

**OBJECTIVES :**

- To study the behaviour of the different types of sensors in the vehicle electronic system environment.
- Study the principles of analogue/digital conversion.
- Study the principles of stepper motor control and actuators when operated using a variable duty cycle.
- Read diagrams.
- Study the method of measuring on each sensor with highlighting of the traps to avoid.

PRESENTATION :

The DTP6010 console is composed of a base to which an interchangeable module is fixed. They are quite suitable for working individually or in pairs. All measurement points are accessible for the use of multimeters, oscilloscopes, computer acquisition systems, for example **REFLET 2000**.

CHARACTERISTICS :

The basic console has 2 panels:

A control / measuring panel composed of:

- 2 switches: ignition on and start.
- 1 potentiometer for adjusting engine speed.
- 1 frequency meter with display in ms.
- 1 multimeter with 2 ranges: 0-2V and 0-20V with read-out.

The DTP ENVIRONMENTS:

Toothed wheel with inductive Sensor and Hall effect sensor.

CLASSES CONCERNED

BEP M.A.
BACPRO M.V.A.
BAC STI – Motor-driven systems option.
BTS M.A.V.A.

**PRACTICAL WORK
AND CORRECTIONS**

PW applicable to the different sensors and probes

A signal processing console for:

- Display of the analogue / digital conversion with binary read-out.
- Signal generation for the stepper motors.
- Signal generation for the variable diesel duty cycle

All inputs and outputs are protected against mishandling.



Magneti Marelli butterfly housing with stepper motor, air CTN and butterfly recopy potentiometer.

Analogue / Digital conversion direct on DTP6010 screen

Binary code displayed on screen

0 1 0 0 1 0 0 1

Conversion:

2^6 2^5 2^4 2^3 2^2 2^1 2^0

128 64 32 16 8 4 2 1

Divider by 10

12,8 6,4 3,2 1,6 0,8 0,4 0,2

Decoding to obtain the voltage

6,4 0,8 0,1

That is to say $6.4 + 0.8 + 0.1 = 7.3$ volts

References	Functions	Connections	Accessories
DTP 6010	Study of probes and sensors	12 V power supply, supplied	User instructions + Power supply Training course book RV1020 and GI2000

-- www.exxotest.com -- www.exxotest.com -- www.exxotest.com --

This equipment is CE certified. It is supplied with an inspection report and a certificate of conformity.

WARRANTY: 2 years Parts and Labour

ANNECY ELECTRONIQUE
Z.A. Les Marais - BP157 - F74410 SAINT-JORIOZ
Tel: 33/0 450 68 90 65 Fax: 33/0 450 68 58 93