

Power supply unit for SiPMs

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The barrel detector (BD) is used for selection of AA-collisions on centrality. For this purpose, a threshold on a number of fired channels of both detectors is set in the fast interaction trigger in the T0U module. The scintillation light produced by charged particles is detected on a single end of a strip by SiPM Micro FC-60035-SMT from Sensl which is directly connected with the strips.

The 16-channel power supply (PS) unit for SiPMs have been designed. Each channel of SiPM PS unit has parameters as follow: the output voltage range is 0 –30.2 V with step of $dV = 7.4$ mV; reading back of the actual channel voltage value with accuracy of $dV = 7.4$ mV; max output current is 50 mA.

A special control software has been developed for this units. This software has following features: setting of the voltage values in channels, read-out of the actual value of channel voltages and settings reading back. The control software also allows to create configuration files of voltage settings for different run conditions, to save them and to upload these settings back to the power supply unit.

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