

SI99 SISTEM OF INVERTERS UP TO 5 kW



The system SI99 of inverters or DC/AC converters is designed for use in the telephone exchanges or remote places with the accumulator batteries of nominal voltage - 48V or -60V.

The system is used in case of big commercial power fluctuations, short interruptions (near big consumers switching on) and in case of long commercial power interruptions. In all above-mentioned cases the output inverter's voltage changes remain within 2%, the value that is acceptable to supply even most sensitive equipment.

The system SI99 operates in two ways in systems of uninterruptible power supply:

- The equipment is always supplied from the inverter ("on-line") and battery is charged through the rectifiers if there is commercial power.
- The equipment is supplied from the existing commercial power (rectifiers charge the batteries), and when the voltage is out of defined limit or the commercial power brake out the equipment is supplied from the inverter ("off-line").

The system consists of 1 to 9 inverter units TI600AS connected in parallel to increase the power. The inverters are placed on the rack along with the control unit TICI. The control unit supervises inverters and enables "on-line" and synchronized "off-line" mode with transition time less than 2 ms.

The SI99 system is robust solution for uninterruptible power supply for telecommunication equipment with high accuracy of output voltage (tolerance < 2%) and frequency (up to 10^{-5}). Microprocessor based control enables high flexibility in use of the system. Due to the fully automatic work and fault self-diagnostics the system is very simple to handle. SI99 provides high level of availability because of simple inverter's work (automatic switch off fault inverter). It is possible to have remote control using PC with standard RS485 (RS232) communication, GSM network (option) or Ethernet (option). Putting 9 inverters in parallel operation, load of up to 5 kW can be supplied.

SI99 TECHNICAL CHARACTERISTICS

Input voltage	from 40VDC to 75VDC
Psophometric voltage on the input side	<2mV
Ripple voltage on the input side	Max.50mV in range up to 20MHz
Input fuse	25A
Output voltage	230VAC±2%
Output voltage frequency stability	50Hz±50ppm
Mode of synchronization	PLL
Speed of synchronization	1s
Distortion factor (linear load)	<1%
Nominal load per unit (TI600AS)	600W/600VA
Maximum 1 hour overload	10%
Maximum number of parallel units	9
Current sharing in parallel operation	5%
Transition time of static switch	<2ms
EMC.....	According to CISPR14-1
Efficiency at nominal load	>90%
Insulation input-output	2.5kV
Earthing of metallic parts	Yes
Input voltage signalization	LED
Output voltage signalization	LED
Signalization of output voltage frequency	display
Fuse breakout signalization	LED
Output voltage measurement ... display with accuracy	1.5%
Output current measurement ... display with accuracy	1.5%
Frequency measurement	display with accuracy 0.1%



Remote signalization	RS485 communication, relay (GSM modem option)
Protection against revers input voltage.....	diode and fuse
Working temperature	from 0°C to +45°C
Storage temperature	from -30°C to 60°C
Altitude	up to 1000m (for higher places in options)
Dimensions with 19' mounting rack	540mm x 2000mm x 570mm