

# HCS312 – RS485/DMX CARD

## User Manual



All components  
are in  
compliance with

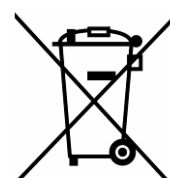
**RoHS**

Directive  
2002/95/CE

**READ THIS MANUAL CAREFULLY BEFORE  
THE USE OF THE HCS CARD**

**THIS MANUAL IS AN ESSENTIAL  
REFERENCE OF THE HCS SERIES**

**THE END USER NEEDS TO BE TRAINED  
AND MUST HAVE A COPY OF THIS  
MANUAL BEFORE START THE USE**



**ISSUE 1.0**

## Introduction

Thank you for choosing TEYCORIG products, before starting the use read the following manual to make easy and safe the use of the HCS cards.

These instructions are intended for the user who has authority over the HCS Device and responsibility for its operation, use and disposal. They must be available and made known to everyone who uses the HCS Cards.

The Manufacturer cannot be held liable in the event of accidents involving people, objects, animals or the machine itself owing to failure to comply with these instructions.

**Before carrying out any operations on the HCS Cards, read carefully these instructions to clearly understand operating conditions and hazardous situations that must be avoided.**

THE HCS312 have a TEYCORIG property Firmware specifically designed to work with Dynamic suspension equipments and cannot be used for standard lighting equipments!

Contact the Manufacturer in the event of doubts regarding their interpretation.

## Features

- HCS312 work with TEYCORIG property RS485 protocol and on request also with DMX512 protocol.
- Address 500 and 501 cannot be used because they are used as SAFETY channels, the HCS312 card will not work without receiving those 2 channels with specific decimal values.
- Fully compliant with the latest USITT DMX512-A Standard
- Backwards compatible with the older USITT DMX512/1990 standard
- Standard RS485/DMX512 input (Gnd/Data-/Data+)pin(1-2-3)
- 24Vdc Nominal power supply input
- 6 Outputs for up/down – left/right operation, plus Data Ok and System ready.

## 1. Warranty

Unless specified in a signed document from UNIRIG, the HCS control interfaces have a 2 year standard warranty.

Maintenance is not part of the warranty. The end customer has the sole responsibility to service and maintain the Devices.

