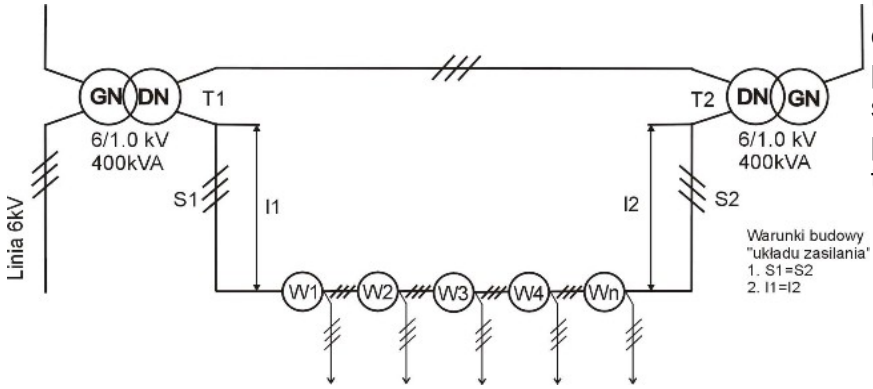
ISO 9001 PCA AC 014 QMS NC-1087	**P.H.P.U.** IZOL PLAST Sp. z o.o. 44-362 Rogów ul. Raciborska 79 tel./fax 32-4512010 **www.izol-plast.rogow.pl**	**INDEX CARD** **Power supply system of radial power networks connected at the end with parallel connection of flameproof transformer stations type IT3Sb or IT3Sd with the power of 400kVA and 630kVA and transmission 6 / 1kV with the use of the RPW-1 relay**

Application:

The power supply system of flameproof IT3Sb or IT3Sd transformer stations allows to increase the concentration of extraction by using the above-mentioned stations in order to supply mining longwall complexes of increasing power. The power supply system allows full use of the power of two IT3Sb or IT3Sd transformer stations.



The "power system" includes:

- two flameproof transformer stations T1 and T2 6 / 1kV which have the same :
  - rated powers,
  - rated gears.
  - connection groups,
  - short-circuit voltage.
- system of cable connections or wires between stations T1 and T2 and the set of switches from which the receivers are supplied with the same:
  - conductor cross-sections S1 = S2
  - length I1 = I2
- ZZP400 or ZZP630 current protection unit, installed in the low voltage (1kV) connection chamber of the T2 transformer station,
- RPW-1 relay unit installed in the low voltage chamber (1kV) of the T2 transformer station,
- central-interlocking leakage protection type RRgZx-10 with a set of ZD-11-3 chokes installed in the lower voltage chamber (1kV) of the T1 transformer station,
- two SH-630 / M lock switches with undervoltage releases installed in low voltage (1kV) chambers of transformer stations T1 and T2.

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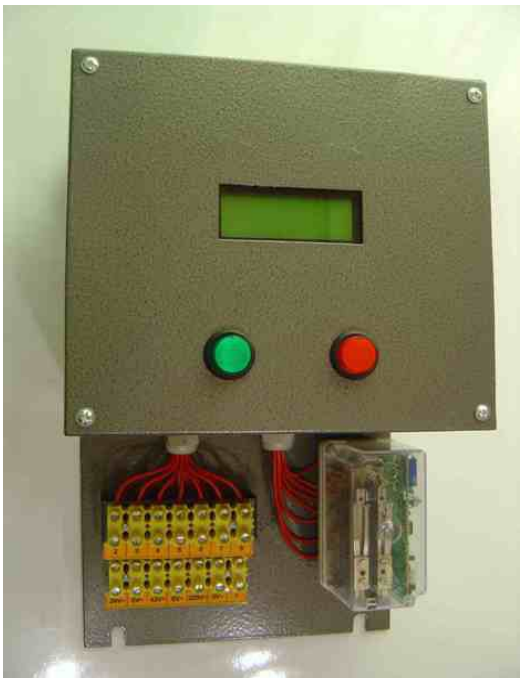
Construction of the RPW-1 relay



The RPW-1 type relay is built based on the microprocessor technique.

Relay type RPW-1 is responsible for the control of the operating status of the power supply system with parallel operation of transformers.

It provides the following information: operating status, failure status, time and date of failure, cause of failure. These events are automatically saved in the microprocessor's non-volatile memory, which allows for saving up to 340 messages. These messages can be viewed on the display in the "History" tab in the sequence from the last event to the first event. It is possible to send all the recorded events to a PC computer through the RS232 serial port.

Opinions, judgments:

"Power supply" has a positive opinion of the Center for Attestation and Certification Research "OBAC" Sp. z o. o. included in the Product Evaluation Report: **OBAC / 164 / RE / 05** of December 2005.

The basic requirements of safety and health protection were implemented by meeting the requirements of the following standards:

- PN-EN 50014:2004
- PN-EN 50028:2002(U)