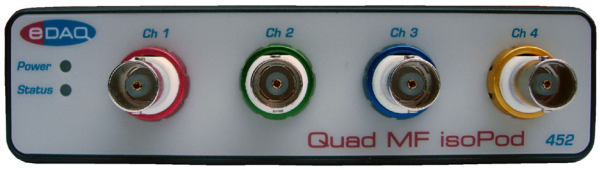
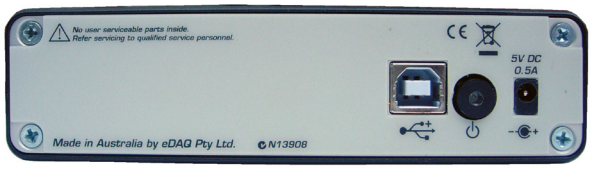
Quad MF isoPod™ (Model EPU452)





- Up to four sensor inputs
- Each channel can be set for pH, conductivity, dO_2 and more
- USB/virtual serial port (RS232) connectivity
- Electrical isolation minimizes noise and crosstalk
- Plug and play with Pod-Vu software

Description

The Quad MF isoPod has four channels, each of which can be software configured as a:

- high impedance millivolt monitor
- pH & ion selective electrode meter
- dO_2 monitor, for Clark–style polarographic oxygen electrodes.
- biosensor monitor, for amperometric sensors, including enzymic peroxide sensors.
- conductivity monitor for two–electrode conductivity probes;
- temperature monitor using either a 30 kohm thermistor, or Pt 1000 ohm RTD, probes.

Electrical isolation between channels and ground ensures minimal signal noise and crosstalk.

Channel Configuration

The MF Configurator software (supplied as standard) sets the function of each channel for a particular sensor (pH, Conductivity, dO_2, thermistor, etc) and can calibrate the signal. Once configured, the MF isoPod will remember its channel functions, even after being turned off, until the Configurator software is used again.

Pod-Vu Software

eDAQ Pod-Vu software (see separate brochure) is also included and is designed for plug and play compatibility with the Quad MF isoPod. Pod-Vu can be used to calibrate sensors, log data, and graphically display the signals in real time. Pod-Vu is designed for those who want to collect data but who do not want to do any programming.

Virtual Serial Port

The Quad MF isoPod unit connects to a Windows XP or later computer with a standard USB port. A virtual serial port is automatically created.

You can write your own recording, or process control, software using the 'virtual serial protocol'. This protocol is a set of commands embedded in the isoPod, and can be accessed by:

- writing your own software, eg in LabView, C#, Visual Basic, etc.
- using terminal emulation software compatible with serial (COM) ports, eg TeraTerm (www.logmett.com), or HyperTerminal (www.hilgraeve.com).
- other serial (COM) port compatible software that can log responses into a file or Excel document, eg WinWedge (www.taltech.com), or HyperAccess (www.hilgraeve.com).

Using these methods you can send commands and receive responses from the isoPod, graph the signals in real time, and/or implement process control regimens. The Quad MF isoPod is compatible with any operating system that supports a 'USB CDC serial port' which is defined as part of the USB standard. This includes Windows, Mac, and Linux operating systems.

Versatility = Economy

By allowing you to reconfigure channel functions, the MF Quad isoPod always adapts to your monitoring needs saving the cost of buying separate meters for each sensor type.

www.eDAQ.com
E-mail: info@edaq.com

PT4/16
Document Number: M-EPU452-1117

Specifications

Channels:	4
Input connectors:	Female BNC, Teflon insultated
Communications connector:	USB Type B socket. Cable supplied.
COM port settings:	115200 baud, 8 bits, 1 stopbit, no parity, flow control NONE
Speed:*	1 /s, 1, 2, 5, 10, 15, 30 /min, 10, 15, 30 /hr
Sample averaging periods:	0.1, 0.2 ,0.3 ... 1.0 s at speeds of 1 /s or slower
Isolation:	> 1500 V, independent on each channel, CAT 1
DC drift:	5 µV/°C
DC Offset error:	< ±0.1% full scale
Amplifier noise:	< ±0.005% full scale
ADC:	25 kHz sampling at 24 bits resolution per channel
Dimensions (l x w x h):	170 x 130 x 35 mm, 6.7 x 5.1 x 1.4 in
Weight:	~800 g, 1 lb 12 oz
Power:	500 mA @ 5 V DC. Mains adaptor supplied.
Operating conditions:	0 — 40 °C, 0 — 90% humidity (non condensing)

mV

Input impedance:	$>10^{12}$ ohm
Input ranges:	±2000 mV ±200 mV

pH & ISE

Input impedance:	$>10^{12}$ ohm
Input ranges:	±2000 mV (less than pH 0 to more than pH 14) ±200 mV (pH 3.6 – 10.4)
Calibration:	Single or double point*

Conductivity

Input ranges:	0.002, 0.02, 0.2, 2, 20, 200 mS
Excitation:	30 – 200 mV p-p sine wave, 2 – 1000 Hz
Calibration:	Single point. Conductivity or TDS

dO_2

Input ranges:	±20, ±200 nA, ±2, ±20, ±200 µA, ±2 mA
Polarization:	0, then –500 to –1000 mV in 50 mV steps*
Zero offset range:	±200 µA
Typical RMS noise:	1 pA when sampling at 1/s
Calibration:	2 point*

Biosensor

Input ranges:	±20, ±200 nA, ±2, ±20, ±200 µA, ±2 mA
Polarization range:	±2000 mV in millivolt steps
Zero offset range:	±200 µA
Typical RMS noise:	1 pA when sampling at 1/s
Calibration:	2 point*

RTD

Temperature range:	–25 to +500°C
Probe type:	1000 ohm platinum RTD
Probe error:	±(0.10 + n/600) °C at n°C with ET021 RTD probe
Excitation:	190 mV p-p sine wave at 200 Hz
Noise:	< 0.001 °C at 1/s

Thermistor

Temperature range:	–25 to +125°C
Probe type:	30 kohm thermistor
Probe error:	±0.2 °C (0 to 70°C) with ET020 Thermistor Probe
Excitation:	190 mV p-p sine wave at 200 Hz
Noise:	< 0.001 °C at 1/s

* Specifications when used with Pod-Vu software. User–written software may take advantage of other features of the serial command protocol, embedded in the internal memory of the isoPod.

Pod-Vu software

Operating system:	Windows XP, or later. Windows 7 or later preferred
Communication:	USB virtual serial port
Channels:	1 — 8
Saved data format:	Pod-Vu native format, or space delimited ASCII text (suitable for Excel, etc)
Data display:	Tabular and graphic
Graphic Y-axis scaling:	Full scale, autoscaling, user selected limits
Channel calibration:	As defined by isoPod firmware
Data acquisition rates:	1/s (default) 30, 15, 10, 5, 2, 1/min 30, 15, 10/h

www.**eDAQ**.com

E-mail: info@edaq.com

PT4/16