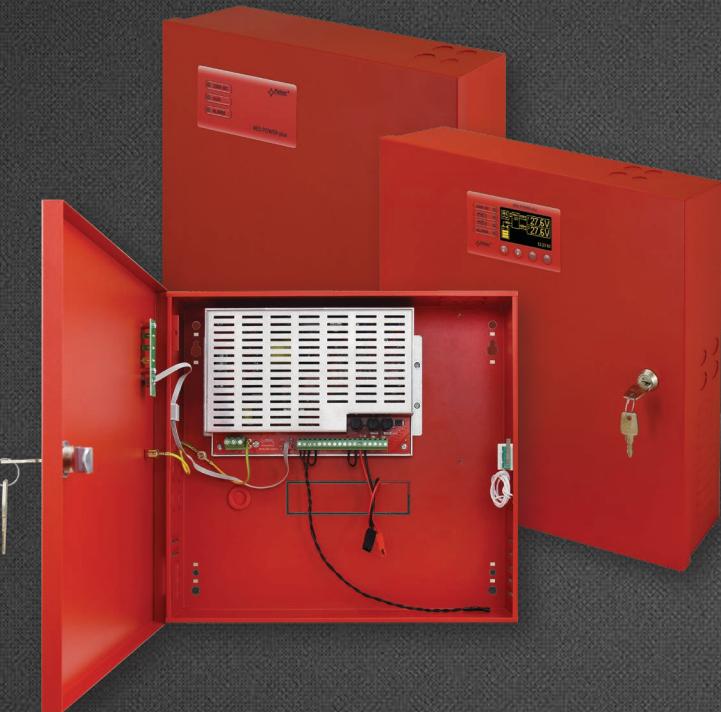


Buffer power supplies and boxes for fire protection systems



EN54C series
EN54M series

Buffer power supply units
certified with: EN54-4, EN12101-10

Power supplies for fire alarm systems and
smoke and heat control systems



AWOP series
AWOZ series

**Fire protection
installation boxes**

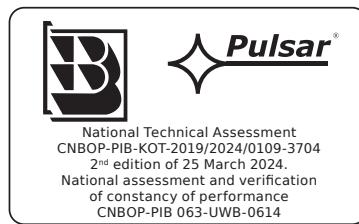
Fire resistance classification:
E30, E60, E90

Certification:



EN54C series
Certificate of constancy
of performance
CNBOP-PIB No 1438-CPR-0628
Certificate of approval
CNBOP-PIB No 5222/2024

