

## PULSE PREAMPLIFIER/DISCRIMINATOR WMT PAD 01A

### Description:

This low cost preamplifier is designed for pulse counting of typical input signals from electron multipliers like channel electron multipliers (CEMs) or photo multiplier tubes (PMTs).

Theoretical maximum count rate is  $10^7$  pulses per second, dead time and output pulse width are entirely independent of threshold setting and overdrive, but change slightly ( $\pm 10\%$  max) with rate. The primary application therefore is pulse counting at not too high rates (some  $10^5 \text{ s}^{-1}$ ), for higher rates and precise setting of threshold WMT PAD06 is recommended.

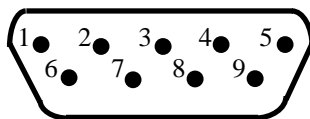
### Characteristics:

**Input signal:** negative pulse, -3 mV to -1V  
safe area without damage:  $\pm 3 \text{ V}$   
width: 5 ns to 20 ns (FWHM)  
rate: up to  $5 \times 10^5 \text{ s}^{-1}$   
resistance: 50  $\Omega$ , dc-coupled (standard), HV-ac-coupling (3 kV max.) optional upon request  
threshold: -3 mV to -100 mV, screwdriver adjustable

**Output signal:** positive pulse  
resistance: 50  $\Omega$   
amplitude: 2.2 V into high Z load, 1.1 V into 50  $\Omega$   
pulse width: 40 ns  $\pm$  10 ns  
dead time: 80 ns  $\pm$  20 ns

**Power Supply:** + 6 V  $\pm$  5 %, 24 mA typ. (no signal, no load)  
- 6 V  $\pm$  5 %, 14 mA typ.

**Connectors:** signal: for dc-coupling input and output BNC female,  
for HV-ac-coupling input BNC-HT female, output BNC female  
power: 9-pin D-Sub, male



pin 1: GND  
pin 2: GND  
pin 6: + 6 V  
pin 7: - 6 V  
pins 3, 4, 5, 8, 9 unconnected

**Temperature range:** 10  $^{\circ}\text{C}$  to 40  $^{\circ}\text{C}$  for specified data, 0  $^{\circ}\text{C}$  to 70  $^{\circ}\text{C}$  operating

**Case:** 89  $\times$  35  $\times$  30 mm<sup>3</sup>, aluminum

The above data are typical. Measured data are provided with each unit.