



# BTX<sup>®</sup>

a division of Harvard Bioscience, Inc.

## AgilePulse™ PLUS Bipolar Transfection System



### HIGH EFFICIENCY TRANSFECTION IN VITRO OR IN VIVO

Easily perform advanced transfection protocols with multiple groups of pulses—each with separate parameters, with the BTX AgilePulse PLUS waveform generator. This system is ideal for high efficiency transfection of mammalian cells, including difficult to transfect cell types, such as stem cells and primary cells. It is also suitable for scale up to large volume electroporation for applications such as large-scale creation of engineered cells and large-scale protein expression. AgilePulse PLUS offers the flexibility to be used in combination with BTX specialty electrodes for in vivo and adherent cell electroporation.

### APPLICATIONS

- Suspension and adherent cell transfection
- Large volume electroporation
- CAR-T cell production
- CRISPR gene editing
- Intradermal, intramuscular, and intratumor delivery
- Animal immunization and vaccine research

### FEATURES AND BENEFITS

- Program up to 5 groups of pulses with separately defined pulse number, voltage, pulse length, interval, and polarity—within each group.
- Direct scale up from standard low-volume cuvettes to large-volume chambers—transfect up to a billion cells in suspension per sample.
- Incorporate bipolar switching into your electroporation protocols for convenient, more efficient in vivo transfection protocols—pulse chains in each group may be defined as +, -, or flip (+→- or -→+) polarity.
- Maximum number of pulses per protocol increases to 100 pulses.
- Compatible with all BTX specialty electrodes for adherent cell electroporation, intradermal electroporation, intramuscular electroporation and other in vivo transfection applications.



Australian distributors:  
Fisher Biotec Australia  
free call: 1800 066 077  
email: [info@fisherbiotec.com](mailto:info@fisherbiotec.com)  
web: [www.fisherbiotec.com](http://www.fisherbiotec.com)



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Specifications	
<b>Pulse Program Specifications</b>	
<b>Voltage Range</b>	100 to 1200 VDC
<b>Pulse Width Range</b>	0.05 to 10 ms
<b>Pulse Interval Range</b>	0.2 to 1000 ms
<b>Number of Pulses per Group</b>	1 to 10
<b>Group Interval Range</b>	0.2 to 1000 ms
<b>Polarity Settings for each Group</b>	Positive, Negative, Flip Positive → Negative, or Flip Negative → Positive
<b>Number of Pulse Groups</b>	1 to 5
<b>Other Specifications</b>	
<b>User Interface</b>	Capacitive Touchscreen Display
<b>Data Export*</b>	USB thumb drive
<b>Input Voltage and Frequency Ratings</b>	100 to 240 VAC, 50/60 Hz
<b>Warranty</b>	2 years
<b>Storage Temperature</b>	-10°C to 70°C (14°F to 158°F)
<b>Operating Temperature</b>	4°C to 40°C (40°F to 104°F)
<b>Intended Use</b>	Indoor Use Only
<b>Operating/Storage Humidity</b>	20% to 80% RH, non-condensing
<b>Pollution Degree</b>	IP2X
<b>Insulation Category</b>	Category II
<b>Regulatory Certifications</b>	CE, ETL (UL, CSA), FCC, WEEE, EU and RoHS
<b>Physical Characteristics</b>	
<b>Dimensions W x H x D</b>	30.5 x 7.8 x 5.4 cm (12 x 6.25 x 14.5 in)
<b>Weight</b>	276 g (0.6 lb)

\*All data automatically stored in internal memory and may be downloaded to external USB Key. Maximum data logs stored and retrievable from internal memory >20,000.

## Ordering Info

Order No.	Description	Included Items
<b>AgilePulse PLUS Systems</b>		
<b>47-0600N</b>	AgilePulse PLUS Bipolar Transfection System	AgilePulse PLUS Generator, HV Output Cable 5 ft, F/F, Adapters, Extended Capacity Safety Stand, Cytoporation Medium T 4 mm Gap Cuvettes, and Cuvette Rack
<b>47-0601N</b>	AgilePulse PLUS Bipolar Transfection Generator Only	AgilePulse PLUS Generator, HV Output Cable 5 ft, and F/F Adapters
Order No.	Description	
<b>AgilePulse PLUS Accessories</b>		
<b>47-0610N</b>	Flatpack Safety Stand for AgilePulse PLUS	
<b>47-0620N</b>	Large Volume Chamber Stand for AgilePulse PLUS	
<b>47-0095</b>	5 ft HV Output Cable for AgilePulse PLUS	
<b>47-0096</b>	10 ft HV Output Cable for AgilePulse PLUS	
<b>47-0097</b>	Adapter, connects AgilePulse PLUS to AgilePulse MAX Safety Stands and Large Volume Chamber Stands	
<b>47-0098</b>	Adapter, connects AgilePulse PLUS to AgilePulse In Vivo Needle Array Handles	

Please visit [www.btxonline.com](http://www.btxonline.com) for a full list of accessories and consumables for AgilePulse PLUS.



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 Fisher Biotec Australia  
 free call: 1800 066 077  
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 web: [www.fisherbiotec.com](http://www.fisherbiotec.com)