DigiLink DHL-4

Digital Handset Link Unit

Operating Manual

[ORIGINAL]

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Revision 1v1

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1 Introduction

1.1 Product introduction

The DigiLink is a unit that links multiple DigiHandsets to a DigiHoist controller so that large numbers of hoists can be controlled remotely.

In order to remotely control a system with more than 32 channels, multiple handsets are required because the maximum number of channels controllable via a DigiHandset is 32. The DigiLink connects up to four handsets together so that a single handset GO button can control up to 96 hoists. While limiting the start of movement to a single GO button, the DigiLink ensures that all emergency stops remain active at all times for maximum safety.

1.2 Scope and purpose

The purpose of this manual is to describe the key features, functions and means of operation for the DigiLink unit.

The equipment described in this manual may only be operated by personnel qualified to do so. Qualified personnel are those who, based on their training and experience, are capable of identifying risks and avoiding potential hazards when working with this and associated equipment.

2 Safety information

WARNINGS

IF IN DOUBT ABOUT ANY ASPECT OF MOVING OBJECTS, ALWAYS SEEK PROFESSIONAL ADVICE

- **Only personnel fully familiar with the operations and procedures outlined in this manual are permitted to operate the DigiLink.**
- **Do a full risk assessment of the location where you intend to use the DigiLink and its connected devices.**
- **Make sure you know the locations of the emergency stop buttons on all connected devices and systems.**
- **If you notice any unexpected or dangerous movements, use the emergency stop button/s to bring all movement to an immediate stop.**
- **Do not operate the equipment, cables or connectors when damaged or wet.**
- **Do not open the DigiLink or remove the outer casing if the system is connected to a power source, even if the DigiLink itself is not powered on. Doing so can result in damage to the product and is also a health hazard.**
- **Do not connect or disconnect cables while the system is powered on. Always switch off before making or breaking connections.**

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- **Do not use the DigiLink unless all emergency stop buttons connected to the system have been tested and are functioning correctly.**
- **Do not use any hoists without having carried out the regular inspection as specified by the manufacturer.**
- **Do not start movement operations until a competent and trained person has inspected the connected equipment.**
- **Do not modify the DigiLink in any way unless expressly advised by the manufacturer.**
- **Do not use the DigiLink if it does not appear to be in 100% working order.**
- **Do not distract the operator's attention while the equipment is in operation.**
- **Do not start movement without having a clear view of all the attached devices and loads. If you do not have a clear view, make sure you have reliable communication with someone who does.**
- **Make sure that all cables, adapters and hoists connected to the DigiLink have the correct connector wired to the same standard as the DigiLink outputs. If in doubt, do not connect hoists or cables without checking for compatibility. Physically identical connectors may be wired differently by various suppliers.**

2.1 Operating environment

The DigiLink is designed for indoor use only and to work at ambient temperatures between 0°C and 55°C (32°F and 131°F). The DigiLink has an Ingress Protection (IP) rating of IP40.

2.2 Transport and storage

Condensation

The DigiLink is designed for indoor use only. If the product has been exposed to temperature fluctuations, for example during transport, there may be risk of condensation which may result in damage. Do not connect the DigiLink to a power source immediately. Leave the DigiLink disconnected until the unit has reached a safe temperature.

Shocks

Do not shake, knock or drop the DigiLink. Avoid excessive force when installing and operating the product.

Handling

Do not lift the DigiLink controller by any of its cables or connectors as this may cause damage to the unit and/or the cable.

Packaging

Where possible, use the original packaging to transport the DigiLink. Alternatively, a purpose-made flight case should be used (available separately).

