

Hoist Simulator

Testing Equipment

USER MANUAL

Hoist Simulator

HS-001
HS-002



This Hoist Simulator is intended for professional use only
Read this entire document before installing operating or using
this Hoist Simulator.

■ ORIGINAL INSTRUCTIONS

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Part Number: HS-XXX-UM
Release: May 2019

Original Instructions
Testing Equipment
Rev ORG
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Other functions not described in this document may be available. However, this fact shall not constitute an obligation to
supply such functions with a new product or when servicing.

We have checked that the contents of this document correspond to the device described.
There may be discrepancies nevertheless, and no guarantee can be given that they are completely identical.
The information contained in this document is reviewed regularly and any necessary changes will be included in the next
edition.

We welcome suggestions for improvement.

Motion Laboratories Inc. intends this document, whether printed or electronic, to be provided in its entirety.



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- **USER DOCUMENTATION**



WARNING

Before installing and operating the Hoist Simulator, you must read all safety instructions and warnings carefully including all the warning labels attached to the equipment. Make sure that the warning labels are kept in legible condition and replace missing or damaged labels.

REGIONAL CONTACTS

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- **USE FOR INTENDED PURPOSE ONLY**

The equipment may be used only for the application stated in the manual and only in conjunction with devices and components recommended and authorized by Motion Laboratories Inc.

- **IDENTIFICATION**

This user manual pertains to Hoist Simulators:

HS-001

HS-002



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WARNINGS

• SYMBOLS



DANGER

Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.



WARNING

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



CAUTION

Used with the safety alert symbol indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.
Used without a safety alert symbol indicates a potentially hazardous situation which, if not avoided may result in property damage.

• DON'Ts

Do NOT operate Hoist Simulator before verifying that the motor controller and cables have the correct pinout.

Do NOT operate Hoist Simulator outside of marked voltage range.



• **GENERAL SAFETY INFORMATION**

This manual must be kept by a person in charge in a suitable place and ready for consultation, in optimal conditions. Should it be lost or damaged, the manual can easily be retrieved on the manufacturer's website: www.motionlabs.com.

The manufacturer retains all material and intellectual rights on the manual, and restricts its duplication, even partial, for any commercial use.



CAUTION

All marking data should not be removed by grinding, abrasion or peeling, whether accidental or not. Any unit that does not carry the proper identification references should be removed from service until those references can be replaced.



WARNING

This equipment contains dangerous voltages. Non-compliance with or failure to follow the instructions contained in this manual can result loss of life, severe personal injury or serious damage to property.

• **ELECTRICAL SAFETY INFORMATION**

The Hoist Simulator operates with high voltages. There are no user serviceable parts inside the enclosure.



DANGER

Risk of electric shock. Disconnect the power supply across all poles before opening the equipment for access. Repairs on equipment must only be carried out by trained NA service technicians familiar with technical specifications contained in this unit.

To ensure proper operation and dependability, any defective electrical component must be replaced using parts contained in the relevant spare parts list.

• **OPERATIONAL SAFETY INFORMATION**

The Hoist Simulator has configuration for safe and reliable operation. It is imperative that the user read and understand the instructions contained in this manual before attempting to operate.

