DEVELOPMENT OF A MATRIX OF TACTILE PRESSURE SENSORS FOR ROBOTIC SYSTEMS

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This article describes the process of developing a tactile sensor for robotic systems, which is a matrix of pressure sensors. Such sensors are necessary for the implementation in robotic manipulators of tracking touch and the degree of pressure on moving objects. To implement the pressure sensor, analogue Hall sensors (magnetic field sensors) and permanent magnets mounted in an elastic matrix were used. The sensor consists of a matrix of magnetic field sensors located close enough to each other. This will allow you to determine some parameters of the shape of the investigated object.

The work shows the connection diagram of the tactile sensor sensors, the results of studies of the dependence of the output signal on the degree of pressure on the sensor and the algorithms of the program for interrogating and visualizing data from the sensor matrix. The use of this tactile sensor along with intellectual data processing will allow to determine the shape and properties of the studied object.

Keywords: Hall sensor, tactile sensor, analog sensors.

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