



BEAM DIAGNOSTIC COMPONENTS

National Electrostatics Corp.

BPM Controllers

NEC offers a variety of BPM controllers to meet your needs based on the type of control needed (local or remote), the number of BPMs you want to control, and your need for variable gain control. These controllers interface the BPM amplifier with a display oscilloscope, which allows the signal from the BPM unit to be displayed on the oscilloscope.

The controllers have three functions:

- Selecting the BPM unit (for multi- unit controllers)
- Controlling gain
- Turning the motor on/off

For systems without an NEC control system including AccelNET and ACT/CAMAC, NEC offers four controllers. For systems with NEC control systems, please contact NEC for further options.



FP3A – for local control of a single BPM unit

The Model FP3A controller is a local single unit controller. It allows the signal from a single BPM unit to be displayed on an oscilloscope. It contains the on/off control, fiducial pulse shaping circuit, adjustable trigger signal, and 10X gain change control.



SS5A – for local control of up to 12 BPM units

The model SS5A controller is a local multi-unit controller. It allows selection of any one of 12 BPM units for display on an oscilloscope. As with the FP3A, the SS5A contains the on/off control, fiducial pulse shaping circuit, adjustable trigger signal, and 10X gain change control.



SS7 – for local control of up to 8 BPM units with variable gain control

The model SS7 controller is a local multi-unit controller like the SS5A. However, the SS7 allows for variable (6 possible options) gain control. It allows selection of any one of 8 units for display on an oscilloscope, contains the on/off control, fiducial pulse shaping circuit, and adjustable trigger signal.



SS6 – for remote control of up to 12 BPM units

The model SS6 controller is a remote multi-unit controller with remote inputs to switch the fiducial and collector signals to be displayed on the oscilloscope. This selection is done via a 24 V signal. The controller does not include on/off or gain control. A customer provided control system is needed for those controls.

	FP3A	SS5A	SS7	SS6
Control	Local	Local	Local	Remote
Selection of BPM Units	1	12	8	12
On/Off Control	Yes	Yes	Yes	No
Gain Control	X1/X10	X1/X10	Variable (6)	Variable (6) *
Input	120 VAC or 240 VAC, 50/60 Hz	120 VAC or 240 VAC, 50/60 Hz	120 VAC or 240 VAC, 50/60 Hz	120 VAC or 240 VAC, 50/60 Hz
Output	+24 VDC power on status control to amplifier +24 VDC high gain status to amplifier Z-axis intensification signal Oscilloscope trigger signal	+24 VDC power on status control to amplifier +24 VDC high gain status to amplifier Z-axis intensification signal Oscilloscope trigger signal	+24 VDC power on status control to amplifier +24 VDC high gain status to amplifier Z-axis intensification signal Oscilloscope trigger signal	+24 VDC power on status control to amplifier* Z-axis intensification signal Oscilloscope trigger signal
Compatible Preamp	Preamp II	Preamp II	Preamp 7A or 8	Preamp II**, 7A, or 8

* When used with customer control system

** Controllers used with Preamp II will not be able to use variable gain feature. X1/X10 gain available only.

Contact NEC

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