GB USER MANUAL

# MOTOR CONTROLLER FOR WINDOW OPERATORS

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# INTRODUCTION

These units are used as 24 Vdc Class 2 power source integrating the command to operate the following actuators:

- Quasar DC
- Quasar DC -Synchro
- Quasar-L DC
- Quasar-L DC -Synchro
- Twinquasar DC
- Vega DC
- Vega DC -Synchro
- Twinvega DC

with or without feedback signal

The units are composed basically by the following parts:

- Power module
- Control module
- Output module
- Enclosure

# PRODUCT CHARACTERISTICS

Motor Controllers can be manufactured to have:

- power output from 30W up to 500W;
- 1 to 4 command modules;
- 1 general command module (optional);
- 1 to 16 output modules;
- 1 to 16 feedback signal modules (optional);
- signal lamps for the feedback on the enclosure cover (optional);
- 1 24Vdc output for auxiliary devices (optional)

according to the costumer requests.

See the wiring diagrams at the end of the manual to identify the specific labels on the connectors for each function.

# PRODUCT NAME

The name of the product range is MCaaa-bb-cc that may be followed by the suffixes -s and / or –a where:

- “aaa” indicates the output power in Watt of the product and can be form 030 (for the product with lowest output power 30W) to 500 (for the product with the highest output power 500 W).
- “bb” indicates the quantity of the command switches that can be connected to the unit and can be from 1 to 16.
- “cc” indicates the quantity of the outputs and can be from 1 to 16.
- the suffix “-s” indicates that the output terminal blocks of the unit are provided with pass-through connections for the end stroke feedback signals of the actuators with or without low voltage indicator lamp located on the front panel of the box.
- The suffix “-a” indicates that the power module of the unit is provided with a 24 Vdc Class2 output to supply auxiliary devices such as rain sensors, wind sensors etc.

Informations | Danger to persons due to electricity | Warning

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## THE FOLLOWING INSTRUCTIONS CONTAIN IMPORTANT SAFETY INFORMATION

- Prior to installation please read carefully these instructions (especially the “Safety Notices”).
- Keep these instructions to consult them after installation if necessary.
- Unsuitable application or wrong installation may result in a loss of system operating functions and consequently in damages or/and injuries.
- Only original parts and fittings shall be used to install the Motor Controller.
- The working temperature of the Motor Controller is: -10°C +60°C with maximum relative humidity 60%.

## SAFETY NOTICES

- Prior to installation make sure that:
  - the Motor Controller performances comply with the estimated application
  - **the existing electric systems comply with the regulations in force**
  - power supply features are those indicated in the actuator specifications
- **The installation of the Motor Controller including the interconnection wiring with the other parts (e.g. power suppy, wall switch) shall be done in compliance with the National Electric Code (NEC) and relevant local Codes.**
- Before connecting the Motor Controller to power supply make sure it has been turned off to avoid electrocution.
- **It’s very important to verify the grounding connection works propely.**
- **An omnipolar switch shall be provided in the supply mains.**
- Protect the switch against mechanical damages during use.
- Protect the field wiring by routing it in cable ducts.
- In case of multi-output version, the outputs must not be interconnected.
- **The input and output circuits have to be properly segregated or separated by barriers.**
- **The Motor Controller is supplied with dedicated key or tool that is only provided for serviceman or installer. Any opening of the control box by the end user is not permitted.**
- It is important to follow the following precautions:
  - prevent liquids from entering the Motor Controller
  - at least once a year check at sight for damages or wear in the supply cable
  - **do not carry out any intervention on the actuator, do not remove or disassemble parts of the Motor Controller; in case of malfunction or damaged cable contact “UCS - Ultraflex Control Systems srl”**

