CHAPTER 35

CURRENT TRANSFORMER, E.E. TYPE AE5734

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LIST OF ILLUSTRATIONS

LEADING PARTICULARS

Current transformer, Type AE5734	*Ref. No.*
Ratio	750/1
Load rating	2 *VA*
Frequency	310 *to* 490 *c/s*
Coil resistance	5 *ohms* $\pm$ 2 *ohms at* 20 *deg. C.*
Temperature range	$-$ 40 *to* $+$ 150 *deg. C*
Dimensions	
Outside diameter (excluding terminals)	$1\frac{7}{8}$ *in.*
Width (overall)	$1\frac{7}{32}$ *in.*
Weight	$3\frac{1}{2}$ *oz.*

Introduction

1. The Type AE5734 current transformer is intended for use in differential protection and load sharing circuits in 200 volt, 3-phase, 400 c/s aircraft electrical systems.

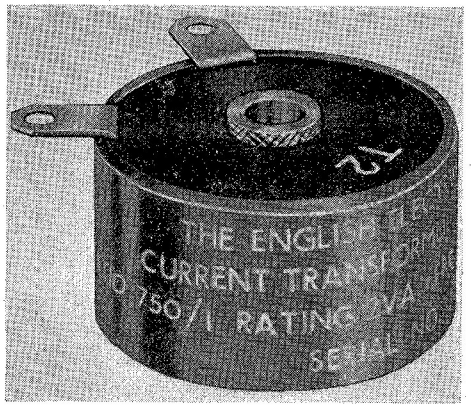

Fig. 1. Current transformer, Type AE5734

DESCRIPTION

2. The unit consists of a toroidal core of high permeability steel on which is wound a 750 turn coil of Lewmex wire. The coil is cocooned in silostomer silicone rubber, and housed and encapsulated in an epoxy resin bonded glass tube. The coil ends are brought out of the incapsulation and terminate in two strip terminals for the external connections. Running through the centre of the coil tube is a stainless steel transfer tube.

3. The coil constitutes the secondary winding of the transformer; the primary is the line bus-bar whose current is to be transformed or sensed, and is therefore not included in the construction of the transformer. When installed the bus-bar runs through the transfer tube.

SERVICING

4. Very little servicing can be carried out on this unit other than to examine for deterioration of the insulation and encapsulation and to check the security of the electrical connections.

Testing

Coil resistance check

5. Measure the resistance of the transformer coil. This should be 5 ohms $\pm$ 2 ohms at 20 deg. C.

Insulation resistance check

6. Measure the insulation resistance between terminal T1 and the centre transfer tube using a 500 volt d.c. insulation tester. The value should not be less than 0·5 megohms.

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