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3 Product overview

3.1 Front panel

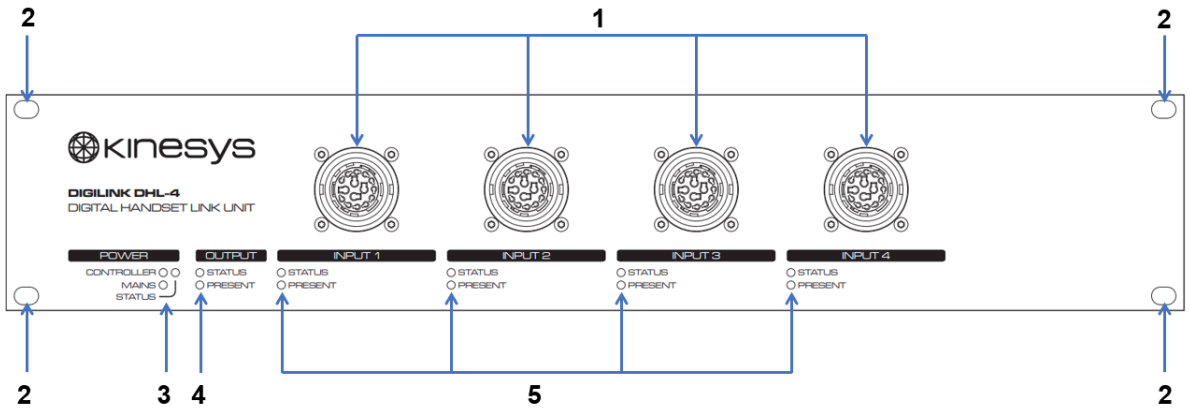

Figure 1 Front panel

1. **Inputs 1 - 4** – connection points for up to four DigiHandsets
2. **Rack mount points** – holes for mounting the DigiLink into a standard 19” rack or enclosure.
3. **Power status indicators** – indicators for mains and controller power.
4. **Output status indicators** – will illuminate once an output connection is established.
5. **Input 1 – 4 status indicators** –status and connection presence lights for each input; will illuminate once a DigiHandset is connected.

3.2 Rear panel

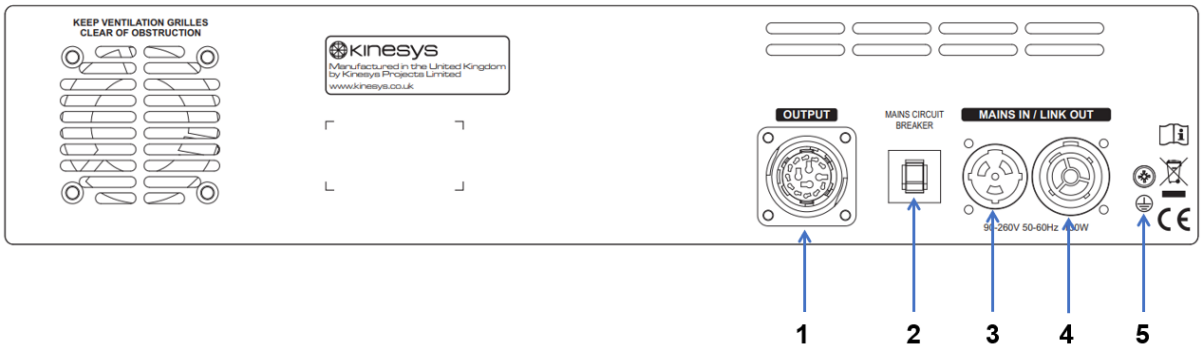

Figure 2 Rear panel

1. **Output** – for connection to a DigiHoist controller
2. **Mains circuit breaker**
3. **Mains power connection** – for connection to the mains power
4. **Link Out** – for daisy chaining power to/from other devices
5. **Ground/Earth point** – point on the chassis to connect a direct Earth connection.

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4 Rack mount installation

The DigiLink has rack mounts on either side on the front panel to enable it to be installed into 2U of space in an industry standard 19” rack. To install the DigiLink into a 19” rack, follow the procedure below.

1) Position the DigiLink within the 19” rack and align the rack mount holes with those of the rack in a desired position on both sides.
2) Secure the DigiLink to the frame of the rack on both sides using cage nuts and bolts.
3) Make sure there is enough space within the rack to allow for the installation of cables at the front and rear of the DigiLink.
4) Make sure there is adequate ventilation when the DigiLink is installed in the rack.

