Microelectronic frequency converter for pressure measurement contains three resistors, a DC voltage source, a blocking capacitor, and a bipolar transistor. It incorporates a single-gate field-effect transistor, a dual-gate field-effect transistor, two resistors, a capacitor, and a pressure-sensitive capacitor, wherein the first terminal of the DC voltage source is connected to the first terminal of the first resistor, the first terminal of the blocking capacitor, the drain of the single-gate field-effect transistor, and the first terminal of the fourth resistor. The second terminal of the first resistor is connected to the channel of the single-gate field-effect transistor and to the second terminal of the capacitor, the first terminal of which is connected to the drain and gate of the single-gate field-effect transistor, to the first terminal of the second resistor, and to the drain of the dual-gate field-effect transistor, which is connected to the second gate of the dual-gate field-effect transistor, the first gate of which is connected to the second terminal of the fourth resistor. The second terminal of the DC voltage source is connected to the second terminal of the blocking capacitor, the second terminal of the fifth resistor, the first terminal of which is connected to the first terminal of the pressure-sensitive capacitor and connected to the base of the bipolar transistor. The first terminal of the fifth resistor is connected to the second terminal of the second resistor and to the first terminal of the third resistor, the second terminal of which is connected to the source of a dual-gate field-effect transistor and the emitter of the bipolar transistor, whose collector is connected to the second terminal of the pressure-sensitive capacitor, the second terminal of the fifth resistor, the second terminal of the blocking capacitor, and the second terminal of the DC voltage source, all of which are connected to ground.