

## A.P.68577 INSULATION-TESTER, 500V - 15 kV, CT318

(Joint-Services Designation: Tester, Insulation, 500V - 15 kV, CT318)

## SUMMARY OF DATA

## PURPOSE

Insulation testing of cables and components, where d.c. voltages from 500V to 15 kV are required.

## BRIEF DESCRIPTION

The required e.h.t. is applied to the cable or component under test and a measure of the leakage is obtained by the reading of a microammeter. The e.h.t. is produced by an r.f. oscillator (approx. 27 kc/s) followed by a step-up r.f. transformer feeding a rectifier system of voltage-doubler type. The maximum direct current that can be measured by the instrument is 300  $\mu$ A although the maximum that can be delivered is 700  $\mu$ A. If the load resistance is reduced below that resulting in 700  $\mu$ A output (e.g. if the e.h.t. output is short-circuited) the oscillator valve stops oscillating and both the e.h.t. output voltage and the current fall to zero.

An audible warning device (using an audio-frequency oscillator) is provided as a safety precaution; it comes into operation when the e.h.t. is switched on.

The instrument is supplied with an earthing probe for testing the e.h.t. supply and for discharging capacitors and cables under test.

## PERFORMANCE

Output voltage Two continuously-variable ranges:

500 - 9000V  
1000 - 18 000V

Max. output current for testing: Between 250 and 300  $\mu$ A at 15 kV

Voltage accuracy  $\pm$  10 per cent over temperature range 0-50°C

Current accuracy  $\pm$  3 per cent over temperature range 0-50°C

Ripple (r.f. or l.f.) less than 0.2 per cent at 15 kV

Internal resistance of the e.h.t. power unit is approx. 10 megohms over the working current range of the instrument, measured at 15 kV.

## POWER REQUIREMENTS AND CONSUMPTION

115, 180, 200, 210, 220, 230, 240, 250 V ( $\pm$  6 per cent)

50 - 500 c/s  $\pm$  10 per cent

Consumption: 45W



GENERAL VIEW OF CT318

#### PHYSICAL DATA

Weight 40 lb approx.  
Height 13½ in.  
Breadth 15½ in.  
Depth 12 in.

NEAREST COMMERCIAL EQUIVALENT None

ESTABLISHMENT LIST E.1115

HANDBOOK B.R.1771(21)

PRODUCTION SPECIFICATION 16775

#### ACCESSORIES

Connector, flexible, screened A.P.67384  
Earthing-Probe A.P.71137  
Resistance-Unit, Design 10, 4.7 megohms, 1 watt A.P.71035