

# counter/timer module CT2 data sheet



## 1 description

The **CT2** counter/timer module converts a PC into a high performance pulse counting instrument. The module has a 32 bit count capability and includes a microcontroller and RS232 interface to communicate with a host computer. Software supplied with the module makes the **CT2** perform a sequence of count rate measurements as programmed by the user. The **CT2** is supplied with software allowing measurements to be made immediately following switch-on. An ActiveX control driver is also provided to allow users to develop their own control software using LabView, Visual Basic, etc. A lead set including pc cable, power and control connectors is included.

## 2 applications

- for counting all sources of TTL pulses but specifically all **Electron Tubes** TTL photon counting packages and TTL amplifier-discriminators
- direct current measurements may be made by using the **Electron Tubes** current to frequency converter IF1

## 3 features

- 100 MHz capability
- trigger input for synchronous counting
- accepts TTL input
- two user outputs
- easily configured as a laboratory ratemeter
- results easily exported

## 4 operating modes

The following operating modes are available with the software application provided:

- continuous readings
- fixed number of readings
- continuous readings - trigger high
- fixed number of readings - start on falling edge trigger

The supplied software provides 0-32000 readings with the option for external level triggering, or 0-125 readings with edge triggering.

## 5 additional equipment required

supply voltage	+4.75 to 5.5 V
PC	any PC with free RS232 serial port and Windows 98®, 2000, XP

## 6 user manual

A comprehensive manual giving installation, start up software and programming procedures is supplied on CD-Rom with every **CT2** module.



## 7 characteristics

<b>power supply</b>	
connector	2.1 mm power socket
voltage	+4.75 to 5.5 V
current	60 mA max at 5 V
<b>signal input</b>	
connector	BNC socket
<b>levels</b>	TTL
edge speed	125 mV /ns min, 0.8 to 2.0 V
minimum pulse width	5.0 ns
pulse pair resolution	8.3 ns
maximum frequency*	100 MHz
sample time	10 ms to 300 s
<b>RS232 interface</b>	
connector	9 pin D-socket
baud rate	9600
format	no parity, 8 data bits, 1 stop bit
<b>user interfaces</b>	
connector	Hirose 6 pin chassis plug Hr10-7R-6P
trigger input	TTL
out 1	TTL; sink 20 mA, source 80 µA
out 2	open drain FET**
<b>general</b>	
weight	175 g
dimensions	76 x 45 x 67 mm

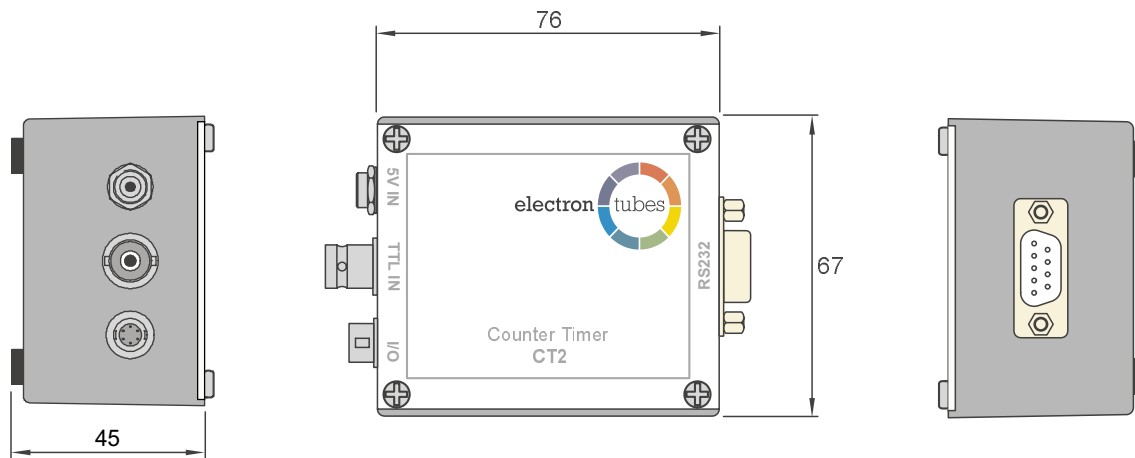
\* with ultra fast photomultipliers, and using dead time correction

\*\* sink 60 mA, on resistance 0.45 Ω max.

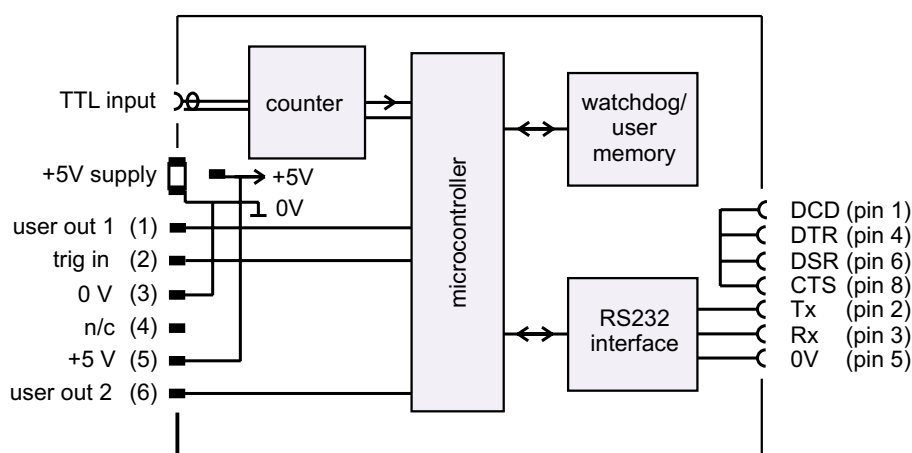
## 8 ordering information

<b>CT2</b>	boxed electronic module and lead set
<b>CT2PSU</b>	universal ac power adaptor for use worldwide

## 9 external dimensions (mm)



## 10 functional diagram



## 11 typical application illustrating the CT2 coupled to a photon counting photomultiplier assembly

