

PROGRAMMABLE PULSE POTENTIOSTATE/GALVONOSTATE SYSTEM

(Galvanostate/potentiostate)

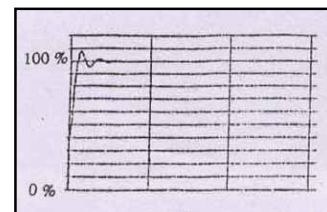
MPGPS-Series

Introduction:

MPGPSeries of high current/low voltages pulse Galvanostate/potentiostate are designed for achieving optimum parameter identification This pulse Galvanostate/potentiostate unit contains programmable ampere-minute controller, space mark controller, and digital volt/ampere meter with RS-232 port which enable the user to online assess/monitor the process parameter Only for this reason, virtually offering solutions to various applications like off-shore petrochemical, automobile, railway, surface transport vehicles, aerospace, nuclear, defense, and many other research & solid state physical applications. This galvanostate/potentiostate could be operated in parallel/multi-injection mode. Company offers tailor made solution to custom requirement.

Operating Principle:

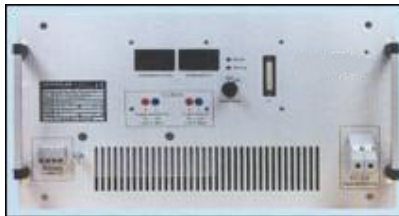
These pulse galvanostate/potentiostate incorporate the compact high frequency ac/dc converter, which low voltage/current ripple which ensure uniform charge injection. Account of the fact that current delivered is in quantified manner so effect of depolarizing stray capacitance is restricted thus ensuring an improved uniform spread of Current. The effect of quantized pulse supply is further more effective in when local development of stray capacitance cells are mitigated height wise/spread wise during space period when over/under capacitance cell growth, either spread wise or height wise are marginalized, thus bringing a uniform current density that help is right identification of parameters.



voltage vs time(of one pulse)



MPGPS-0800200



MPGPS-0800500



MPGPS-0800050

Pulse Electrodeposition (Galvanostate/potentiostate) Specification:

| Model | Volts DC Bipolar | Current m.a. | frequency k.hz | cooling | Model | Volts DC Bipolar | Current m.a. | frequency k.hz | Cooling |
|---------------|------------------|--------------|----------------|---------|---------------|------------------|--------------|----------------|---------|
| MPGPS-0100015 | 10/option | 0015.0 | 05-50 | Air | MPGPS-0050010 | 05/option | 0010.0 | 05-50 | Air |
| MPGPS-0100025 | 10/option | 0025.0 | 05-50 | Air | MPGPS-0050025 | 05/option | 0025.0 | 05-50 | Air |
| MPGPS-0100050 | 10/option | 0050.0 | 05-50 | Air | MPGPS-0050050 | 05/option | 0050.0 | 05-50 | Air |
| MPGPS-010100 | 10/option | 0100.0 | 05-50 | Air | MPGPS-0050100 | 05/option | 0100.0 | 05-50 | Air |
| MPGPS-0100200 | 10/option | 0200.0 | 05-50 | Air | MPGPS-0050200 | 05/option | 0200.0 | 05-50 | Air/oil |
| MPGPS-0100500 | 10/option | 0500.0 | 05-50 | Air | MPGPS-0050500 | 05/option | 0500.0 | 05-50 | Air/oil |
| MPGPS-0101000 | 10/option | 1000.0 | 05-50 | Air | MPGPS-0051000 | 05/option | 1000.0 | 05-50 | Air/oil |

Pulse Electrodeposition (Galvanostate/potentiostate) Specification:

