

# Multichannel Programmable Signal Recorder & Plotter V4.39

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[www.dadehabzar.ir](http://www.dadehabzar.ir)

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## Features

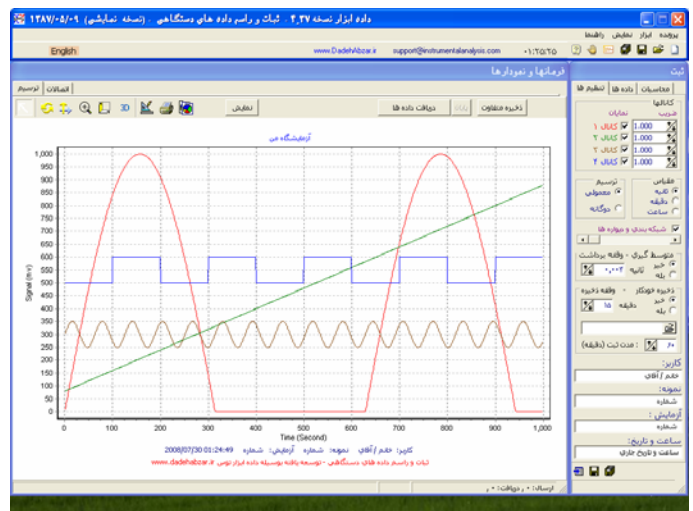
- 4 Analogue Input Channels
- Very Wide Input Range
- High Voltages Monitoring
- $\pm 0.1\%$  Precision
- Easy Interfacing Transducers & Instruments to PC
- 10 KV Electrical Isolation for Noise Rejection Immunity
- Total of 1000 Samples per second for all channels
- Advanced chart & data handling tools
- Farsi & English Menu
- Fast / Real Time with Minimum system requirements
- Customizable & Powerful
- Risk-free
- One Year Warranty

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## Software

### Advanced chart & data handling tools:

- Export Data and Graph at 14 formats  
(note 1)
- Averaging noise reduction option
- Mouse XY coordinates locator
- Advanced 2D & 3D plotting tools
- Fine Tuning of Signal Channels
- Autosave data & charts
- Custom Signal Processing & Report
- Real time data display
- Real time signal analysis & control



### System:

- Corruption Control Module
- Farsi & English Menu
- Multithreads Execution of jobs on Windows platforms, simultaneously
- Safe Data Acquisition based on Industrial Standard HART protocol

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### Applications

- Research, Medical, Industry, Education
- Long term Measurements
- Interfacing various Analytical Instruments to PC:
  - Old Photometers, Spectrophotometers & Spectrometers such as:
    - Colorimeters, UV-Vis, IR, FTIR, Mass, GCMS, NMR
  - Desktop & Portable Electrometers & Meters such as:
    - pH-meter & Ion Specific Electrode Meters (pH & Oxidation Reduction Potential (ORP) Instruments), Conductometer (Resistivity & Conductivity Meters), Multimeter (Ohm-meter, Voltmeter, Ampermeter), Columbmeter, Polarograph ,Potentiostat, Galvanostat
  - Other Instruments such as:
    - Calorimeters & Thermal Analyzers, Chromatographs, Electronic Balances, Density & Specific Gravity Instruments, Durometers, Extensometers, Environmental Test Chambers & Rooms, Fluorometers, Gas & Air Instruments, Hardness Testers, Humidity Equipment, Measurement Instruments, Leak Detectors, Magnetic Field Instruments, Mechanical Testing, Physical Property Testers, Gas Analyzers, Temperature Indicators & Instruments, Titration Instruments, Water Quality & Weather Instruments
- Interfacing various Transducers to PC
- High Voltages Monitoring
- Data Logging & Handling
- Replacement of paper-based plotters & recorders

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### Specifications

#### **Operating Temperature:**

0°C to +70°C (C models)

-20°C to +85°C (I models)

**Inputs:** 4 analogue voltage inputs +5V

**Precision:** ± 0.1%

**Capacitance:** ~10 nano farad

**Impedance:** 1 Mega Ohm for +5V range

**Attenuate Ranges:** 1... x10000; very wide

**Maximum Voltage Range:** depends on external resistor

**Sampling Rate:** Total of 1000 Samples per Second for All Channels



**Protection:** 10 Volts DC blocking voltage, 200 Ohm 0.125W

**Power Consumption:** AC, 200-240V, 50-60Hz, <5W

**PC Interface:** Industrial Standard HART protocol on RS232, RS485 or USB ports

**Electrical Isolation:** 10 KV for Noise Rejection Immunity

**Connector:** DB9

**Dimensions:** 80(H) x 280(W) x 320(D) (mm)

**Weight:** ~ 3 Kg

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### Cables

Power [2 m]