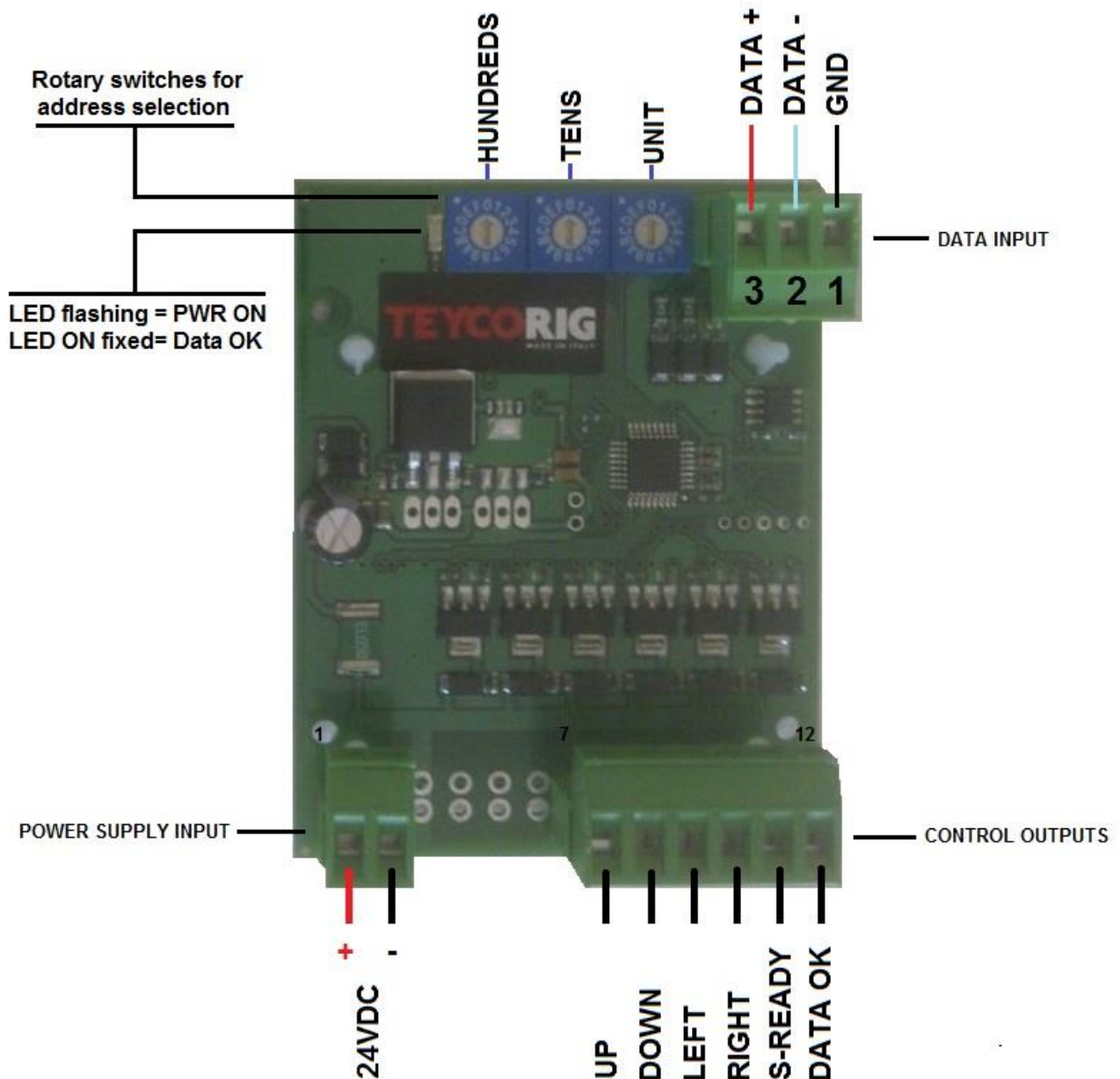
During the standard warranty period UNIRIG will replace all defective components free of charge and ex works UNIRIG factory in Europe. The warranty does not cover the misuse of the HCS control Interfaces. The end user is responsible for returning all defective parts at his own cost.

For any additional information, please contact

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Address: Via F.lli Lumière, 15  
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City: Forlì (FC)  
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Phone: +39 0543 783578  
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Web: [www.unirig.it](http://www.unirig.it)

Or our local representative

## 2. HCS312 Layout



### 3. How to use the HCS312 Control Interface card (RS485 Protocol)

#### Use with TEYCORIG FLYSET TOUCH Control System (RS485 Data output)

Normally the Address is factory pre-set according the project specification, for general use the card will come with "001" address, use the rotary switches to change the address according your needs.

The HCS312 card will use 1 single channel for each Hoist to control UP/DOWN/LEFT or RIGHT directions.

NOTE: Address 500 and 501 cannot be selected! They are Factory pre-set for safety use of HCS control card, the above address are common on all the HCS cards.

According the FLYSET TOUCH data connection, the card will work as follow:

- After the power up period of the Flyset Touch control system, each DATA OK on the HCS312 card must became active, and the relevant LED on the Hoist will became ON. If not disconnect the data input cables and check the Data starting from the first device in the Daisy chain connection, and step by step re-connect all the cables until you will have the DATA OK on all the devices. Make sure to connect the 120ohm termination resistor on the last devices on each RS485 data line.
- On the Touch screen select the relevant Hoist, the SYSTEM READY output will became active and the relevant LED on the Hoist will became ON, to show the hoist is selected.
- On the Touch Screen select the desire directions UP/DOWN or LEFT/RIGHT the hoist will not move but the card is now ready to start.
- On the Touch Screen Push and Hold the RUN pushbutton the hoist will start to move on the selected direction. Release the RUN pushbutton to stop the Hoist.

**WARNING!! This is a DEAD MAN control and MUST BE PRESENT in any control for any Motorized suspension device.**

## 4. How to use the HCS312 Control Interface card (DMX512 Protocol)

### Use with DMX512 Control System (DMX512 Data output)

Normally the Address is factory pre-set according the project specification, for general use the card will come with "001" address, use the rotary switches to change the address according your needs.

**The HSC card will use 1 single channel for each Hoist to control UP/DOWN or LEFT/RIGHT directions.**

NOTE: Address 500 and 501 cannot be selected! They are Factory pre-set for safety use of HCS control card, the above address are common on all the HCS cards.

