RENEWABLE ENERGIES

FUEL CELLS SYSTEMS TRAINER

DL HYDROGEN-B

This trainer has been designed for the study of fuel cell systems. It teaches their engineering principles and it allows performing a set of experiments for educational purposes.
It is safe and easy to be operated.

Complete with connecting cables, experiment manual and **software for data acquisition and processing**.

TRAINING OBJECTIVES

The trainer is very flexible, modular and suitable for the understanding of basic principles as well as more complex technology concepts.
It allows performing the following experiments:

- Familiarize yourself with the trainer
- Performance of the PEM Fuel Cell with fixed loads, without DC/DC converter
- Performance of the PEM Fuel Cell with fixed loads, with DC/DC Converter
- Recording of the current/voltage characteristic curve of the PEM Fuel Cell with variable load
- Calculation of the energy efficiency of the PEM Fuel Cell

Average training hours: 8h.
Approx. packing dimensions: 1.21 x 0.62 x 0.82 m.
Net weight: 35 kg.

Option:
DL HYGEN: Hydrogen generator, for filling the hydride storage canister

TECHNICAL SPECIFICATIONS

The trainer includes the following modules:

- 100 W PEM fuel cell. Performance: 14 V at 7.2 A. Consumption of H_2: 1.4 l/min. it includes the electronic controller.
- 300 Nl aluminum storage canister
- DC/DC converter, output 12 V, 8 A
- Load, with one halogen lamp, 12 V, 20 W, and one LED lamp, 12 V, 3 x 1 W
- Variable logarithmic rheostat, 1.5 Ohm ÷ 17 Ohm, 100 W, Imax = 8 A
- Battery
- Instruments module, containing 4 multifunction meters and 4 LCD displays

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