

## Information sheet & instructions for the Output Converter OC20

### 1. Description

The output converter OC20 derives a signal of 4-20mA, 0-20mA, or 0-1 volt from a nominal 0-1mA input. It is intended to be used in conjunction with Airflow's EDRA

anemometers or EDM2500 micromanometer. If used elsewhere it must be limited to equipment providing a constant current drive of 0-1mA only.

### 2. Specification

- 2.1 The OC20 is set to its 4-20mA range when manufactured against a load of 100 ohms. It can be used with loads from zero to 450 ohms and still maintain an accuracy of  $\pm 2\%$  of input signal. This figure can be improved by adjustment of potentiometers to relate the OC20 to actual load conditions. See section (4.1.).
- 2.2 The instrument is intended for use over the temperature range 0-40°C. The instrument is set at an ambient of

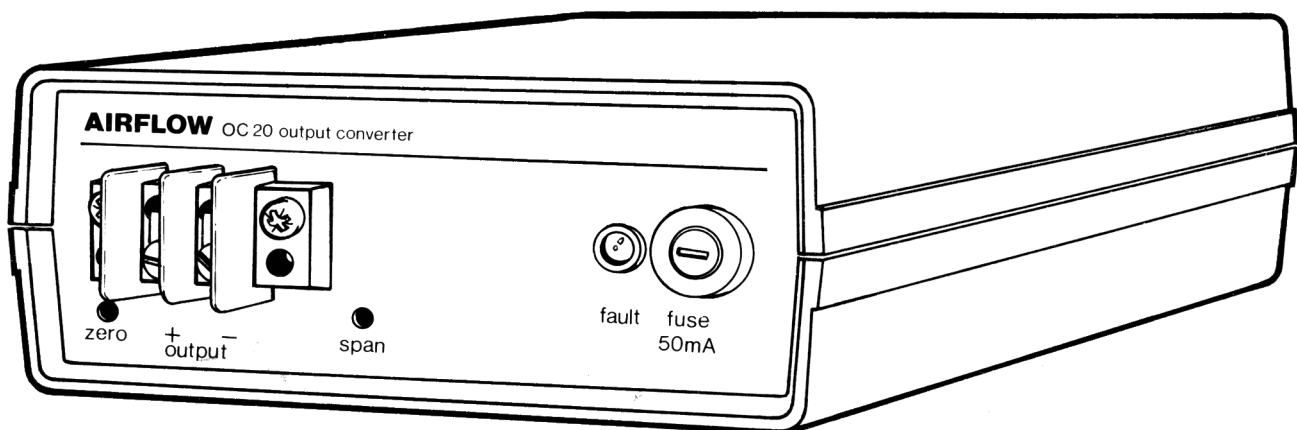
approximately 20°C.

- 2.3. Electrical Specification  
Supply 220/240V-1pH-50Hz  
Double Insulated

Fuses: Input 100mA, Output 50mA

- 2.4. Overall Dimensions  
Case: 135 x 130 x 60mm

- 2.5. Note 1. The OC20 does not have input/output voltage isolation.  
Note 2. The input impedance is approximately 1.6k ohms.



### 3. Installation

The OC20 is provided with a mains cable 1 metre long. Signal input to the OC20 is by cord 1 metre long fitted with a 3.5mm dia jack plug. The EDRA 5 requires a DIN speaker plug which is supplied with the anemometer. This plug must be connected as follows:— Round pin; positive to ribbed core. Flat pin;

negative to unribbed core.

A terminal block is provided for the output cord. A suitable twin conductor cord should be fitted under the terminals provided. The OC20 may be up to 100 metres from the monitoring equipment.

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## 4. Setting up the OC20

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The signal from the convertor can be varied by means of internal switches.

**DISCONNECT FROM MAINS SUPPLY BEFORE REMOVING THE COVER FROM THE ENCLOSURE**

4.1. 4-20mA output is provided with the switches in position. **1|2|3|4**

As stated earlier the OC20 is factory set in this configuration and against a load of 100 ohms. For greater accuracy against different loads adjust potentiometer marked 'zero' to read precisely 4mA on the monitoring equipment with an input signal of 0mA, and the potentiometer marked 'span' to precisely 20mA on the monitoring equipment with a signal input of 1mA. Load range of monitoring equipment zero to 450 ohms.

4.2. 0-20mA output is provided with the switches in position. **1|2|3|4**

For greater accuracy adjust 'zero' potentiometer to read precisely 0mA on

the monitoring equipment with a signal input of 0mA, and 'span' potentiometer to read precisely 20mA on the monitoring equipment with a signal input of 1mA. Load range of monitoring equipment zero to 450 ohms.

4.3. 0-1 volt output is provided with the switches in position. **1|2|3|4**

For greater accuracy adjust 'zero' potentiometer to read precisely 0 volts on the monitoring equipment with signal input of 0mA, and 'span' potentiometer to read precisely 1 volt on the monitoring equipment with a signal input of 1mA. Use of the 0-1 volt output facility assumes that a load resistance is to be used, and for correct operation this load must be at least 2500 ohms. The load resistance presented by the monitoring equipment should be found and the load adjusted accordingly. It is best to recalibrate if switches or loads are changed.

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## 5. Fault Finding

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**WARNING!**

The printed circuit board has components at mains voltage when the unit is switched on.

**DISCONNECT FROM THE MAINS SUPPLY BEFORE REMOVING THE COVER FROM THE ENCLOSURE**

5.1. Check the security of all cables, cords and terminal blocks before the following:

SYMPTOM	FAULT	SOLUTION
	Load in excess of 450 ohms	Reduce load
	Open circuit conditions	Check connection to monitoring equipment
LED on and blown output fuse	Powered load	Remove powered load and replace 50mA fuse
No output	Blown input fuse	Replace 100mA fuse

5.2. If fault persists return the instrument to Airflow Developments Limited, Service Department. Telephone (0494) 25252.

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