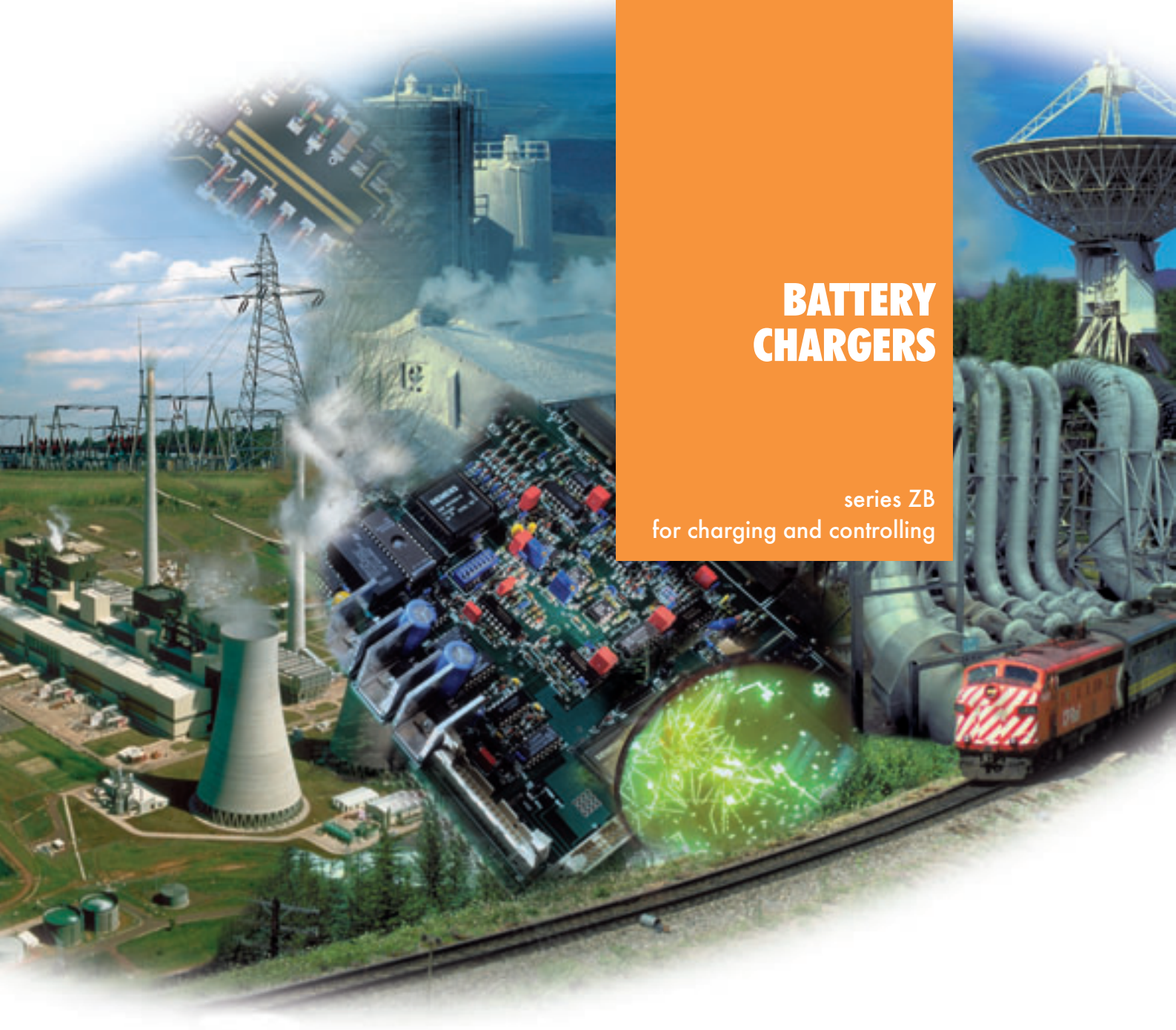


BATTERY CHARGERS

series ZB
for charging and controlling

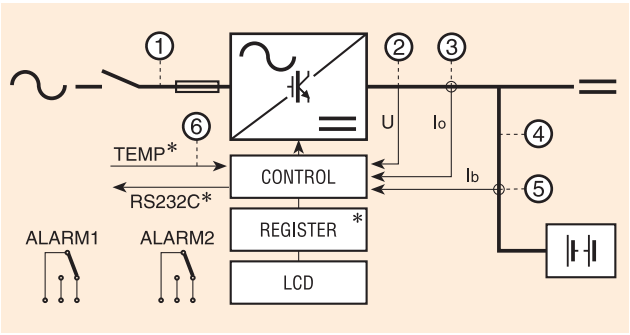
RECTIFIERS

MEDCOM
AC & DC POWER SOLUTIONS
TRACTION CONVERTERS

DESIGNATION

New generation battery charger for charging and controlling batteries gives you warranty for good co-operation with any type of battery.

- possibility of operation in series and parallel systems
- modern design which includes a lot of standard facilities improving quality of charging and extending life of battery
- highly proof against AC network noises
- possibility of remote monitoring and control
- easy to servicing and maintenance
- low weight in comparison with classical thyristor chargers



Alarms:

① Mains off
② low battery
③ overload / short circuit
④ battery circuit break *
⑤ no charging
⑥ temperature out of limit *

*) optional

BATTERY CHARGERS SERIES ZB

standard version features:

- co-operation with stationary batteries sets 24 V, 48 V, 60 V, 110 V or 220 V
- very high stability of output voltage (< 1 %) and very low output ripples (< 0.5 %)
- high stability of output voltage and current irrespective of changes of load or input voltage
- possibility of setting up output parameters
- possibility of setting up battery current limitation
- full galvanic separation between input and output
- highly proof for overloads and short circuits
- displaying of output parameters and alarm conditions on LCD
- signalling of programmable alarm conditions
- simple enlargement of operation system due to possibility of series or parallel operation of units
