	Weight [kg]	Connectors
MX 7.0-12	12	7	65	93.5	107	151	2.2	B2
MX 18-12		18	77	167	167	181	5.4	B12
MX 22-12		22	77	167	167	181	5.6	B12
MX 28-12w		28	125	175	175	165	9.1	B12
MX 40-12		40	165	170	170	197	12.2	B6
MX 65-12		65	167	178	178	348	19.2	B6

Intended use:

- fire protection systems
- alarm and access control systems
- emergency lighting
- emergency power supply for automation and control systems
- UPS
- telecommunication power systems
- telephone exchanges

Features:

- design service life 6-9 years
- absorbent glass mat
- low internal resistance
- floating or cyclic operation
- wide operating temperature range
- operation in any position

MXL / MXV series

Airtight maintenance-free batteries with extended service life

Intended use:

- telecommunication power systems
- fire protection systems
- alarm and access control systems
- emergency power supply for automation and control systems
- emergency lighting
- UPS
- telephone exchanges

Features:

- **VdS certified (selected types)**
- design service life of up to 10-12 years
- absorbent glass mat
- low internal resistance
- floating or cyclic operation
- wide operating temperature range
- operation in any position

Version	Output [V]	Nominal capacity [Ah]	Width [mm]	Height [mm]	Total height [mm]	Depth [mm]	Weight [kg]	Connectors	VdS
MXL 7.2-12		7.2	65	94	98	150	2.4	B2	–
MXV 7.2-12		7.2	65	94	98	150	2.5	B2	G 115017
MXL 12-12		12	98	95	101	151	3.5	B2	–
MXV 12-12		12	98	95	101	151	4.1	B2	G 115018
MXV 18-12		18	77	167.5	167.5	181.5	5.7	B12	G 114078
MXL 26-12		26	175	125	125	166	7.8	B12	–
MXV 26-12		26	175	125	125	166	7.8	B12	G 115019
MXL 28-12		28	175	125	125	166	8.1	B12	–
MXL 33-12		33	164	170	195	130	10.5	B6	–
MXV 38-12		38	165	170	170	197	13.2	B6	G 114080
MXL 40-12		40	170	170	197	165	12.2	B6	–
MXL 45-12		45	165	170	170	197	14.5	B6	–
MXV 45-12	12	45	165	170	170	197	14.5	B6	G 115020
MXL 55-12		55	137	210	216	228	17.7	B6	–
MXV 65-12		65	167	178	178	348	21.3	B6	G 115021
MXL 75-12		75	168	208	214	259	23.0	B6	–
MXL 90-12		90	168	208	214	306	27.5	B6	–
MXL 100-12		100	173	212	220	330	31.5	B11	–
MXL 100-12d		100	172	222	222	328	29.0	B11	–
MXL 120-12		120	177	225	225	408	37.6	B11	–
MXL 120-12s		120	172	222	222	328	32.0	B11	–
MXL 150-12		150	170	238.5	238.5	483	48.2	B11	–
MXL 150-12d		150	170	240	240	483	43.7	B11	–
MXL 200-12		200	240	218	224	522	65.0	B11	–
MXL 200-12d		200	240	219	240	522	59.0	B11	–

MXL - FT series

Airtight maintenance-free Front-Terminal batteries

Intended use:

- telecommunication power systems
- telephone exchanges
- UPS power supplies
- emergency lighting
- fire protection systems
- emergency power supply for automation and control systems

Model	Output [V]	Nominal capacity [Ah]	Width [mm]	Height [mm]	Total height [mm]	Depth [mm]	Weight [kg]	Connectors
MXL 55-12FT	12 V	55	106	222	222	277	17.3	B6
MXL 100-12FT		100	110	285	285	394	32.6	B6
MXL 100-12FTm		100	110	233	233	545	35.6	B6
MXL 125-12FT		125	110	288	288	552	41.5	B6
MXL 150-12FT		150	110	288	288	552	46.6	B6
MXL 150-12FTm		150	110	228	296	565	43.5	B11

Features:

- installation in 19” and 21” racks
- design service life i of up to 10-12 years
- absorbent glass mat
- front-mounted terminals
- low internal resistance
- floating or cyclic operation
- wide operating temperature range

Accessories

Racks, housings, covers, cabling

We offer a wide range of open and closed racks for all our batteries. The racks are adapted to both the type and number of batteries installed in a given system.

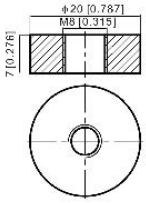
For smaller systems, we recommend battery enclosures that, depending on the type, can fit from one to eight batteries. The lockable enclosures can be wall-mounted, shelf-mounted or mounted on a TS35 rail.

Cabling for battery installation including cable connectors and connectors made from copper flat bars is also available.

