

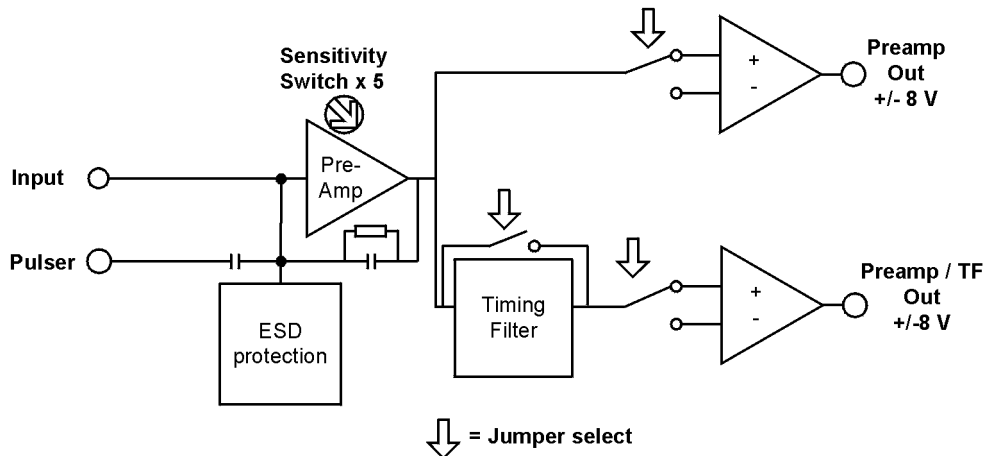
The mesytec **MPR-1-PMT** is a charge integrating preamplifier module. It provides two outputs which can be jumpered to different or same polarity. One can be configured as timing filter output. Both can drive terminated BNC cables. The sensitivity can be changed by a factor of 5 via front panel switch. This helps to get larger signals at low charge deposition.

Features:

- Ni-plated, fully shielded case
- ESD input protection
- Positive and negative input charge
- Pulser input
- Two outputs
- Strong output driver for 50 Ω (optional 93 Ω) termination
- Fast risetime ($t < 5$ ns)
- Two sensitivities (switch selectable)
- Switchable timing filter
- Low power



Schematics:



Technical Data:

Standard range:

Number of electrons max
 Switch low sensitivity: $2 \cdot 10^{10}$ electrons = 3.2nC.
 Switch high sensitivity: $4 \cdot 10^9$ electrons = 0.6nC.
 All values for ± 8 V output.

Other ranges on request.

Preamplifier:

- ESD protected
- Positive and negative charge can be amplified equally.
- Temperature drift $< \pm 50$ ppm/ $^{\circ}$ C
- Nonlinearity < 50 ppm
- Energy rate capacity $3.2 \cdot 10^{-5}$ C/s
- Risetime of energy and timing output typ 20ns.

Pulsar input

- Tail pulse, rise-time $TR=0..100$ ns, decay time typ. 500 μ s
- Terminated with 50 Ω
- Amplitude: max 10V.
- Charge terminator capacity: 220 pF

Output stage:

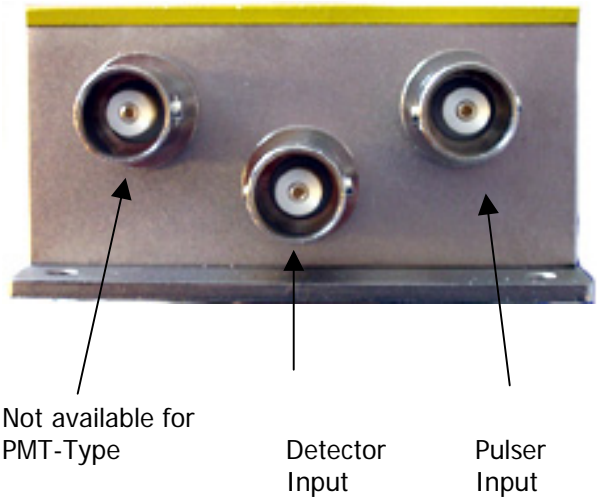
- Positive and negative output for single or differential use. Optional: same polarity, or one output with timing filter. (Customer selectable via internal switches)
- Output amplitude: 0 to ± 8 V
- Decay time $TD = 50 \mu$ s

Input capacity:

- The preamplifier can handle capacities of more than 1000 pF.
- Preamp input capacity typ. 10 nF.

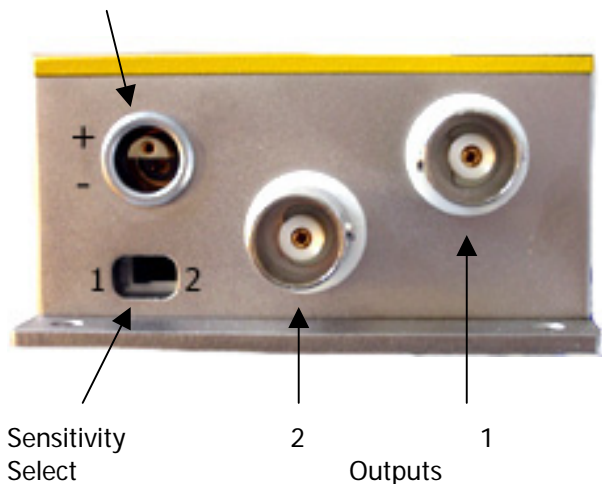
Input side:

BNC connectors



Output side:

Power



Output 1: polarity + or -
 Output 2: Polarity + or -, optional Timing filter

Power consumption:

- +12 V, 40 mA + output current
- -12V, 30 mA + output current

Power connector:

needed plug:
 Lemo: FFA.0S.303.CLAC44ZN.
 Lemo to SubD9 cable included at delivery

Dimensions:

- 60 mm * 143mm * 30mm
including connectors.
- Weight: 240 g