

The ZM-A power supplies have been designed for battery cooperation in the uninterruptible DC power systems. They supervise the battery and monitor their presence, its circuit continuity and the voltage value. Consequently, they can indicate the low battery voltage and disconnect the battery to prevent it from too deep discharge.

The exemplary full marking index is as follows: **ZM24V8A-200A-0**.

APPLICATION

- industrial electronics and automatic control
- power engineering
- telecommunications
- telemetry, surveillance, monitoring systems

FEATURES

- modular construction – screw mounting (optional mounting on the TS35 DIN rail)
- powered by either AC or DC
- power factor correction (PFC) (excluding the ZM 151 version)
- cooperation with a battery bank in the direct floating mode
- temperature probe in the standard equipment



BASIC OUTPUT VOLTAGES AND CURRENTS

		Nominal output current / versions (installation versions are unmarked)				
Nominal output voltage	12V	10A <i>ZM12V10A-151A</i>	12A <i>ZM12V12A-200A</i>	16A <i>ZM12V16A-300A</i>	24A <i>ZM12V24A-400A</i>	32A <i>ZM12V32A-600A</i>
	24V	6A <i>ZM24V6A-151A</i>	8A <i>ZM24V8A-200A</i>	12A <i>ZM24V12A-300A</i>	16A <i>ZM24V16A-400A</i>	24A <i>ZM24V24A-600A</i>
	48V	3A <i>ZM48V3A-151A</i>	4A <i>ZM48V4A-200A</i>	6A <i>ZM48V6A-300A</i>	8A <i>ZM48V8A-400A</i>	12A <i>ZM48V12A-600A</i>
External dimensions [mm]		66 x 111 x 203+17 (connectors)			66 x 111 x 262+17 (connectors)	
Weight [kg]		1,2	1,3		1,7	
Cooling		convection		convection and forced with the internal fan		
Power correction factor (PFC)		no	yes		yes	

FUNCTIONS

- floating mode with the temperature compensation of the charging voltage -4 [mv / °C / cell]
- five position floating mode voltage switch 2,2÷2,4 [V / cell]
- bulk charging mode with the temperature compensation of the voltage
- Low Voltage Disconnect Device (LVD)
- four position battery charging current switch - accessible on the top panel (25%, 50%, 75%, 100%)
- LED indication of the mains operation **MAINS** (green LED)
- LED indication of the current overload **OCP** (yellow LED)
- LED indication of the general fault **FLT** (yellow LED)
- LED indication of battery charging **CHRG** (yellow LED)
- LED indication of the battery operation **BAT** – yellow 1/1s (time on / off)
- LED battery fault indication **BAT**
 - no battery – yellow LED on before switching on the battery by the LVD
 - no battery circuit continuity, including the battery fuse fault – yellow LED on
 - low battery voltage – yellow LED on 0.5/0.5s
- possibility to connect the external LED indication system – the LED system located on the cabinet's door can indicate the mains failure **MAINS** and general fault **FLT**
- remote relay indication of the main AC or DC power supply source fault (mains presence and correct operation of the power supply) **MAINS FLT**
- remote relay indication of the battery power source fault – battery bank (three dry relay contacts available) **BAT FLT**
 - indication of the battery absence or low battery voltage
 - indication of the lack of the battery circuit continuity, including the battery fuse fault

CREATION OF THE POWER SUPPLY INDEX – HOW TO ORDER

- ZM** designation of the power supply series
- 12V, 24V, 48V** nominal output voltage
- 10A** nominal output current: value depending on the construction and the output voltage (please, see the table)
- 151, 200, 300, 400, 600** construction discriminant due to the output power
- A** functions: **A** – battery supervision
- 0, 1** designation of an installation version (0 – screw terminals, 1 – sockets)
- 000** designation of a detailed installation and mounting version code
 first digit: 0 – screw terminals, 1 – sockets;
 second digit: 0 – standard version, E – for mounting in the EURO cassette;
 third digit: 0 – basic version, 1, 2, 3 etc. – subsequent customized versions

Examples: **ZM12V10A-151A-0, ZM24V12A-300A-1**

BASIC PARAMETERS

Input parameters		General	
Frequency	47..53Hz	Efficiency	up to 87%
Power factor	0,98 ¹	Working temperature range	-25 ÷ 55°C
Input voltage	184.. <u>230</u> ..253VAC 165 (187 ²).. <u>220</u> ..297VDC	Ingress protection	IP20 EN 60529:1991+A1:2000
Output parameters		Compliance with standards	
Characteristics	UPI	Functionality	EN 61204:1995+A1:2001
Output voltage regulation	0,5%	Electrical safety	EN 60950-1:2006+A1:2010 Class I EN 61204-7:2006
Floating mode voltage for a cell at +25°C	2,20 ... <u>2,25</u> ...2,40 V	Electromagnetic interferences	EN 55022:2010 Class B
Bulk charging voltage at +25°C	2.36V / cell	EMC immunity	EN 61204-3:2000 EN 61000-4-2,3,4,5,6,11
Output voltage range	10.2 ... 14.4V 20.4 ...28.8V 40.8 ... 57.6V	EMC emissions	EN 61000-3-2:2006 +A1:2010+A2:2009 EN 61000-3-3:2009
Temp. compensation factor	-4mV / °C / cell		

MANUFACTURER

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NOTICES

1. Detailed information on choosing an installation version, fastening methods, additional fastening accessories, dimensions and functioning of the indication systems are included in the user manual for the specific power supplies
2. There is a possibility to manufacture power supplies with special configuration including expected changes in the indication system.

¹ 0,65 for the ZM151 power supplies

² voltage of 187V in the case of the models without the PFC, i.e.: with the discriminant 151.