Product Name :	Product Code :
System Of Horizontal Travel Lifting	EEH0005

Technical Specification :

General presentation

Coming from applications of lifting
industry, this system associates the horizontal travel and lifting functions in order to transfer of a modular load, whose values are understood between 50 to 125 daN.

Intended to be a part of the systems used in electrotechnics lab, this system has been designed to make wire by students different types of asynchronous motor starting as well as a logic control.

It is built around an electrical hoist with a capacity of 125 kg associated with an electrical cabinet integrated to the whole. It answers the securities norms in force.

Teaching objectives

- Mono speed asynchronous motor starting.
- Bi-speed asynchronous motor starting.
- Variation of frequency of the asynchronous motor.
- Logic control of the brake in lifting mode, safety management.
- Control of measurable sizes of the installation: absence or presence of voltage (system able to be used for the electric security clearance).
- Commissioning and inspection of the good running after wiring realization.
- Maintenance and control of the system (thermal relay, control of the travels ends).

Technical specifications

Structure:

- Mechanically welded Frame.
- Working area protected by a wire fencing.
- Access to the load by a door (with closing electric contact and key locking) located on the frame.

Lifting mechanism:

Bi-speed electric hoist with chain with nominal capacity of 125 kg, mounted with electromagnetic brake for lack of energy.

- Lifting motor: 850W, 400V three-phase, bi-speed.
- Horizontal travel motor: 400V three-phase, bi-speed.
- Lifting linear speed : 2 and 8 m/mn.
- Horizontal linear speed : 5 and 20 m/mn.
- 4 travel ends mechanics.

Horizontal axis: left and right

- Vertical axis: high and low.
- Load: 8 kg modular metallic masses with 11 additional elements of 10 kg, easily removable.

Control part:

- The electrical cabinet is full part of the system. It receives the bearing plate wired by the student.
- It consists of two distinct zones:

Cableman Area:

- Area receiving receives the bearing plate wired by the student.
- A fastener device and connectors allows a quick assembly of the bearing plate wired by the student.
- The buttons and indicators are fixed on the door and are connected to the bearing plate by a fast connector.

Power supply Area:

This second area concerns the power
supply of the electrical cabinet. It is already wired and the student
doesn’t have an access to it.

It includes:

- An alternative 24V power supply.
- A 3*400V+N+T power supply protected by a 30 mA differential circuit-breaker.
- One security logical building block.
- One security limit switch on the door
  that conditions the power sequencing of the bearing plate. This security
  can be inhibited permitting to make measurement exercises or electric
  authorization.
- The power sequencing buttons and lights.
- A main switch.
- An electric power supply by three phased normalized connector 3*400V+N+T 16A.

We propose, in option, several kits of components allowing the student to realize the wiring of this bearing plate ,:

- Lot of material to wire version direct starting on the 2 axes.
- Lot of material to wire version speed driver.

All these components are available in cabled version on removable bearing plate

General features of the system:

- Measurements: length: 2440 mm, width of the basis: 620 mm, height 1630 mm.
- Weight: 300 Kg.
- Electric power supplied : 3 x 400 V+T+N – 16 A.

Feature of the confinement casket:

- Dimensions (L x w x h) out all: 320 x 650 x 1000 mm.
- Dimensions of the wiring zone: width: 600 mm, height: 800 mm

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