EN54M series
Certificate of constancy
of performance
CNBOP-PIB No 1438-CPR-0630



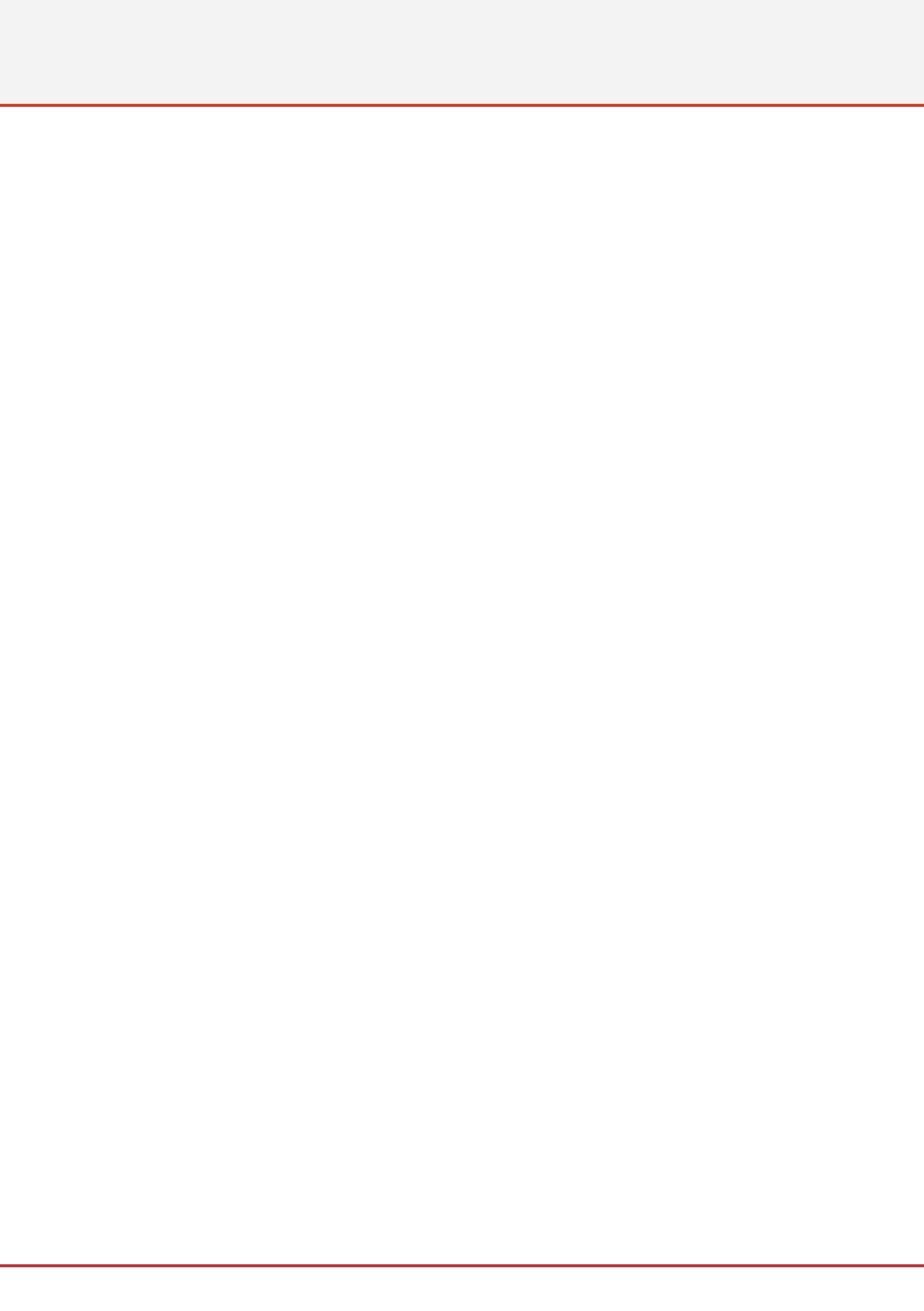


Table of contents

Buffer power supply units

Page 2

RED POWER plus



Buffer power supply EN54C series

- switch mode
- 27,6 V DC
- EN54-4, EN12101-10 certified
- communication: LAN, RS485 – appropriate modules required, only version with LCD graphic display

Page 4

RED POWER plus



Buffer power supply modules EN54M series

- switch mode
- 27,6 V DC
- in accordance with EN54-4, EN12101-10 standard for fire detection
- built-in power supply module

Accessories for power supply EN54C and EN54CM series

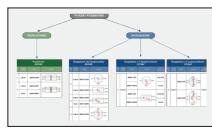
Page 6



- fuse modules
- sequential modules
- bracket DIN, set for optical indication
- interfaces (LAN, RS485)

Fire protection installation boxes

Page 8



- feed-trough
- junction
- distribution boxes protected with fuses
- selection of fire protection installation boxes

Batteries

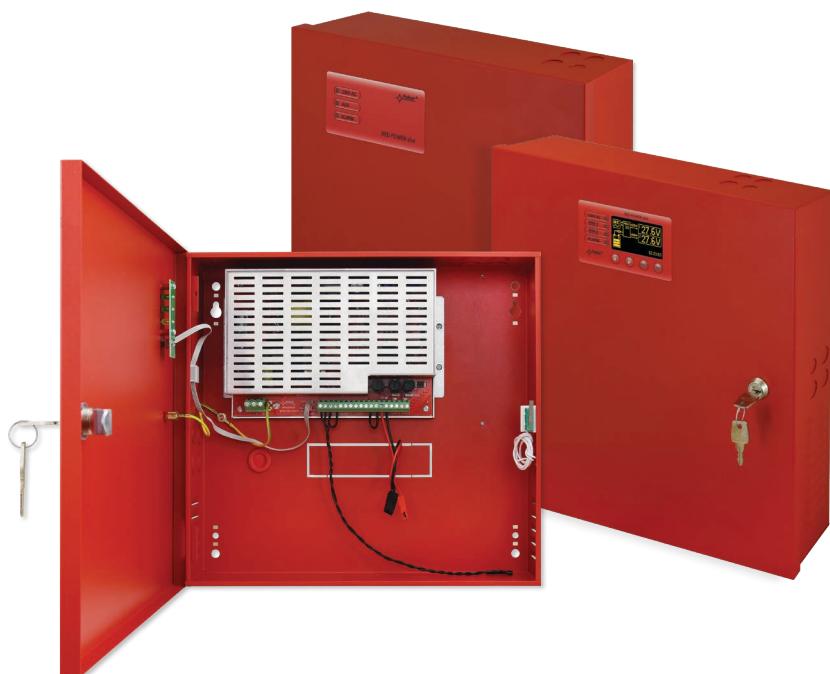
Page 12

- HPB series
- SCB series



Buffer power supply units EN54C series

RED POWER plus



Certificate of constancy
of performance
CNBOP-PIB No 1438-CPR-0628

Certificate of approval
CNBOP-PIB No 5222/2024

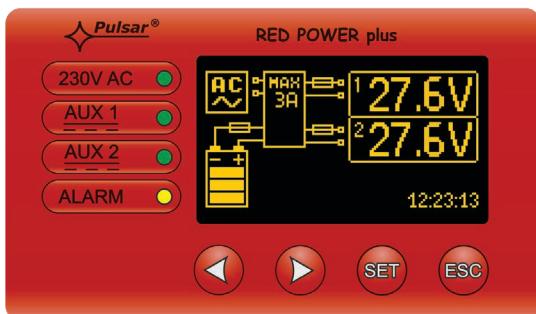
Features

- in accordance with standards: EN 54-4, EN12101-10
- available versions with 2A/3A/5A/10A current
- available versions with space for 7Ah - 65Ah batteries
- independently protected outputs AUX1 and AUX2
- high efficiency (up to 89%)
- low level of voltage ripple
- microprocessor-based automation system
- measurement of resistance of battery circuit
- automatic temperature-compensated charging
- automatic battery test
- two-stage battery charging process
- accelerated battery charging
- monitoring of continuity of battery circuit
- monitoring of battery voltage
- monitoring of charging and maintenance of batteries
- cooperation with EN54C-LB4 and EN54C-LB8 fuse modules (optional equipment)
- cooperation with EN54C-LS4 and EN54C-LS8 sequential modules (optional equipment)
- deep discharge battery protection (UVP)
- battery overcharge protection
- LoB low battery voltage indication
- brackets set - EN54C-BR (optional equipment)

