

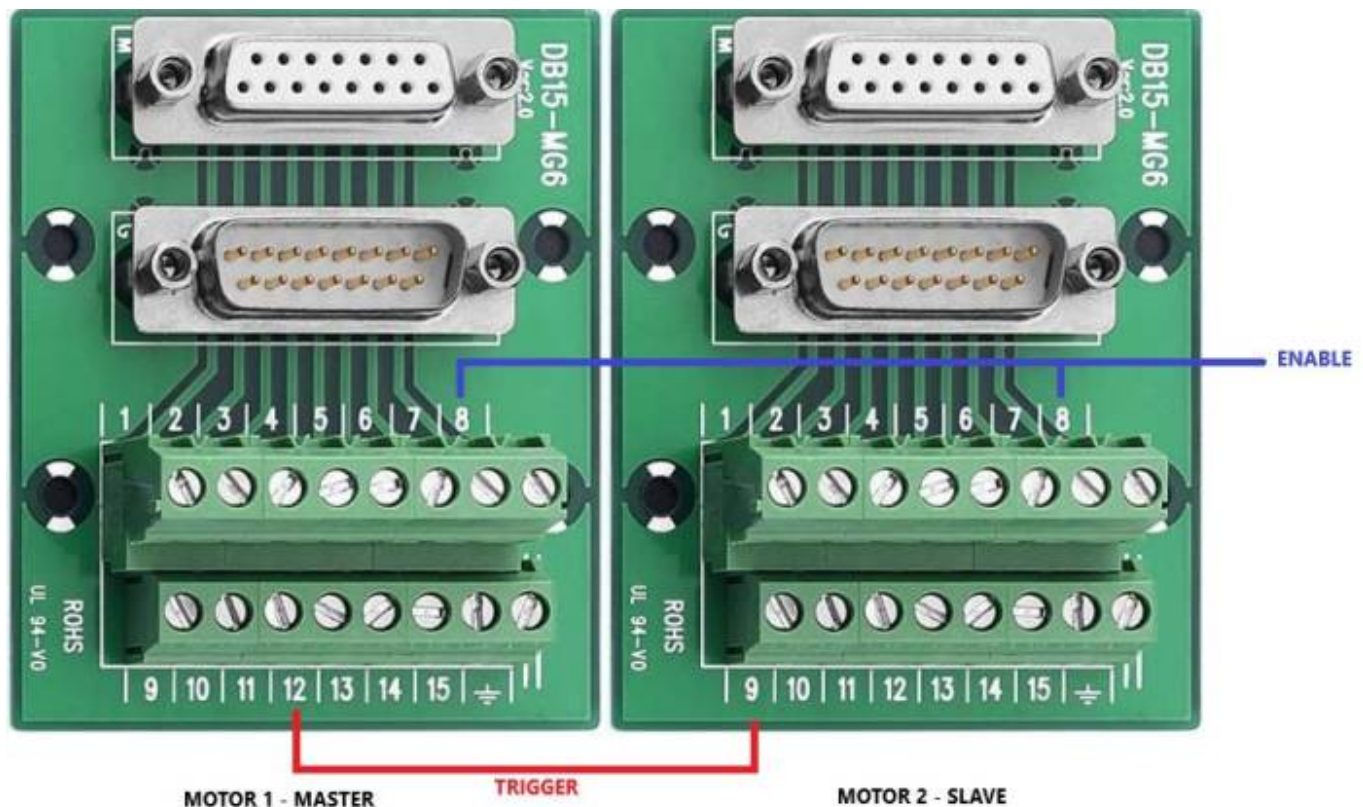
# Master and slave mode

when two or more axis must be synchronized without PLC that send a trigger signal on digital input 1, one NLI motor can be used as a master to synchronized the others.

## Connection between the two motors

Pin 12 (Digital output 2) of the master motor must be connected to Pin 9 (Digital Input 1) of slave motor

Pin 8 (Digital input 0) must be set to 24VDC to start the motion.



## Example of configuration of the two axes

The waiting time of the master and slave must be set to a waiting time of 5 ms (1). On the master motor, the parameter 4098 Digital Output2 must be select to Master synch (2).