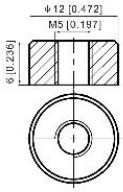
The supply of rubber covers for the battery connectors is also provided.

Types of connectors

B11 connector

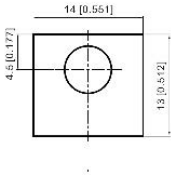


B12 connector

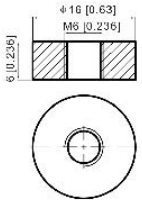


B2 connector

B3 connector



B6 connector



In order to extend the service life of the battery, it should be used with devices ensuring correct charging parameters and battery discharge control. It is recommended to use chargers or floating operation power supplies appropriate for VRLA batteries, e.g. manufactured by MERAWEX.

MEAN WELL POWER SUPPLIES AND CONVERTERS

MEAN WELL – one of the world's leading manufacturers of power supply devices, it has recognised our long-standing commitment to selling and providing technical support for its products. MERAWEX is an official distributor partner for all MEAN WELL products.

MDR SERIES

DIN-rail-mounted power supplies

- mounted on a TS35 7.5 or 15 rail
- wide supply voltage range: 85...264 Vac, 125...375 Vdc
- output voltages: 3.3; 5; 12; 15; 24; 48 V
- power: 10-100 W
- LED and relay indication of correct operation

HDR SERIES

DIN-rail-mounted power supplies

- mounted on a TS35 7.5 or 15 rail
- class II insulation
- wide supply voltage range: 85...264 Vac, 120...370 Vdc
- output voltages: 5; 12; 15; 24; 48 V
- power: 15-150 W
- LED indication of correct operation

EDR, NDR, SDR SERIES

Slimline DIN-rail-mounted power supplies

- mounted on a DIN TS35 7.5 or 15 rail
- wide supply voltage range: 90...264 Vac, 127...370 Vdc
- output voltages: 12; 24; 48 V
- power: 75-960 W
- LED indication of correct operation

DRC SERIES

DIN-rail-mounted power supplies for battery operation

- mounted on a DIN TS35 7.5 or 15 rail
- wide supply voltage range: 90...264 Vac, 124...370 Vdc
- output voltages: 13.8; 27.6 V
- output power: 40-100 W
- protection against overdischarge and reverse battery polarity
- LED indication of correct operation
- battery discharge indication

SCP SERIES

Power supplies for battery operation

- convection cooling
- wide supply voltage range: 85...264 Vac, 120...370dc
- output voltages: 13.8; 27.6 V
- power: 35; 50; 75 W
- reverse battery polarity protection

SD, RSD SERIES

Built-in DC / DC converters

- convection cooling
- power: 15-1000 W
- low-profile housing (RSD series)

LRS SERIES

Low-profile power supplies

- convection cooling
- wide supply voltage range: 85...264 Vac, 120...370 Vdc
- output voltages: 3.3; 5; 12; 15; 24; 36; 48 V
- power: 35-350 W
- low-profile housing (30 mm)

RSP SERIES

Low-profile power supplies with PFC filters

- convection cooling
- wide supply voltage range: 85...264 Vac, 120...370 Vdc
- output voltages: 3.3; 5; 12; 15; 24; 36; 48 V
- power: 75-500 W
- low-profile housing (30 mm)

UHP series

Low-profile slimline power supplies

- convection cooling
- wide supply voltage range: 90...264 Vac, 127...370 Vdc
- output voltages: 3.3; 5; 12; 15; 24; 36; 48; 55 V
- power: 200-1000 W
- low-profile housing

TS SERIES

DC / AC inverters

- power: 400-3000 W
- true sine wave output
- fan-forced cooling
- temporary overload capacity of 200%
- the inverter can be turned on and off remotely

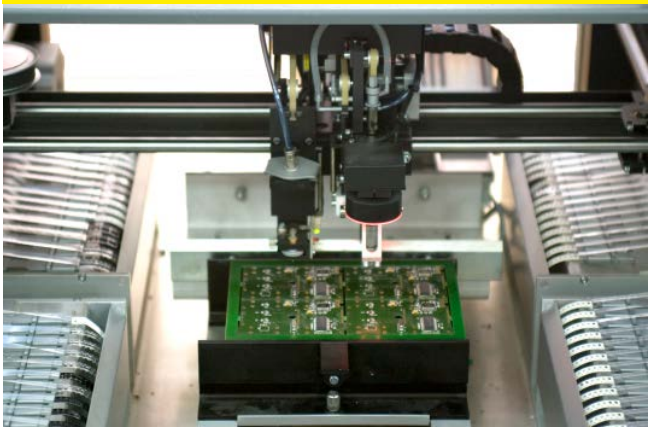
We offer:

- electronic mounting – mounting using surface-mount technology and through-hole technology, final installation of electronic devices
- periodic inspections of power supply systems
- on-site installation of power supply systems, including commissioning
- services related to equipment design to customer requirements, including preparation for manufacturing and manufacture of final devices

Contract manufacturing

We offer to perform single- and double-sided mounting using surface-mount technology (SMT) in accordance with customer documentation. We perform mounting using both our own components and customer-provided materials. We also provide PCBs for mounting. Our machine facilities enable us to mount discrete components in sizes from 0201 as well as circuits in BGA packaging.

