TCS MICROPUMPS: EQ12-M500

For use with all variants of the M500 including S, 180 degree, Waterproof and Submersible.
(Patents Pending, Quality Assured ISO 9001, RoHS compliant)

INTRODUCTION

The TCS EQ12 driver board is a small lightweight device that can be installed in-line with the M500 pump to enable power and control via a standard DC power supply.

Using the EQ12 driver the M500 can be used on voltages up to 12v.

The input voltage can be varied to adjust the performance of the pump.

The EQ12 driver is highly efficient, small and lightweight and can be quickly and easily installed into the smallest spaces in a vast range of laboratory, prototype and production equipment.
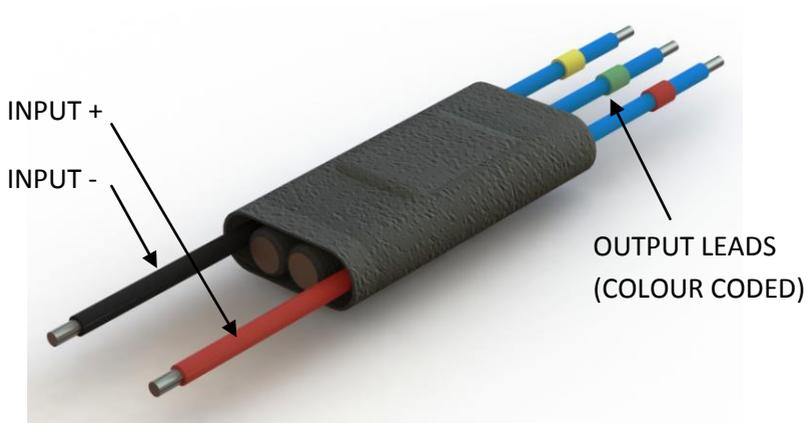
ELECTRICAL CONNECTION

Voltage: up to 12 DC
Input: Red lead +VE:
             Black lead –VE
Output: 3 wire DC Sensorless Brushless Motor
             (colour coded to match the M500 Micropump wires)

1. Connect the 3 output wires of the EQ12 to the corresponding 3 wires on the M500 Micropump. Both the wires on the controller and those on the pump are colour coded Yellow/Green/Red to ensure correct connection.
2. Connect the Red/Black input wires to the power source.

TCS suggest that you begin testing with a supply voltage of 12v.

Note.
When power is applied there is a 4 second delay before the pump runs while the electronics carry out a diagnostics check. Following a successful check the pump will start.

INPUT +

INPUT -

OUTPUT LEADS
(COLOUR CODED)

Adjusting Pump performance

Overall pump performance can be adjusted by varying the supply voltage.

Lower voltage	=	Lower flow / pressure
Higher voltage	=	Higher flow / pressure (Max 12v)

Further fine tuning can be made by restricting the outlet of your pump using a fixed jet restriction or with flexible tubing and an adjustable clamp.

Note
The M500 pump can be run even with the outlet completely blocked. Pressure inside the pump will increase; yet load on the drive motor will reduce as flow is reduced.

Mounting

The EQ12 should be bonded or fixed to a suitable surface.

Notes on Operation

The EQ12 is not waterproof and if used with a M500 submersible or waterproof pump it must be installed so that it is protected from the liquid.
DO NOT immerse the EQ12.