- operation with systems with booster battery

Optional facilities:

- interface RS232 and special software for remote monitoring and control charger and battery
- temperature sensor for thermal correction (-10 °C ÷ 40 °C) of output voltage
- three modes of operation: floating, forming and quick charging
- automatic check up of battery circuit break
- continuos control of charging and discharging of the battery
- digital recorder storing in memory conditions of the last 200 alarms

Gold Medal of the Poznań International Fair

Recommendation of the SEP (Polish Electricians' Association)

ISO 9001:2001 Quality Assurance System covering development, design, manufacture and service of industrial electronics products

Certficate of the Energopomiar-Elektryka Gliwice

CE

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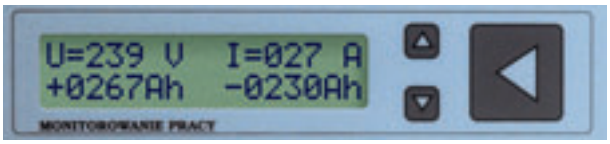
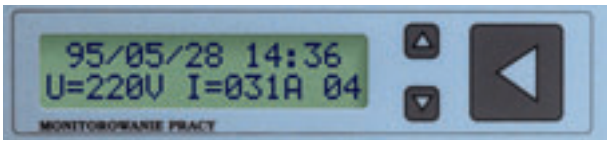
LCD PANEL





Every battery charger is provided with LCD, keyboard (push buttons) and LED

You can read on LCD the following displayed data:

- output voltage and current
- environment temperature of battery set
- quality of the electric charge
- information on the following alarm conditions
  - OVERLOAD
  - SHORT CIRCUIT
  - NO CHARGING
  - MAINS OFF
  - LOW BATTERY

and additional information but in case of optional equipment only

  - BATTERY CIRCUIT BREAK
  - TEMPERATURE (>Tmax)
  - TEMPERATURE SENSOR FAILURE

- recording data of alarm conditions recorder year–month–day–hour–min–voltage–current–alarm condition code

