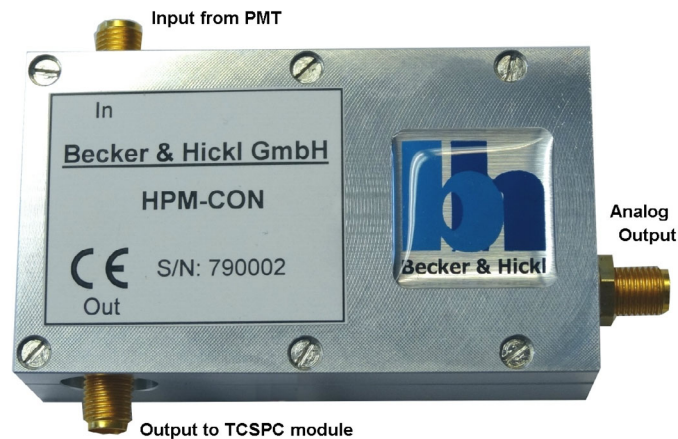




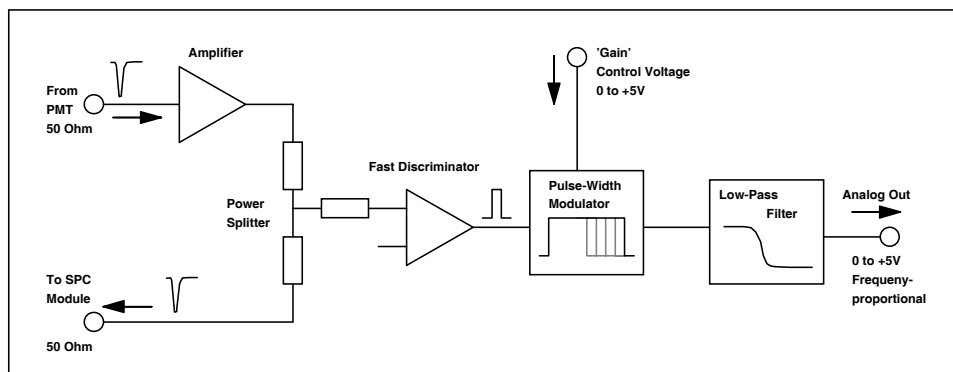
Frequency-to-Analog Converter for PMT Pulses

The HPMCON module converts the single-photon-pulse sequence of a photon-counting detector into an intensity-proportional analog signal.

- Input pulse amplitude -30 mV to -200 mV
- Input pulse width down to 500 ps
- Inserts directly in detector output pulse line
- Compatible with bh PMT modules and hybrid detectors
- Input pulse rate up to 10^7 pulses per second
- Output voltage range 0 to +4.9 V
- Power supply $\pm 5V$ from bh SPC or DCC module



Principle



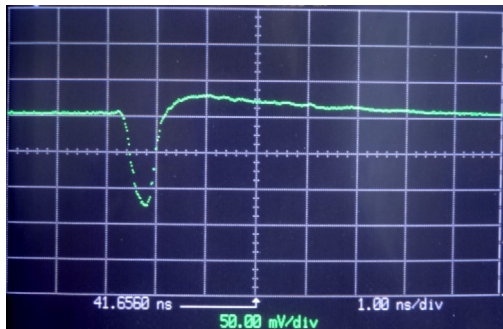
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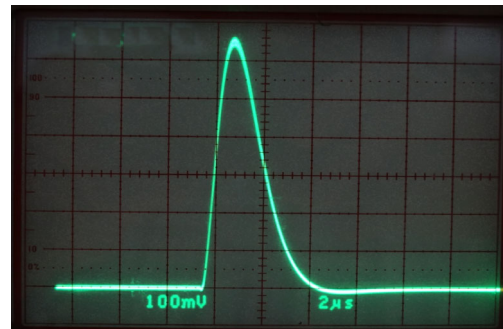
HPMCON-02

Specifications

Input pulse amplitude		-30 to -200 mV
Input pulse width		600 ps to 10 ns
Gain from PMT In to OUT		1 to 1.5
PMT In and OUT connectors		SMA
PMT in and PMT out impedance		50 Ω
Output amplitude for single photon	$V_{gain}=1V$	650 mV
	$V_{gain}=5V$	180 mV
Output pulse width for single photon		2 μs
Output voltage, $F_{in}=100kHz$	$V_{gain}=1V$	0.13 V
	$V_{gain}=5V$	0.03 V
Output voltage, $F_{in}=1MHz$	$V_{gain}=1V$	1.35 V
	$V_{gain}=5V$	0.34 V
Output filter response time		2 μs
Maximum load at output		1 k Ω
Output connector		SMA
Gain control voltage		0 to +5V, or potentiometer 250k Ω from +5V into V_{gain}
Gain control characteristic		Gain = $1/V_{gain}$
Impedance of gain control input		2 k Ω
Power supply	+5V	90 mA
	-5V	152 mA
Power supply connector		Mini-USB



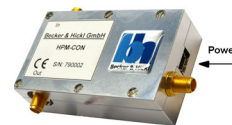
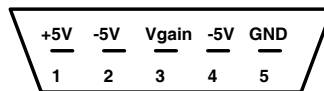
Output to SPC, Input pulse with 500 ps,
Input pulse amplitude 100 mV



Output signal for a single photon. Gain control voltage
 $V_{gain} = 1V$

Pin assignment of Mini-USB Connector

Power supply is provided at SUB-D connectors of SPC and DCC modules



Related Products:

- HPM-100 hybrid detectors, PMC-100 PMT modules
- SPC-130, SPC-130EM, SPC-150, SPC-830 TCSPC modules
- Simple-Tau TCSPC systems
- DCS-120 confocal scanning FLIM systems

bh International Sales Representatives



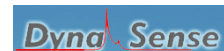
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