

Beam Profile Monitor Controllers

Three models of beam profile monitor controllers are available. These controllers interface the BPM amplifier with a display oscilloscope.

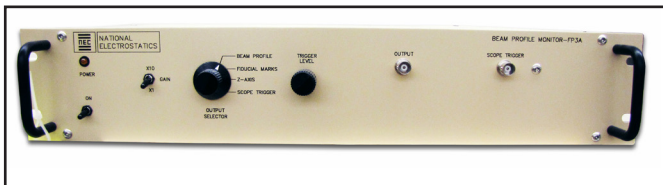
DESIGN

All three of the beam profile monitor controllers contain the fiducial pulse shaping circuit. The fiducial marks generated by the controller indicate the center of the beam tube. They appear as bright spots on the oscilloscope display.

The controllers also produce the oscilloscope trigger signal and control the on/off power relays for the amplifier and motor on each BPM unit.

Model FP3A

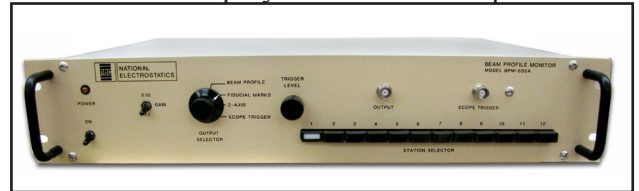
The Model FP3A controller is a single unit controller. It allows the signal from a single BPM unit to be displayed on an oscilloscope. It contains the on/off control, fiducial pulse shaping circuit, adjustable trigger signal and 10X gain change control.



Model FP3A single unit controller.

Model SS5A

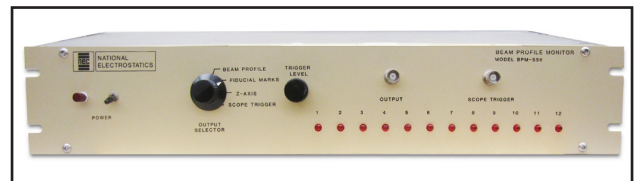
The Model SS5A is a multi-unit controller with connectors and switching for 12 BPM units. In addition to the features of the FP3A, the SS5A has 12 switches to allow selection of any one of 12 BPM units for display on an oscilloscope.



Model SS5A multi-unit controller.

Model SS6

The Model SS6 multi-unit controller selects the collector and fiducial signals to be displayed on an oscilloscope. The selection of any one of up to 12 BPM units is done via a 24V signal. The front panel has 12 LED lights, which indicate the BPM unit selected. The BPM enable and gain signals are not connected to this controller. The user must provide these signals directly to the BPM preamps.



Model SS6 multi-unit controller.

When ordering additional BPM units, it is recommended that the type of controller already in use be specified. This will assure compatibility between the existing controller and BPM amplifier.

Beam Profile Monitor Controllers

The BPM controllers interface the BPM amplifier with a display oscilloscope.

- Model FP3A:** Single unit controller → controls one BPM only
- Model SS5A:** Multi-unit controller → allows switching between 12 BPM units
- Model SS6:** Multi-unit controller → BPM collector and fiducial switching via a 24V control signal

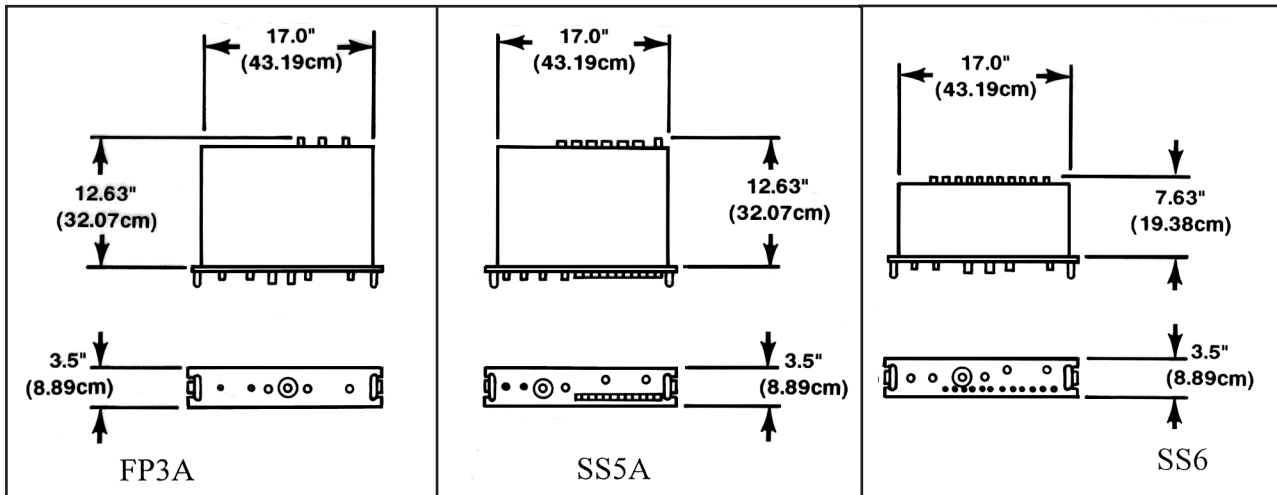
SPECIFICATIONS:

- Input:** 120 VAC or 240 VAC, 50/60Hz
- Output:** +24 VDC - power on status control to amplifier
+24 VDC - high gain status to amplifier (FP3A, SS5A)
Z-axis intensification signal. Oscilloscope trigger signal.
- Controls:** Power on/off, trigger level adjust, 10X gain control (except SS6) and output display selector
SS5A: 12 station selector switches
SS6: 12 LED station selector indicators

Display signal monitoring requires external oscilloscope with Z-axis intensification and simultaneous remote triggering capability.

Digital Oscilloscope Recommendations:

- Time Base:** 5 ms/div
 - Band Pass:** at least 10kHz
 - Vertical Sensitivity:** 50mV to 5 V/dir
- Analog oscilloscope can be used if it has simultaneous z axis intensification and remote trigger



ORDERING INFORMATION

FP3A: 2HA014080

SS5A: 2HA014840

SS6: 2HA076680

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[BPM Cont v3]

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