- battery output protection against short-circuit and reverse connection
- output voltage control
- fuse monitoring of AUX1 and AUX2 outputs
- relay output of collective failure ALARM
- EPS relay output indicating 230V power loss
- EXTi input of external failure
- protections:
 - SCP short-circuit protection
 - OLP overload protection
 - OVP overvoltage protection
 - surge protection
 - antisabotage protection - tamper
 - closing enclosure - lock
- convection cooling (forced only in EN54C-10Axx)
- warranty: 3 years

Additional features of LCD series

- „SERIAL“ communication port with implemented MODBUS RTU protocol and TCP/IP – list of registers is available
- optical indication – graphic LCD display
 - display of electrical parameters, e.g. voltage, current, resistance of circuit
 - failure indication
 - PSU settings adjustable from panel's level
 - adjustable delay for 230VAC power loss indication
 - 2 levels of password protected access
 - operation memory of PSU
 - failure memory
 - real-time clock (RTC) with battery backup
- remote monitoring
 - Ethernet communication or RS485
 - online remote monitoring of operating parameters: voltage, current, temperature and resistance in battery circuit
 - PSU operation history from period of 113 days: voltage, current, and resistance in battery circuit
 - battery operating temperature readings from period up to 5 years
 - event log of up to 2048 power supply failures
 - SSL email encryption
 - remote battery test
 - automatic email notifications about failures



Buffer power supply units EN54C series

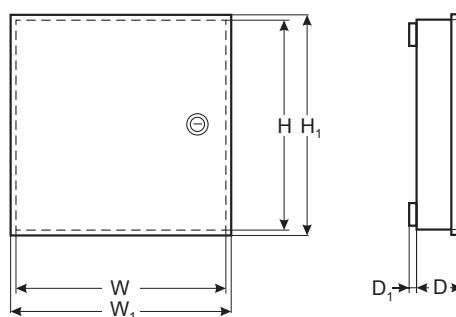
RED POWER plus



LED indication

LCD display

Code		Output voltage	Total current		Fitting battery	Dimensions WxHxD+D ₁ [+- 2mm] W ₁ xH ₁ [+- 2mm]
LED panel	LCD panel		for continuous operation $I_{max\ a} + I_{fad}$	for intermittent operation $I_{max\ a} + I_{fad}$		
EN54C-2A7	—	27,6 V DC	1,6A + 0,4A	2A + 0A	2×7Ah	330×305×82+8 335×308
EN54C-2A17	—		1,2A + 0,8A	2A + 0A	2×17Ah	385×402×88+8 390×406
EN54C-3A7	—		2,6A + 0,4A	3A + 0A	2×7Ah	330×305×82+8 335×308
EN54C-3A17	EN54C-3A17LCD		2,2A + 0,8A	3A + 0A	2×17Ah	385×402×88+8 390×406
EN54C-3A28	—		1,8A + 1,2A	3A + 0A	2×28Ah	420×407×178+8 425×411
EN54C-5A7	—		4,6A + 0,4A	5A + 0A	2×7Ah	330×305×82+8 335×308
EN54C-5A17	EN54C-5A17LCD		4,2A + 0,8A	5A + 0A	2×17Ah	385×402×88+8 390×406
EN54C-5A28	—		3,8A + 1,2A	5A + 0A	2×28Ah	420×407×178+8 425×411
EN54C-5A40	EN54C-5A40LCD		3,2A + 1,8A	5A + 0A	2×40Ah	420×407×178+8 425×411
EN54C-5A65	—		2,4A + 2,6A	5A + 0A	2×65Ah	410×648×180+8 416×652
EN54C-10A17	EN54C-10A17LCD		9,2A + 0,8A	10A + 0A	2×17Ah	385×402×88+8 390×406
EN54C-10A28	—		8,8A + 1,2A	10A + 0A	2×28Ah	420×407×178+8 425×411
EN54C-10A40	EN54C-10A40LCD		8,2A + 1,8A	10A + 0A	2×40Ah	420×407×178+8 425×411
EN54C-10A65	—		7,4A + 2,6A	10A + 0A	2×65Ah	410×648×180+8 416×652

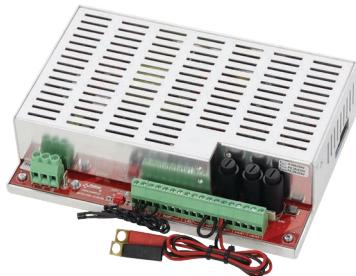


Buffer power supply modules EN54M series

RED POWER plus



Certificate of constancy
of performance
CNBOP-PIB No 1438-CPR-0630



To be able to install module of PSU in fire alarm system, it has to be placed in enclosure of appropriate design and make complementary examinations to achieve certificate EN54-4+A1+A2 or EN12101-10+AC in accredited institution

Features

- built-in power supply module
- in accordance with standards: EN 54-4, EN12101-10
- 27,6 V DC uninterruptible power supply
- available versions with 2A/3A/5A/10A current
- available versions with space for 7Ah - 65Ah batteries
- independently protected outputs AUX1 and AUX2
- DIN rail mounting using additional EN54M-DIN1 bracket (optional equipment)
- cooperation with EN54C-LB4 and EN54C-LB8 fuse modules (optional equipment)
- cooperation with EN54C-LS4 and EN54C-LS8 sequential modules (optional equipment)
- optical indication - LED panel EN54M-LED (option)
- high efficiency (up to 89%)
- low level of voltage ripple
- microprocessor-based automation system
- measurement of resistance of battery circuit
- automatic temperature-compensated charging
- automatic battery test
- two-stage battery charging process
- accelerated battery charging
- monitoring of continuity of battery circuit
- monitoring of battery voltage
- monitoring of charging and maintenance of batteries
- deep discharge battery protection (UVP)
- battery overcharge protection
- LoB low battery voltage indication
- battery output protection against short-circuit and reverse connection
- output voltage control
- fuse monitoring of AUX1 and AUX2 outputs
- relay output of collective failure ALARM
- EPS relay output indicating 230V power loss
- EXTi input of external failure
- protections:
 - SCP short-circuit protection
 - OLP overload protection
 - OVP overvoltage protection
 - surge protection
- convection cooling (forced only in EN54M-10Axx)
- warranty: 3 years

