CEA201
electronic accelerator control
Version 2.0

- Functional and ergonomic.
- High precision control.
- Economic.
- Manual or automatic operation
- Rapid joystick control
- Precision setting by multi-turn potentiometer.

DESCRIPTION

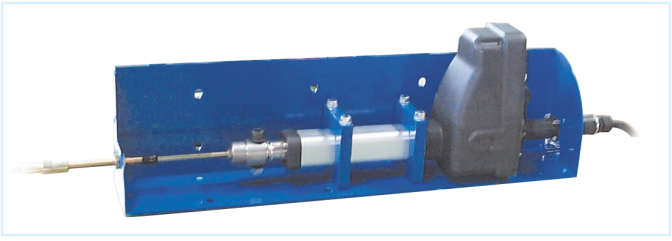
The CEA 201 allows remote control of the acelerator of an internal combustion engine installed on a test bed. It enables the existing cable or hydraulic control to be replaced and can be automatical driven by virtue of its 0 to 10 volt command input or its RS485 / RS232 serial interface.
The manual control unit enables automatic control to be overridden at any time.
The remote control allows easy adjustment of the accelerator settings as a function of the internal combustion engine's accelerator control mechanism.

CONTENTS OF THE ACCESSORY

1 electrically operated screwjack for installation close to the engine, dimensions 600 X 220 X 100 mm, weight : 7 kg
1 control cabinet for installation in the test cell, dimensions 300 X 400 X 250mm, weight : 12,5 kg
1 remote control to adjust the accelerator settings, for connection to the control cabinet , dimensions : 250 X 80 X 50 mm, weight : 900 g
1 manual control unit for installation on the test bed control panel, dimensions : 200 X 155 X 120 mm, weight : 1,1 kg
1 installation / user manual.

Option :
1 cable, 1.5m long, for connecting the screwjack to the engine's accelerator control mechanism.

THE ELECTRIC SCREWJACK



An electrically operated screwjack for installation in proximity to the engine: Its base plate incorporates pre-drilled holes for easy fixing. A maximum travel of 150 mm ensures compatibility with any engine type. Connection between the screwjack and the engine is by cable (available by order) or mechanical linkage.
Screwjack characteristics :

Speed :
-110 mm/s without load
-85 mm/s with 200 N load
Max. load : 200N
Travel : 150 mm

THE CONTROL CABINET

The control cabinet contains the system management electronics. All elemenets are connected to it (screwjack, remote control unit, manual control unit). The cabinet should be installed in the test cellin proximity to the test bed. An LED indicates when the cabinet is switched on and also serves to indicate alarm conditions.
It is equipped with terminals allowing the connection of peripherals (screwjack, remote control, manual control) as well as terminals for the following external command connections :

- Command input 0 to10 Volts,
- RS232 / RS485 Interface
- Input for an emergency stop switch
- Output for a general alarm switch

THE MANUAL CONTROL UNIT

This unit is situated on the test bed control panel. It allows the user to manually drive the accelerator and to visualize the position of the screwjack in real time.

- The LED display indicates the effective position of the screwjack as a percentage of total travel.
- The joystick at the centre of the facia allows the position of the screwjack to be rapidly set.
- The multi-turn potentiometer allows fine adjustment of the screwjack position, for example, when undertaking isometric mapping.
- The two switches allow selection of the source controlling the screwjack: joystick, multi-turn potentiometer or external command.

THE REMOTE CONTROL

The remote control is for use in the engine test cell and allows the selection and application of preset screwjack positions for precise accelerator control. It allows operation of the screwjack at a lower speed for precise positioning of the throttle opening. Preset accelerator positions can be memorized and selected by simply depressing a button.
A test procedure enables verification of settings.

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