

SPECIFICATION T-2089- Δ

CHARGER – POWER SUPPLY 54/48 VDC (30A)

1. GENERAL

The requested equipment is required to provide uninterruptible power of 48V DC to the installed telecommunication equipment in the High Voltage IPTO substations. The DC Power Supply shall be terminated in a DC Distribution Board. The DC Distribution Board can be “wall mounted metallic enclosure” or “floor mounted cubicle/rack”.

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:

- 1.1** Batteries protection circuit from deep discharge, set at 44 VDC
- 1.2** Input circuit breaker (230V AC)
- 1.3** Circuit breaker for the battery bank
- 1.4** Load circuit breaker
- 1.5** Free switching contacts (220 V AC, 1A, ON-ON, N/O-N/C contacts) (Normal Close in normal operation, in the case of malfunction the contact must be open) wired to appropriate terminal, for the following Alarms:
 - 1.5.1** AC supply loss,
 - 1.5.2** 48 VDC output loss
 - 1.5.3** charger failure
 - 1.5.4** battery low voltage
- 1.6** Digital voltmeter, switching mode between the voltage across the battery terminals or the voltage across the load
- 1.7** Digital Ammeter to display the total current supplied to the load

2. TECHNICAL SPECIFICATION

2.1 Input voltage	230VAC ± 20% , 50Hz ± 5%
2.2 Output voltage (batteries)	54 VDC adjustable ± 5%
2.3 Output voltage (load)	48 VDC adjustable + 3%
2.4 Total current capacity of rectifier	30A (charging current of batteries limited to 10A)
2.5 Line regulation	500 mV max for line variation 185-263 V AC
2.6 Load regulation	400 mV max no load to full load
2.7 Ripple and noise	1% p-p
2.8 Efficiency	>85%
2.9 Overshoot	No overshoot at turn-on, turn-off or power failure
2.10 Electromagnetic Interference EMI	Build in filter
2.11 Output over voltage protection	1 volt above preset output voltage
2.12 Over load protection	Protected against overload and short circuit
2.13 Soft start	Soft start system
2.14 Boost charge	Boost charge system
2.15 Input to output isolation	3 KV
2.16 Operating temperature	-5 to 50° C
2.17 Relative Humidity	5 to 95%
2.16 Standards (Safety & EMC)	EN 60950-1, EN 61000-3-2, EN 61000-3-3, EN 61000-6-2/-4

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
 - 2.1 Block diagram
 - 2.2 Installation instructions and commission instructions
 - 2.3 Description of operation
 - 2.4 Detailed circuit diagrams and layout diagrams of each electronic board

4. BIDS EVALUATION

- 4.1 All bidders within ten (10) working days from the date of acceptance of their offer they must submit to the requesting department of IPTO a sample of the exact type of the equipment offered for further technical evaluation, otherwise the offer will be considered as non acceptable.
- 4.2 In case that the offered equipment is identical to previously supplied to IPTO it is not necessary to provide said sample but must state the number of the relevant contract.
- 4.3 The supplied sample will remain with IPTO for at least the duration of the validity of the economic offer.