Intelligent battery monitor IMAB-16.02

USER MANUAL

Content

Introduction

This manual contains information on the purpose, technical characteristics, installation procedure and safe operation of the IMAB-16.02 discrete data collection device (hereinafter referred to as the device) and is intended for service personnel.

1. Product Description

1.1 Purpose of the product

The device is designed for continuous operation as part of the Jcom-IoT production monitoring system.

The device is designed to collect data from 16 analog battery channels and transmit it to the RS-485 network upon request from another device.

The device generates an “emergency” signal according to pre-set settings.

1.2 Technical specifications

Device supply voltage at contacts “+12V”, “GND”: 8…+12.0V

The device provides the specified parameters under the following environmental conditions:

- ambient air temperature -20℃..+40 ℃;
- air humidity at +25 ℃ (30..80)%;
- atmospheric pressure (84..100) kPa.

The data transfer rate via the serial interface is 9600 bps.

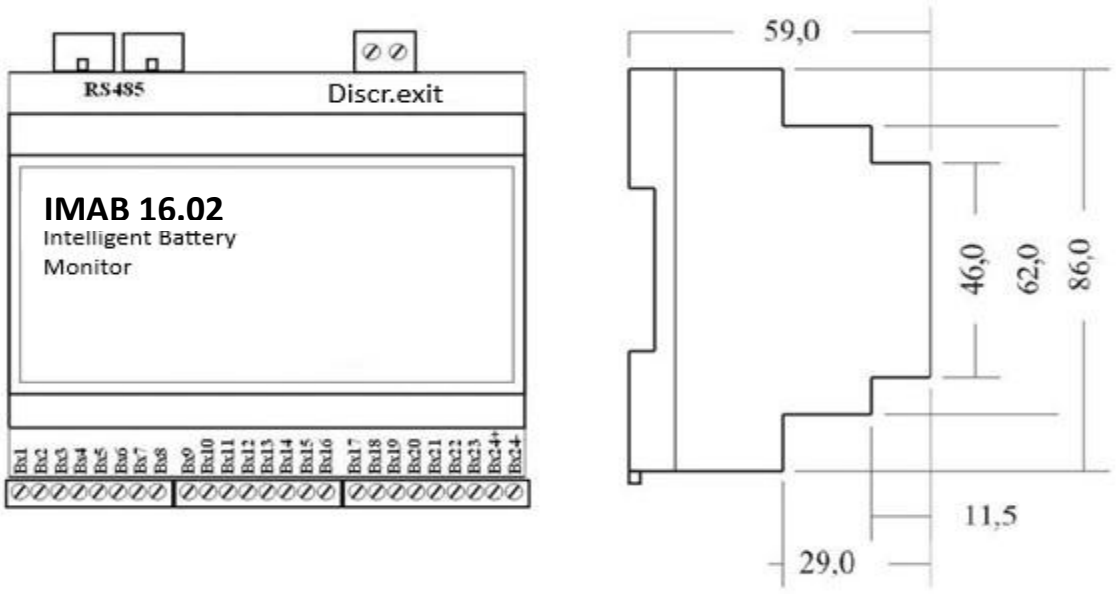
Current consumption: no more than 80 mA

Mounting on a 35mm DIN rail. Free positioning.

Service life is 20 years.

The weight of the device is no more than 0.25 kg.

The overall dimensions are shown in Figure 1.



1.3 Completeness

Device IMAB-24.02	1 pc.
Operating manual	1 piece/lot
Package	1 piece/lot

Note: The batch size is determined by the manufacturer.

1.4 Installation procedure

ATTENTION: All installation work must be carried out with the power disconnected.

When carrying out installation and commissioning works, it is necessary to use the design documentation for the monitoring system.

Install the device on a DIN rail.

Connect the battery according to the connection diagram (Appendix 2).

The device communicates via the RS-485 interface using a two-wire circuit. Connection should be made using twisted-pair wires, observing polarity. Wire A is connected to the A terminal of the device, and wires B are connected similarly. Connection must be made with both devices powered off.

Connect the discrete output of the device to the upper-level system, following the design documentation for the monitoring system.

2. Maintenance

During operation of the unit during its service life, no maintenance work is required.

3. Storage and transportation rules

Climatic conditions for transportation must meet the following conditions:

- ambient air temperature from minus 50 °C to plus 50 °C;
- relative air humidity up to 98% at 25 °C;
- atmospheric pressure from 84.0 to 107.0 kPa (from 630 to 800 mmHg).

The devices can be transported by all types of transport (in covered wagons, closed vehicles, containers).

Devices should be stored only in the manufacturer's packaging in heated rooms at temperatures ranging from +5°C to +40°C and relative humidity no more than 80%. Storage areas must be free of aggressive impurities (acid or alkali vapors) that could cause corrosion.

4. Manufacturer's (supplier's) warranties

The manufacturer guarantees that the device complies with technical specifications, subject to the conditions of transportation, storage, installation and operation.

The warranty period for the device is set at 1 year, counting from the date of transfer of the device into operation.

During the warranty period of the device, the manufacturer has the right to supervise the correct operation of the complex in order to improve the quality and efficiency of operation.

Device components that fail during the warranty period are subject to replacement or repair by the manufacturer at the manufacturer's expense.

The user loses the right to free repairs during the warranty period in the event of broken seals, mechanical damage by the user, or if the device was repaired by a person who is not authorized to perform repairs and maintenance.

5. APPLICATION

Connection diagram