

1. General

1.1. INTRODUCTION

The PE 1542 is a stabilized D.C. power supply designed for supplying and testing electrical and electronic circuits. It produces three precise output voltages, which are galvanically separated. All outputs are protected against short circuit. Regulation of each output is achieved by transistor series-regulator stages. The transistor series-regulator gives continuously variable adjustments of the output voltages and currents with good accuracy and stability with minimum ripple. By means of controls, each output voltage can be continuously varied as follows:

output I between 0 V and 20 V
output II between 0 V and 20 V
output III between 0 V and 7 V.

Similarly, controls provide continuously variable output currents between:

0 A and 1 A — output I
0 A and 1 A — output II
0 A and 3 A — output III

Three front-panel meters provide a visual indication of the stabilized output voltage or current. The load must be connected to the front-panel terminals. These terminals are floating with respect to earth, but either the "+" or "-" terminal of an output can be linked to the adjacent earth.

If a larger continuously adjustable voltage or current source is required than is available from one output then the outputs can be connected in series or parallel to provide increased power.

NOTE: The design of this instrument is subject to continuous development and improvement.

Consequently, this instrument may incorporate minor changes in detail from the information contained in this manual:

1.2. CHARACTERISTICS

This instrument has been designed and tested in accordance with IEC Publication 348 for Class I instruments and has been supplied in a safe condition. The present Instruction Manual contains information and warnings which shall be followed by the purchaser to ensure safe operation and to retain the instrument in a safe condition.

1.2.1. Technical data

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Safety

In accordance with IEC 348, Safety Class I.

D.C. test voltage

2100 V between primary and chassis

4200 V between primary and secondary

2100 V between secondary and chassis

Output terminals

Floating with respect to earth.

The maximum permissible d.c. voltage between any one of the output terminals and chassis is 250 V.

The "+" or "-" terminal of each output may be connected to the chassis, if desired.

Radio interference

According to VDE 0875 below the K curve.

1.2.1.2. Input

A.C. voltage

110-127-220-240 V (+ or - 10%)

Frequency

50 to 60 Hz