

# Quantum Production Limited

Unit 25, Wornal Park Estate, Menmarsh Road, Worminghall, Nr. Aylesbury, Bucks.  
HP18 9PH. England.

TELEPHONE NUMBER +44 (0) 1844 339993

FAX NUMBER: +44 (0) 1844 339996

---

## Appendix A. Replacing the Sensor-Battery Pack in QFM330.

When replacing a Sensor-Battery Pack, five steps must be taken

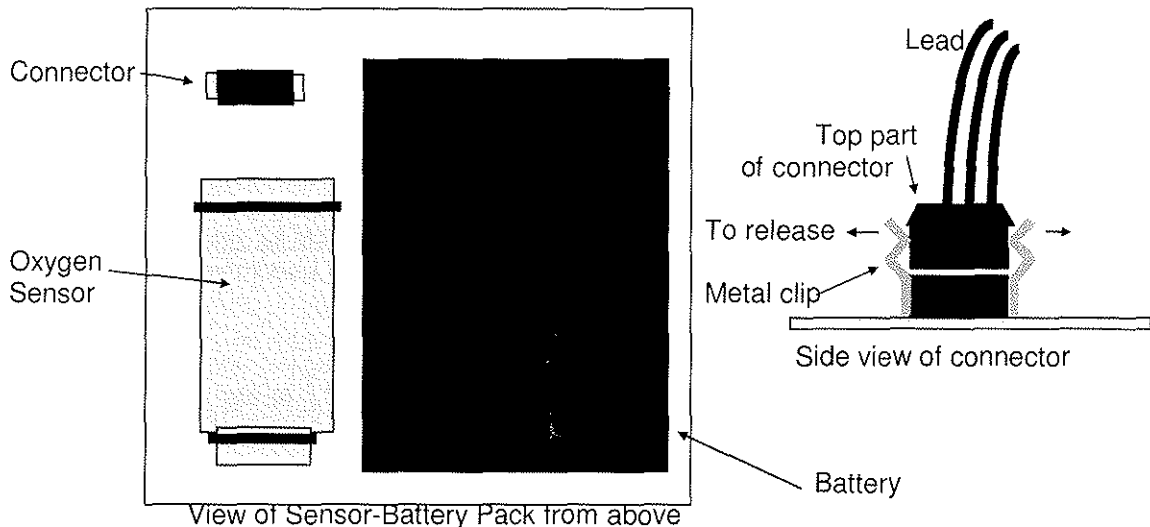
- 1] The old Sensor-Battery Pack must be removed
- 2] The new Sensor-Battery Pack must be fitted
- 3] The QFM330 monitor must be calibrated
- 4] The QFM330 monitor must be tested.
- 5] The new 'Replace Sensor-Battery Pack by:....' label must be fitted.

### 1] Removal of the old Sensor-Battery Pack.

The four corner screws retaining the base panel of the QFM330 must be unscrewed carefully (cross point screwdriver No.1) and the panel removed. Take care to prevent the old Sensor-Battery Pack from falling out.

When the base panel has been removed the Sensor-Battery Pack will slide out of the bottom of the QFM330. The lead must now be carefully disconnected from the Pack by separating the metal clips and pulling gently on the top part of the connection.

**Do NOT pull on the wires of the lead.**



### 2] Fitting the New Sensor-Battery Pack

Check that the 'Replace by..' date of the new Pack being inserted has not expired. Carefully insert the connector attached to the red, white and blue wires of the QFM330 into the black connector of the Pack. The connector is polarised and so can only be fitted one way round. Do NOT force the two halves of the connector together.

When correctly fitted the two halves of the connector are held together by the metal clips which are both sides of the black connector of the Pack.

The Pack should carefully be inserted into the QFM330 in the direction indicated by the arrows on the pack (i.e. connector first). The edges of the board of the pack slide into slots in the QFM330. The pack is then held in place by fitting the base panel to the QFM330. When fitting the panel IT IS IMPORTANT TO ENSURE THAT THE PANEL IS THE CORRECT WAY ROUND AND THE CORRECT WAY UP.

When viewed from below and facing the QFM330, the white sensor filter should be visible on the outside and should be on the left side of the panel. (The sensor filter should coincide with the sensor on the Pack).

### **3] Calibrating the QFM330 after fitting a new Sensor-Battery Pack**

After fitting a new Sensor-Battery Pack (or after reconnecting any Sensor-Battery Pack) the QFM330 **must be left for a minimum period of 2 hours before an accurate calibration is performed.**

To perform a calibration:

First, fresh dry air (or test gas with a concentration of 20.8% oxygen in balance of nitrogen) must be admitted to the sensor filter for at least 60 seconds and whilst still subject to this, the calibration button on the top face of the QFM330 should be held down. A fine blade instrument screwdriver (or trimtool) should be used to adjust the brass coloured calibration screw (20 turn potentiometer) which is recessed beneath the top plate of the QFM330 to the left hand side of the socket. The calibration screw should be adjusted until both of the green lights are out (off) when the calibration button is pressed. If the upper 'Cal High' green LED is lit, rotate the screw Clockwise. If the lower 'Cal Low' green LED is lit, rotate the screw Anti-clockwise. (If both green LEDs are off when the calibrate button is first pressed, rotate the screw one way to make one of the green LEDs light and then rotate it back to turn the LED off again - this checks that the green LEDs are functioning.)

### **4] Testing the QFM330 after fitting and calibrating a new Sensor-Battery Pack**

This **must be performed following the calibration** of the QFM330 described in the section above.

A test gas of 18.0% oxygen (balance nitrogen) should be admitted to the sensor filter (ideally at a flow rate of 0.5 litre per minute). The 'Low Oxygen' and 'Critically Low Oxygen' red LEDs should both flash and the audible alarm bleep within 30 seconds.

When fresh air is admitted again to the sensor filter, the alarm indications should cancel within 60 seconds.

### **5] Fitting the new 'Replace Sensor-Battery Pack by ...' label**

This label is supplied loose with the replacement Sensor-Battery Pack. The backing paper should be removed and the self-adhesive label fitted should be fitted directly over the previous label (so that previous label is completely covered).