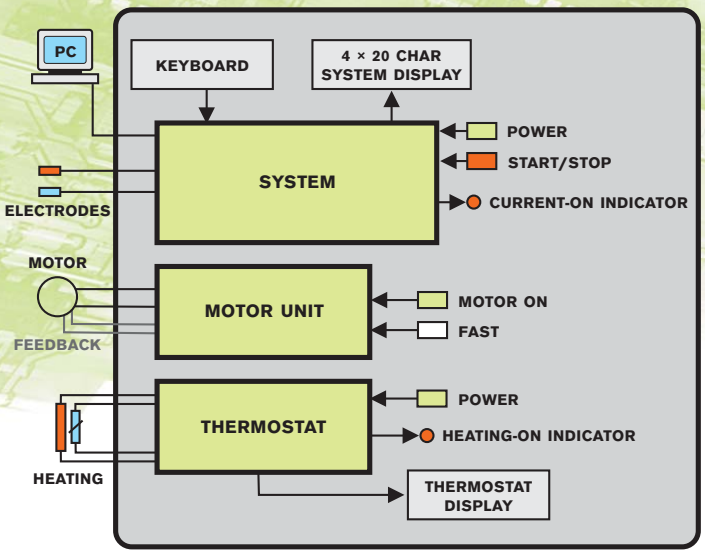
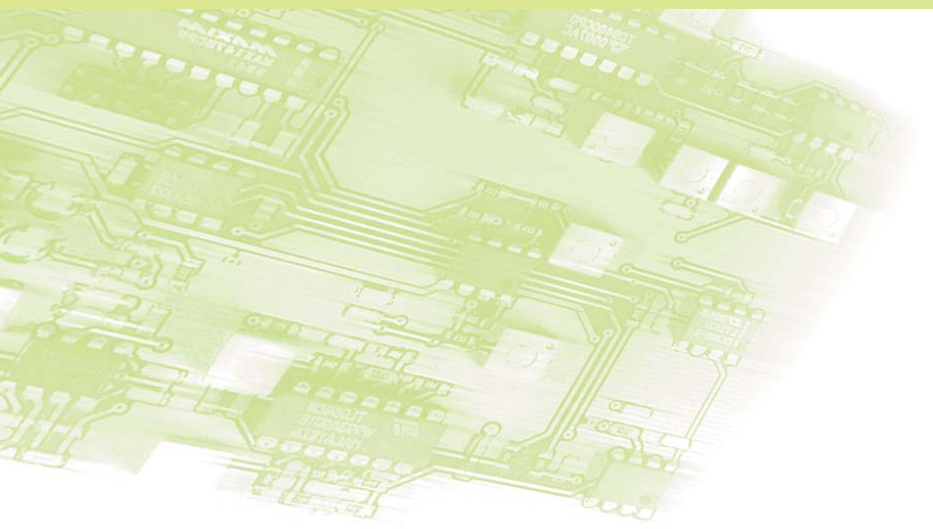
Precision Charge Integrating Power Supply
Model **GALVA 2001**



The GALVA 2001 system is high precision DC current power supply primarily designed for scientific and industrial applications (electrogalvanic treatment and forming, electronic test equippment etc.). This instrument has modular structure an can be tailored to custom-specific requirements. It consists of three independent parts: system unit, motor unit and thermostat unit.

FOTON



Parameters

Output current	0 to 6 A
Resolution in output current	2 mA
Accuracy in output current	0.2 %
Current On indicator treshold	8 mA
Voltage limit	0.6 to 3.5 V
Resolution in voltage	2 mV
Accuracy in voltage	0.2 %
Final electrical charge	1 mC to 9999999 C
Resolution in electrical charge	1 mC (resp. 1 C)
Accuracy in electrical charge	0.2 %
Motor powering	0 to 12 VDC
Motor feedback	voltage from tachogenerator
Slow speed period	5 to 50 s
Fast speed period	0.1 to 1.5 s
Thermostat range	1 to 69 °C
Resolution in temperature measurement	0.1 °C
Resolution in thermostat level	1 °C
Thermal control	ON/OFF, heating only
Thermostat output	5 V/10 A
Communication	RS-232 (TxD, RxD, GND)
Baud rate	9600 Bd
Communication details	8 bit, 1 stop bit, no parity
Power	230 VAC, 50/60 Hz
Dimensions	19" × 3U × 250 mm (483 × 132 × 250 mm)
Weight	8 kg

The **system unit** yields current output 0 to 6 A DC with 2 mA resolution and accuracy better than 0.5 %. The current output is voltage limited. Both current and voltage is measured and displayed independently with respect ro feedback system. The core of the system consists of a voltage controlled switching voltage power supply, chopper-stabilized circuits for output current measurement, voltage to frequency convertor and 12-digit BCD counter. High efficiency of the device is reached by a special switching power supply. Flowing electrical charge is measured by means of counting of electrical pulses with frequency proportional to output current. It yields high precision and resolution in electrical charge measurement.

All the instrument works either locally or under remote control (RS-232 serial line). Both locally and remotely the instrument is programmable. There are up to 7 programmable technological processes each of all can consist of up to 10 sections with defined parameters (output current, limiting voltage, final charge and thermostat temperature). When the final electrical charge is reached, the section is over and a new section starts until the end of process.

The **motor unit** drives DC motor (voltage feedback system). This unit is primarily intended for rotating electrodes. It works with two speeds which alternate (to prevent bubling on the surface of electrode). Fast speed is indicated and can be set manually while touching a proper button.

The thermostat unit controls the temperature of galvanic bath by means of heating of ohmic load. Its capability is 5 V/12 ADC, soft start. The powering of the thermostat unit is completely separated. It allows to long time continuous thermostating without need to operate all the instrument. In case of electricity distribution fault, the current thermostat setting is stored. After recovery of electricity the thermostat works immendiately which minimize the temperature changes in bath. The heating is indicated by LED.

All the system is equipped by advanced internal thermo-management. All control elements (keyboard, displays, switches, buttons and leds) are located on front panel, all inputs and outputs are on the rear panel. The system information is displayed on 4-row blue alphanumerical VFD display, the thermostat information is on illuminated LCD display. Well-quality metal standard rack encloasure is used as a housing.