

mesytec **MSI-8-PT** is a compact 8 channel preamplifier with $\pm 5V$ preamp output, a timing filter output and an additional differential preamplifier output. It uses the same preamp cards as MSI-8 and adds a buffer / timing filter card instead of the Shaper card for MSI-8.

Features:

- Gain adjustable by Jumper at preamp x5.
- 8 channel compact standalone module
- Preamplifier modules individually selectable
- Two buffered Lemo outputs per channel: preamplifier and timing filter output.
- Differential preamplifier output per channel. Can be terminated with 100 Ohm.
- Single and common detector bias
- All outputs can be terminated with 50 Ω
- Lemo connectors for in- and outputs



System Design

Preamplifier inputs

- Lemo connectors directly situated on the preamplifier module

Detector bias

- Lemo connectors directly situated on the preamplifier module
- Connect bias switches allow to select a channel group to be commonly biased. (Bias inputs of this group are connected). This allow easier cabling.

Pre amplifier outputs

- Lemo connector
- Positive, or negative preamplifier pulse, maximum amplitude ± 4 V unterminated, ± 2.0 V terminated.

Timing output

- Lemo connectors
- Fast negative signal (standard band width limit $RC = 7$ ns)
- Max ± 4 V unterminated ± 2.0 V terminated

Differential outputs

Each preamplifier channel has an extra differential output. Maximum amplitude ± 1.8 V. Can drive differential terminated 100Ohm lines.

Power supply

- SUB-D 9 female connector. (NIM convention)
- Supply voltages (currents for box with 8 shapers and 8 preamps)

+12 V 150 mA
 +6 V 50 mA
 -6 V -100 mA
 total power: 3 W

Pulser input

- Tail pulse, or square pulse
- Internally terminated with 50Ω
- Sensitivity marked on the box

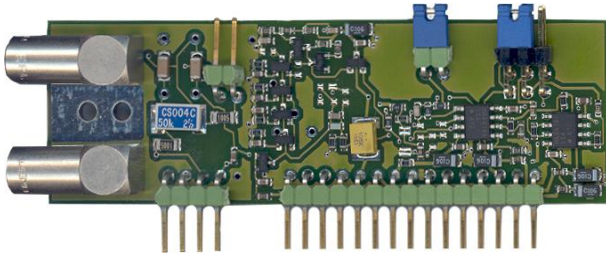
- Pin connections (numbers are noted on the connector):

pin	name	pin	name
1	Gnd	6	Not connected
2	Gnd	7	Not connected
3	+6 V	8	Not connected
4	+12 V	9	Not connected
5	-6 V		

Box size

length = 170 mm
 width = 105 mm
 height = 67 mm

Preamp Module (MMPR-1)



Input

- The standard pre amplifiers can handle a detector capacity of up to 1000 pF

Detector bias

- Maximum bias voltage: ± 400 V
- Bias filter 10 M Ω / 50 M Ω (selectable by internal jumper)

Sensitivity

Attenuator switch by factor of 5

Power consumption

- Low power: typ 150 mW
- cooling not necessary

For details see data sheet of MMPR-1