

MOTOR CONTROL

4-1CV /4-2CV



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1.- General Description

The Motor Control 4-1CV and 4-2CV are equipments for motor control specially suitable for mobile installations.

Totally integrated in a water proof suitcase ,very strong and of small dimensions .

Can control up to 4 motors of 1 or 2 HP depending on the model selected .

It's possible to connect several Motor Control in series , in the way master /slave and take control of all of them from the first one.

Includes a Manual Emergency Stop, phase detector and circuit breakers for protecting the installation.

2.- Characteristics

- Possibility of connection with other Motor Control units (unlimited number)
- The units connected could be the models Motor Control 4-1CV or Motor Control 4-2CV indistinctly.
- Power supply phase detector .

- Electrical protection through circuit breakers per motor
- Preset of the individual sense of turn , per motor .
(Up / Stop / Down)
- Manual Emergency Stop
- Access key

2.1.- Technical Data

Power supply	380V 50Hz triphase
Max. Power	4 x 1cv / 4 x 2cv
General Protection	Differential 25Amp. + Breaker 6 Amp.
Motor protection	4-1CV Breaker 1.6-2.5 Amp 4-2CV Breaker 2.5-4 Amp.
Master/Slave control signal	0-24V c.c.
Power connector	Cetac 32 Amp. 5 poles
Motor connector	Cetac 16 Amp. 6h 4 Poles
Weight	12 Kg

3.- Measurements

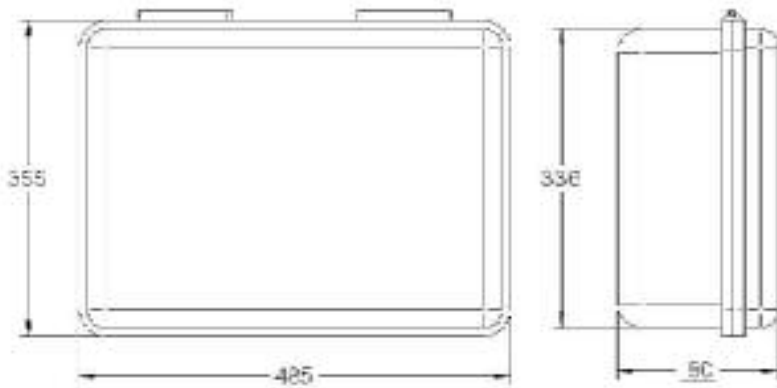


Fig.- 1

4.- Connections

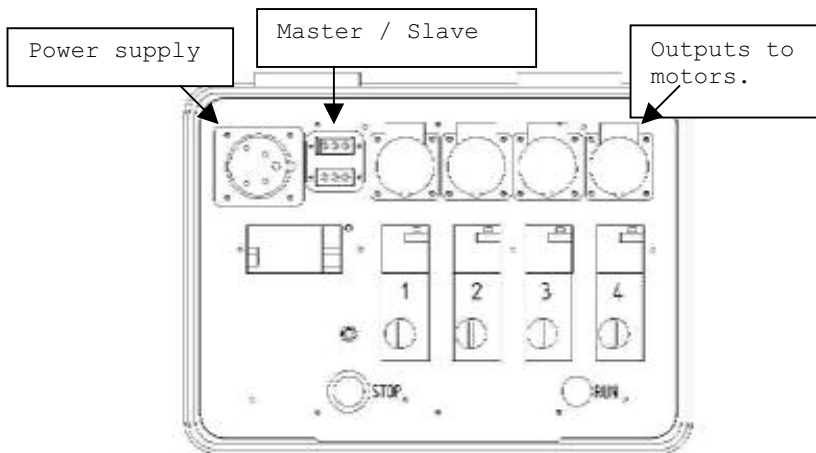


Fig.- 2

For connecting the Motor Control you only have to supply the mains and the outputs to the motors.

4.1.- Master / Slave connection

If we want to connect the Motor Control suitcases in Master/Slave mode , we have to connect the master/slave output of the first Motor Control to the master /slave input of the next and so on.

If we have , for instance 4 Motor Control,

The number 1 is Master of 2,3 and 4;

Number 2 is Master of 3 and 4;

Number 3 is Master of 4.

5.- Way of working

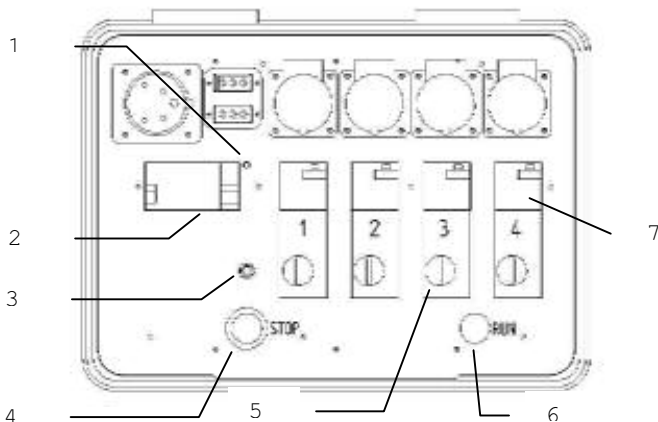


Fig. 3

- | | |
|---------------------------|----------------------------|
| 1.- Phase detector pilot. | 5.- Sense of turn selector |
| 2.- General Protections | 6.- RUN pushbutton |
| 3.- Key | 7.- Motor breakers |
| 4.- Emergency stop | |

For make working the Motor Control do the following:

- 1.- Turn on the general protections and the motor breakers.
- 2.- Turn the key to On position.
- 3.- Select the sense of turn of each one of the motors through the switches : Up, Stop and Down..
- 4.- When you press the RUN pushbutton each motor starts moving in the sense previously decided with the switches.

Note.

In case of emergency pushing the STOP button the movement of all motors stopped.

Master / Slave working

The way of working is the same as mention above but with the difference that when you push the RUN button of the master Control Motor the motors of the slaves starts moving too.

Important.

Remind that all Motor Control slave units should have the breakers and the key in the ON position.

6.- Maintenance

6.1..- Regular cleaning

To prevent the accumulation of dust and dirt which may impair correct functioning, the equipment should be cleaned regularly.

For cleaning use a soft, slightly damp cloth . If there is considerable amount of accumulated dirt, apply a little liquid detergent to the cloth.

Attention:

Do not use solvents or products containing alcohol. Make sure that no liquids get inside the equipment.

7.- Common problems.

Problems	Usual causes	Solutions
Motors doesn't work.	All switches Up/Stop/Down are in Stop position.	Select the movement desired for each motor.
	Protections broke the circuit	Check the installation and reset the protections
	Defective power connection.	Check the connection and/or the phases order. Check the light of the phase detector.
	Disconnected key	Place key in ON position.
	Emergency pushbutton activated	Check the installation and reset it .
Motors doesn't work in Master / Slave mode	Bad connection between suitcases.	Check the connections.

If the problem persists despite these measures, please contact with FRESNEL S.A.s Technical Service
Telf 34 93 210 73 51
Telf 34 93 219 94 60
Fax 34 93 213 76 61



FRESNEL S.A.

DC-01

STATEMENT OF COMPLIANCE

DATE: 1/1/02

We hereby declare that the product:

Brand: **STRONG**

Model: **MOTOR CONTROL
4-1CV / 4-2CV**

Year of construction: **2002**

Conforms to Directive 73/23 in respect of safety requirements for electrical material , to be used within specific voltage limits, and to Directive 89/336 in respect of the electromagnetic compatibility of equipment, systems and installations.

Sole Administrator

Angel Torrecillas Redón

Barcelona, January 2nd 2002

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