PSL Systemtechnik
Germany

THE COMPACT INSTRUMENT FOR SIMPLE CONTROL TASKS

# Small Potentiostat KP07


The KP07 is a compact small potentiostat for potentiostatic and galvanostatic operations at relatively low cell voltages.

It is particularly suited when high currents are required with low power dissipation in low voltage operation.

Despite its compact size, the KP07 offers the typical features of Wenking potentiostats. These include easy operation, reliability, and long term stability in continuous duty.

## Your benefits at a glance

- **High current at low cell voltage:** Designed for applications with high currents and low voltages.
- **Three operation modes:** Open circuit potential (OCP) measurement, potentiostatic control, galvanostatic control.
- **Stand alone or integrable:** Internal control voltage source and monitor outputs for potential and current.
- **4 quadrant operation:** Can be used as current source and current sink.
- **Fanless cooling:** Aluminium heat sink for harsh environmental conditions.

## Operating Principle

The KP07 operates as potentiostat or galvanostat. It can be used as stand alone device using its internal control voltage source ± 5000 mV, or it can be controlled by an external control voltage.

Potential and current are displayed on two LCD displays. In addition, monitor outputs for potential and current are available for integration into measurement and data acquisition systems.

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DESIGNED FOR LOW CELL VOLTAGES AND HIGH CURRENTS

# Specification KP07

## Potentiostat

| | |
|---|---|
| Control input resistance | 100 kΩ |
| Potential control range | ± 5 V |
| Open loop gain | > 1000 000 (dc) |
| Roll-off | 20 dB / Dekade |
| Unity gain bandwidth | 200 kHz typ. |
| Small signal rise time | 2 µs (closed loop, ohmic load, 90%) |
| Slew Rate | 10 V/µs |
| Full power bandwidth | > 50 kHz |
| Power limits | max. ± 5 V max. ± 3 A, max. 15 W |
| Current ranges | 20 mA / 200 mA / 2 A / 20 A |
| Analog output current | 1 V/A und 0.1 V/mA |
| Current to voltage conversion | better than 0.25% up to 1 A, better than 0.5% up to 3.3 A |

## Internal control voltage source

| | |
|---|---|
| Range | ± 5000 mV |
| Tolerance | 0,2% ± 1 LSB |
| Temperature coefficient | < $10^{-4}$/°C |
| Drift | < $10^{-4}$/1000 h |

## Dimensions and power supply

| | |
|---|---|
| Dimensions | 250 x 90 x 160 mm |
| Power supply | 115/230 V ± 10 %, 50/60 Hz, max. 60 W |
| Stabilisation range | ± 15% of nominal line voltage |

## Potential buffer

| | |
|---|---|
| Input impedance | > $10^{12}$ Ω, 1 pF parallel (cable capacitance compensated) |
| Potential range | ± 4 V |
| Input bias current | < 10 pA bei 25°C |
| Unity gain bandwidth | 5 Mhz typ. |
| Small signal rise time | < $10^{-6}$ s |
| Slew Rate | 10 V/µs |
| Potential output | 1 kΩ |
| Noise (0-250 kHz) | < 30 µV rms |

## Options

- ☐ **TTL switching interface**: CE on/off, potentiostat/galvanostat switching and high/low Range
- ☐ **PC integration**: AD / DA interface

## Typical applications

- ☐ Battery research and testing
- ☐ Energy storage and fuel cells
- ☐ Galvanics as well as anodic and cathodic protection

**We will be pleased to advise you on integrating the KP07 into your test setup.**
**Contact us directly or request an individual quotation.**

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