

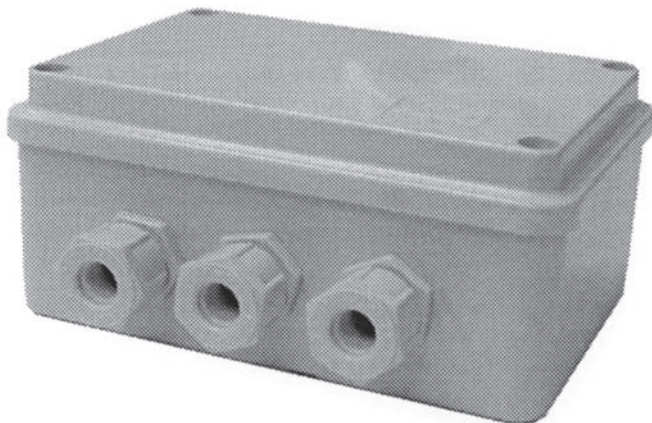
 **MINGARDI**<sup>®</sup>  
THE REFERENCE FOR WINDOW AUTOMATION

• SOLUTIONS FOR  
LINEAR  
AUTOMATION

○ Somfy international

**GB** USE AND INSTALLATION MANUAL

## CONTROL UNIT FOR TWO ACTUATORS



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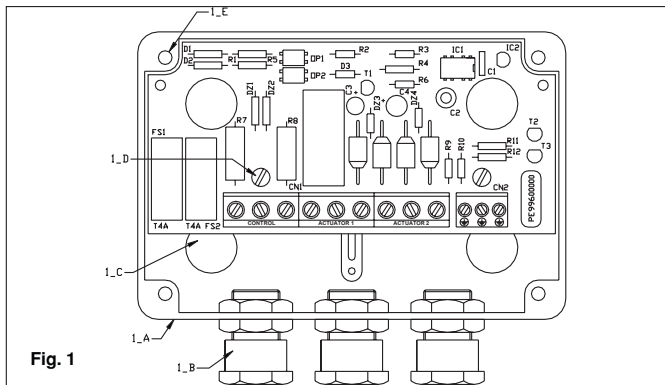
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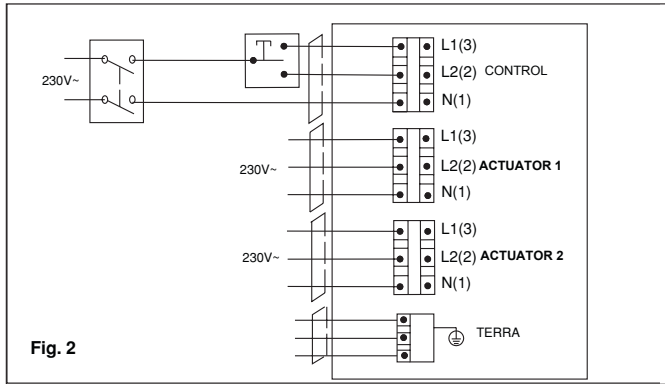


# INSTRUCTIONS ON ASSEMBLY, USE AND INSTALLATION

# CONTROL UNIT FOR TWO ACTUATORS 230 V a.c.



**Fig. 1**



**Fig. 2**



## INSTRUCTIONS ON ASSEMBLY, USE AND INSTALLATION

## CONTROL UNIT FOR TWO ACTUATORS 230 V a.c.

### 1 NOTES ON READING THE MANUAL

Before embarking on any installation or wiring operations, read this manual extremely carefully.

The user must refer to the notes contained in it and keep it safely for future reference.

#### EXPLANATION OF THE SYMBOLS

**Danger!**

General danger or preventive warning with numerous implications.

**Warning!**

Read this manual carefully.

**Danger!**

Danger of electrocution from electric current.

**Danger!**

Danger that could cause personal injury.

**Danger!**

Danger of hands being crushed.

**Warning!**

Draws attention to instructions that must be followed in order to prevent damage to the actuator.

**Notice**

Refers to important information to which special attention must be paid.

#### NOTES ON THE CONTROL UNIT

The control unit complies with current safety standards.

Operational safety can be guaranteed only if installers comply with the safety regulations in force in the country where it is installed. The control unit is to be used solely for managing 230V AC actuators. Use of the control unit for other applications must be authorised by Mingardi Magnetic S.r.l following a technical inspection of the application. Install the control unit using only original accessories or accessories approved by Mingardi Magnetic S.r.l.

### 2 IMPORTANT SAFETY REGULATIONS

**Warning!**

Read this manual carefully.

**Warning!**

In order to ensure personal safety, strictly comply with all the regulations that are set out below.

#### USE AND MAINTENANCE

When using the control unit, follow these safety regulations:



## INSTRUCTIONS ON ASSEMBLY, USE AND INSTALLATION

## CONTROL UNIT FOR TWO ACTUATORS 230 V a.c.



Restrict use of the control unit to qualified personnel; do not expose the control unit to splashes of water when cleaning the room.



Do not allow children to play with the control unit; it is necessary to remove all sources of power supply with an appropriate knife switch prior to performing maintenance on the control unit or on the actuators connected to it.



In the event of failures or damage to the equipment, contact specialised personnel. Do not use the device until it has been repaired.

### 3 DESCRIPTION OF THE INSTRUMENT

#### 3.1 Operation features:

The synchronisation control unit for two actuators is able to control all Mingardi Magnetic line actuators provided with asynchronous motors running at 230V 50Hz.