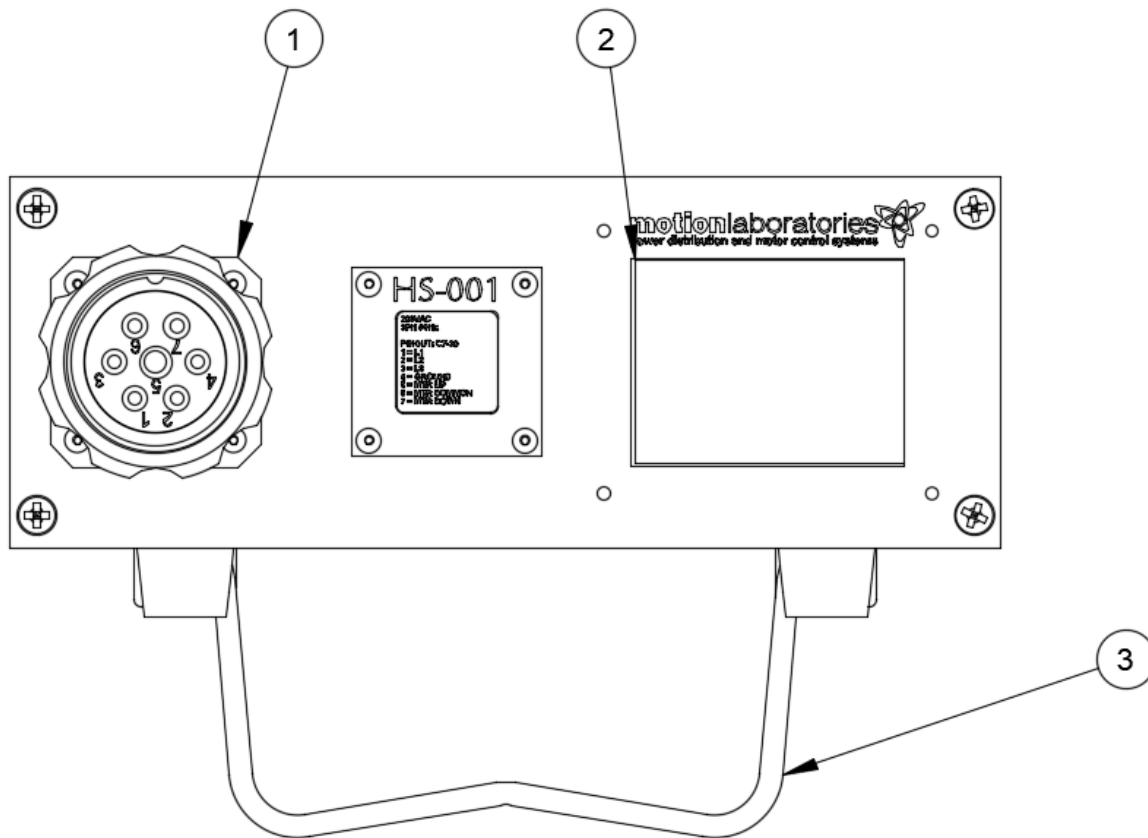


CAUTION

The Hoist Simulator must be operated with the correct motor connector pinout. Motor connector voltage must not exceed 250V.