Buffer power supply modules EN54M series

RED POWER plus

EN54M-DIN1

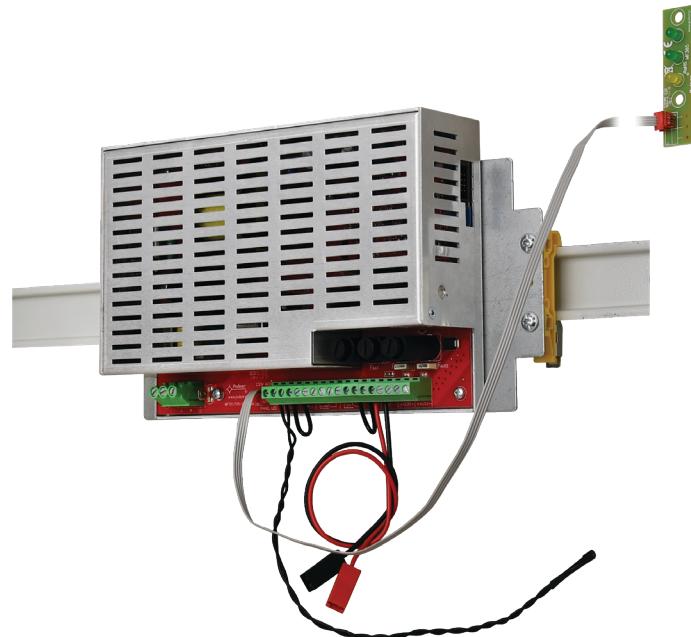


Bracket DIN/EN54M 1

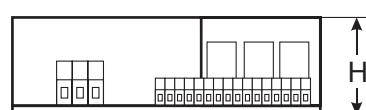
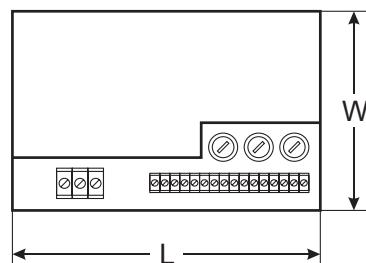
EN54M-LED



Set for optical indication EN54M



Code	Output voltage	Total current		Battery	Dimensions LxWxH [+/- 2mm]
		for continuous operation $I_{max\ a} + I_{lad}$	for intermittent operation (5 min) $I_{max\ a} + I_{lad}$		
EN54M-2A7	27,6 V DC	1,6A + 0,4A	2A + 0A	2x7,2Ah	200x120x48
EN54M-2A7-17		1,2A + 0,8A	2A + 0A	2x7÷20Ah	
EN54M-3A7-17		2,2A + 0,8A	3A + 0A	2x7÷20Ah	
EN54M-3A17-40		1,2A + 1,8A	3A + 0A	2x17÷45Ah	
EN54M-5A7-17		4,2A + 0,8A	5A + 0A	2x7÷20Ah	204x141x52
EN54M-5A17-40		3,2A + 1,8A	5A + 0A	2x17÷45Ah	
EN54M-5A40-65		2,4A + 2,6A	5A + 0A	2x40÷65Ah	
EN54M-10A7-17		9,2A + 0,8A	10A + 0A	2x7÷20Ah	
EN54M-10A17-40		8,2A + 1,8A	10A + 0A	2x17÷45Ah	237x168x55
EN54M-10A40-65		7,4A + 2,6A	10A + 0A	2x40÷65Ah	

