

CB200C Charge sensitive preamplifier.

The preamplifier **CB200C** 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 3 KV) and protection circuit to avoid breakdown of the input of the preamplifier circuit.



GENERAL :

Model	Charge sensitivity (Si Equivalent)	Max. Noise (keV/(Si) (Cin = 0pF)	Energy range
CB200C	80 mV/MeV	<1 KeV	0-100 MeV

Note: Noise characteristics see Fig.1.

PERFORMANCE

INPUTS/ OUTPUT

Decay time	100 us	INPUT	accepts positive or negative charge signal.
Dynamic input capacitance:	up to 1000 pF	BIAS	voltage can be applied through SHV input connector. The serial resistance between input and bias connectors is 26 MegOhm.
Noise/Input capacitance ratio:	<9 e-/pF	TEST	pulse input connector is BNC type connector. Test capacitance is 3,3 pF.
Integral nonlinearity:	0,1 % (without termination)	POWER	input power through 3 meter screened cable from spectrometric amplifier or portable power supply.
Dynamic output range :	+/- 7,5 V (without termination). +/-3 V(with 100 Ohms termination).	ENERGY	output negative or positive linear pulse. BNC connector.
Temperature stability:	+/- 100 ppm/C.		
Open loop gain:	30,000		
Output resistors:	100 Ohm		
Test Capacitance:	3,3 pF (+/-3%).		

POWER SUPPLY REQUIREMENTS:

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

Power supply pin out:

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

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

Box dimensions: 111x80x40 mm

Cable length 3 m.