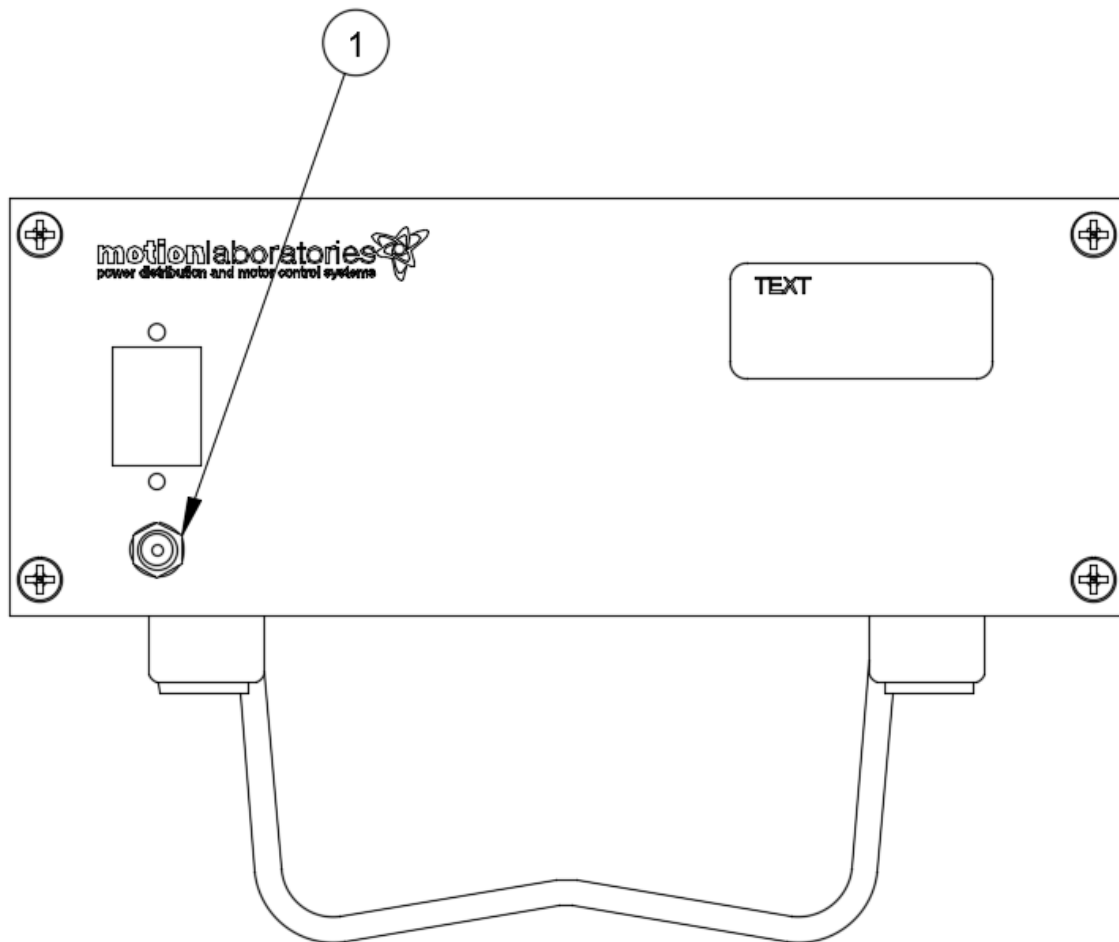
OVERVIEW

- **HOIST SIMULATOR, FRONT**



1. Display Screen.
2. Motor Connector. Please note that motor connector view will vary among models.
3. Tilt Stand.

- **HOIST SIMULATOR, REAR**



1. 12V DC Power Jack.

TECHNICAL SPECIFICATIONS

- PART NUMBERS**

HS-001

HS-002

- SYSTEM CAPACITY**

The Hoist Simulator is to be used for one channel of three-phase, low voltage control motor control.

- ELECTRICAL SPECIFICATIONS**

External Power Supply Input Voltage..... 100 – 240VAC 1 Phase

Frequency..... 50/60Hz

External Power Supply Output..... 12VDC @2A Max.

Motor Connector Input Power..... 250VAC Max. @20A Max.

Frequency..... 50/60Hz

- PHYSICAL SPECIFICATIONS**

Chassis..... .048 in. Steel, black powder coat finish

Front Panel..... .125 in. Aluminum, red powder coat finish

Rear Panel..... .090 in. Aluminum, black powder coat finish

Chassis Width.....8.5 in.

Chassis Height..... 3.2 in. (2RU when mounted with additional rack sleeve)

Chassis Depth..... 11.7 in.

Weight..... 7 lbs.

- DATA SPECIFICATIONS**

The Hoist Simulator provides real-time diagnostic information and will not log or transmit data.

- ENVIRONMENTAL SPECIFICATIONS**

Indoor Use Only

IP Rating..... IP40

NEMA..... NEMA1

Operating Temperature Range..... 0°C to 70°C



INSTALLATION

- **SYSTEM CONNECTIONS**

Connect motor controller to motor connector.