The HCS312 control interface card when used with DMX512 Devices must work as follow:

#### - 4.1: DEAD MAN function

On your DMX Devices program a Toggle pushbutton this must be used as your "DEAD MAN" pushbutton, and must be pushed and hold for the entire period you want move the hoist you are controlling with HCS312 Interface card.

Program as follow, please use decimal values from 000 to 255 not % values from 00 to FF

**Channel 500 at 085 (decimal values) possible tolerance +/- 1 digit;**

**Channel 501 at 187 (decimal values) possible tolerance +/- 1 digit;**

The above 2 channels are common for all the HCS312 cards and once the 2 values are selected and on the output they will enable, if selected, the UP/DOWN/and LEFT/RIGHT movement.

When the programmed Pushbutton will be released the hoist will stop the movement.

**WARNING!! You must Have a "DEAD MAN" control in your DMX device to control the Motorized Hoist. Programming a fixed values for the above 2 Safety Channels to avoid to push and Hold the "DEAD MAN" Control it is totally forbidden! You will be personally responsible for any Trouble and or Injury you may cause for the incorrect used of HCS312 Control Interface card, and for do not follow the above indication to program a "DEAD MAN" pushbutton control! UNIRIG will be not responsible for any of yours incorrect actions!**

- **4.2: Hoist selection (valid for any DMX channels) as example we will use DMX Address 001.**

Channel 001 at any (decimal values) > 023 and < at 046. This channel selection will put on the HCS312 card the System Ready output active and the relevant LED on the Hoist will become ON.

- **4.3: UP/DOWN or LEFT/RIGHT movement (valid for any DMX channels) as example we will use DMX Address 001.**

**To select Move UP:** Channel 001 at 099 (decimal values) possible tolerance +/- 1 digit;

**To select Move DOWN:** Channel 001 at 048 (decimal values) possible tolerance +/- 1 digit;

**To select Move LEFT:** Channel 001 at 150 (decimal values) possible tolerance +/- 1 digit;

**To select Move RIGHT:** Channel 001 at 200 (decimal values) possible tolerance +/- 1 digit;

- **4.4: HOW TO MOVE THE HOIST (valid for any DMX channels)**

Once you have pre-programmed all the functions on your DMX devices, any time you want move the hoist select the Channel, or channels you want move with the relevant direction, then Push and Hold the "DEAD MAN" Pushbutton you have programmed on point 4.1.

To stop the movement just release the DEAD MAN pushbutton.

- **4.5: DATA OK (valid for any DMX channels)**

- After the power up period of your DMX devices, each DATA OK on the HCS312 cards must become active and the relevant LED on the Hoist will become ON. If not disconnect the data input cables and check the Data starting from the first device in the Daisy chain connection, and step by step re-connect all the cables until you will have the DATA OK on all the devices. Make sure to connect the 120ohm termination resistor on the last devices on each DMX512 data line.



## 5. Disposal of HCS Interface cards



### INFORMATION TO USERS

pursuant to art. 10 of Directive 2002/96/EC of 27 January 2003 on waste electrical and electronic equipment (WEEE), incorporated into Italian law by D.Lgs. n. 151 of 25 July 2005.

- The symbol shown above, which is also found on the Hoist or Pantographs, and the relevant HCS interface cards, shows that the Hoist or Pantographs was placed on the market after 13 August 2005 and that it must be collected separately when the user decides to dispose of it (including all its components, subsystems and consumables which are an integral part thereof).
- For information regarding the collection systems for this equipment, please contact the retailer or other subjects entered in the various National Registers for the other European Union Countries. Waste of household or similar origin may be delivered to urban waste separation systems.
- When new equipment of an equivalent type is purchased, the old equipment may be returned to the retailer. The retailer will then contact the subject in charge of collecting the equipment.
- Suitable separate collection of the discarded equipment and the subsequent treatment, recovery and environmentally compatible disposal operations allow potentially negative effects on the environment and human health to be avoided and the component materials to be recycled and recovered.
- Illegal disposal of the Hoist or Pantographs and relevant HCS interface cards by the user entails application of the penalties provided for in the national laws which incorporate Directives 91/156/EC and 91/689/EC (incorporated into Italian law by Italian legislative decree No. 22 of 5 February 1997).



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