RS232 [2 m] (extendable to 20 meters)

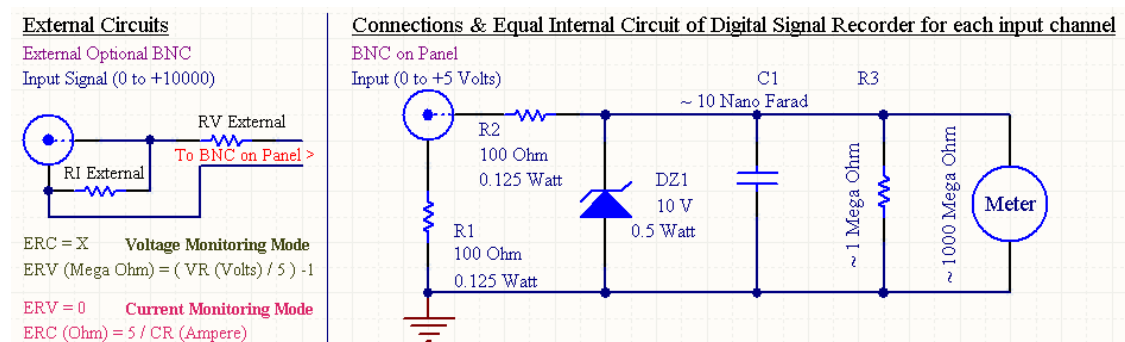
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### Custom Design Features

- Size & Weight (Only Module or Portable instead of Desktop or Rack Mount enclosure)
- Power Source (Automobile or Portable Battery instead of Main)
- Internal Fixed input range or Digitally Selectable Input
- Bipolar Inputs
- Inputs as Current or Pulse Counter
- Precision / Accuracies (4%, 0.1%, 0.05%, 0.02%, 0.0015%, 0.000048%)
- Sampling Rates (10, 1000, 60000, 100000, 1000000) [samples per second]
- Built-In Memory for logging data & events
- Ports (RS232, RS485, USB, Parallel)
- Time Saving using Complex / Routine Calculations , Signal Processing & Reports

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### Equal Circuit for each input channel



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### External Circuit for Voltage Monitoring Applications

Voltage Range (Volts)	External Voltage Resistor (Mega Ohm)	External Current Resistor (Ohm)
0 to 5	0	X (remove)
0 to 10	1	X
0 to 50	9	X
0 to 100	19	X
0 to 200	39	X
0 to 500	99	X
0 to 1000	199	X
0 to 2000	399	X
0 to 5000	999	X
0 to 10000	1999	X

General Equation for any range:

$$ERC = \infty$$

$$ERV_{(Mega\ Ohm)} = (VR_{(Volts)} / 5) - 1$$

\* Fine tuning of monitored signals using Coefficient adjustment of Software

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### External Circuit for Current Monitoring Applications

Current Range (Ampere)	External Voltage Resistor (Mega Ohm)	External Current Resistor (Ohm)
0 to 0.001	0 (short circuit)	5000
0 to 0.010	0	500
0 to 0.020	0	250
0 to 0.100	0	50
0 to 0.200	0	25
0 to 1.000	0	5
0 to 10.00	0	0.500
0 to 100.0	0	0.050

General Equation for any range:

$$ERV = 0$$

$$ERC_{(Ohm)} = 5 / CR_{(Ampere)}$$

\* Fine tuning of monitored signals using Coefficient adjustment of Software

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### **Ordering Information**

**Description:** 4 Channels Programmable Signal Recorder & Plotter V4.39

**Part Code:** MP.SRP 4.39

For Price List please include your Full Name, Company, Tel number & Postal Address

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## **Contact**

DadehAbzar Toos Co. Ltd

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## **Download**

Download links for last version of demo software & datasheet are available at:

**Products web page:** <http://www.instrumentalanalysis.com/en/products/products.php>

**Download web page:** [http://www.dadehabzar.ir/downloads/index\\_en.php](http://www.dadehabzar.ir/downloads/index_en.php)

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### **Note 1:**

#### **Data & Chart Formats:**

DAB binary file , PDF , JPEG , GIF , HTML Table , PCX , SVG , PostScript , HTM , VML , Metafile , Bitmap , Text , XML , Excel

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