

**Features:**

- Operation with batteries with a capacity of 17..240 Ah
- Balancing type - energy transfer
- Possibility of balancing batteries combined in 24V/36V/48V sets
- LED optical indication
- Protection against reverse connection
- Warranty – 2 years

**Technical description.**

AWZ643 24V balancer is designed for voltage equalisation in 12V batteries (AGM, SLA) connected in series or series-parallel. The basic working principle of the module is to transfer energy from battery with higher voltage to battery with lower voltage. Equalising the charge in the batteries is beneficial and protects against overcharging or undercharging, which leads to a reduced service life.

Module has LEDs optical operation indication.

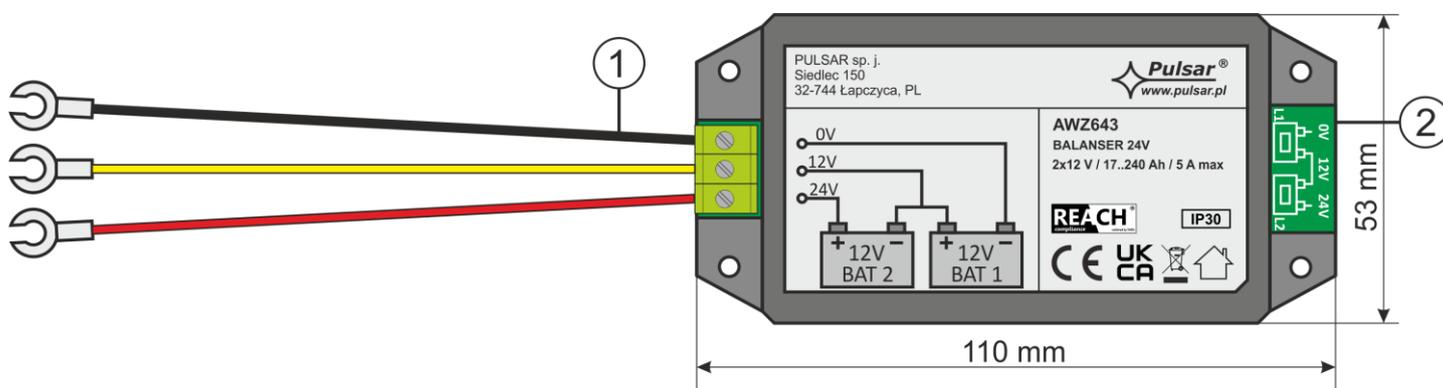


Fig.1. View of the module.

**Table 1. Description of the components.**

| Element no.<br>[ Fig. 1 ]         | Description  |             |    |    |                                |    |    |                              |          |   |                              |   |          |                                   |   |   |
|-----------------------------------|--|-------------|----|----|--------------------------------|----|----|------------------------------|----------|---|------------------------------|---|----------|-----------------------------------|---|---|
| ①                                 | <b>Cables for 2x12V battery connection</b><br>Black – 0V<br>Yellow – 12V<br>Red – 24V  |             |    |    |                                |    |    |                              |          |   |                              |   |          |                                   |   |   |
| ②                                 | <b>LEDs: L1, L2 – signaling the operating status</b> <table border="1" style="margin-left: 20px;"> <thead> <tr> <th>Description</th> <th>L1</th> <th>L2</th> </tr> </thead> <tbody> <tr> <td>Equalised voltages BAT1 = BAT2</td> <td>on</td> <td>on</td> </tr> <tr> <td>Energy transfer BAT2 -&gt; BAT1</td> <td>blinking</td> <td>-</td> </tr> <tr> <td>Energy transfer BAT1 -&gt; BAT2</td> <td>-</td> <td>blinking</td> </tr> <tr> <td>Voltage on BAT1 &lt;10V or BAT2 &lt;10V</td> <td>-</td> <td>-</td> </tr> </tbody> </table> | Description | L1 | L2 | Equalised voltages BAT1 = BAT2 | on | on | Energy transfer BAT2 -> BAT1 | blinking | - | Energy transfer BAT1 -> BAT2 | - | blinking | Voltage on BAT1 <10V or BAT2 <10V | - | - |
| Description                       | L1   | L2          |    |    |                                |    |    |                              |          |   |                              |   |          |                                   |   |   |
| Equalised voltages BAT1 = BAT2    | on   | on          |    |    |                                |    |    |                              |          |   |                              |   |          |                                   |   |   |
| Energy transfer BAT2 -> BAT1      | blinking   | -           |    |    |                                |    |    |                              |          |   |                              |   |          |                                   |   |   |
| Energy transfer BAT1 -> BAT2      | -  | blinking    |    |    |                                |    |    |                              |          |   |                              |   |          |                                   |   |   |
| Voltage on BAT1 <10V or BAT2 <10V | -  | -           |    |    |                                |    |    |                              |          |   |                              |   |          |                                   |   |   |

