

See AP 113D-0412-1 held 'C'

Chapter 17

TRANSFORMER, ROTAX, TYPE P 6601

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LEADING PARTICULARS

Transformer, Rotax, Type P 6601	<i>Ref. No. 5UB/</i>
<i>System voltage</i>	208-volt a.c.
<i>Frequency</i>	335 to 535 c/s
<i>Weight</i>	1 lb. 2 oz.
<i>Overall dimensions</i>	
<i>Length</i>	5.250 in.
<i>Width</i>	2.250 in.
<i>Height</i>	2.500 in.

Introduction

1. The Type P 6601 three-phase current transformer has been designed for use in conjunction with alternators having a 'built-in' Merz-Price protection system.

DESCRIPTION

2. The three windings are individually mounted in a moulded block (*fig. 1*) and are cemented in position. A cover is provided for the six 4 B.A. terminals and is secured by three 4 B.A. securing screws.

Operation

3. A Merz-Price protection circuit normally comprises two delta connected three-phase transformers and a bridge rectifier and is used to detect 'line' to 'line', and 'line' to 'neutral' faults up to the busbar. The three components are interconnected so that under normal conditions the output from the

respective transformers is equal, and the output from the rectifier zero. Any feeder fault up to the busbar will increase the output from the protection transformer built into the alternator and give a net output from the rectifier sufficient to operate a trip circuit.

INSTALLATION

4. For installation purposes the moulded base is provided with four 0.218 in. dia. fixing holes spaced 1.625 in. and 4.750 in. between centres. The electrical connections (*fig. 2*) to A, B and C are via 0.250 UNF terminal screws and studs, and to connections 1, 2, 3, 4, 5 and 6, via six 4 B.A. terminal screws.

SERVICING

5. In addition to the following insulation resistance tests the transformer should receive a thorough visual inspection to ensure that

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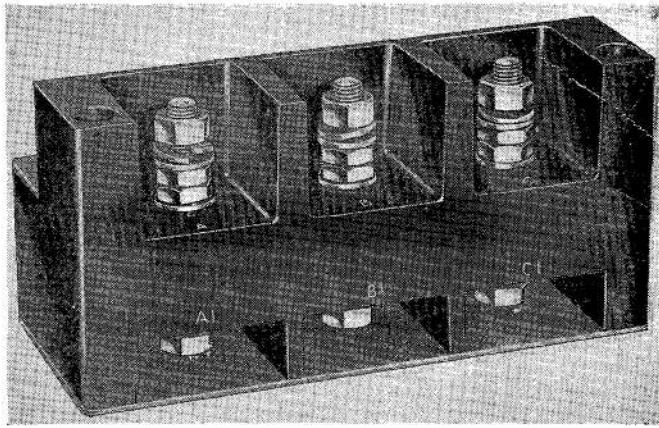


Fig. 1. General view of Type P 6601 transformer

all component parts are secure and undamaged and that the moulded body is free from cracks.

Insulation resistance tests

6. (a) Test between common studs B and C and terminals 1, 3 and 5.
- (b) Using a 500-volt insulation resistance tester measure the insulation resistance between the commoning lead and stud A. The reading obtained must not be less than 50,000 ohms.
- (c) Remove the connections on stud B and measure the insulation resistance between the disconnected stud B and the commoning lead as described in (b). Repeat this procedure for all terminations, disconnecting each termination in turn and applying an 'insulation resistance tester' test between the disconnected termination and the remaining connections. In each instance the insulation resistance must not be less than 50,000 ohms.

Note . . .

The value of insulation resistance given in para. 6 applies to the transformer being tested under normal workshop conditions. Due allowance should be made for the climatic conditions of the locality and those of the aircraft servicing area or dispersal point where the tests are being applied. In particularly damp climates, the readings obtained may be low enough to give apparently sufficient reason for rejection and, in these instances, discretion should be exercised.

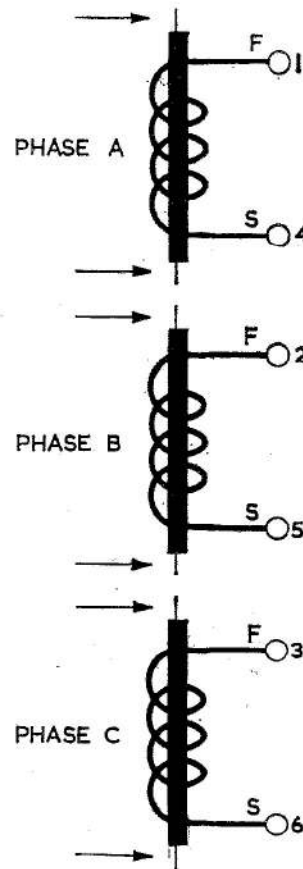


Fig. 2. Diagram of internal connections

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