

**CB200B - CHARGE SENSITIVE PREAMPLIFIER**

The preamplifier CB200B is a low noise charge sensitive preamplifier. Fast timing and small size make this preamplifier excellent module for small charged particle detectors or laboratory measurements. The preamplifier is optimized for high input capacitance ( up to 1000pF). The module has bias input (up to 3KV) and protection circuit to avoid breakdown of the input of the preamplifier circuit.

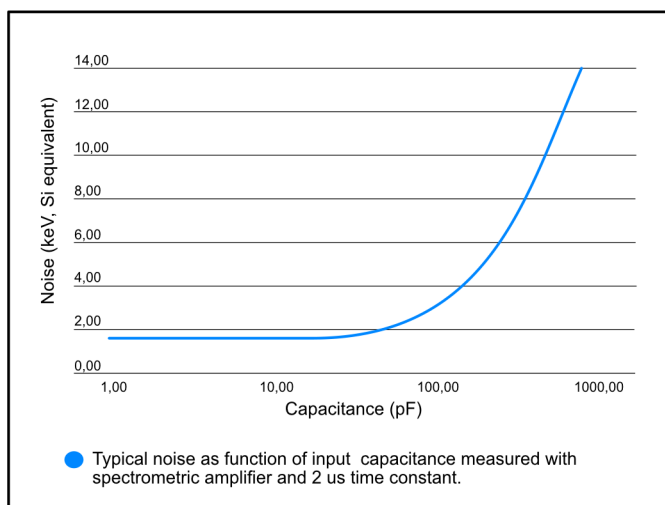
Model	Charge sensitivity (Si Equivalent)	Max. Noise (KeV/(Si)) (Cin=0pF)	Energy range
CB200B	60 mV/MeV	< 1,2 KeV	0-130 MeV

**PERFORMANCE**

Decay time	150 $\mu$ s
Dynamic input capacitance	Up to 1000 pF
Noise/Input capacitance ratio	< 9 e <sup>-</sup> /pF
Integral nonlinearity	0,1% (without termination)
Dynamic output range	$\pm$ 7,5 V (without termination) $\pm$ 3 V (with 100 $\Omega$ termination)
Temperature stability	$\pm$ 100 ppm/C
Rise time	< 12 ns
Open loop gain	30,000
HV Bias resistor	50 Meg $\Omega$
Output resistors	100 $\Omega$
Test Capacitance	3 pF ( $\pm$ 3%)

## INPUT/OUTPUT

<b>Input</b>	Accepts positive or negative charge signal.
<b>Bias</b>	Voltage can be applied through SHV input connector. The serial resistance between input and bias connectors is 26 Meg $\Omega$ .
<b>Test</b>	Pulse input connector is BNC type connector. Test capacitance is 3 pF.
<b>Power</b>	Input power through 3m screened cable from spectrometric amplifier, NIM crate power supply or portable power supply.
<b>Energy</b>	Output negative or positive linear pulse. BNC connector.



## POWER SUPPLY REQUIREMENTS

The best solution is alimentation from a NIM standard power supply or special low noise linear power supplies.

P. Voltage (V)	Current/ch (mA)
+24	19,6
-24	10,0
+12	10,0
-12	11,6

Power supply pin out:

Pin number	
7	+24 V
6	-24 V
4	+12 V
9	-12 V
1	Ground
2	Ground

## BOX DIMENSIONS

box dimensions	111x80x40 mm
weight	0,5 kg
cable length	3 m