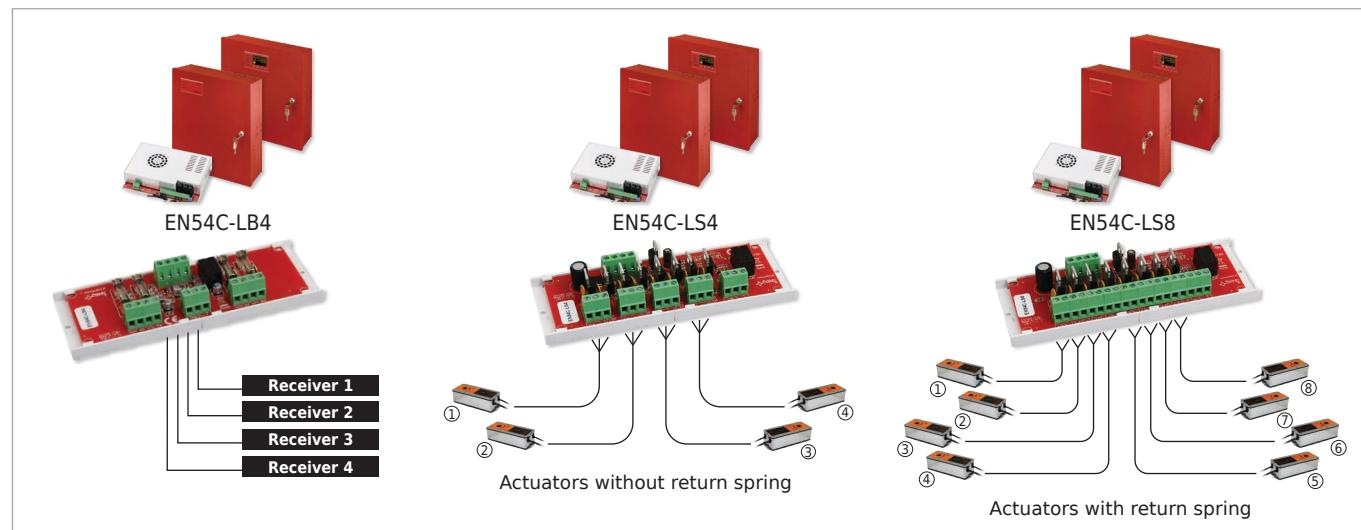
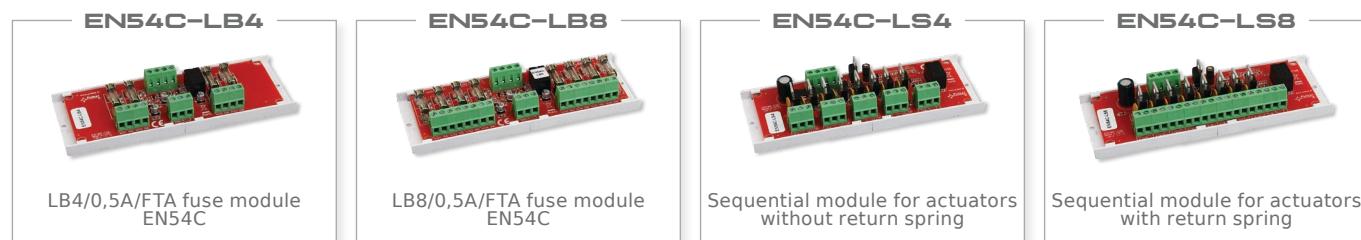


Accessories for power supply units EN54C and EN54M series fuse modules, sequential modules, mounting, optical indication

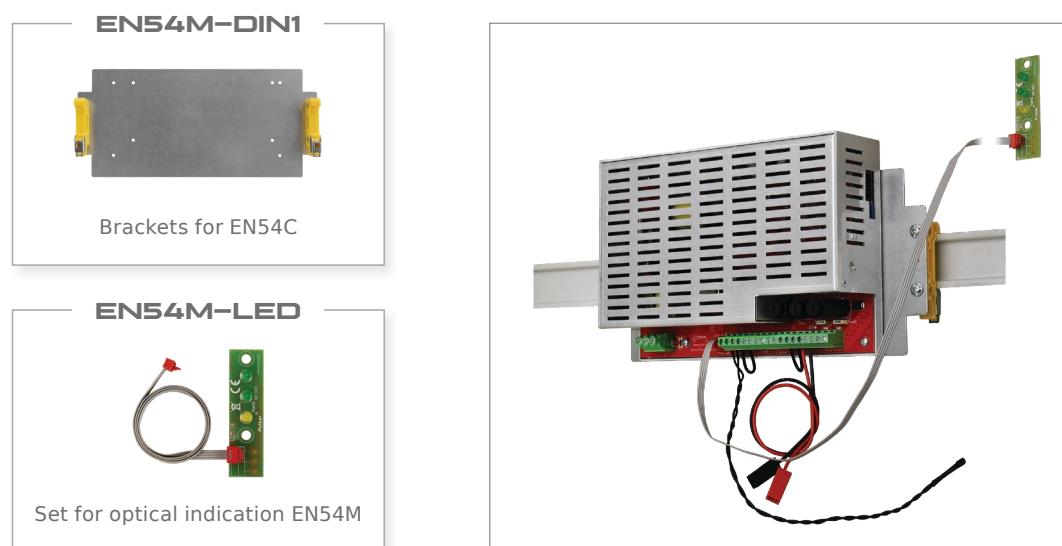
Fuse modules are designed for power distribution in power supply units of EN54C series. Fuse activation is indicated by turning off corresponding LED: L1 for AUX1, L2 for AUX2 etc., technical output relay type and PSU LED. PSU technical output can be used for remote control of parameters, e.g. external optical indication.

Sequential modules are designed for cooperation with electric actuators used for fire shut-off dampers and fire ventilation dampers.

Sequential switching module causes receivers connected to its outputs to be sequentially switched, with a delay of 100 ms. Thanks to this solution, surge current is reduced to value ensuring correct operation of power supply. Thus, it enables safe connection of additional actuators. All outputs are independently protected by PTC fuses and have LED diodes signaling activation of each output.