**As regards the homing speed, please specify low speed (for example 10mm/s) in the master motor and medium speed (for example 50mm/s) in the slave motor.**

**This is to guarantee that the automatic homing of the slave is completed before the master motor starts the motion.**

## Master configuration

Motion controller

Controller configuration

Scope

Parameter

Communication

Diagnostic

Expert

Parallel Motion

Surveillance

Motion Table

MODBUS ADDRESS

Index

Motion type

Position

A  
Acceleration time  
or motion time

B  
Constant speed time

C  
Deceleration time

Waiting

Trigger mode

|      |   |            |        |     |   |     |    |            |
|------|---|------------|--------|-----|---|-----|----|------------|
| 1793 | 0 | Triangular | 5,000  | 100 | 0 | 100 | 5  | Auto       |
| 1804 | 1 | Triangular | 45,000 | 100 | 0 | 100 | 5  | Auto       |
| 1815 | 2 | None       | 65,000 | 100 | 0 | 0   | 20 | Auto       |
| 1826 | 3 | None       | 0,000  | 0   | 0 | 0   | 0  |            |
| 1837 | 4 | None       | 0,000  | 0   | 0 | 0   | 0  |            |
| 1848 | 5 | None       | 41,500 | 140 | 0 | 190 | 10 | DIG IN HIC |
| 1859 | 6 | None       | 35,000 | 140 | 0 | 140 | 10 | DIG IN LOV |
| 1870 | 7 | None       | 0,000  | 0   | 0 | 0   | 0  |            |
| 1881 | 8 | None       | 0,000  | 0   | 0 | 0   | 0  |            |
| 1892 | 9 | None       | 0,000  | 0   | 0 | 0   | 0  |            |

Load/Write these data from/to motor

Value changed and not downloaded

Value downloaded / uploaded correctly

Motion mode

1792 1 Maps - 10 positions pro map

Motion parameter

Evaluate motion profile

Cycle time 1156 [msec]

Motion per minute 52

Duty motion 96 [%]

Digital input and output Configuration

Digital Output 0

Drive Enable (active low)

Digital Output 1

Drive Fault (active low) OR DIR (Rotolinear)

4098 Digital Output 2

Master Synch

4097 I/O control

## Slave configuration

Trigger mode of the index 0 (first row) must be set to DIG IN falling edge (1) with a waiting time of 3ms and the parameter 4098 Digital output2 must be seto In position (2)

Motion controller

Controller configuration

Scope

Parameter

Communication

Diagnostic

Expert

Parallel Motion

Surveillance

Motion Table

MODBUS ADDRESS

Index

Motion type

Position

A  
Acceleration time  
or motion time

B  
Constant speed time

C  
Deceleration time

Waiting

Trigger mode

|      |   |            |        |     |   |     |    |              |
|------|---|------------|--------|-----|---|-----|----|--------------|
| 1793 | 0 | Triangular | 5,000  | 100 | 0 | 100 | 3  | DIG IN falli |
| 1804 | 1 | Triangular | 45,000 | 100 | 0 | 100 | 3  | Auto         |
| 1815 | 2 | None       | 65,000 | 100 | 0 | 0   | 20 | Auto         |
| 1826 | 3 | None       | 0,000  | 0   | 0 | 0   | 0  |              |
| 1837 | 4 | None       | 0,000  | 0   | 0 | 0   | 0  |              |
| 1848 | 5 | None       | 41,500 | 140 | 0 | 190 | 10 | DIG IN HIC   |
| 1859 | 6 | None       | 35,000 | 140 | 0 | 140 | 10 | DIG IN LOV   |
| 1870 | 7 | None       | 0,000  | 0   | 0 | 0   | 0  |              |
| 1881 | 8 | None       | 0,000  | 0   | 0 | 0   | 0  |              |
| 1892 | 9 | None       | 0,000  | 0   | 0 | 0   | 0  |              |

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Motion mode

1792 1 Maps - 10 positions pro map

Motion parameter

Evaluate motion profile

Cycle time 1156 [msec]

Motion per minute 52

Duty motion 96 [%]

Digital input and output Configuration

Digital Output 0

Drive Enable (active low)

Digital Output 1

Drive Fault (active low) OR DIR (Rotolinear)

4098 Digital Output 2

In Position

4097 I/O control

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