EPOCH
INSTRUMENTS & CONTROLS PRIVATE LIMITED

ELECTRONIC WEIGHING KIT

INTRODUCTION

Epoch electronic Aircraft weighing kit is designed primarily to cater the accurate weighing needs of aircraft and aerospace vehicles, but can be used for other precision weighing application as well as for the calibration of force generating machines. These kits are factory calibrated. Apart from this, test certificate from Government agencies like M/s. C.P.R.I or IISc will be provided.

Epoch combines state-of-the-art electronic end mechanical design features to provide the highest quality weigh measurement. Weighing kits are microprocessor based and are more accurate. The capacity resolution and decimal points are user programmable.

It is recommended that the kit will be returned to the factory for routine calibration every 12 months or sooner if trouble is observed or erroneous readings are suspected. Cables to the indicator mounted in the case where the weight, in kilograms, is read directly on digital display.

The load imposed on a load Cell producers a signal in the cell directly proportional to the load. The signal is transmitted through connecting

DESCRIPTION

Each Kit contains necessary equipment for weighing an aircraft with the exception of Specialized jacks and power source. The kit may be operated on 230 Volts, 50 to 60 Hz mains or by 24 Volts /DC inverter.

Three portable containers to house necessary equipment for weighing are provided.

UNIT- 1 contains three digital readouts one for each channel. In this case, the electronic weigh indicator is permanently attached. The Cells Cables and Adaptors are readily removable from their particular spaces provided in the case for weighing operation.

The second Unit contains three load cells, One power cable, three spools and three Jack adaptors.

The third Unit contains one inverter.

Fig 1.1

Fig 1.2

Fig 1.1 & 1.2 : Epoch Electronic Weighing Kit

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ELECTRONIC WEIGH INDICATOR

The indicator is accessible for maintenance and easily removable from the case. All circuits are composed of the finest components available in the market. This circuitry is contained in an RFI shielded, dustproof box to protect the instrumentation from possible adverse environment encountered during the operation of the kit. The indicators are rugged and compact desktop weight indicators. It is having built in membrane keypad/ Keyboard for calibration.

FEATURES

- 8 bit Microcontroller.
- External counts 1 in 10000.
- Digital calibration through membrane Keypad.
- EEPROM / ZPROM to store calibration constants.
- 6 character Liquid Crystal displays for Weight & data entry.

SPECIFICATIONS

CPU	: 8 bit microcontroller with WDT & EEPROM.
Display	: 6 digit LCD display for weight. 6 digit LCD display for data entry.
L/C Supply	: +10 V DC or 12 V DC (dip switch selectable).
A/D Converter	: 4½ digit dual slope.
Resolution	: Internal 20000 counts External 10000 counts
Keypad	: Membrane keypad.
Capacity Sel.	: Through keypad.
Power	: 230 V ±10%, 50 Hz ± 3%, 75 W.

LOAD CELL

The kit contains three hermitically sealed strain gauge load cells. These cells are precision devices and will withstand 150% overload without damage. Dropping the cell, however, could damage either the electrical connector or the diaphragm disabling the cell or affecting its accuracy.

Although the cells provided with each kit appear identical, they are not interchangeable; each must be connected to the kit observing the color coding. The load cells have a tapped hole on the bottom to receive a plug or ring adapter. The top surface will have 19.5 mm radius concave surface to receive either the spherical surface of adapter or the Aircraft jack pad directly.

CABLES

The three 20 mtrs. Load Cell cables are reeled and stored in the case when not in use. A 7.5 mtrs. AC power cable is provided.

ADAPTERS

For the purpose of mounting the cells under varying physical arrangements, several adaptors are provided on request.

1. JACK ADAPTER.
2. STUD TO SUIT ADAPTER.