Additional mounting brackets:
EN54M-DIN1 - mounting plate allows install EN54M series power supply units on DIN rail (TH35)

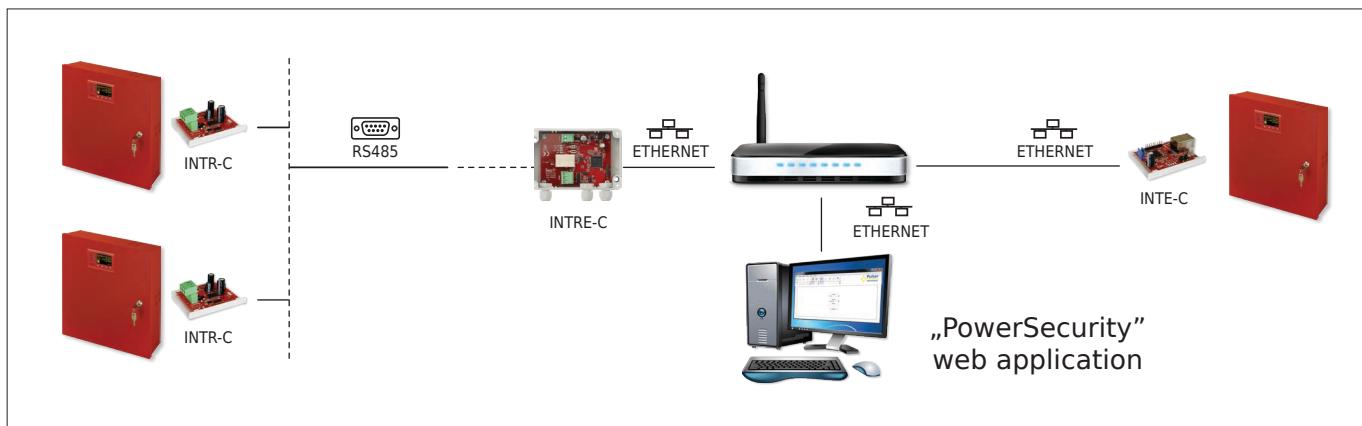


Accessories for power supply units EN54C-...LCD series

Interfaces

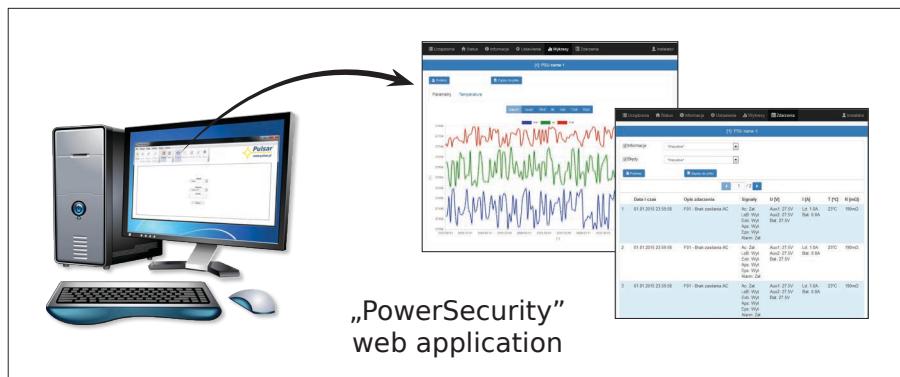
Modules for remote communication with PSU.

Applies EN54C-...LCD

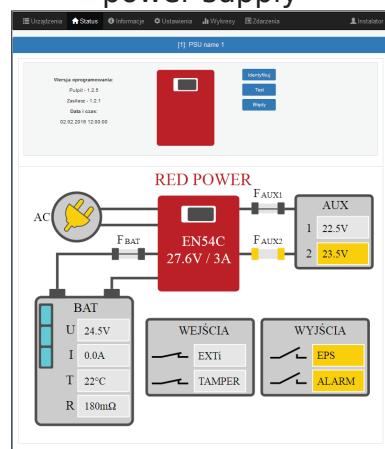


„PowerSecurity” web application for EN54C-...LCD series power supplies

Free application to download from: www.pulsar.pl/PowerSecurity-EN



Window of remote access to power supply



Fire protection installation boxes



**Fire resistance classification:
E30, E60, E90**

Fire protection installation boxes are intended for connecting fire protection devices in cable installation systems made in fire resistance class in accordance with DIN 4102-12, where continuity of power supply or signal transmission is required during fire.

Junction box is fitted with separate terminals for connecting signal line input, signal line output and indicator or another device via fuse.

Junction

AWOP-225PR

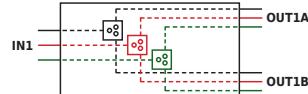
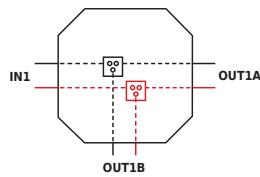
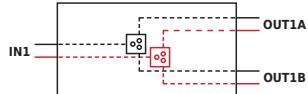
Distribution Junction Box 2×2,5mm²

AWOP-225SR

Distribution Junction Box 2×2,5mm²

AWOP-325PR

Distribution Junction Box 3×2,5mm²



- Voltage: 450 V AC max

- Cable cross section: max. 2,5mm²

- Dimensions: W=154 H=80 D=30 [mm]

- Voltage: 450 V AC max

- Cable cross section: max. 2,5mm²

- Dimensions: W=120 H=120 D=37 [mm]
- Suitable for installation of signalling device

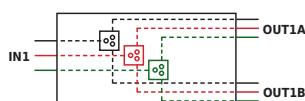
- Voltage: 450 V AC max

- Cable cross section: max. 2,5mm²

- Dimensions: W=190 H=80 D=30 [mm]

AWOP-360PR

Distribution Junction Box 3×6mm²



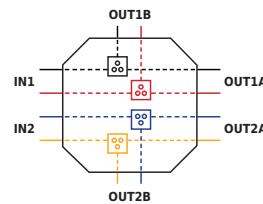
- Voltage: 450 V AC max

- Cable cross section: max. 6mm²

- Dimensions: W=204 H=100 D=30 [mm]

AWOP-425SR

Distribution Junction Box 4×2,5mm²



- Voltage: 450 V AC max

- Cable cross section: max. 2,5mm²

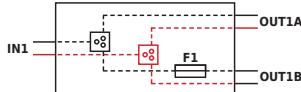
- Dimensions: W=120 H=120 D=37 [mm]

