

# **Omni connection manual**

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Omni Joystick connection interface  
Addendum to the manual of a mo-Vis Joystick



## Contact & Product

### mo-Vis bvba



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Produced and published by mo-Vis bvba, Belgium

Edition 2, June 2018

Manual item: D-P002-81-70-01

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## This manual is an addendum

This manual is an addendum of a mo-Vis Joystick manual and contains the information about the Omni interface connection.

All information on: support, scrapping and spare parts, warranty and safety precautions from the mo-Vis Joystick manual are equally applicable to this addendum of the manual.

## Important information about this manual

Before you install or begin using this product, it is important that you read and understand the content of these installation and operating instructions, the safety instructions in particular.

The installation instructions will guide you as an installer through the options and possibilities with the mo-Vis product. The mo-Vis product should be adjusted with the mo-Vis Configurator software.

The operating instructions are primarily intended to acquaint you with the functions and characteristics of the mo-Vis product and how you can use it in the best manner possible. They also contain important safety and maintenance information, as well as describe possible problems that can arise during use.

Always keep the operating instructions handy in connection with your wheelchair, since the need for important information can arise concerning its use, safety and maintenance.

All information, pictures, illustrations and specifications are based on the product information that was available at the time of printing. Pictures and illustrations shown in these instructions are representative examples and are not intended to be exact depictions of the various parts of the product.

We reserve the right to make changes to the product without prior notice.

### ***Referenced products***

This manual is valid for the mo-Vis Omni Joystick connection interfaces.

### ***Ordering documentation***

You can download additional copies of this User & Installation manual on the mo-Vis website: [www.mo-vis.com](http://www.mo-vis.com).

# About the Omni Joystick Connection interface

## *Purpose*

The Omni Joystick connection interface is a part of a mo-Vis Omni Joystick, and allows you to connect the Joystick to a wheelchair with Omni interface.

An Omni Joystick has a cable with a SUB D9 connector and a 3.5 mm jack connection. They can be directly plugged into the electronics of the wheelchair. The joystick then controls the wheelchair in all its functions (driving, electric gears, lights ...).

## *Additional connectivity*

Optional adapters allow you to connect the Omni Joystick to a wheelchair with:

- **E-fix 25:** Joystick Interface Omni - Efix (P002-33)
- **DX:** Joystick Interface Omni - DX (P002-31)
- **Easy Rider:** Joystick adapter cable Omni - Easy Rider (M002-90)
- **Otto Bock Curtis electronic :** Joystick Interface Otto Bock Curtis (P002-37)

## **Availability**

The following Joysticks are available with an Omni connection interface:

- **All-round Joystick Heavy Duty:** large size joystick, extreme force (ca. 650 gr – 22.93 oz)
- **All-round Joystick:** regular size joystick, regular force (ca. 250 gr – 8.81 oz)
- **All-round Joystick Light:** regular size joystick, medium force (ca. 120 gr – 4.23 oz)
- **Multi Joystick:** smaller size joystick, limited force (ca. 50 gr – 1.76 oz), operated with finger, chin, lip, ...
- **Micro Joystick:** very small sized joystick, minimal force (ca. 8 gr – 0.28 oz), operated with finger, chin, tongue, lip, ...

## **Features**

The Omni Joystick connection interface is an integrated part of a mo-Vis Omni Joystick and consists of:

- Omni (SUB D9) connector with cable
- 3.5 mm mono jack out with cable

## Installation, first time use, conditions of usage, maintenance, parameter settings

For installation, first time use, conditions of usage, maintenance and parameter settings, we refer you to the Joystick manual.

### LED status

The illumination of the LED on the joystick or joystick interface indicates the operational status of the joystick.

Joystick status	Tilt parameter	Joystick tilted	Led status
Operational	Enabled	N	LED on
Operational	Enabled	Y	LED flashes as heartbeat
Operational	Disabled	Y	LED on
Operational	Disabled	N	LED on
Error	x	x	Flash the error code



## Error codes

When a fault occurs, the LED of the mo-Vis Omni Joystick will start to flash. A long delay is followed by a number of flashes with a short delay. The error message depends on the connection type. Count the number of flashes and look up the according error message in the table below:

Flash count	Reason	Required action
1	-	-
2	Connection Cable/Driver issues	Check/replace cable to wheelchair, and/or check/replace sensor cable (if available), or Replace PCB
3	Power supply	Check cable and/or replace PCB
4	Joystick/sensor fault	Check/replace joystick
5	-	-
6	ADC – internal Analog to Digital converter	Replace PCB
7	Test Flag failed or diagnostic failed	Redo tests and/or replace PCB.
8	CPU fault	Replace PCB
9	Scheduler fault	Update software or replace PCB
10	Coding error	Update software or replace PCB

## Fault log

A fault log with counters is maintained. The fault log can be accessed by the configurator (Dealer Level). Below is an overview registered faults.

Depending on the joystick type, not all faults may be possible.

Fault	Reason	Required action
CPU Error RAM	CPU consistency check failed.	Replace PCB
CPU Error FLASH		
CPU Error EEPROM		
Run Error Scheduler	Firmware consistency check failed.	Update Software or Replace PCB
Code Error Framework		
Code Error Application		
MSP Command Corrupt	Corrupt command was received.	Connection with the PC (Configurator program) went wrong, try again.
MSP Command Unknown	Unknown command was received.	Connection with the PC (Configurator program) went wrong. Update Firmware or update Configurator Software. Try again.
MSP Sub Command Unknown	Unknown Sub Command was received.	
MSP Argument Invalid	Invalid argument received.	
MSP Device Not Ready	Device as not ready to receive an MSP command.	

Fault	Reason	Required action
MSP Device Wrong State	The device is not able to receive a command in the current device state.	
PCB Test Failed	Factory test failed.	A fault occurred during factory testing.
Assembly Test Failed		
Field Test Failed	Field test failed (Calibration).	A fault occurred during field testing (Calibration).
Test Flag Check	One or more test flags not set.	Redo tests and/or replace PCB.
ADC	ADC Conversion error.	Check OMNI Cable, replace PCB interface
Output	The OMNI outputs are out of spec.	Check OMNI Cable, replace PCB interface
Reference	The OMNI reference is out of spec.	
Communication	Communication with the sensor (joystick failed)	Check cable to sensor (joystick) and/or replace sensor (joystick)
Joystick (Sensor)	The Sensor (Joystick) faulty	
Accelerometer	The Accelerometer fails	Replace PCB interface

## Technical data

### *Available on:*

- All-round Joystick Omni Heavy Duty (P002-73)
- All-round Joystick Omni (P002-71)
- All-round Joystick Omni Light (P002-72)
- Multi Joystick Omni (P002-61)
- Micro Joystick Omni (P002-51)

### *Connectors*

- Omni (SUB D9) connector with cable
- 3.5 mm mono jack out with cable -



Installation date: . . / . . / . . . .

Dealer: . . . . .



***Dealer stamp:***

A large, empty rectangular box with a thin green border, intended for a dealer stamp.

***Serial number sticker***

A large, empty rectangular box with a thin green border, intended for a serial number sticker.