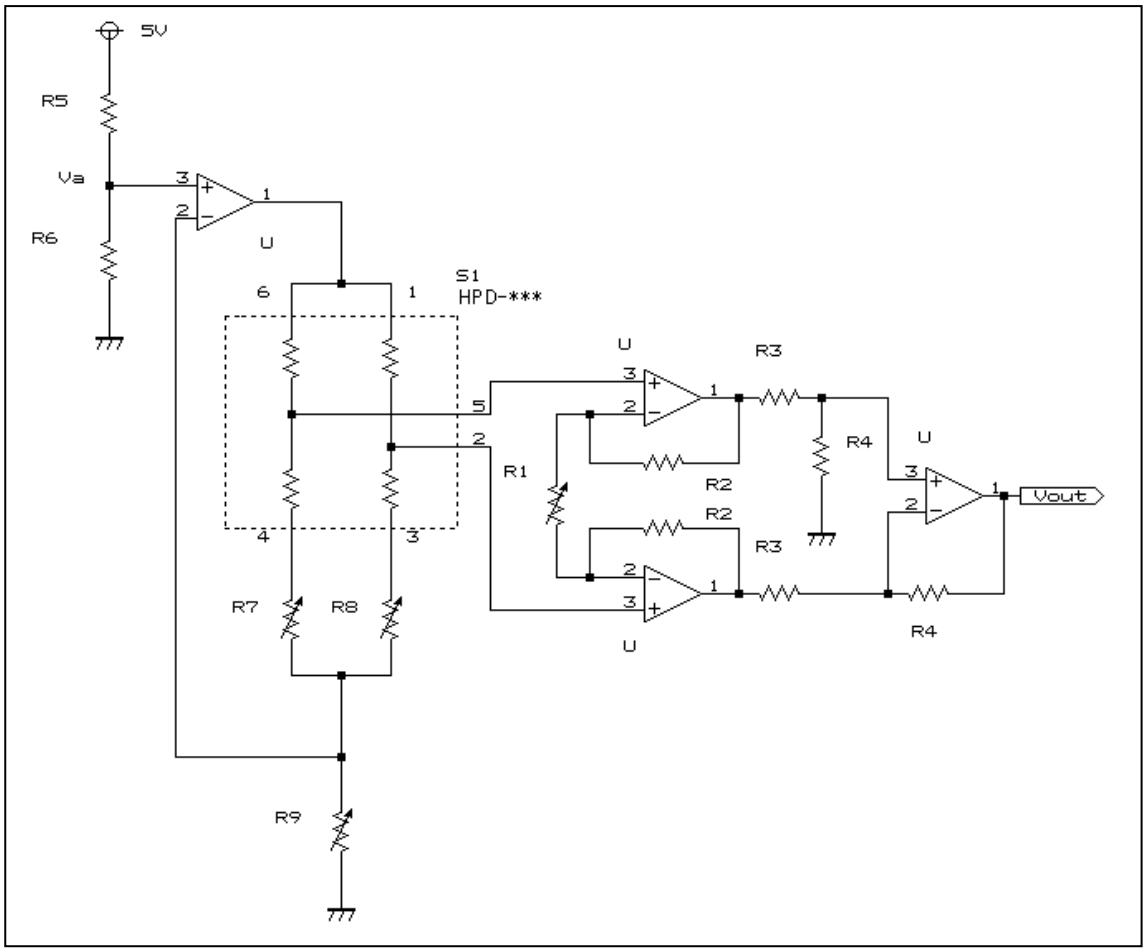
Application circuit example



■Amplifier circuit

The output voltage of the pressure sensor (HPD series) is about 1mV / kPa,
which is a very small voltage when measuring a small pressure.
Therefore, it is recommended to use a differential amplifier circuit as described above to
amplify the output in order to ensure reliable circuit operation.
For your reference, the post-amplification output calculation formula for this circuit is shown below.

$$Vout = Vin \bullet \frac{2R_2 + R_1}{R_1} \bullet \frac{R_4}{R_3}$$

The gain can be adjusted with R1 (or R3).
Vout is the output value after amplification, and Vin is the output value of the sensor element.

Constant current drive
It is recommended that the sensor be driven at a constant current of 1.5mA.
The setting can be adjusted with R9.
Idrv=Va/R9

Offset adjustment
It is recommended to adjust the offset voltage at 0 kPa.
The adjustment can be adjusted with R7 or R8.

Note: The sensor output should be received with high impedance.