

DSN 102



Dual SPAD Power Supply

- Two channel power supply for Single Photon Avalanche Diodes (SPAD)
- Integrated counter
- Acoustic monitoring and warning
- Safety shut-down to prevent SPAD degradation
- Stand-alone version or OEM module for 19" subrack



Applications

- General photon counting
- Time-resolved spectroscopy
- Fluorescence Lifetime Imaging (FLIM)
- Confocal fluorescence microscopy
- Single Molecule Spectroscopy (SMS)
- Fluorescence Correlation Spectroscopy (FCS) and Förster Resonance Energy Transfer (FRET)

Dual SPAD Power Supply

The dual SPAD power supply DSN 102 is an accessory for the SPCM-AQR(H) SPAD detectors of Excelitas Technologies, the PDM modules from Micro Photon Devices (MPD), the COUNT modules from Laser Components and the τ -SPAD from PicoQuant. It controls and monitors the operation of the detectors. The DSN 102 can control two SPAD modules at the same time, displaying the count rate of one selected module.

The DSN 102 is also equipped with an automatic protection circuitry that shuts down the supply voltage to the modules when critical exposure levels to light are reached. While this is not a critical issue for the PDM modules, it is an absolute must for the SPCM-AQR(H) modules and suggested for the COUNT and τ -SPAD modules. In such a case the DSN 102 gives an acoustic warning.

For further diagnostics and detector adjustment there is also a BNC output for an oscilloscope or other monitoring device. The voltage at this output is proportional to the log count rate. In addition, an acoustic count rate monitor output e.g. for use with speakers or earphones is provided. The DSN 102 in its OEM version is an installation module (3 U, 160 mm depth) designated to fit into a 19 inch subrack. The stand-alone version is supplied in a small table-top rack, equipped with the appropriate AC power supply.

Specifications

Detector Input		
Pulse width		> 20 ns
Pulse height		> 2.3 V
Electrical Parameters		
High shut-down count rate (factory set)	PDM SPAD: 8×10^6 counts/sec	
	SPCM-AQR(H) SPAD: 4×10^6 counts/sec	
	COUNT SPAD: 4×10^6 counts/sec	
	τ -SPAD: 4×10^6 counts/sec	
Oscilloscope output		max. 2 V
Acoustic output		> 120 Ohms
Connectors		
SPAD power socket		LEMO EEG 2B (5 pin)
Appropriate male connector		LEMO FGG 1B 302 C Type
Input/output SPAD		female SMA
Oscilloscope output		female BNC
Acoustic output		3.5 mm earphone socket
Power Requirements		
	Stand-alone version	OEM version
Voltage	110 to 240 V, 50/60 Hz	13.5 V, stabilized at ± 5 %
Power/current consumption	max. 35 Watts	max. 3 A
Dimensions		
	Stand-alone version (incl. rack)	OEM version (3 U/21 HP)
Width	237 mm	106 mm
Depth	310 mm	173 mm
Height	133 mm	129 mm

All Information given here is reliable to our best knowledge. However, no responsibility is assumed for possible inaccuracies or omissions. Specifications and external appearances are subject to change without notice. Trademarks or corporate names are used for explanation and identification, to the owner's benefit and without intent to infringe.

© PicoQuant GmbH, October 2011



PicoQuant GmbH
Rudower Chaussee 29 (IGZ)
12489 Berlin
Germany

Phone +49-(0)30-6392-6929
Telefax +49-(0)30-6392-6561
Email info@picoquant.com
WWW <http://www.picoquant.com>