GENERAL TECHNICAL DATA

Output power	up to 2.4 kW	2.4 ÷ 100 kW
Main supply voltage	230 V	3×400 V
Main supply voltage stability	+10 % ÷ – 15 %	
Output voltage stability	< 1 %	
Output voltage ripples	< 0.5 %	
Thermal correction of output voltage	-10 °C ÷ + 40 °C	
Output current limitation	(1.02 ÷ 1.05) In	

Battery chargers series ZB are manufactured in cubicles type W, S1, S2, R and T1, T2, T3 (dimensions as below). Cubicles type R are the modules (5U) of Rack 19” system.

BATTERY CHARGERS ZB SERIES

CUBICLES

Cubicle type W

- for battery chargers up to 12 kW
- for wall mounting or for mounting on additional rack delivered together with charger

dimensions:

- width – 440 mm
- depth – 300 mm
- heigh – 490 mm

weight 28 kg ÷ 35 kg
producer: MEDCOM

Cubicle type S1 (S2)

- for battery chargers up to 22 kW
- free standing

dimensions:

- width – 800 mm
- depth – 300, (400) mm
- height – 1100 mm

weight 85 kg ÷ 280 kg
producer: SAREL

Cubicle type T1 (T2, T3)

- for main battery charger or battery charger with booster battery charger up to 100 kW
- consists of R modules (rack 19”)
- free standing

dimensions:

- width – 600 mm
- depth – 850 mm
- height – 1600, (1800, 2000) mm

weight 240 kg ÷ 575 kg
producer: RITTAL

BASIC PARAMETERS

ZB	220	DC	200	DX	x: – 50 A 1 – 100 A 2 – 200 A
Battery charger	Output voltage [V]	Direct current	Rated output current [A]	Booster charger for → booster battery 24V	

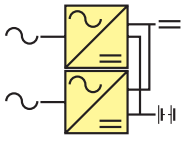
Type	U_N V	U_{Nmax} V	I_N A	U_{WE} (50 Hz) V	Fuse AC A	Cubicle	Weight kg
ZB24DC50	24	29,8	50	230	16	R-W-S1	28-28-85
ZB24DC100	24	29,8	100	230	32	R- W-S1	30-30-85
ZB24DC200	24	29,8	200	3×400	16	R- W-S1	32-32-90
ZB24DC300	24	29,8	300	3×400	25	T2	190
ZB24DC400	24	29,8	400	3×400	50	T3	220
ZB24DC500	24	29,8	500	3×400	63	T2	230
ZB48DC30	48	59	30	230	16	R-W-S1	30-30-85
ZB48DC50	48	59	50	3×400	32	R-W-S1	30-30-85
ZB48DC100	48	59	100	3×400	16	R-W-S1	32-32-90
ZB48DC200	48	59	200	3×400	50	2×R-S1	65-125
ZB60DC50	60	74	50	3×400	32	R-W-S1	30-30-85
ZB60DC100	60	74	100	3×400	25	R-W-S1	35-35-90
ZB60DC200	60	74	200	3×400	63	2×R-S1	70-125
ZB110DC10	110	150	10	230	16	R-W-S1	28-28-85
ZB110DC30	110	150	30	3×400	16	R-W-S1	30-30-85
ZB110DC50	110	150	50	3×400	20	R-W-S1	35-35-90
ZB110DC100	110	150	100	3×400	50	R-S1	35-185
ZB220DC10	220	254	10	230	32	R-W-S1	30-30-85
ZB220DC20	220	254	20	3×400	20	R-W-S1	32-32-90
ZB220DC30	220	254	30	3×400	32	R-W-S1	32-32-90
ZB220DC50	220	254	50	3×400	50	R-W-S1	35-185
ZB220DC80	220	254	80	3×400	63	R*-S2	36-230
ZB220DC100	220	254	100	3×400	80	R*-S2	36-280
ZB220DC150	220	254	150	3×400	125	T1	340
ZB220DC200	220	254	200	3×400	160	T1	400
ZB220DC300	220	254	300	3×400	250	T2	490
ZB220DC400	220	254	400	3×400	315	T3	540
ZB220DC50D	220+24	254+29,8	50+50	3×400	50	T1	260
ZB220DC100D	220+24	254+29,8	100+50	3×400	80	T1	340
ZB220DC100D1	220+24	254+29,8	100+100	3×400	100	T1	340
ZB220DC200D	220+24	254+29,8	200+50	3×400	200	T2	430
ZB220DC200D1	220+24	254+29,8	200+100	3×400	200	T2	430
ZB220DC200D2	220+24	254+29,8	200+200	3×400	200	T2	435
ZB220DC300D	220+24	254+29,8	300+50	3×400	250	T3	520
ZB220DC300D1	220+24	254+29,8	300+100	3×400	315	T3	520
ZB220DC300D2	220+24	254+29,8	300+200	3×400	315	T3	525
ZB220DC400D	220+24	254+29,8	400+50	3×400	315	T3	570
ZB220DC400D1	220+24	254+29,8	400+100	3×400	400	T3	570
ZB220DC400D2	220+24	254+29,8	400+200	3×400	400	T3	575

