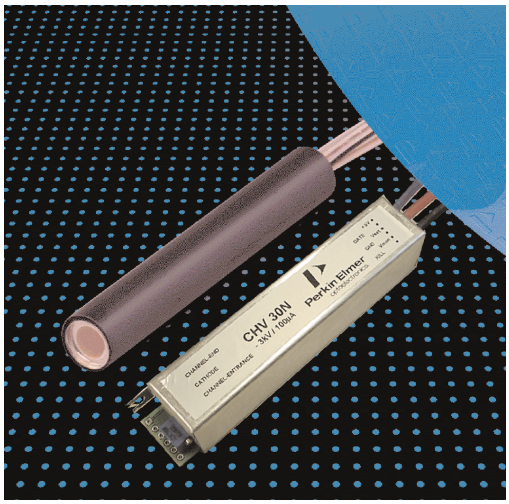
CHV 30N

CPM High Voltage Power Supply



Description

The CHV 30N is a self contained high voltage supply, specially designed for the Channel Photomultiplier CPM C900, C1300 and C1900. It provides the matching voltages for the cathode, the channel entrance and channel end. Beside, the module is prepared to switch the potential between the two high voltages via an external TTL-pulse, in order to protect the CPM from over exposure or to apply a gating function.

PerkinElmer™
optoelectronics.

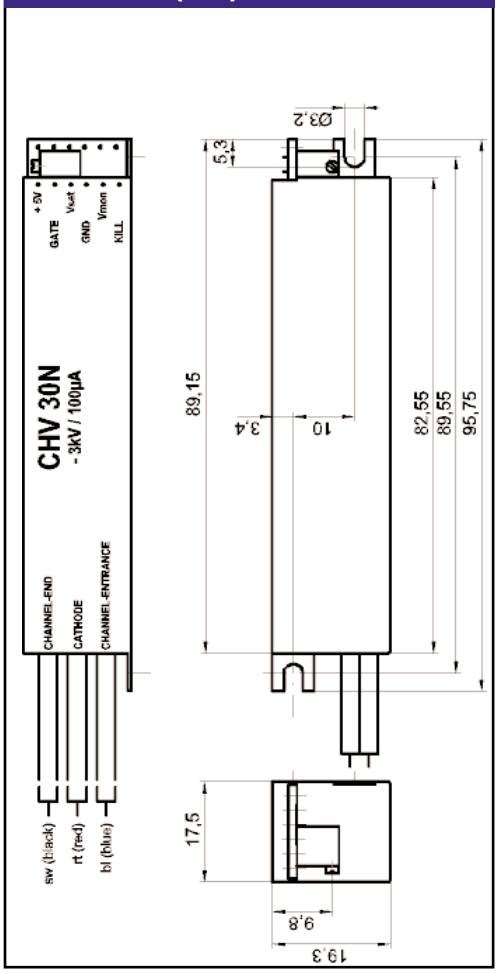
CVN 30 Power Supply

Technical Specifications

parameter	name	min *)	max *)	typ *)	units	conditions
Voltage channel-entrance	$V_{ch\text{-}ent}$	0	-2900		V	V_{set} = 0 ... 2.9 V
Voltage cathode	V_{cat}	0	-3000		V	V_{gate} = low or open
Output current	I_{ch}		100		µA	
Long term stability				< 1E-5		@ V_{set} << 1E-5
Stability $\Delta V_{ch\text{-}ent}$				< 1E-4		versus V_{in} and I_{ch}
Temperature coefficient				< 5E-5 / K		
Ripple				< 50	mV_{pp}	
Gate voltage V_{gate}		***V1*** **)	***V2*** **)	***V3*** **)		
(TTL-level required	TTL-level low to high	-0,9	-1,9	-2,9	kV	@ $V_{ch\text{-}ent}$
min 2.5 volts)		-1	-2	-3	kV	@ V_{CA}
**)*(Values for varies*		-0,88	-1,8	-2,75	kV	to V_{CA}
output voltages	Time	< 150	< 170	< 200	µs	
V1, V2, V3)	high to low	-0.88	-1.8	-2.75	kV	@ V_{CA}
		-1	-2	-3	kV	to V_{CA}
	Time	< 150	< 170	< 200	µs	
Channel- entrance-. voltage to control voltage	$V_{ch\text{-}ent}$-V_{set}			0 ≤ $V_{ch\text{-}ent}$ ≤ 2900	V	Vset = 0 to 2.9 V
Monitor voltage	V_{mon}			V_{mon} = 0 to 2.9 V	V	0 ≤ $V_{ch\text{-}ent}$ ≤ |2900| V
Switching voltage - Vkill	$V_{kill\ off}$			$V_{ch\text{-}ent}$ = 0: t_{off} ~ 900ms	V	V_{kill} < 0.8 V:
	$V_{kill\ on}$			$V_{ch\text{-}ent}$ = V_{set}: t_{on} ~650 ms		V_{kill} > 4 V or open:
Switching current	I_s			< 50	µA	
Supply voltage	V_{in}	5	5,5	5	V	
Current consumption	I_{ch}			< 3	mA	HV_{off}
				< 90	mA	$HV_{max}/I_{ch=0}$
				< 180	mA	HV_{max}/I_{chmax}
Weight			45		g	
Operating temperature		0	50		°C	
Storage temperatur		-20	60		°C	

*) Not valid for V_{Gate}

Dimensions (mm)



CAUTION: HIGH VOLTAGE WARNING

This product operates at high voltage. Extreme care must be taken to ensure operator safety and to avoid damage to other instruments. Avoid direct contact with the entrance window of the built in CPM when high voltage is applied. Avoid placing conductive material close to the cathode. Ensure that no light levels are applied, generating higher anode currents than specified.
All given values are nominal/typical @ 20 °C ambient temperature; specification subject to change without notice

USA:
PerkinElmer Optoelectronics
2175 Mission College Blvd.
Santa Clara, CA 95054
Phone: (408) 565-0850
Fax: (408) 565-0793

EUROPE:
PerkinElmer Optoelectronics GmbH
Wenzel-Jaksch-Str. 31
65199 Wiesbaden
Germany
Phone: +49 611 492 534
Fax: +49 611 492 578

ASIA:
PerkinElmer Optoelectronics
47 Ayer Rajah Crescent #06-12
Singapore 139947
Phone: +65 775 2022
Fax: +65 775 1008

PerkinElmer™ optoelectronics.