

Description

The SDS232 SMB Distribution System provides electrical connectivity between Vertilon's PhotoniQ multi-channel PMT & APD data acquisition systems, and up to 32 charge output devices. Multiple single element PMTs and/or avalanche photodiodes are interfaced to the SDS232 through SMB male bulkhead jacks mounted to its front panel. The SDS232 through a connector on its back panel, is connected to the PhotoniQ using a multi-channel, micro-coaxial cable that conforms to Vertilon's standard sensor interface board mating system. This separately ordered cable utilizes Vertilon's low-noise, interconnection method where 32 coaxial connections are made using a single plug.



The SDS232 is useful in PET and SPECT nuclear imaging as well as other applications such as high energy physics and radiation detection where multiple single element photomultiplier tubes or avalanche photodiodes are employed. New high gain solid-state devices like silicon photomultipliers (SPM) and multi-pixel photon counters (MPPC) are easily connected to the SDS232. Having performance approaching PMTs but in a single silicon package, these novel devices combine the small size, low voltage operation and robustness of APDs, with the high gain and stability of PMTs. The SDS232 is particularly well-suited for use with SensL's SPM devices and Hamamatsu's S10362-11 series of MPPCs.

Specifications	
Description	Specification
Maximum Charge Signal	2 nC with IQSP480/482, 500 pC with IQSP580/582
Input Noise Charge (RMS)	30 fC with IQSP480/482, 55 fC with IQSP580/582
Crosstalk	< -84 dB
Enclosure Width	9.843 in. (250 mm)
Enclosure Height	3.346 in. (85 mm)
Enclosure Depth	10.236 in. (260 mm)
Panel Connector Type	SMB Male Bulkhead Jack
Compatibility	Models: IQSP480, IQSP482, IQSP580, IQSP582

Front Panel View



Rear Panel View



Typical Setup



The photo shows an SDS232 connected to a PhotoniQ IQSP480 32-channel PMT / APD data acquisition system. Two channels of the SDS232 are connected to single element silicon photomultiplier (SPM) devices.



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