

CB200C4 - 4 CHARGE SENSITIVE PREAMPLIFIER

The preamplifier CB200C4 is low noise charge sensitive preamplifier. CB200C4 series has four fixed gain values. 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.

In module C200C4 are housed four PCB boards of CB200 preamplifier that has only ±12 Volt power supply voltage.

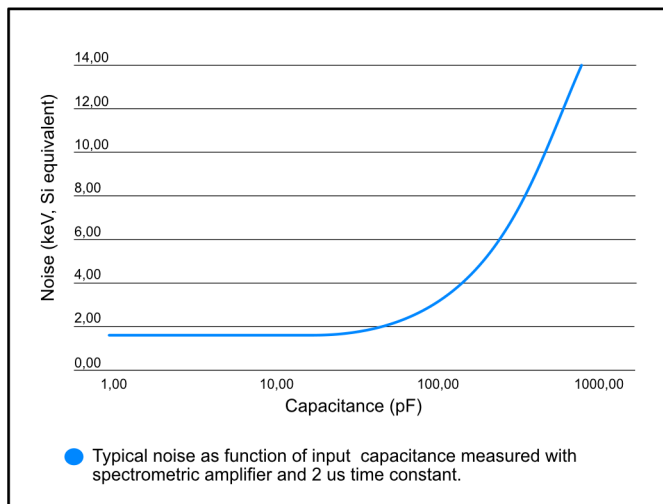
Model	Charge sensitivity (Si Equivalent 3,62)	Max. Noise (KeV/(Si)) (Cin=0pF)	Energy range
CB200C	45 mV/MeV	< 1,5 KeV	0-200 MeV
CB200C2	20 mV/MeV	< 1,5 KeV	0-400 MeV
CB200C3	12 mV/MeV	< 1,9 KeV	0-600 MeV
CB200C7	5,5 mV/MeV	< 1,9 KeV	0-1200 MeV

PERFORMANCE

Decay time	CB200C	100 μs
	CB200C2	200 μs
	CB200C3	165 μs
	CB200C7	350 μs
Dynamic input capacitance	Up to 1000 pF	
Noise/Input capacitance ratio	CB200C	9 e ⁻ /pF
	CB200C2	10 e ⁻ /pF
	CB200C3	12 e ⁻ /pF
	CB200C7	14 e ⁻ /pF
Integral nonlinearity	0,03% (without termination)	
Dynamic output range	± 7,5 V (without termination) ± 3 V (with 100 Ω termination)	
Temperature stability	± 100 ppm/C	
Rise time	< 20 ns	
Open loop gain	30,000	
HV Bias resistor	26 MegΩ	
Output resistors	100 Ω	
Test Capacitance	3 pF (± 3%)	

INPUT/OUTPUT

Input	Accepts positive or negative charge signal.
Bias	High voltage can be applied through SHV input connector. The serial resistance between input and bias connectors is 26 Meg Ω .
Test	Pulse input connector is LEMO type connector. Test capacitance is 3 pF.
Power	Input power through 3m screened cable from spectrometric amplifier or portable power supply.
Energy	Output negative or positive linear pulse. LEMO type 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)
+12	90,0
-12	70,0

Power supply pin out:

Pin number	
4	+12 V
9	-12 V
1	Ground
2	Ground

BOX DIMENSIONS

box dimensions	111x80x40 mm
weight	0,78 kg
cable length	3 m