The actuators connected to the control unit, which must be the same, will both lock with a spatial displacement proportional to approximately 1.5S if one of the two stops absorbing current. Once the block occurs, it is impossible to make operations in the direction in which the lock occurred except for a first proportional attempt at about 0.1S. On the other hand, it is possible to operate the actuators in the direction opposite the lock.

There is then a minimum time and a maximum time. The minimum time is the time (0.1S) that

passes after a lock occurs following an opening or closing command. The maximum time is the time (1.5S) that passes during the dynamic phase from the moment of the two actuators stops absorbing current until when the other one is stopped. The actuators' lock occurs by switching off the power supply voltage on both actuators.

#### 3.2 Electrical features:

The control unit is provided with a power supply input (fig. 2, CONTROL) at 230V $\pm$ 6% - 50Hz. And two relay outputs with the same electrical specifications (fig. 2, ACTUATOR 1 and 2) for connecting the two actuators.

Suitable devices (fuses) are contemplated in the case of overcurrent.

#### 3.3 Mechanical features:

The electric "parts" are contained inside an 88x128x58 mm (fig.1\_A) connector block with an IP56 degree of tightness. Three cable clamps with relative nuts (fig. 1\_B) and 4 sealant plugs for possible fastening screws (fig. 1\_C) are supplied together with the block.

### 4 ENGINEERING DATA

Dimensions: 88x128x58 mm.

Degree of tightness: IP56.

Working temperature: from -10 to 50 C°.

Maximum working humidity: 60%.



## INSTRUCTIONS ON ASSEMBLY, USE AND INSTALLATION

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Power supply: 230V~±6% - 50Hz.

### Fields of application:

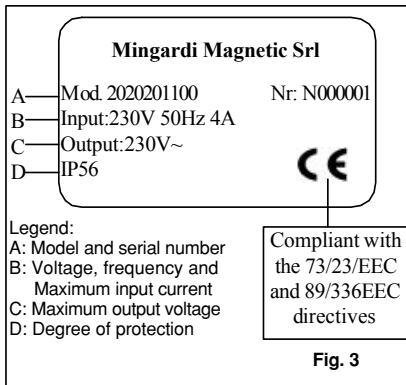
Product intended for use in indoor environments for controlling actuators used for the electric remote opening/closing of top-hung windows, skylights and louvre windows in public, private and industrial buildings.



#### Warning!

Use only actuators provided with temperature protection.

### Identification data on the control unit rating plate



### 5 CONTROL UNIT ASSEMBLY / INSTALLATION

**Only qualified installers can carry out installation.**

**The control unit must be assembled and wired only by specialised personnel who have been properly trained and who are familiar with problems of automatic window opening and closing systems, technical reference standards and safety standards.**



#### Warning!

Incorrect installation may make the control unit dangerous! Follow all the instructions set out below.

### Checks

Before installing, check that:

- The electric cables connected to the device have the proper section.
- The electric power supply systems are in compliance with the standards in force in the country where it is installed.
- All of the power supply sources are switched off when making interventions on the control unit or on the actuators connected to it.
- Check that the wires are properly connected to the control unit.
- Check that the power supply voltage is the same as that shown on the control unit's rating plate.



## INSTRUCTIONS ON ASSEMBLY, USE AND INSTALLATION

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It is possible to fasten the control unit onto a support surface using 4 screws (fig. 1\_C) in the following manner before wiring the control unit:

- 1- remove the cover by loosening the 4 screws (fig. 1\_E).
- 2- remove the electronic card by loosening the 2 fastening screws (fig.1\_D);
- 3- drill the block (fig.1\_C) and the support surface;
- 4- insert the anchors into the support surface and fasten the block with the 4 screws;
- 5- cover the screws with the 4 plugs provided and mount the electronic card.

### 6 CONNECTING TO THE POWER SUPPLY



**These connection instructions are exclusively for skilled installers who are qualified to install electrical systems. Installers must at all times**

**comply with current regulations governing electrical installations.**



#### **Danger!**

In order to avoid the danger of electrocution from electric current, turn off the power supply to the control line

prior to working on the actuators or the electric system. Always install a main bipolar power supply switch with a minimum contact opening of 3 mm upstream of the actuator control line.



#### **Information.**

Connection to the electric mains is made by using a four-lead cable (4x1 mm<sup>2</sup>) with adequate length for reaching the junction box, which must be placed close to the control unit.



#### **Warning!**

Applications that do not rule out danger for people must be provided with additional safety attachments.

It is forbidden to connect voltages to the control unit that are higher than those shown on the rating plate.



**The connections described below are to be performed on Mingardi Magnetic products. Refer to the relative manuals for more information.**



#### **Information.**

An adhesive plate is displayed inside the control unit cover and shows the type of connection to be adopted.

**6.1 Connection to the electric power supply.** Connection to the power supply mains is done using the terminal board (fig. 2, CONTROL). The voltage must be the same as that shown on the control unit rating plate (230Volt - 50/60Hz, Fig. 3). Perform the wiring as shown in the two figures.



## **6.2 Connection to the actuators.**

Connection of the actuators to the supply mains is done using the terminal boards (fig. 2, ACTUATOR 1 and 2). The voltage must be the same as that shown on the control unit rating plate.

Be careful when working on these terminal boards because a voltage the same as the control unit power supply voltage may be present.

It is not possible to simultaneously connect actuators working at different voltages or frequencies.



### **Warning!**

The earth wires must be connected to the relative terminal board so that they are always the last to break in the case of excess mechanical stress.







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## SOLUTION FOR LINEAR AUTOMATION

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