

A. T. M. S.

Proven Advanced Technology Solutions

HEXAN C Three-Phase Relay Test Set

by

COTEL

- 25 A/ phase
- Up to 300V/ phase
- Very User Friendly
- Computer or Manual control
- Modular
- Robust



HEXAN C applies the latest techniques for component integration and power supply design to provide a fully-featured three-phase test set of reduced dimensions and weight. It uses advanced digital signal processing to combine the accuracy necessary for testing Electronic Relays (static or digital) with the power needed to test electromagnetic relays by secondary injection. It has two operating modes -

Manual - using the MCM Custom Interface incorporated into the front face which displays and enables easy setting of the electrical parameters, voltages, currents, frequency and phase angle, defining the network state. A simple scrolling menu accesses the different test modes: Shunt, Re-closer, Generator protection and Neutral Offset. Two states can be defined, and used in conjunction with the incorporated timer, this makes relay reaction timing simple, accurate and repeatable.

Computer - using our free **MANUSOFT** software which presents a virtual control panel with sliding potentiometers as well as advanced injection tools. There are also displays of the Timer, Input/ Output states, a Fresnel diagram and a Symmetrical Components display. This software is very easy to use to test most of the commonly encountered relays and to produce a customised test report instantly.

Three voltage ranges (**0-130, 260 or 300V**) and two current ranges (**0-15 or 25 Amps**) are available, and the modular construction allows any combination of these. Possible options include an auxiliary supply of **24/48/127 Volts** to power relays, an external module with three current amplifiers to test differential relays, and a fourth independent voltage amplifier.

HEXAN C represents an extremely cost effective solution to the problem of testing a wide diversity of protection circuits and other electrical systems easily and with confidence.

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Technical Characteristics

MODELS

HEXAN C - 610

Voltage 0 - 13 V/6 VA & 0 - 130V/60 VA

Resolution **400µV at 13 V, 4 mV at 130 V**

Ph-Ph max. **260 V**

Current 0-5A & 0-25 A/175VA

Resolution **760 µA at 25 A**

Ph-Ph max. **75 A**

HEXAN C - 611

Voltage 0 - 130 V/30 VA & 0 - 260V/60 VA

Resolution **4 mV at 130 V, 8 mV at 260 V**

Ph-Ph max. **520 V**

Current 0-5A & 0-25 A/175VA

Resolution **760 µA at 25 A**

Ph-Ph max. **75 A**

HEXAN C - 612

Voltage 0 - 130 V & 0 - 300V/70 VA

Resolution **4 mV at 130 V, 8 mV at 300 V**

Ph-Ph max. **520 V**

Current 0-5A & 0-25 A/175 VA

Resolution **760 µA at 25 A**

Ph-Ph max. **75 A**

The current amplifiers can be connected in parallel on all models for **45 or 75 Amps**

Accuracy 0.1 %

Distortion 0.1 % THD*

Current Ph-N max **75 A**

*THD-data full load (100% range) at 45 to 65 Hz

OS- Windows 2000/XP/VISTA/7(32bit) via RS232 or USB

There is protection against overload on the voltage & current outputs and the outputs of the current amplifiers are galvanically separated.

HEXAN C - Integrated Custom Commands

This instrument can be used easily without a PC for quick and simple testing of three phase relays. The front panel represents a typical test set with potentiometers.

Each of the three voltage and current values is controlled by UP & DOWN buttons. These can be linked for simultaneous variation

Frequency from 40 to 70 Hz.

Phase shift of voltage from current, -180 to 180°.

Switching between two states.

Immediate or step-by-step injection.

Neutral point shift along V1,V2 or V3.

Differential Current mode.

Vector jump.

Programming of state sequences.

Timer range 0—199.999 s, resolution 1 ms.

Start on injection or external event.

Cycle measurement (e.g. re-arming).

4 independant timer inputs, dry contact or volts.

Setting the **HEXAN** volt-free contacts.

Environment

Operating temperature **0 to 40 °C**

Storage Temperature **-25 to 70 °C**

Low Level Outputs

Level 0 to 7.07 Vrms

Resolution **215µV**

Accuracy **0.1 %**

Distortion **0.1 % THD***

Output current **4 mA max.**

Phases

Resolution **0.1°**

Accuracy **0.5°**

Power Supply

180-264 Vac, 50/60 Hz 1 phase + earth

Power **2100 VA** for **25A** Models

Chronometer Inputs - 4 - all isolated

Trigger Criteria - Voltage-free contact or voltage up to 250 Vac or dc

Connection 4mm. Banana plug

Accuracy **± 1 ms. ± 0.02 % value**

Resolution **1 ms.**

Logic Outputs - 3 voltage free (NO/NF) or voltage

Connection 4mm. Banana plug

Frequency generation

Range **0.1 to 500 Hz**

Resolution **500 µHz**

Accuracy **± 1 mHz at 50 Hz**

All amplifiers can generate DC outputs up to their maximum ranges

Flight case with carrying handles

Dimensions **448x 350 x 480 centimeters**

Weight **20 kg**

EMC Standards

Emission **EN 50011** 1991 class A

Immunity **EN 50082-2** 1992

Security—Complies with **IEC1010**

