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(54) **ELECTRONIC MEASURING DEVICE AND METHOD OF CONVERTING SERIAL DATA TO PARALLEL DATA FOR STORAGE USING THE SAME**

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See application file for complete search history.

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(57) **ABSTRACT**

An electronic measuring device includes a detection channel module, a sampling module, a control unit, a data path selector and a memory device. A user will be able to selectively enable the desired detection channels and store only data collected from enabled channels. The data collected from the detection channels are in serial data form. The device utilizes a serial-parallel shifter in its sampling module to convert the serial data to parallel data bytes. Two indicators in the storage unit of the memory device allow users to effectively store the parallel data bytes in designated locations. The innovative data conversion and storage methods of this invention will significantly conserve memory space that otherwise will be occupied by data from the disabled channels and allow accurate and efficient reading of the stored data.

6 Claims, 7 Drawing Sheets