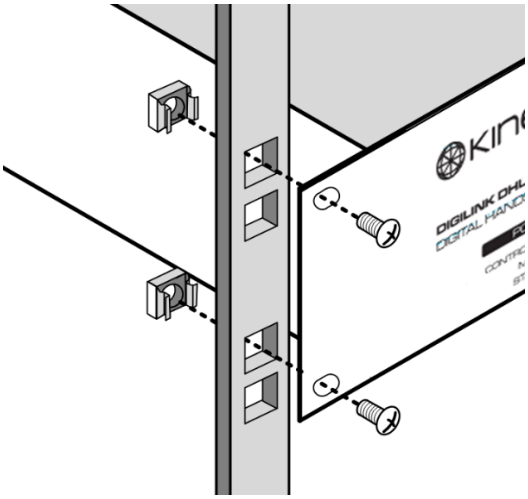

Figure 3 Rack mount installation

5 Connecting the DigiLink

5.1 Mains connection

Warning! **The DigiLink requires a power supply between 90V and 260V at 50Hz and 60Hz. It is supplied with a Neutrik PowerCon True1 connection and a cable with a bare end to enable the user to fit whichever plug is appropriate for the region in which it is being used. Make sure this power connection is fitted correctly by a qualified electrician.**

When powered on, the MAINS indicator on the front panel will illuminate to confirm the DigiLink is receiving power.

Figure 4 Mains indicator

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5.2 Connecting DigiHandsets and DigiHoist controllers

Note: For more information on the operations and functions of the DigiHoist controller, consult the Kinesys DigiHoist Operating Manual (Document No. 9200110).

1) Connect a Kinesys DigiLink cable (sold separately) to the output on the rear panel of the DigiLink. Locate the connector in the socket and twist the locking ring to secure.

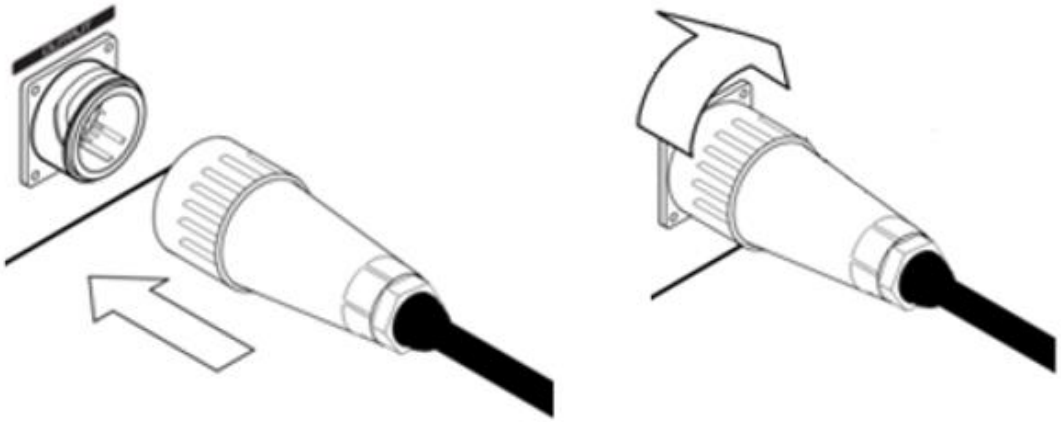

Figure 5 Connect the DigiLink cable to the DigiLink

2) Connect the other end of the DigiLink cable to the Data IN socket on the first DigiHoist controller in the chain. Locate the connector in the socket and twist the locking ring to secure.

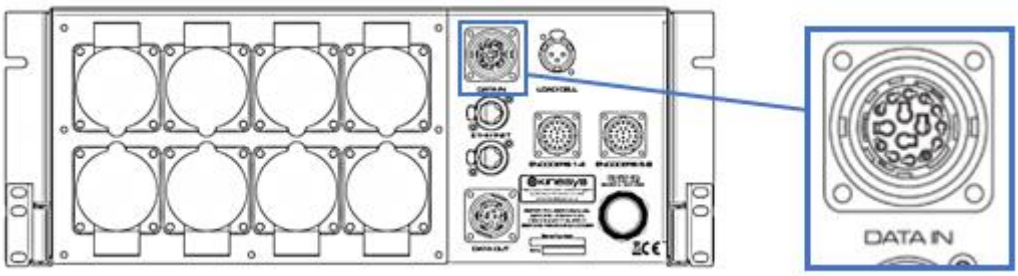

Figure 6 Connect the DigiLink cable to the DigiHoist controller

Once the DigiLink is receiving communications from the DigiHoist controller, the CONTROLLER and STATUS power indicators will illuminate. Both output indicators will also illuminate to indicate that the output of the DigiLink is connected and active.