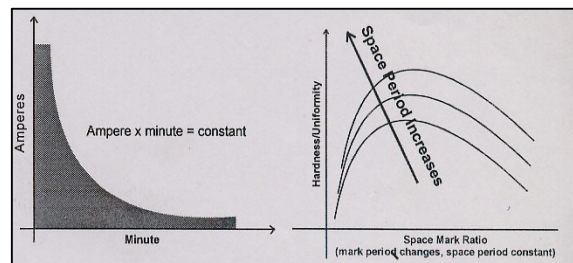
Operating voltage 220 volts, 1 phase, 40-60 Hz
 Output current/voltage 0-10/20/optional/20000 m.a. (max)
 Voltage/current ripple 10 micro volts-noload/ 100 micro volt-full loads
 Operating frequency 5.0-200 K.Hz
 Voltage/current control accuracy 99.9% of set point
 Resolution 0.1 volts/amps D.C.
 Repeatability 100 percent
 Response time 0.5 -1.1 mill-seconds
 Phase margin/gain margin: 18degree/15 db
 Interface Signal 0.0-12.0 volts D.C. [proportional to voltage/current]
 Voltage control range 0.0-100%
 SPACE-MARK RATIO 1:3 to 1:9
 FREQUENCY/wave forms: 0-100,000 Hz/ square/rectangle/elliptical /programmable wave shape

Control options 1.cascade feedback control with soft start.
 2. Contant voltage/current/coulometric with external Adjustment.
 Display Differential Voltametry/ amperometry coulombmeter.

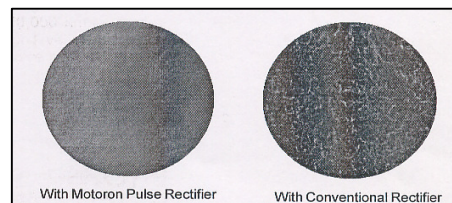
Common Galvanostate/potentiostate High dimension:

- MPGPS-0300015 08X06X06 MPGPS-2002000 14X12X12
- MPGPS-0300050 10X06X06 MPGPS-2004000 16X14X24
- MPGPS-0600100 12X08X08 MPGPS-8002000 18X16X36
- MPGPS-0600200 12X10X10 MPGPS-8004000 20X18X48

Two numerals after MPGPS indicate voltage of pulse Galvanostat/
 Potentiostate and last five-digit Indicates current.
 All dimensions are in inch Two numerals after MPGPS indicates Kilo voltage of pulse deposition and last five-digit Indicates current. All dimensions are in inches.



pictorial presentation of effect of pulse deposit



Effect of duty cycle variation

MOTORON SEMICONDUCTORS CORPORATION

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PROGRAMMABLE PULSE POTENTISTATE/GALVONOSTATE SYSTEM

Feedback controlled

Pulse Electrodeposition (Galvanostate/potentiostate) Specification:

| Model | Volts DC Bipolar | Current m.a. | frequency k.hz | cooling | Model | Volts DC Bipolar | Current m.a. | frequency k.hz | Cooling |
|---------------|------------------|--------------|----------------|---------|---------------|------------------|--------------|----------------|---------|
| MPGPS-0200015 | 20/option | 0015.0 | 05-50 | Air | MPGPS-3000010 | 30/option | 0010.0 | 05-50 | Air |
| MPGPS-0200025 | 20/option | 0025.0 | 05-50 | Air | MPGPS-3000025 | 30/option | 0025.0 | 05-50 | Air |
| MPGPS-0200050 | 20/option | 0050.0 | 05-50 | Air | MPGPS-3000050 | 30/option | 0050.0 | 05-50 | Air |
| MPGPS-0200100 | 20/option | 0100.0 | 05-50 | Air | MPGPS-3000100 | 30/option | 0100.0 | 05-50 | Air |
| MPGPS-0200200 | 20/option | 0200.0 | 05-50 | Air | MPGPS-3000200 | 30/option | 0200.0 | 05-50 | Air/oil |
| MPGPS-0200500 | 20/option | 0500.0 | 05-50 | Air | MPGPS-3000500 | 30/option | 0500.0 | 05-50 | Air/oil |
| MPGPS-0201000 | 20/option | 1000.0 | 05-50 | Air | MPGPS-3001000 | 30/option | 1000.0 | 05-50 | Air/oil |

Two numerals after MPGPS indicate voltage of pulse deposition and last four-digit indicates current. All dimensions are in inches.

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