



H – MOD

USER MANUAL

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1 – INTRODUCTION

H-MOD is a device which allows to install the HYDROVERT frequency converter to any existing hydraulic lift, cutting the installing time and the control panel interface problems.

2 –GENERAL DESCRIPTION

The full kit includes the frequency converter, the interface board, the wiring cables and the tools to install it on the wall.

This Manual especially refers to the metal box containing the interface board, with full instructions for a proper connection to the control panel and to HYDROVERT.

Please read it carefully before proceeding to the installation.

3 – WORKING PRINCIPLE

During the up operation, H-MOD takes the commands from the control panel, so it controls HYDROVERT using the proper control sequence.

During the down run, the operation is the same as without H-MOD.

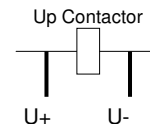
4 – INSTALLATION

H-MOD can be easily wall-mounted, preferably as close as possible to the control panel and to HYDROVERT.

The electrical connections must be carried out using the wires already signed and connected to the board.

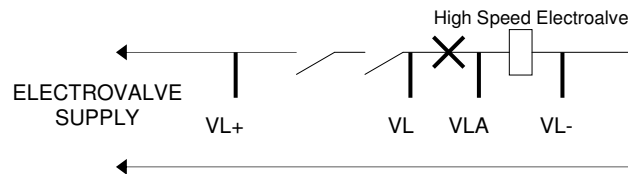
- L1 – L2 H-MOD Supply (1 ~ 400Vac): connect to terminals L1 – L2 of HYDROVERT.

- U+ – U- Up Command: connect in parallel to the Up Contactor coil (allowed voltage 24V ÷ 110V, ac/dc).



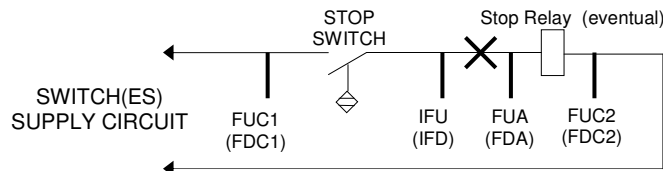
- VL – VL- High Speed Command: connect to the High Speed Electrovalve command (allowed voltage 2V ÷ 110V, ac/dc).

- VL+ – VLA Electrovalve Command contact: connect to the High Speed Electrovalve.



- IFU – FUC2 Stop Commands Up(U)/Down(D): connect to the up/down stop switches (allowed voltage 24V ÷ 110V, ac/dc).

- FUC1 – FUA Stop “voltage free” contact Up(U)/Down(D): connect to the control panel, in place of the stop switches.



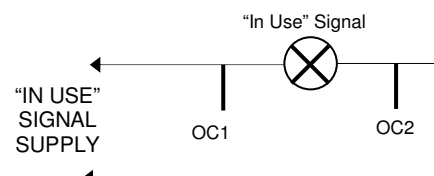
The Dip-Switch 1 allows you to select if there is only one stop switch (in this case connect only the U part) or if there are two stop switches, one working in up direction and the other in down direction (see par.6).

The Dip-Switch 2 allows you to select if the switches are N.A type (closed at floor level) or N.C. (open at floor level) - (see par.6).

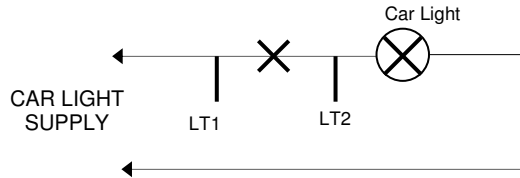
If you don't know in advance what kind the switches are, or to check if the setting is right, make the connections as above indicated, then verify the IFU (IFD) led status with the car at floor level:

- if IFU (in case IFD) is ON, N.A. type must be set
- if IFU (in case IFD) is OFF, N.C. type must be set.

- OC1 – OC2 In Use: connect in parallel to the “in Use” signal (allowed voltage 12V ÷ 48V, ac/dc).



- LT1 – LT2 Car Light switch off “voltage free” contact: connect in series to the car light.



IMPORTANT: The OC1-OC2 and LT1-LT2 connections are not essentials to the H-MOD operation, but they make the car light switch off after a few minutes after the latest run, in order to increase further on the energy saving.
In detail, you can set the car light switch off delay through the Dip-Switch 5 and 6, in the following way:

SW-5	SW-6	CAR LIGHT SWITCH OFF DELAY
OFF	OFF	= 2 minutes
ON	OFF	= 5 minutes
OFF	ON	= 15 minutes
ON	ON	= 30 minutes

- RR1 – RR2 Option Command: connect only if needed, to command the re-levelling operation.
- Connect the wires marked with numbers 6, 7, 8, 9, 10, 18, 22, 23 to the HYDROVERT corresponding terminals.

5 – OPERATION

The MR led flashing means that the board is correctly supplied and ready to operate.

The operation starts when the input U goes ON (UP Run).

If together with U, also the VL command goes ON (high speed), the board commands HYDROVERT for an high speed starting, when the VL command goes OFF, it commands the slowing-down.

When the car reaches the floor, the up stop command makes HYDROVERT to control the car stop; after that, at the end of the electrical stopping, the up stop command is switched to the control panel, so it commands the contactor de-energization and the eventual door opening.

If VL doesn't go ON, the board commands HYDROVERT for the re-levelling run.

6 – LED AND DIP-SWITCH KEY

LED

- U = U+/U- INPUT
- VL = VL/VL- INPUT
- RT = CONTACTOR COMMAND (FROM HYDROVERT)
- IFU = UP STOP SWITCH
- IFD = DOWN STOP SWITCH
- IOK = HYDROVERT OK
- DLA = RUN COMMAND FOR HYDROVERT
- DLB = SPEED COMMAND FOR HYDROVERT:
 - HIGH SPEED → ON
 - LOW SPEED → OFF
 - RE-LEVELLING → FLASHING
- DLC = “IN USE” COMMAND
- MR = THE BOARD IS READY TO OPERATE (FLASHING)

DIP-SWITCH SW

- 1 = STOP SWITCH NUMBER
 - OFF = N° 2 Switches
 - ON = N° 1 Switch

- 2 = STOP SWITCH TYPE
 - OFF = N.C. Stop Switch (open at floor level)
 - ON = N.A. Stop Switch (closed at floor level)

- 5 – 6 = CAR LIGHT SWITCH OFF

SW-5	SW-6	DELAY
OFF	OFF	= 2 minutes
ON	OFF	= 5 minutes
OFF	ON	= 15 minutes
ON	ON	= 30 minutes

For further information and advice please contact :

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