

**CB234 - PREAMPLIFIER/DISCRIMINATOR**

The CB234 is a preamplifier/discriminator module. It specially has been designed for processing fast high count rate output pulses from electron multipliers. The dead time is selectable in six steps to allow for a precise dead time correction. The threshold can be set from 3 up 255 counts. The module is housed in small RF-shielded case. Optional version with  $\pm 12$  Volt alimentation increase input signal protection range.

**PERFORMANCE**

Working input range	3 - 250 mV
Safe operating without damage	$\pm 5$ V (optional version $\pm 12$ V)
Threshold, adjustable in 256 counts	3 - 250 mV
Pulse width (FWHM)	5 - 30 ns (About 0,5xdead time)
Count rate	up to $2 \times 10^6$
Accuracy	5%
Dead time switch selectable	10-20-30-40-50-60 ns
Output NIM standard (optional version)	-0,7 V (14 mA)
Output amplitude (open circuit )	4 V
Output amplitude (50 $\Omega$ termination)	1,5 V
Temperature stability (full range)	1%
Temperature range	0-50C

**INPUT/OUTPUT**

- Input** LEMO style connector (optional version BNC style). Input impedance DC coupled 50 Ω.

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- Output** LEMO style connector (optional version BNC style).

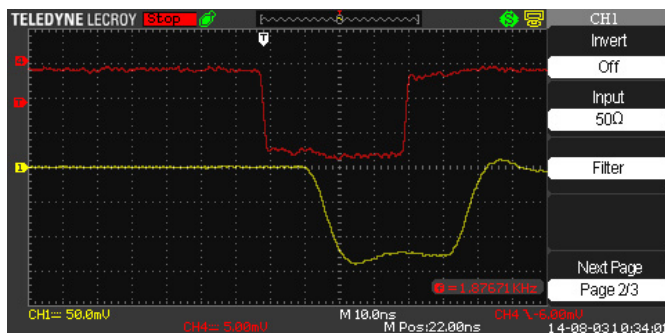


Fig.1 - Test signal of input preamplifier CB234 before discriminator 12 mV input signal.



**POWER SUPPLY REQUIREMENTS**

The best solution is alimentation from a NIM standard power supply or special low noise linear power supplies like DCB101.

P. Voltage (V)	Current/ch (mA)
+6	38.5 (26 mA for optional version)
-6	38,5 (26 mA for optional version)
+12	12,5 (optional version)
-12	12,5 (optional version)

Power supply pin out:

Pin number	
7	NC
6	NC
4	+12 V
9	-12 V
1	Ground
2	Ground
3	+6 V
5	-6 V
8	NC

**BOX DIMENSIONS**

box dimensions	111x80x40 mm
weight	0,4 kg
cable length	3m