NOTE: On request possible delivery of battery chargers of another, agreed technical data

OPERATIONS SYSTEMS (BASIC A, B, C, D)

A)


B)


C)


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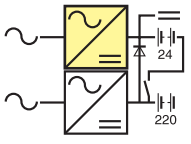

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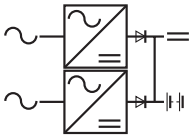

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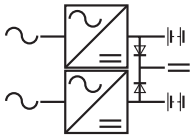

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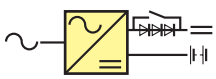

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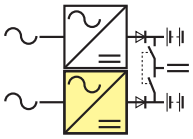
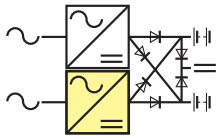


I)


A) internal battery current measurement
B) external (on bars) battery current measurement
C) parallel operation
D) system with booster battery
E) redundancy “1 of 2” for battery charger
F) redundancy “1 of 2” for system battery charger – battery
G) output voltage limitation (countercell)
H) automatic transfer to reserve supply (mechanical type)
I) automatic transfer to reserve supply (diode type)

MEDCOM

AC & DC POWER SOLUTIONS
TRACTION CONVERTERS

MEDCOM Sp. z o.o.
Founded in 1988, active in the design, manufacture, installation and servicing of modern electronic devices, aimed mainly at the power industry, military, railway and tramway transport, industry and health service customers. The use of latest technologies and system solutions, the services of highly experienced structural designers and the introduction of an ISO9001:2001 Quality Assurance System, ensure that the devices produced are state-of-the-art and highly reliable. The technical design for all products is carried out in-house. In 2001 the company was awarded a prize The Polish President's Economy Award for THE BEST POLISH SMALL ENTERPRISE.

The most important products in the company's offer:

- **DC power supplies**
- **Uninterruptible power systems**
- **High-voltage power supplies**
- **Power supplies (MIL standards)**
- **Static converters for railway and tramway applications**
- **Power supplies for industrial applications**
- **Power active filters**
- **Traction battery chargers**
- **Static switches**
- **“Fail-safe” power supplies**
- **Motor driving systems: AC and DC motors**
- **Measurement devices: battery ground-fault meters, battery operation monitors**
- **Wind power converters**

MEDCOM Sp. z o.o.

ul. Barska 28/30
02-315 Warszawa, Poland
e-mail: info@medcom.com.pl

tel. +48(022) 314 42 00, 668 99 34, 668 69 84
fax +48(022) 314 42 99, 668 99 29
website: www.medcom.com.pl

Due to constant introduction of newest technological advances, our products may be subject to modifications.
For that reason, the above-presented description may be partially outdated.

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