## Installation.

Balancer module should be connected to batteries using three wires terminated with fork terminals, maintaining correct polarity. Depending on the number of batteries and the way they are connected (series, series-parallel), the connection of the module should be carried out according to the diagram below.

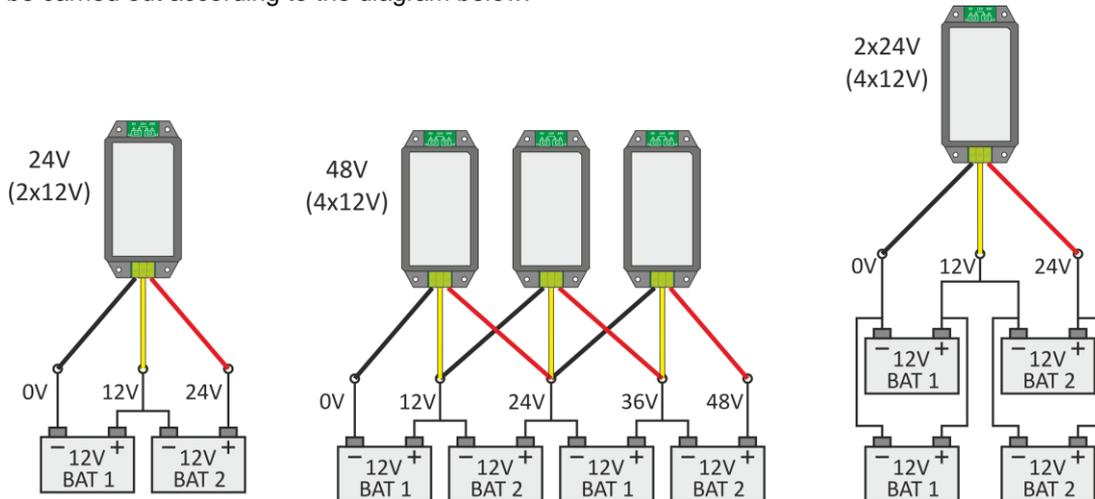


Fig. 1. Method of connecting to batteries.

## Specifications.

|   |   |
|---|---|
| Supply voltage                                | 15 – 30 V DC                                    |
| Battery capacity                              | 2x 12 V / 17..240 Ah (AGM, SLA)                 |
| Balancing current                             | 5 A max.  |
| Balancing signal voltage                      | > 50mV  |
| Protection against deep discharge of battery  | Disconnection below 10V, residual current < 1mA |
| Short-circuit and reverse polarity protection | PTC polymer fuse                                |
| LED operation indication                      | LEDs  |
| Operating temperature                         | -10°C...+40°C                                   |
| Storage temperature                           | -20°C...+60°C                                   |
| Dimensions (LxWxH)                            | 110 x 53 x 35 [+/- 2mm]                         |
| Net/gross weight                              | 0,10 / 0,13 [kg]                                |
| Enclosure                                     | ABS, RAL9005, black                             |
| Pattery cables                                | 40 cm, AWG 18, Ø8                               |



### WEEE LABEL

**Waste electrical and electronic equipment must not be disposed of with normal household waste. According to European Union WEEE Directive, waste electrical and electronic equipment should be disposed of separately from normal household waste.**

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