BRI CONTRLLABLE DISCHARGE DEVICE

BRI is designed for the controlled discharge of chemical battery with a preset direct current.

The controlled battery discharge is carried out according to the manufacturer's instructions so that the measurement results can be compared with factory data. BRI measures the battery temperature during test discharging of the battery and introduces a temperature adjustment to the measured values.

The device enables remote parameter preset and data reading using communication APS6000 protocols (internal protocol of APS Energia) and Modbus RTU.

It is possible to connect devices in parallel in order to multiply the maximum discharge current. The process is fully automatic.

Controlable discharge device is equipped with a microprocessor operation and battery state monitoring system.

The following are signalized through LCD display:

- Battery voltage;
- Battery discharge current;
- Load drawn from the battery;
- Operating time and preset discharge time;
- Date and time of discharge commencement and completion;
- Ambient temperature;
- Measured capacity of the battery taking into account the external temperature.

TAB. BRI TECHNICAL PARAMETERS

Nominal input voltage UBAT	12..400 VDC
Max voltage UMAX	450 VDC
Min voltage UMIN	9 VDC
Nominal uncharging current IZN	50 A
Max power PZN leakage	12000 W
Max uncharging current IROZ	If P>PZN IROZ=[A] If P<PZN IROZ=IZN [A]
Uncharging current stabilization	<1 %
Uncharging current ripple	<3 %
Nominal voltage auxiliary supply UZ	230 VAC
Nominal frequency auxiliary supply fz	50 Hz
Automatic monitoring system SAN	YES
IP (PN-EN 60529:2003)	IP 20
Dimensions	420x317x696 (WxHxD)
Paint finish	RAL 7035
Weight	26 kg
Operating temperature (EN 50178 class 3K3)	0..40 °C
Storage temperature	-40..55 °C
Humidity	max. 80 %
Attitiude	1000

PIC. BRI controllable discharge device

TAB. BRI SPECIFICATION

Microprocessor controlled BRI 12-400 type control discharge device is characterized by the following parameters:	• Automatic termination of the discharge process after reaching preset parameters; • Low pulsation and low level of higher harmonics of the current drawn from the battery; • Displaying and archiving discharge parameters; • Possibility of parallel operation of several BRI; • Remote control of operation and parameters reading (protocols: APS6000 and Modbus RTU); • Small size and weight; • Mobile design with the use of wheels that allows for easy transport.
The device has protections against:	• Overheating; • Exceeding the maximum permitted voltage.
BRI monitors critical components and signals failure states:	• Damage to the internal temperature sensor; • Damage to the external temperature sensor; • Lack of parallel communication; • Damage to the fan (s); • Improper battery polarity.

BRI USER INTERFACE

On the front plate of BRI a control panel console is situated. LEDs and LCD screen allow for monitoring of the device operation and for measured values reading.

Controlled discharge process parameters presetting occurs using a 3-button keypad and graphic LCD display located on the front panel or remotely via RS485 or USB. The discharging is performed until the battery voltage reaches a preset minimum level or after expiry of the discharge time.

The device enables for connection to a master system (e.g. PC) via RS485 (connections field) or USB-B (front panel). The user has the following two programs at his/her disposal: "SAN DIR" and "Eksplorator archiwum BRI" [BRI archive explorer], communicating with each other through the internal APS 6000 protocol. Also Modbus RTU industrial communication protocol is implemented as a standard.

Communication connectors of the device:

- RS485 and USB B to communicate with a master system (e.g. PC).
- USB A to copy the archival data to flash memory.