Dimensions in mm:

PAT-Controller-8

78 · 170 · 168

PAT-Channel-1

97 · 105 · 164
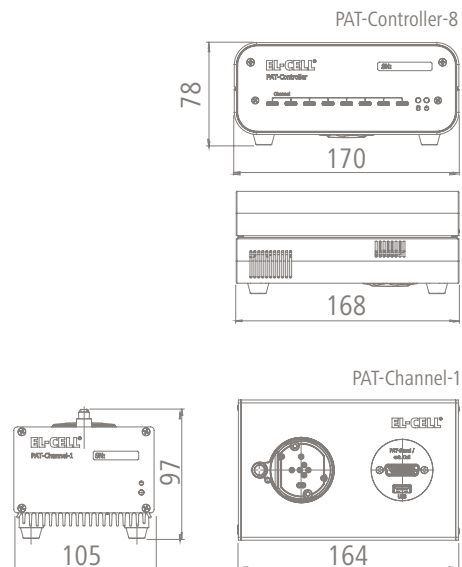
PAT-Tester-x-8

The individual test solution

The PAT-Tester-x-8 is the perfect choice for small scale and special purpose testing. It brings the same battery tester hardware and software as the PAT-Tester-i-16. However the fully featured channels (galvanostat/potentiostat/impedance analyzer) are separated into individual devices. Up to 8 of these PAT-Channels may connect to one single PAT-Controller-8 which serves as the control unit for storing all measurement data and enabling communication with the EL-Software server.

That way each channel of the PAT-Tester-x-8 can be controlled from any client PC in the same network via the EL-Software. The individual PAT-Channels can be placed where they are needed: on the bench, in a climate chamber, or inside the glove box.
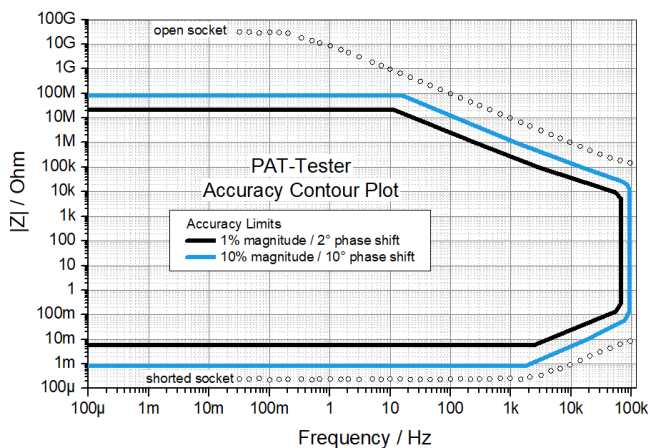
Accuracy contour plot

Product website:

Manual (PDF):

Specifications

General		
	Width / Depth / Height (in mm)	PAT-Controller-8: 168 / 170 / 78, PAT-Channel-1: 164 / 105 / 97
	Weight	PAT-Controller-8: 1.7 kg, PAT-Channel-1: 1.3 kg (without test cells)
	Channels per device	1 to 8
	Control Voltage / Compliance Voltage	-7 V to +7 V / -8 V to 8 V (no load)
	Current	±100 mA
	Cell connection / Electrode connection	3 electrodes plus sense wires, switch matrix
	ADC	2 x 24 bit
	DAC	1 x 18 bit
	Slew rate	2.5 V / µs
	Bandwidth ranges	500 kHz, 50 kHz, 5 kHz
	Sampling interval (rate)	1 ms (1000 samples per second) with intelligent data recording
	Input Impedance	>100 MΩ ‖ 20 pF
	Computer Interface	1 GBit Ethernet, Runs standalone, Multiuser

Voltage		
	Acquisition voltages	Full cell voltage, both half cell voltages, auxiliary voltage
	Measurement Accuracy	±0.02% of FSR (Full Scale Range)
	Measurement Noise floor	30 µV peak-peak typical
	Control Resolution	57 µV (18 Bit)

Current		
	Current Ranges	±100 mA, ±10 mA, ±1 mA, ±100 µA, Autorange
	Measurement Accuracy	±0.05% of FSR
	Measurement Noise floor	<1 µA @ 100mA, <100 nA @ 10mA, <10 nA @ 1mA, <1 nA @ 100µA
	Control Resolution	1 nA min. (18 bit)

Impedance (each channel)		
	Frequency range	100 µHz to 100 kHz
	Impedance mode	PEIS and GEIS (simultaneous measurement of full- and half-cell impedances)
	Impedance range	1 mΩ to 100 MΩ
	EIS quality indicator	SFDR (Spurious Free Dynamic Range)
	EIS drift correction	yes
	EIS adaptive amplitude	yes

Other		
	Additional data input (each channel)	(I^{2}C) sensor signal (e.g. for cell temperature) Analog sensor signal(e.g. for gas pressure)
	Calibration	Fully automatic self-calibration with internal voltage reference and three internal calibration cells
	Cell Identification	PAT-Button with unique serial number stored in EEPROM
	Software features	Experiment designer, Cell and material management with database, Script editor, Live data monitoring, Analysing and reporting capabilities