

SPECIFICATION T-2089-Г
CHARGER – POWER SUPPLY 54/48 VDC (30A)

1. GENERAL

The specified equipment is required to provide uninterruptible power supply of 48VDC in power transmission substations.

The equipment will charge lead-acid batteries of the sealed type 4X12V, 90AH/20H/20°C, and will operate with positive (+) ground. It must be of switching technology and excellent construction quality. If there would be no batteries installed the charger must operate as a simple power supply.

The charger must be suitable for wall mounting and provide the following:

1. Circuit for the protection of the batteries from deep discharge set at 44 VDC
2. Input circuit breaker (230V AC)
3. Circuit breaker for the batteries connection
4. Load circuit breaker
5. Free change-over contacts (220 V AC 1A) wired to appropriate terminal, for the following Alarms: AC supply loss, rectifier failure, battery low voltage.
6. Digital voltmeter switched between the voltage across the battery terminals or the voltage across load
7. Digital Ammeter to display the total current supplied to the load.

2. TECHNICAL SPECIFICATION

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| 1. Input voltage | 230VAC + 15%-20% , 50Hz ± 5% |
| 2. Output voltage (batteries) | 54 VDC adjustable ± 5% |
| 3. Output voltage (load) | 48 VDC adjustable + 3% |
| 4. Total current capacity of rectifier | 30A (maximum charging 10A) |
| 5. Line regulation | 500 mV max for line variation 185-263 Vac |
| 6. Load regulation | 400 mV max no load to full load |
| 7. Ripple and noise | 1% pk/pk |
| 8. Efficiency | >85% |
| 9. Overshoot | No overshoot at turn-on, turn-off or power failure |
| 10. Electromagnetic Interference EMI | Build in filter |
| 11. Output over voltage protection | One volt above preset output voltage |
| 12. Over load protection | Protected against overload and short circuit |
| 13. Soft start | Soft start system |
| 14. Boost charge | Boost charge system |
| 15. Operating temperature | -5 to 50° C |
| 16. Input to output isolation | 3 KV |

3. INSTRUCTION MANUALS -DRAWINGS

1. All manual must be supplied in three copies in Greek or English language. Manuals in any other language will be rejected.
2. The manuals must include
 - a. Block diagram
 - b. Installation instructions and commission instructions
 - c. Description of operation
 - d. Detailed circuit diagrams and layout diagrams of each electronic card

4. BIDS EVALUATION

A sample of the equipment must be available to the bids evaluation Committee. The sample will be returned as soon the evaluation Committee will conclude the technical evaluation.