

Title (en)  
DEVICE AND METHOD FOR ULTRASONIC MEASUREMENT OF A FLUID FLOW RATE COMPRISING A SIGMA-DELTA BAND PASS ANALOG-TO-DIGITAL CONVERTER

Title (de)  
VORRICHTUNG UND VERFAHREN ZUR ULTRASCHALLSTRÖMUNGSMESSUNG MIT EINEM BANDPASS-SIGMA-DELTA-ANALOG-DIGITAL-WANDLER

Title (fr)  
DISPOSITIF ET PROCEDE DE MESURE ULTRASONORE DE DEBIT DE FLUIDE COMPORTANT UN CONVERTISSEUR ANALOGIQUE NUMERIQUE SIGMA-DELTA PASSE BANDE

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Application  
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Abstract (en)  
[origin: FR2787880A1] The invention concerns a device for ultrasonic measurement of a fluid flow rate comprising a first and a second transducer (1, 2) placed in the fluid whereof the flow is to be determined. Said device comprises means for processing (21) an analog signal coming from the receiving transducer, designed to transform it into a digital signal used for determining the fluid flow rate. Said means processing (21) the analog signal comprise a Sigma-Delta band pass converter including a passband loop filter (22) whereof the input is connected to said receiving transducer output, an analog-to-digital converter (24) whereof the input is connected to said loop filter (22) output, said analog-to-digital converter output (24) forming the digital output of said analog-to-digital converter output (21), and a digital-to-analog converter (26), forming a feedback loop, connecting the analog converter (24) output to said loop filter input (22). In a preferred embodiment, the band pass loop filter (22) of the Sigma-Delta band pass converter consists of the receiving transducer.

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