- Suitable for installation of signalling device

Fire protection installation boxes

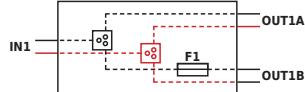
Junction - with 1 fuse

AWOZ-125P
Distribution Junction Box 0,375A



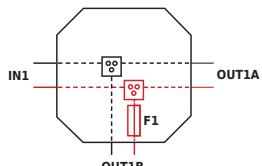
- Voltage: 125 V AC max
- Cable cross section: max. 2,5mm²
- Dimensions: W=154 H=80 D=30 [mm]

AWOZ-125P1A
Distribution Junction Box 1A



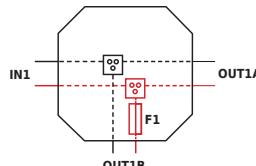
- Voltage: 125 V AC max
- Cable cross section: max. 2,5mm²
- Dimensions: W=154 H=80 D=30 [mm]

AWOZ-125S
Distribution Junction Box 0,375A



- Voltage: 125 V AC max
- Cable cross section: max. 2,5mm²
- Dimensions: W=120 H=120 D=37 [mm]
- Suitable for installation of signalling device

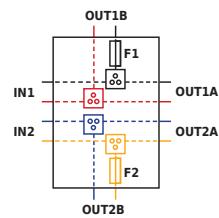
AWOZ-125S1A
Distribution Junction Box 1A



- Voltage: 125 V AC max
- Cable cross section: max. 2,5mm²
- Dimensions: W=120 H=120 D=37 [mm]
- Suitable for installation of signalling device

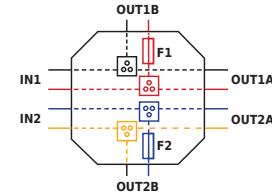
Junction - with 2 fuses

AWOZ-225P
Distribution Junction Box 2×0,375A



- Voltage: 125 V AC max
- Cable cross section: max. 2,5mm²
- Dimensions: W=146 H=122 D=30 [mm]

AWOZ-225S
Distribution Junction Box 2×0,375A



- Voltage: 125 V AC max
- Cable cross section: max. 2,5mm²
- Dimensions: W=120 H=120 D=37 [mm]
- Suitable for installation of signalling device

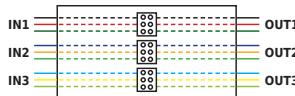
Feed-through

AWOP-625PP
Junction Box 6×2,5mm²



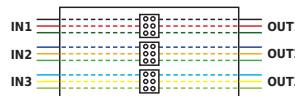
- Voltage: 450 V AC max
- Cable cross section: max. 2,5mm²
- Dimensions: W=154 H=80 D=30 [mm]

AWOP-925PP
Junction Box 9×2,5mm²



- Voltage: 450 V AC max
- Cable cross section: max. 2,5mm²
- Dimensions: W=190 H=80 D=30 [mm]

AWOP-960PP
Junction Box 9×6mm²



- Voltage: 450 V AC max
- Cable cross section: max. 6mm²
- Dimensions: W=204 H=100 D=30 [mm]

Selection of fire protection installation boxes

FIRE PROTECTION INSTALLATION BOXES

FEED-TROUGH

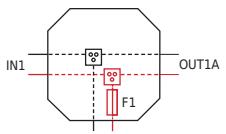
Feed-trough 450 V AC			
Number of cores	Cable cross section	Model	Diagram
6	2,5mm ²	AWOP-625PP	
9	2,5mm ²	AWOP-925PP	
	6mm ²	AWOP-960PP	

Distribution junction boxes without fuses 450 V AC			
Number of cores	Cable cross section	Model	Diagram
2	2,5mm ²	AWOP-225SR	
	2,5mm ²	AWOP-225PR	
3	2,5mm ²	AWOP-325PR	
	6mm ²	AWOP-360PR	
4	2,5mm ²	AWOP-425SR	

JUNCTION

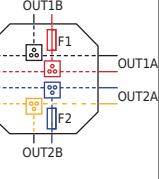
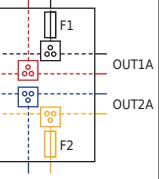
distribution junction boxes with 1 fuse 125 V AC

Number of cores	Cable cross section	Model	Diagram	Number of fuses
-----------------	---------------------	-------	---------	-----------------

2	2,5mm ²	AWOZ-125S		1x0,375A
		AWOZ-125S1A		1x1,0A
		AWOZ-125P		1x0,375A
		AWOZ-125P1A		1x1,0A

distribution junction boxes with 2 fuses 125 V AC

Number of cores	Cable cross section	Model	Diagram	Number of fuses
-----------------	---------------------	-------	---------	-----------------

