



## PED 020700

### Serial chopper 2.5 Ampères with Thyristor

#### GENERAL CHARACTERISTICS

The PED 020700 module allows the study of the serial.

The command(order) is realized by a microcontroller, and an IHM (keyboard billposter) which allows the user to configure and to pilot the chopper.

It integrates interfaces of measure tension and current on BNC output, compatible with standard oscilloscopes (not differential).

The galvanic insulation is realized by impulse transformer.

#### AREA OF APPLICATION

##### Basic Training :

Introduction to high Power Circuits and to the control principles of the motor / generator assembly :

Technical Secondary & Higher Levels, Universities, etc.

##### Vocational Training :

Control of Power Assemblies.

#### TECHNICAL CHARACTERISTICS

- Aximum power voltage 30 V DC
- Maximum average current 2.5 A.
- Supervision of charging voltage of the capacitor termination
- Fréquency chopper 3 Hz to 976 Hz
- Automatic mode :
  - Duty cycle adjusted by the user,
  - Fréquence ajustée automatiquement en fonction du rapport cyclique,
  - Frequency adjusted automatically according to the duty cycle,
  - Limiting the duty cycle to avoid passing in continuous conduction.
- Manuel mode :
  - Duty cycle and frequency adjusted by user,
  - No control.
- 2 types of control:
  - Internal (potentiometer),
  - External (analog input 0 +5V).
- Differential interface measurement voltage for standard oscilloscope,
- Shunt measuring current in each branch
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##### Technical and user guide :

The PED020700 module is provided with a handbook of startup and maintenance indicating the general conditions of initiation and use

#### PRACTICAL WORKS

- 1- Operation of control circuit,
- 2- Study of extinction circuit.
- 3- Serial chopper on R load,
- 4- Serial chopper on RL load,
- 5- Serial chopper on RLE load (DC motor).

#### TECHNICAL ENVIRONNEMENT

The necessary equipment to good use of PED020700 module

##### -Accessoires :

*Commande board :*

Alim. +/- 15 V CC

*Power board :*

Alim. 30 V / 5 A CC réversible

. Self 1 à 8 mH, 5A

. Rhéostat 22Ω, 5A

. Motor Banch 24 V DC

. Security leads 4 mm,

. BNC BNC leads

##### -Appareil de mesure :

Oscilloscope 2 x 35 MHz

Amperemter 3A,

Voltmeter 30V DC

#### CARACTERISTIQUES MECANQUES :

- Poids net : 0.9 Kg
- brut : 1.6 Kg
- Dimensions nettes : 30 . 20 . 10 cm
- (L . l . h) brutes : 31 . 21 . 17 cm