

The ZM-AZC power supplies have been designed to cooperate with batteries in the uninterruptible voltage systems for the devices of:

- fire detection acc. to EN 54-4 + A1 + A2
- heat and smoke acc. to EN 12101-10
- Certificate No. 1438-CPR-0484 for the 24V version

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. Additionally, they indicate when battery circuit resistance is too high. The power supplies are equipped with a digital communication module (RS-485 or RS-232).

- Certificate of constancy of performance No. 1438-CPR-484
- Declaration of performance No. DWU-MX-09



#### APPLICATION

- fire detection and automation
- heat and smoke control systems
- electronics and industrial automation
- power generation
- telecommunications
- telemetry, surveillance, monitoring systems
- disaster rescue and disaster notification center systems
- retransmission stations (trunked) and base stations of radio communication 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<br>(installation versions are unmarked) |   |                                 |
|-------------------------------|-----|---|---|---------------------------------|
| Nominal output voltage        | 12V | 10A<br>ZM12V10A-151AZC  | 16A<br>ZM12V16A-300AZC                      | 32A<br>ZM12V32A-600AZC          |
|                               | 24V | 6A<br>ZM24V6A-151AZC  | 12A<br>ZM24V12A-300AZC                      | 24A<br>ZM24V24A-600AZC          |
|                               | 48V | 3A<br>ZM48V3A-151AZC  | 6A<br>ZM48V6A-300AZC                        | 12A<br>ZM48V12A-600AZC          |
| 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 factor correction (PFC) |     | No  | 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 on 1/1s (time on / off)
- LED battery fault indication **BAT**
  - no battery – yellow LED on before switching on the battery
  - no battery circuit continuity, including the battery fuse fault – yellow LED on
  - low battery voltage – yellow LED on 0.5/0.5s
  - high battery circuit resistance – blue LED on 1/1s
- possibility to connect the LED diodes on the box door to the power supply to indicate mains failure **MAINS** and the general fault indication **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
  - indication of battery circuit high resistance (according to EN 54-4 + A1 + A2)
- equipped with a RS485 or RS232 communication

### 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, 300, 600** construction discriminant due to the output power

**AZC** functions: **A** – battery supervision, **Z** – indication of high resistance, **C** – digital communication

Examples: **ZM12V10A-151AZC, ZM24V12A-300AZC**

### BASIC PARAMETERS

| Input parameters                          |  | General                       |   |
|---|--|-------------------------------|---|
| Frequency                                 | 47...53Hz  | Efficiency                    | up to 87%   |
| Power factor                              | 0.95 <sup>1</sup>  | Working temperature range     | -25 ÷ 55°C  |
| Input voltage                             | 184... <u>230</u> ...253Vac<br>165 (187 <sup>2</sup> )... <u>220</u> ...297Vdc | Protection degree             | IP20 <sup>3</sup>                                   |
| Output parameters                         |  | Compliance with standards     |   |
| Characteristics                           | UPI  | Functionality                 | EN 54-4 + A1 + A2<br>EN 12101-10 Environ. Class 1   |
| Output voltage regulation                 | 0,5%   | Electrical safety             | EN 60950-1 + A1 Class I<br>EN 61204-7               |
| Floating mode voltage for a cell at +25°C | 2.20... <u>2.25</u> ...2.40V   | Electromagnetic interferences | EN 55022 Class B                                    |
| Bulk charging voltage at +25°C            | 2.36V / cell   | EMC immunity                  | EN 50130-4<br>EN 61204-3<br>EN 61000-4-2,3,4,5,6,11 |
| Output voltage range                      | 10.2...14.4V<br>20.4...28.8V<br>40.8...57.6V                                   |                               |   |
| Temp. compensation factor                 | -4mV / °C / cell   | EMC emission                  | EN 61000-3-2 + A1 + A2<br>EN 61000-3-3              |

<sup>1</sup> 0,65 for the ZM151 power supplies

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

<sup>3</sup> the power supply's compliance with the EN 54-4 + A1 + A2 or EN 12101-10 standards for the Envir. Class 1 can be reached by mounting in the IP30 cabinets

### MANUFACTURER

**MERAWEX Sp. z o.o.**

Toruńska 8, 44-122 Gliwice, Poland

VAT No. PL6310000440

[www.merawex.com.pl](http://www.merawex.com.pl)

[merawex@merawex.com.pl](mailto:merawex@merawex.com.pl)

tel. +48 32 23 99 400

fax +48 32 23 99 409