

ABSTRACT

SURGEON INPUT DEVICE FOR MINIMALLY INVASIVE SURGERY

A surgeon input device (400) for controlling a robotic surgical system (100) is disclosed herein. The surgeon input device (400) comprising a housing (401) and at least one sensor (407) disposed within the housing (401). The at least one sensor (407), in operative communication with an electromagnetic signal transmitter (307), configured to detect at least one of a position and orientation of a surgeon's hand within a predefined electromagnetic field generated by the electromagnetic signal transmitter (307). The surgeon input device (400) further comprising at least one button (403) protruding out of the housing (401), where the at least one button (403) configured to open and close an end-effector of a surgical instrument and at least one sensor (409) disposed within the housing (401), where the at least one sensor (409) configured to detect a compression and decompression of the at least one button (403) and send a signal via a sensor wire (405) to a control system to regulate opening and closing of the end effector of the surgical instrument.

Figure 4(a)