The entire SMT process is subject to automated optical inspection (AOI), whose results are archived. We also offer to perform mounting using through-hole technology, either manually or via wave soldering. If agreed, the service can also be expanded to include final installation of the device, its commissioning and final inspection.



Installation of power supply systems

We perform installation and commissioning for power supply system items supplied by MERAWEX.

The scope of services includes manufactured power supply systems for voice alarm systems, DC power supplies, telecommunications power systems and uninterruptible power supply systems, including battery banks.

Detailed scope of work is specified and calculated on an individual basis.

Periodic inspections

We offer to perform periodic inspections of power supply systems in use, with a particular emphasis on power supply systems offered by MERAWEX. We specialise in inspections of uninterruptible power supply systems (both DC and AC).

For these systems, we offer to:

- select the optimal system for the powered device and customer requirements;
- verify an existing system, including preparation for its expansion;
- perform on-site warranty repairs of our equipment;
- perform battery capacity testing;
- perform remote monitoring of batteries.

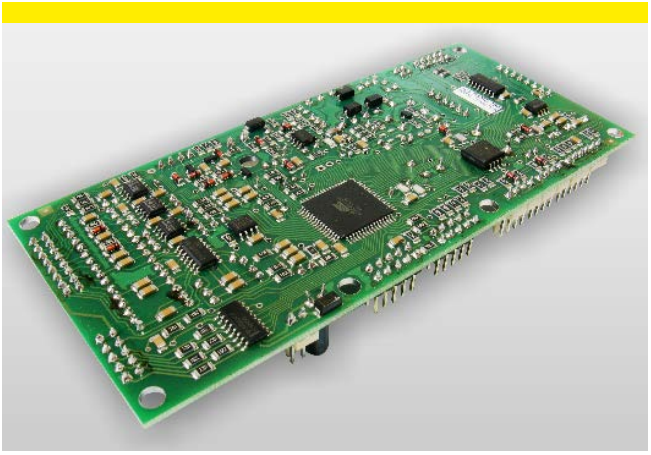
R&D services

We offer services related to equipment design to customer requirements in the following scope:

- AC/DC, DC/AC, DC/DC conversion
- adaptation to operation in unusual environmental conditions (industry, power engineering, fire protection)
- adaptation to unusual supply voltages
- electrical measurements in switching-mode systems
- uninterruptible power supply; charging, measurements of parameters of various types of batteries

The R&D department has its own EMC laboratory and environmental test chamber, while the Quality Control Department utilises modern automatic testers. Thanks to this, the developed devices comply with the required standards.

We specialise in devices dedicated for security systems, including fire protection systems, and power supplies dedicated for telecommunications and industrial equipment.

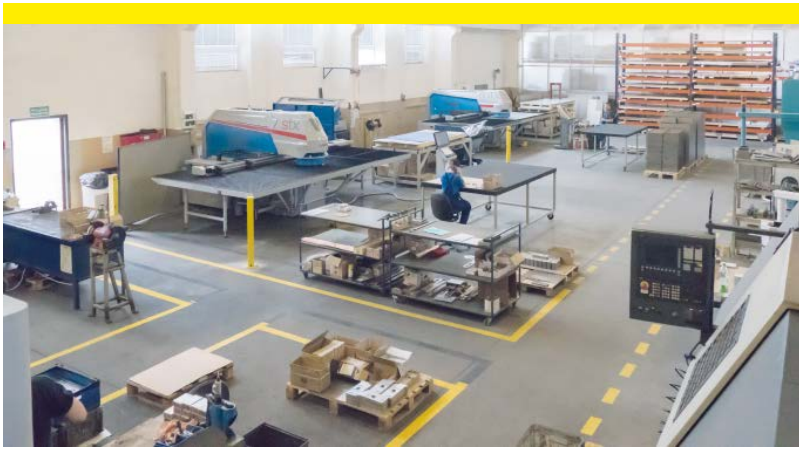


Manufacture of mechanical parts

Our offer includes manufacture of mechanical parts using CNC machines by punching or laser cutting, sheet metal bending on press brakes and machining.

We offer:

- parts made of galvanised or coated steel sheets with a thickness of up to 2 mm
- parts made of aluminium and copper sheets with a thickness of up to 3 mm
- installation of pressed and welded components (connectors) in parts
- welding of metal parts
- cutting of parts to customer specifications
- sheet metal bending to customer specifications



MERAWEX

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