

ABSTRACT

SURGEON INPUT DEVICE FOR MINIMALLY INVASIVE SURGERY

The invention relates to a surgeon input device (300) to be used by a surgeon to control robotic surgical instruments in a minimally invasive surgery procedure. The surgeon input device (300) comprises a housing (302), a pinch button (304), and a clutch button (306). A sensor (310) is disposed within the housing (302) detects compression and decompression of the pinch button (304), by the surgeon's finger. A multiple infrared (IR) sensors (308a), (308b), (308c) may be configured within the housing (302) to detect the presence of surgeon's hand. A sensor (314) is operably coupled to an electromagnetic wave generator (130) and 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 wave generator (130) and send a signal to a console processor (118). The clutch button (306) allows the repose of the hand of the surgeon and lets the surgeon be in a comfortable position, without moving the surgical instrument.

Figure 4