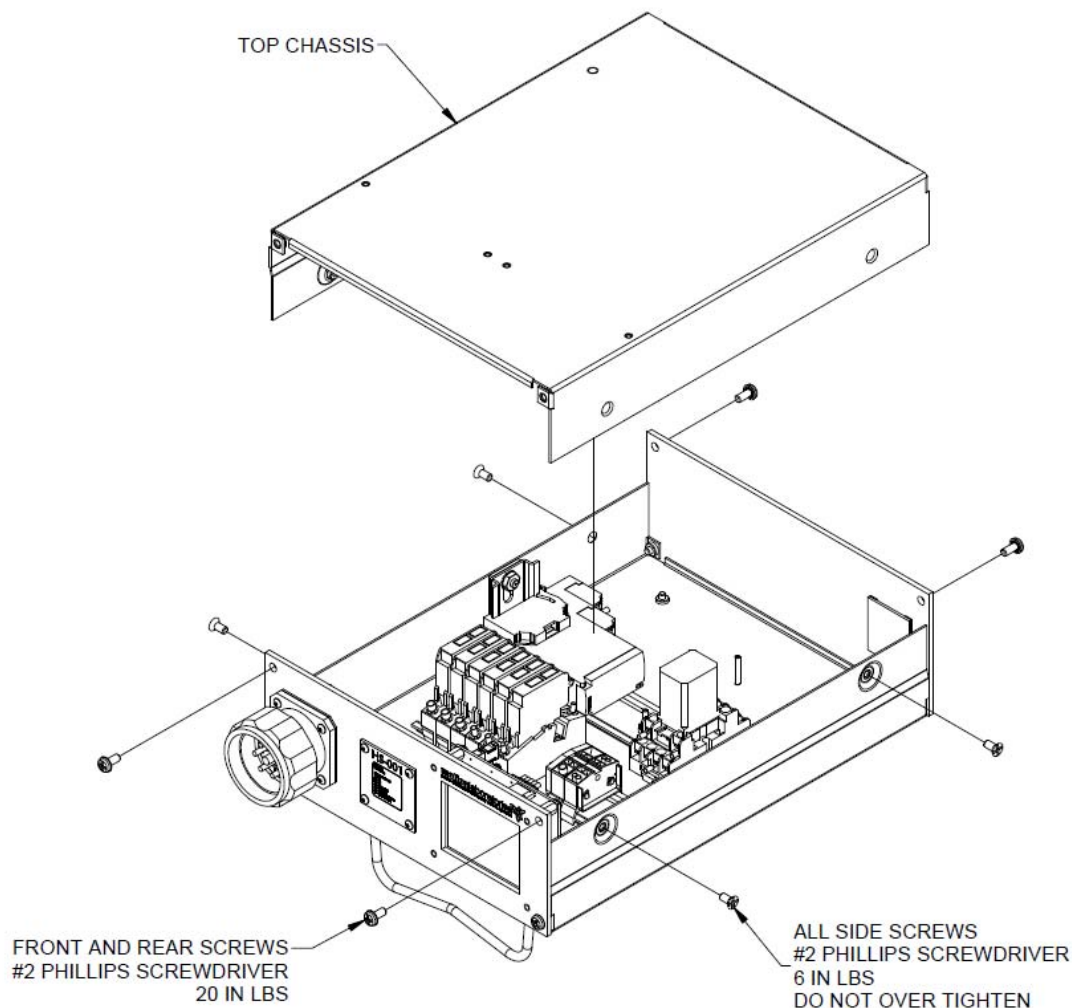
- **POWER UP**

Connect the external 12VDC power supply to the connector on the rear of the unit.

