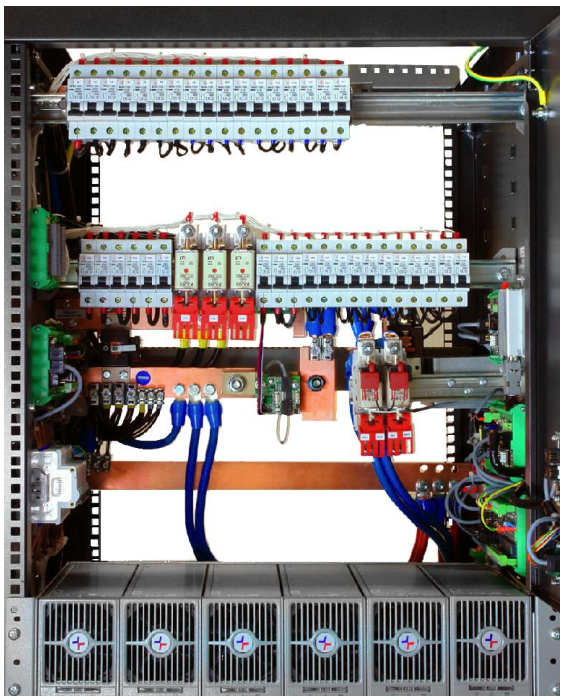
STB - Battery Testing System

maintenance-free battery diagnostics during operation

General description:

STB - Battery Testing System is designed for automatic and maintenance-free battery diagnostics during normal operation.

Necessary conditions for the implementation of STB in power supply system are:
+ cooperation with at least two battery strings;
+ possibility to assign at least two groups of loads.



Application:

+ telecommunications and teletransmission;
+ IT applications;
+ industrial automation systems.

Features:

+ fully automatic operation;
+ closely adjusted to currently tested type of battery;
+ reduce batteries maintenance costs
+ enhancement the safety of the site related to power supply – a guarantee of preserving the designed autonomy;
+ lossless carrying out the test - the energy of discharged battery is 100% used to supply non-critical loads;
+ advanced algorithm allows to set many discharging and charging parameters of the battery.

Features:

+ automatic deep discharge test of one battery without any attendance of service staff;
+ automatic charging of previously discharged battery without any attendance of service staff
+ programming of test parameters in accordance with the requirements of the battery manufacturer;
+ automatically send reports to the operator with information about real battery condition – allows to make earlier decision related to battery replacement in the future;
+ possibility of programming the cyclic test;
+ possibility of launch the test manually;
+ setting of parameters:
  - -locally by using a PC (PIK) or PI1,
  - -remotely by using WinCN,
+ power safety is the most important criterion: implemented algorithms will stop the test in the event of occurrence certain adverse conditions (eg, AC mains absence, rectifier module failure, too early decrease of voltage of tested battery);
+ maintaining a specified discharge current and then charge current;
+ test result is stored locally in memory of control unit and sent to the remote WinCN Supervisory Centre to a detailed analysis of received data and friendly presentation of the test results and the recommendations.

Principle of operation:

STB - Battery Testing System uses the only so far known and reliable method to check the real capacity of the battery, which is the direct measurement of energy absorbed by the load, at deep discharge. The process is fully automated and controlled by Pi1 control unit and the measuring elements.
After finishing the full test cycle (deep discharge and then full charge of battery) the system goes into the buffer operation mode and the test results (Actual discharge time, Actual capacity, Relative battery capacity to C10 and T=20˚C) are automatically sent to the WinCN supervisory system. Also alarm will be generated in case of negative test results.

The use of a Battery Testing System developed by Telzas allows to assess the key parameters of the battery which determines for the power supply security of the site.

Reliable information related to the status of the battery allows the take optimal actions in optimal time and at minimal cost in order to ensure uninterruptible operation of loads.

The solution is protected by patent application P. 390982.

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