

CB200PC Charge sensitive preamplifier.

The preamplifier **CB200PC** is a low noise charge sensitive preamplifier with very high gain 6 V/pC. Fast timing and small size make this preamplifier excellent for module 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
CB200PC	160 mV/MeV	<0,6 KeV	0-50 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 56 MOhm.
Noise/Input capacitance ratio:	<8 e-/pF		
Integral nonlinearity:	0,1 % (without termination)	TEST	pulse input connector is BNC type connector. Test capacitance is 3,3 pF.
Dynamic output range:	+/- 7,5 V (without termination). +/-3 V(100 Ohms termination).		
Temperature stability:	+/- 100 ppm/C.	POWER	input power through 3 meter screened cable from spectrometric amplifier, NIM crate power supply or portable power supply.
Open loop gain:	30,000		
Test Capacitance:	3,3 pF (+/-3%).	ENERGY	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.

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.