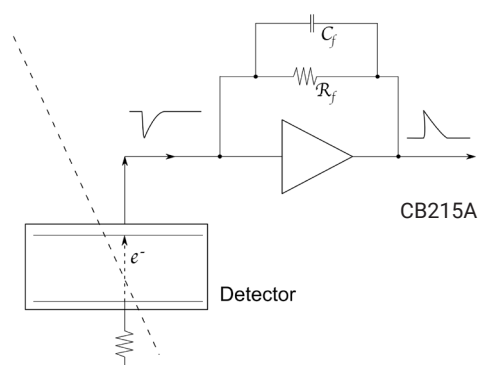




CB215A - CHARGE SENSITIVE PREAMPLIFIER

The preamplifier CB215A is a low noise charge sensitive preamplifier. CB215A series has four fixed gain values. The preamplifier is optimized for high input capacitance (up to 1000pF). The module has bias input (up to 5KV) and protection circuit to avoid breakdown of the input of the preamplifier circuit.

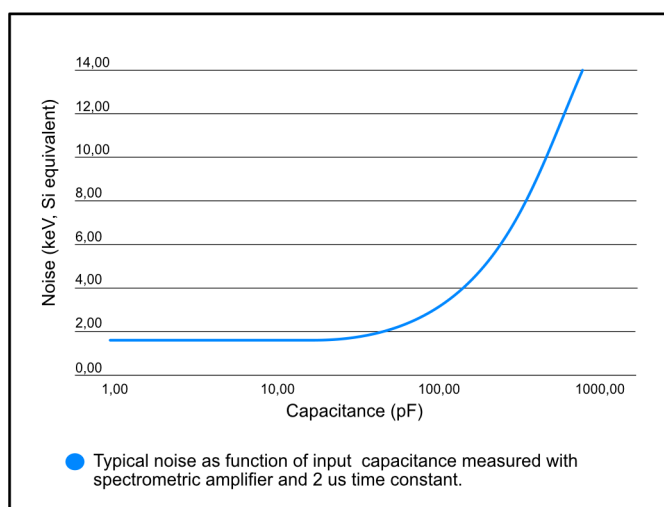
Model	Charge sensitivity (Si Equivalent)	Max. Noise (KeV/(Si)) (Cin=0pF)	Energy range
CB215A	40 mV/MeV	< 1,5 KeV	0-266 MeV
CB215A2	20 mV/MeV	< 1,5 KeV	0-532 MeV
CB215A3	12 mV/MeV	< 1,9 KeV	0-800 MeV
CB215A7	5,5 mV/MeV	< 1,9 KeV	0-1600 MeV

PERFORMANCE

Decay time	CB215A	100 μ s
	CB215A2	200 μ s
	CB215A3	165 μ s
	CB215A7	350 μ s
Dynamic input capacitance	Up to 1000 pF	
Noise/Input capacitance ratio	CB215A	9 e ⁻ /pF
	CB215A2	10 e ⁻ /pF
	CB215A3	12 e ⁻ /pF
	CB215A7	14 e ⁻ /pF
Integral nonlinearity	0,1% (without termination)	
Dynamic output range	$\pm$ 10 V (without termination) $\pm$ 5 V (with 100 Ω termination)	
Temperature stability	$\pm$ 100 ppm/C	
Rise time	< 12 ns	
Open loop gain	40,000	
HV Bias resistor	Up to 5 kV/ default value 3 kV through 26 Meg Ω	
Output resistors	N/S	
Test Capacitance	3 pF ($\pm$ 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 BNC type connector. Test capacitance is 3 pF.
Timing output	Unipolar inverted signal, 50 Ω termination, LEMO connector
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. Input power through 3m screened cable from amplifier or portable power supply.

P. Voltage (V)	Current/ch (mA)
+24	19,6
-24	10,0
+12	20,0
-12	20,6

Power supply pin out:

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

BOX DIMENSIONS

version 1 (one channel)	111x80x40 mm
weight	0,5 kg
cable length	3 m

