

SINGLE OUTPUT BATTERY CHARGER POWER SUPPLY

CBM SERIES

Overview

Single output battery charger power supplies, in thyristor technology. Particularly developed for the charge of sealed or open pot lead acid accumulators, with parallel connected load, in industrial automation applications where are requested high reliability, high operation safety performances and the ability to withstand, high overvoltages generated by perturbations on the input line.

Electrical characteristics

The most important characteristics that distinguish this type of power supply are:

Input voltage	115/230/400 Vac
Admitted tolerance	±20%
Input frequency	50/60 Hz
Admitted tolerance	±5%
Output voltage	24/48/110/144 Vdc
Cells number	12/24/54/72
Warranted tolerances	
Line variations	±1%
Load variations	±1%
Variations to load	as battery voltage
AC superimposed ripple	less than 2% RMS
Overvoltages rejection	more than 40 dB
Limiting current	trimmable to the maximum value
Charging method	Floating to 2.25 V/cell. Recharge at const. current.
Power factor	more than 0,7 lagging at full load
Single unit MTBF	ab. 150.000 hours

Output current

The product range includes the following models as a function of the output currents.

Model	Output current
CBM10	10 A
CBM16	16 A
CBM25	25 A
CBM40	40 A
CBM63	63 A
CBM80	80 A
CBM100	100 A

Accessories

A wide range of accessories is available to equal the power supplies to the more complex applications and specifications.

The ones foreseen in normal production are the following.

- Input magnetothermic breaker
- Output magnetothermic breaker
- Not trimmable AC Mains breakdown relay
- Analog battery Instruments (V/ I)
- Trimmable anomalous output voltage relay
- Trimmable bipolar ground output voltage relay
- Load shutdown for discharged battery

Mechanical characteristics

The mechanical construction is 19 inches Rack type according to DIN41612 standard, with stainless steel AISI 316 structure and anodized aluminium front side in black or natural color. The height units and modularity are a function of the supplied power. The overall dimensions are the following.

Model	Units x width	Depth
CBM10-1/2	4 x 84TE	420mm
CBM10-3	7 x 84TE	420mm
CBM16-1	4 x 84TE	420mm
CBM25-1	4 x 84TE	420mm
Others	7 x 84TE	420mm

Ambient compatibility

The power supplies are submitted to typical or production tests to warrant the ambient compatibility. The fundamental tests are the following (* identifies typical tests).

*Vibrations	5 m.s ⁻² - 0,032mm
*Storage temperature	from -25 to 70 °C
*Working temperature	from -10 to 55 °C
*Injected harmonics	less than 15%
1,2/50 µs pulse withstand	2 kVp
Dielectric strenght	2 kV RMS
Insulation resistance	100 MΩ at 500 Vcc
Damped oscillatory waves	1 kVp at 1MHz
CE mark ref. standards	EN50081-2/50082-2

Product range

Model	Input voltage 50Hz A=115 B=230 C=400 Input voltage 60Hz D=115 E=208 F=440	Input breaker	Output breaker	AC Mains fault relay	Instruments	Load shutdown	Anomal. output voltage relay	Ground fault relay	Output voltage	Output current
CBM10-1	A/B/C/D/E/F	I1	I3	R1		K1	R6		24	10
CBM16-1	A/B/C/D/E/F	I1	I3	R1		K1	R6		24	16
CBM25-1	A/B/C/D/E/F	I1	I3	R1		K1	R6		24	25
CBM40-1	A/B/C/D/E/F	I1	I3	R1	S1	K1	R6	T1	24	40
CBM63-1	A/B/C/D/E/F	I1	I3	R1	S1	K1	R6	T1	24	63
CBM80-1	A/B/C/D/E/F	I1		R1	S1		R6	T1	24	80
CBM100-1	A/B/C/D/E/F	I1		R1	S1		R6	T1	24	100
CBM10-2	A/B/C/D/E/F	I1	I3	R1		K1	R6		48	10
CBM16-2	A/B/C/D/E/F	I1	I3	R1	S1	K1	R6	T1	48	16
CBM25-2	A/B/C/D/E/F	I1	I3	R1	S1	K1	R6	T1	48	25
CBM40-2	A/B/C/D/E/F	I1	I3	R1	S1	K1	R6	T1	48	40
CBM10-3	A/B/C/D/E/F	I1	I3	R1	S1	K1	R6	T1	110	10
CBM16-3	A/B/C/D/E/F	I1	I3	R1	S1	K1	R6	T1	110	16
CBM25-3	A/B/C/D/E/F	I1	I3	R1	S1	K1	R6	T1	110	25
CBM10-7	A/B/C/D/E/F	I1	I3	R1	S1	K1	R6	T1	144	10
CBM16-7	A/B/C/D/E/F	I1	I3	R1	S1	K1	R6	T1	144	16
CBM25-7	A/B/C/D/E/F	I1	I3	R1	S1	K1	R6	T1	144	25

Mechanical dimensions