Figure 7 Controller and Status indicators

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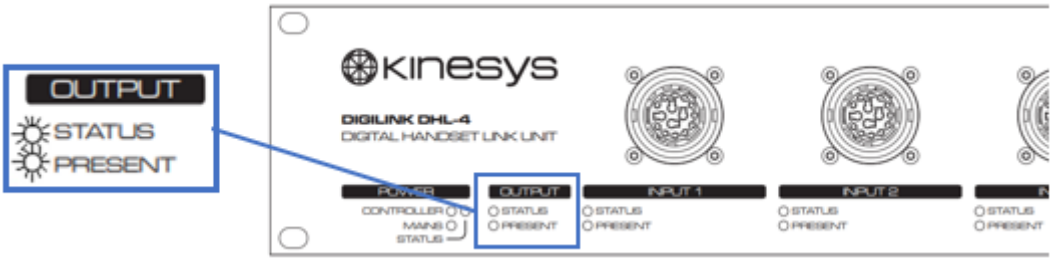

Figure 8 Status and Present output indicators

3) Connect another DigiLink cable (sold separately) to the connector at the top of the DigiHandset. Locate the connector in the socket and twist the locking ring to secure. This can be done for up to four DigiHandsets.

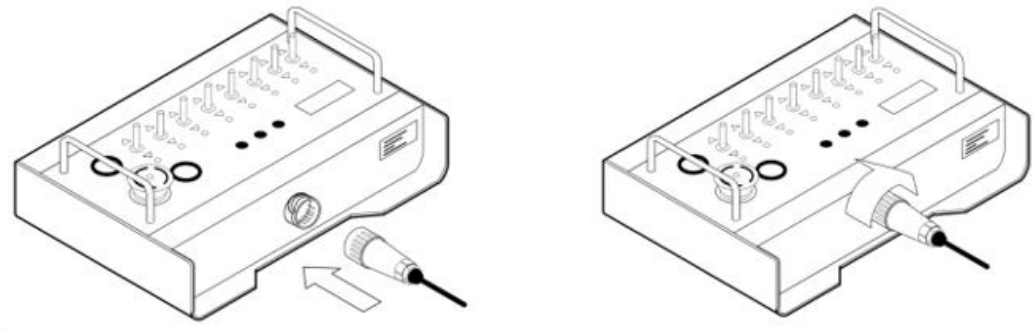

Figure 9 Connect the DigiLink cable to the DigiHandset

4) Connect the other end of the DigiLink cable to one of the input sockets on the front of the DigiLink. Locate the connector in the socket and twist the locking ring to secure. The DigiHandset connected to input number 1 will always be the primary handset - the GO and RESET buttons on this handset will control all hoists.

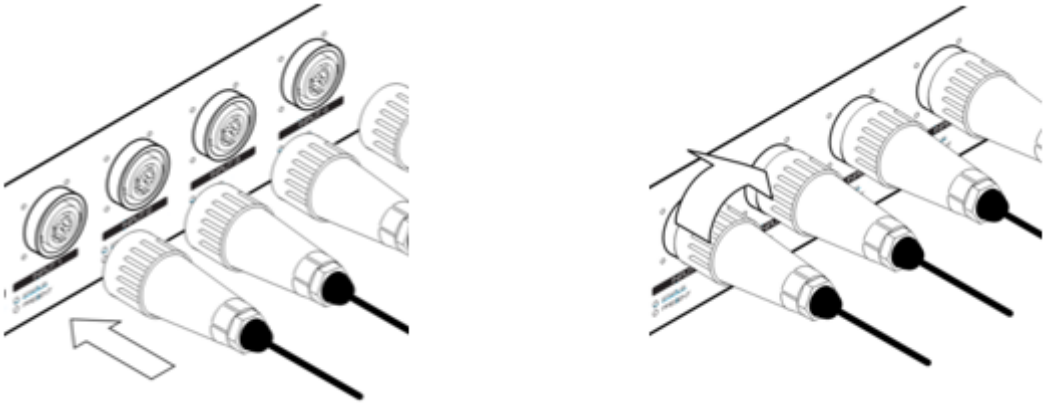

Figure 10 Connect the DigiLink cables to the inputs of the DigiLink

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Once each DigiHandset is connected to the DigiLink, the STATUS and PRESENT indicators for each input channel will illuminate, indicating that the system is ready for movement.