4	2,5mm ²	AWOZ-225S		2x0,375A
		AWOZ-225P		

Batteries - HPB / SCB series

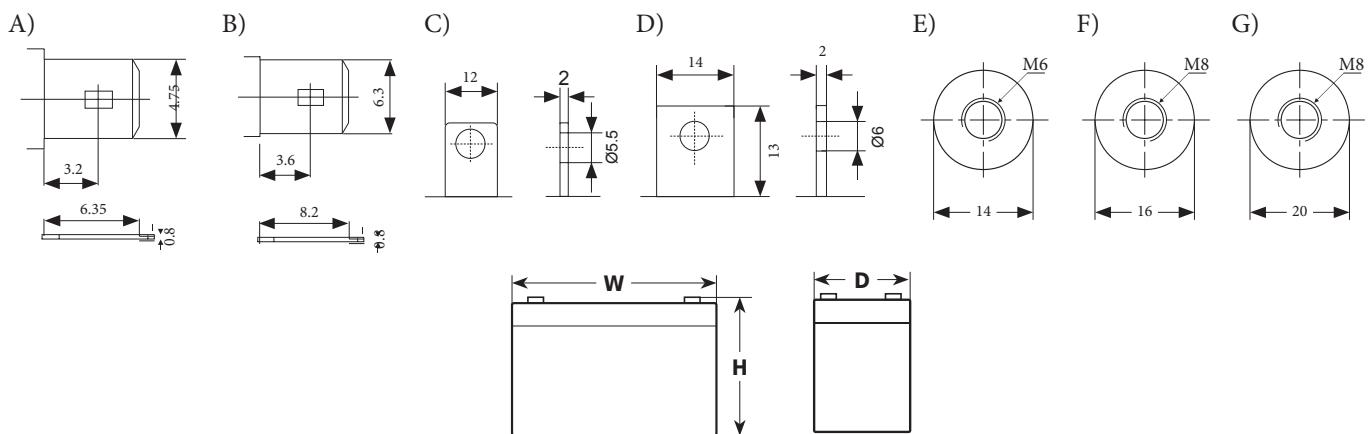


Features

- sealed and maintenance-free equipped with self-regulating valves
- low internal resistance
- high energy density
- operation in different positions



Code	Output voltage	Rated capacity (C ₂₀)	Connectors	Charging current		Charging voltage in 25°C		Dimensions WxHxD [+/-2mm]	
				Recommended	Maximum	Backup operation	Cyclic operation		
HPB series	HPB1,2-12	12 V DC	1,2Ah	A	0,13A	0,36A	13,5 V DC – 13,8 V DC	14,4 V DC – 14,9 V DC	98×59×44
	HPB2,3-12	12 V DC	2,3Ah	A	0,23A	0,69A	13,5 V DC – 13,8 V DC	14,4 V DC – 14,9 V DC	178×68×35
	HPB3,6-12	12 V DC	3,6Ah	A	0,36A	1,08A	13,5 V DC – 13,8 V DC	14,4 V DC – 14,9 V DC	133×65×65
	HPB5-12	12 V DC	5Ah	A	0,5A	1,5A	13,5 V DC – 13,8 V DC	14,4 V DC – 14,9 V DC	90×106×70
	HPB7-12	12 V DC	7Ah	A	0,7A	2,1A	13,5 V DC – 13,8 V DC	14,4 V DC – 14,9 V DC	152×100×65
	HPB9-12	12 V DC	9Ah	B	0,9A	2,7A	13,5 V DC – 13,8 V DC	14,4 V DC – 14,9 V DC	152×100×65
	HPB9-12-4,8	12 V DC	9Ah	A	0,9A	2,7A	13,5 V DC – 13,8 V DC	14,4 V DC – 14,9 V DC	152×100×65
	HPB12-12	12 V DC	12Ah	B	1,2A	3,6A	13,5 V DC – 13,8 V DC	14,4 V DC – 14,9 V DC	150×100×98
	HPB12-12-4,8	12 V DC	12Ah	A	1,2A	3,6A	13,5 V DC – 13,8 V DC	14,4 V DC – 14,9 V DC	150×100×98
	HPB18-12	12 V DC	18Ah	C	1,8A	5,4A	13,5 V DC – 13,8 V DC	14,4 V DC – 14,9 V DC	182×168×77
	HPB28-12	12 V DC	28Ah	D	2,6A	7,8A	13,5 V DC – 13,8 V DC	14,4 V DC – 14,9 V DC	175×125×166
	HPB40-12	12 V DC	40Ah	E	4A	12A	13,5 V DC – 13,8 V DC	14,4 V DC – 14,9 V DC	197×171×166
	HPB55-12	12 V DC	55Ah	E	5,5A	16,5A	13,5 V DC – 13,8 V DC	14,4 V DC – 14,9 V DC	229×211×138
	HPB65-12	12 V DC	65Ah	E	6,5A	19,5A	13,5 V DC – 13,8 V DC	14,4 V DC – 14,9 V DC	349×178×167
SCB series	HPB80-12	12 V DC	80Ah	F	8A	24A	13,5 V DC – 13,8 V DC	14,4 V DC – 14,9 V DC	269×215×168
	HPB100-12	12 V DC	100Ah	F	10A	30A	13,5 V DC – 13,8 V DC	14,4 V DC – 14,9 V DC	330×219×171
	HPB120-12	12 V DC	120Ah	F	12A	36A	13,5 V DC – 13,8 V DC	14,4 V DC – 14,9 V DC	409×234×175
	HPB160-12	12 V DC	160Ah	G	16A	48A	13,5 V DC – 13,8 V DC	14,4 V DC – 14,9 V DC	524×222×238
SCB series	SCB7-12	12 V DC	7Ah	A	0,7A	2,1A	13,5 V DC – 13,8 V DC	14,4 V DC – 14,9 V DC	152×100×65
	SCB18-12	12 V DC	18Ah	C	1,8A	5,4A	13,5 V DC – 13,8 V DC	14,4 V DC – 14,9 V DC	182×168×77
	SCB40-12	12 V DC	40Ah	E	4A	12A	13,5 V DC – 13,8 V DC	14,4 V DC – 14,9 V DC	197×171×166



Notes

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