Chapter 17

TRANSIENT DETECTOR CURRENT TRANSFORMER, ROTAX, TYPE ZA14102

LIST OF CONTENTS

LIST OF ILLUSTRATIONS

LEADING PARTICULARS

Transient detector current transformer (Rotax ZA14102)	**Ref. No.**
Weight	1 *lb.* 5 *oz.*
Overall dimensions—	
Height	3·062 *in.*
Length	4·656 *in.*
Width	3·062 *in.*
Primary—	
Minimum short circuit current to be detected	100 *A*
Required rate of rise	100,000 *A/sec.*
Maximum steady current	400 *A d.c.*
Secondary—	
Peak value current	25 *mA*
Temperature range	—40 *to* +80 *deg. C.*
Cooling	*Natural convection*

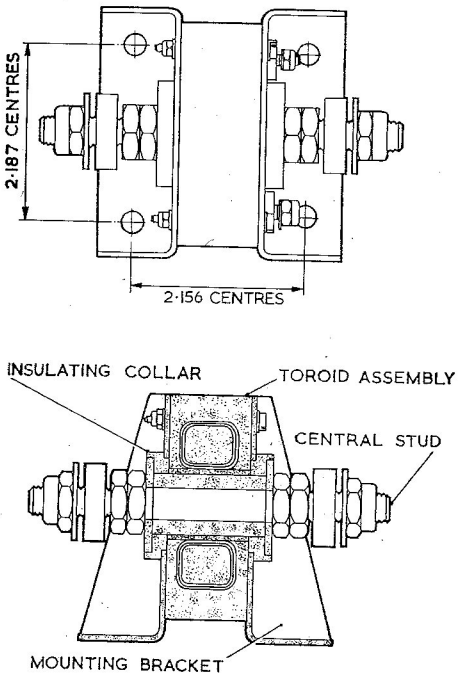

Fig. 1. Transient detector current transformer, Rotax, Type ZA14102

Introduction

1. The transformer is designed for the detection of short circuits and is used in conjunction with a 28V voltage protection system.

DESCRIPTION

2. The transient detector current transformer (fig. 1) consists of a toroidal coil assembly mounted between two support brackets. The central stud which passes through the toroidal coil and acts as the primary, is clamped to the toroid assembly by four locknuts. The central stud is threaded at both ends (0·375 UNF), to accommodate 280 A connector lugs which are secured to the central stud by plain washers and stiffnuts. Two fixing screws pass through the support brackets and the toroid assembly, securing the transformer components.

3. Electrical leads from the toroidal coil are brought out to one 10–32 UNF terminal and one 6–32 UNC terminal. This prevents inadvertent cross connection of the external connecting leads. The terminal studs are integral parts of the toroid assembly and protrude through holes provided in the mounting bracket.

SERVICING

Insulation resistance tests

4. Using a 250V insulation resistance tester measure the insulation resistance between the following points:—

(1) Between terminal 1 and the central stud

(2) Between terminal 1 and the frame

(3) Between the central stud and the frame

A reading of at least 5 megohm should be obtained for each test.

Inductance tests

5. The inductance of the toroidal winding may be checked between terminal 1 and terminal 2, using a suitable test set. The inductance at 1 c/s shall be 175±20 mH.

Printed for H M Stationery Office by Chorley & Pickersgill Ltd Leeds
P33076/470268/5143 1875 3/65 Gp 375