Figure 11 Status and Present input indicators

5.3 Pressing E-Stops

Pressing and E-Stop on a DigiHandset

When an E-Stop button on a DigiHandset is pressed, the Status indicator for that handset input will flash red and the Status indicators of all other connected handsets will turn solid red. The output Status indicator will also turn solid red. Once the E-Stop has been released and reset, all Status indicators will go back to solid green.

Pressing and E-Stop on a DigiHoist controller

When an E-Stop button on a DigiHoist controller is pressed, the output Status indicator will turn solid red and it will turn green again once the E-Stop button is released and reset.

6 Service & end of life

In the event of the product being considered beyond economic repair it should be disposed of with care and in line with local legislation on disposal of Waste Electrical and Electronic Equipment (WEEE).

In Europe WEEE shall be disposed of in accordance with European Union Directive 2012/19/EU.

In most regions of the world, similar legislation exists to ensure that WEEE is handled separately to maximise reuse of materials and avoidance of landfill.

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7 Product specifications

Feature	Specification
Environmental	- Operating temperature: 0°C and 55°C (32°F and 131°F) - Ingress Protection rating: IP40 (Protected from tools and small wires greater than 1 millimetre, not protected from liquids)
Mains power supply	- 3-phase + Neutral + Earth 50-60Hz - 90 V to 260 V
Front panel controls	N/A
Connections	- Amphenol C16-3 Link In Male 14+PE - Amphenol C16-3 Link Out Female 14+PE - Channel input status indicators
Front panel indicators	- Power and controller indicators - Output indicators - Input indicators
Enclosure	1.5mm steel, matt black powder coat finish
Cooling	Natural air cooling
Accessories supplied	Neutrik Powercon True1 2m power cable, socket to bare ends
Accessories required	Kinesys DigiLink cable
Product dimensions	- 480 mm x 302 mm x 87 mm (excluding cables, connectors and mounting hardware) - 4U 19” rack mountable
Weight	3.3 kg

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8 Declaration of Conformity

ORIGINAL

EC Declaration of Conformity

manufacturer: **Kinesys Projects Limited**
address: **Unit 2 Kempton Gate, Oldfield Road, Hampton, Middlesex. TW12 2AF**

in accordance with the following EC directives:

Low Voltage Directive 2014/35/EU
EMC Directive 2014/30/EU

declares that the products:
description: **DigiLink DigiHandset Combiner**
part numbers: **DGH-00-0210**
DGH-00-0211
DGH-00-0300

are in conformity with the applicable requirements of the following standards:

EN 60204-1	**Safety of machinery - Electrical equipment of machines -- Part 1: General requirements**
EN 62061	**Safety of machinery - Functional safety of safety-related electrical, electronic and programmable electronic control systems** DigiLink may be used in applications up to SIL2 (emergency stop function only) in conjunction with DigiHandset and DigiHoist
EN 61000-6-1	**Electromagnetic compatibility (EMC). Generic standards. Immunity for residential, commercial and light-industrial environments**
EN 61000-6-3	**Electromagnetic compatibility (EMC). Generic standards. Emission standard for residential, commercial and light-industrial environments**

The manufacturer hereby declares that the products named above have been designed to comply with the relevant sections of the above referenced standards. The units comply with all applicable Essential Requirements of the Directives.

Equipment referred to in this Declaration of Conformity was first manufactured in 2011

A M Cave

Technical Director

Hampton, 6 October 2020

The attention of the specifier, purchaser, installer, or user is drawn to special measures and limitations to use which must be observed when these products are taken into service to maintain compliance with the above directives.

Details of these special measures and limitations to use are available on request, and are also contained in the product manuals.

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