

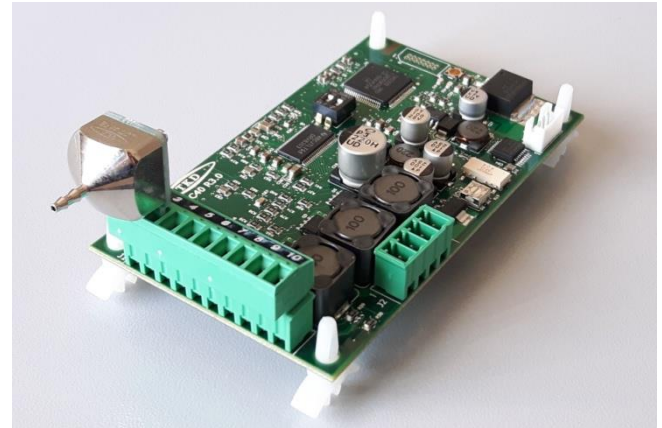


TeKne Dental

Application Notes

PPOT PNEUMATIC POTENTIOMETER

March 2017



DESCRIPTION

The PPOT pneumatic potentiometer can be directly connected to the main connector of the BMC40 electronic board and its special linear air pressure sensor allows easy speed control of the DEFINITIVE[®] brushless electric motor by means of air pressure.

CONNECTION

The PPOT has got three pins and must be connected to pins 1, 2 and 3 of the J1 connector of the BMC40 electronic board. **The one marked “GND” must be connected to pin 1 and the one marked “5V” must be connected to pin 3** (as shown on figure). Please pay attention not to reverse its position otherwise the sensor will break. A derivation of the variable air pressure coming out from the pneumatic (foot) control must be connected to the PPOT input. Motor speed is directly proportional to such air pressure.

CONTROL SPEED

Once connected to the BMC40 electronic board, **the AUTO mode must be selected by setting the FIRST DIP SWITCH on.** When using air pressure to control speed, **the EXP mode is recommended** (rather than LINEAR mode): this mode will allow a more accurate control at the lower range of speed. **The EXP mode can be selected by setting the SECOND DIP SWITCH on.**

At power-up, the BMC40 electronic board will test and recognize the PPOT potentiometer and the selected modes.

With the PPOT, motor start-up procedure is activated as soon as air pressure to its input is equal or greater than 0.8 bar (80 kPa). Maximum speed is reached when input pressure is equal or greater than 3 bar (300 kPa). Maximum input pressure is 8 bar (800 kPa). Viceversa, the motor is stopped as soon as air pressure to its input is less than 0.8 bar.

Minimum speed: 1000 rpm (@0.8 bar)

Maximum speed: 40000 rpm (@3.0 bar or more)

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