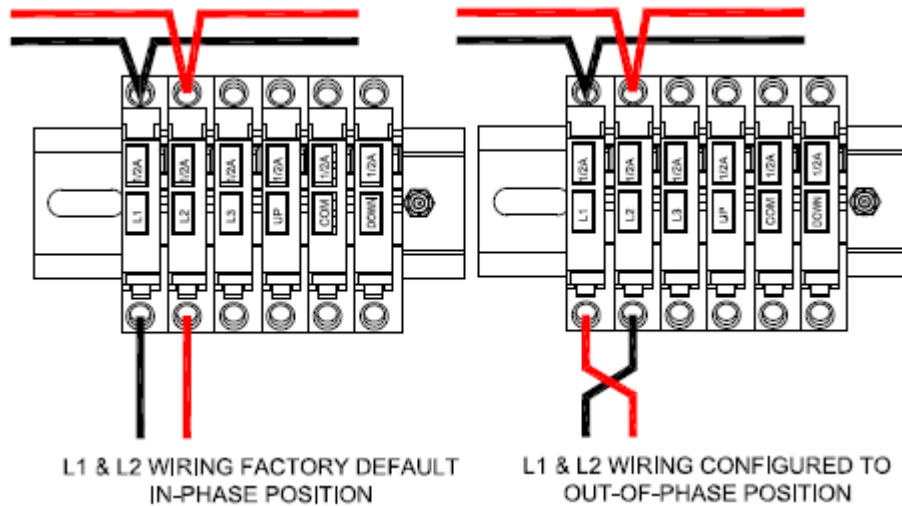
- **SETUP & CONFIGURATION**

The Hoist Simulator will come from the factory configured to simulate the operation of an in-phase three-phase chain hoist. If you require the Hoist simulator to simulate the operation of an out-of-phase three-phase chain hoist, please take the following configuration steps.

1. Disconnect all power and external electrical connections to the Hoist Simulator.
2. Remove chassis top panel.



3. Switch positions of the red and black wiring incoming from the motor connector going to the fuse blocks as shown.



4. Reinstall chassis top panel.
5. The Hoist Simulator is now ready to be used in simulation of an out-of-phase three-phase chain hoist.

- **OPERATION**

- After power and connection to the hoist controller, the screen will indicate hoist operation including:
 - a. Power Off
 - b. Power In-Phase
 - c. Power Out-of-Phase
- After power and connection to the hoist controller and a directional signal is sent to the unit, the screen will indicate hoist operation including:
 - d. Control direction UP, In-Phase
 - e. Control direction DOWN, In-Phase
 - f. Control direction UP, Out-of-Phase
 - g. Control direction DOWN, Out-of-Phase



INSTALLATION

- a. When hoist simulator is first powered up it will display the off screen



- b. When in-phase power is applied it will display the Phase OK screen



- c. When out-of-phase power is applied it will display the Phase Reverse screen



INSTALLATION

- d. With in-phase power and an UP command it will display a Phase OK with up arrow. Hoist chain will animate up.



- e. With in-phase power and a DOWN command it will display Phase OK with a down arrow. Hoist chain will animate down.



INSTALLATION

- f. With out-of-phase power and an UP command it will display Phase Reverse with a down arrow. Hoist chain will animate down.



- g. With out-of-phase power and a DOWN command it will display Phase Reverse with an up arrow. Hoist chain will animate up.



RELATED PRODUCT LINE COMPONENTS

- **RELATED LINE COMPONENTS**

Items below will be useful for safe and convenient use of your Hoist Simulator.

1400-02-30-06-001 - Cable, Multi Pin, SEOOW, 16/7, 5ft, C7-30

1400-02-30-07-001 - Cable, Multi Pin, SEOOW, 16/7, 10ft, C7-30

1400-05-30-06-001 - Cable, Multi Pin, SEOOW, 16/7, 5ft, 14Pin

1400-05-30-07-001 - Cable, Multi Pin, SEOOW, 16/7, 10ft, 14Pin

1405-00-30-05-023 - Cable, Adapter, SEOOW, 16/7, 3FT, 7PIN C7-30C to Dual Twist 0900-01

1405-00-30-05-025 - Cable, Adapter, SEOOW, 16/7, 3FT, 14Pin P14-01 C to Dual Twist 0900-01

Please contact the Motion Laboratories Inc. Sales Department for assistance in selecting other useful cables and adapters.



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MAINTENANCE

- **INSPECTIONS**

Maintenance and inspections should be carried out by competent personnel.
Check all components of system prior to operation.



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- **SPARE PARTS**

Only original spare parts may be used. Motion Laboratories Inc. cannot be held responsible for failures and breakdowns caused by the use of non-OEM or incorrect spare parts.

In case of necessity, please contact:

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- **DISPOSAL**

The Hoist Simulator should be scrapped by cutting, so that it can no longer be used.

Upon demolition, plastic parts must be separated from electric components and must be sent to selective collections according to regulations in force.

With regard to metal elements and components, all materials shall be separated by type such as ferrous materials or aluminum and shipped for recycling