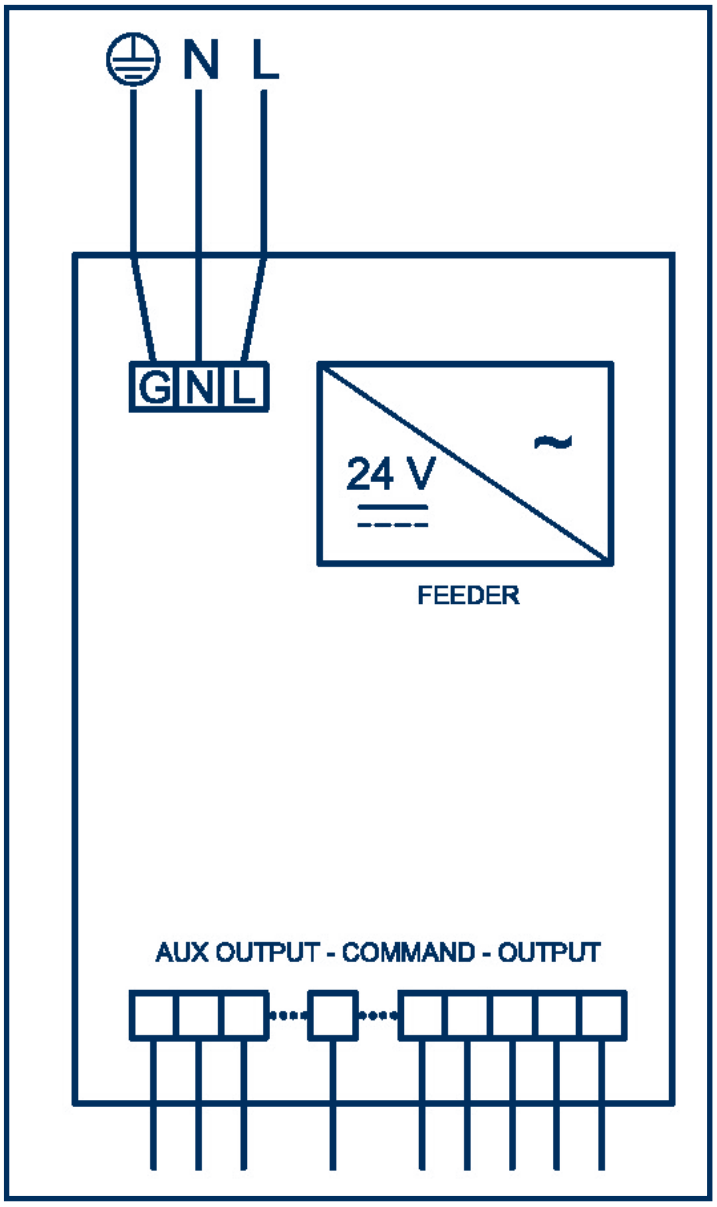
## GUARANTEE

Ultraflex Control Systems S.r.l. products are guaranteed, for a period of two years from the manufacture date, against defects in material and workmanship.
Alleged defective products returned, freight prepaid, within the above said term, will be repaired or replaced free of charge, at our option, if found effectively below our quality standards.
This guarantee does not cover other claims for direct or indirect damages.
In particular, we decline liability and exclude guarantee (except for what stated above) if improper installation or misuse should result in a failure of our products.

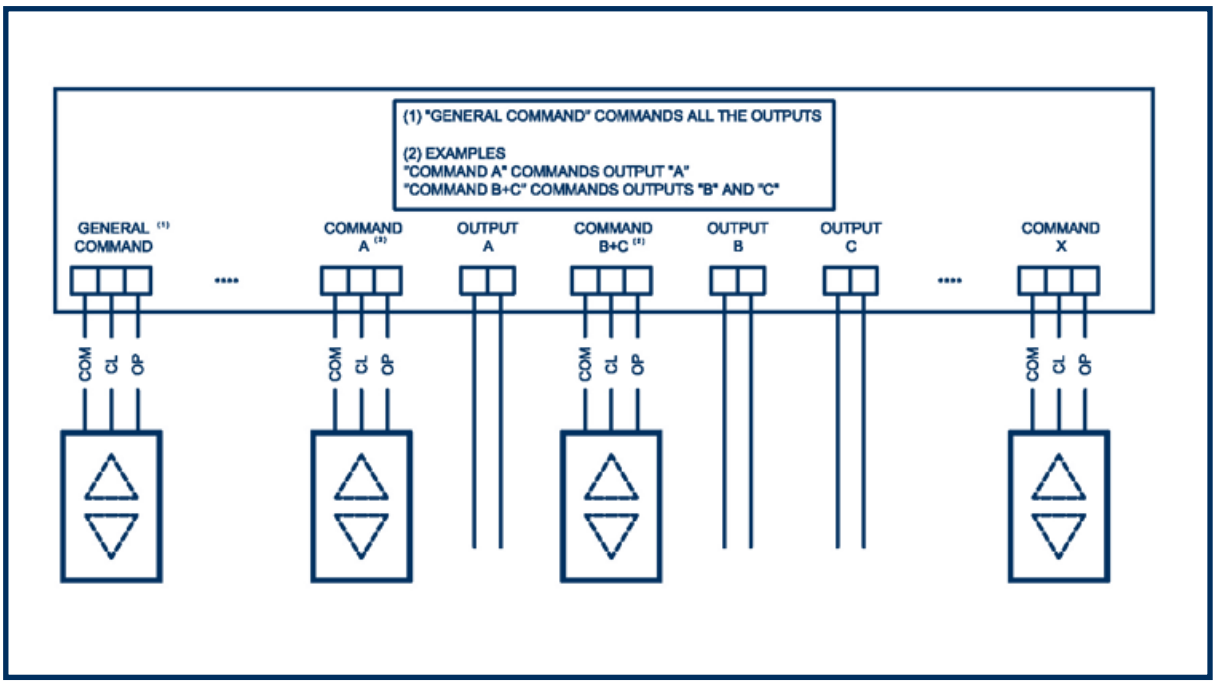
## CORRECT DISPOSAL OF THIS PRODUCT

The correct disposal of your old appliance will help prevent potential negative consequences for the environment.

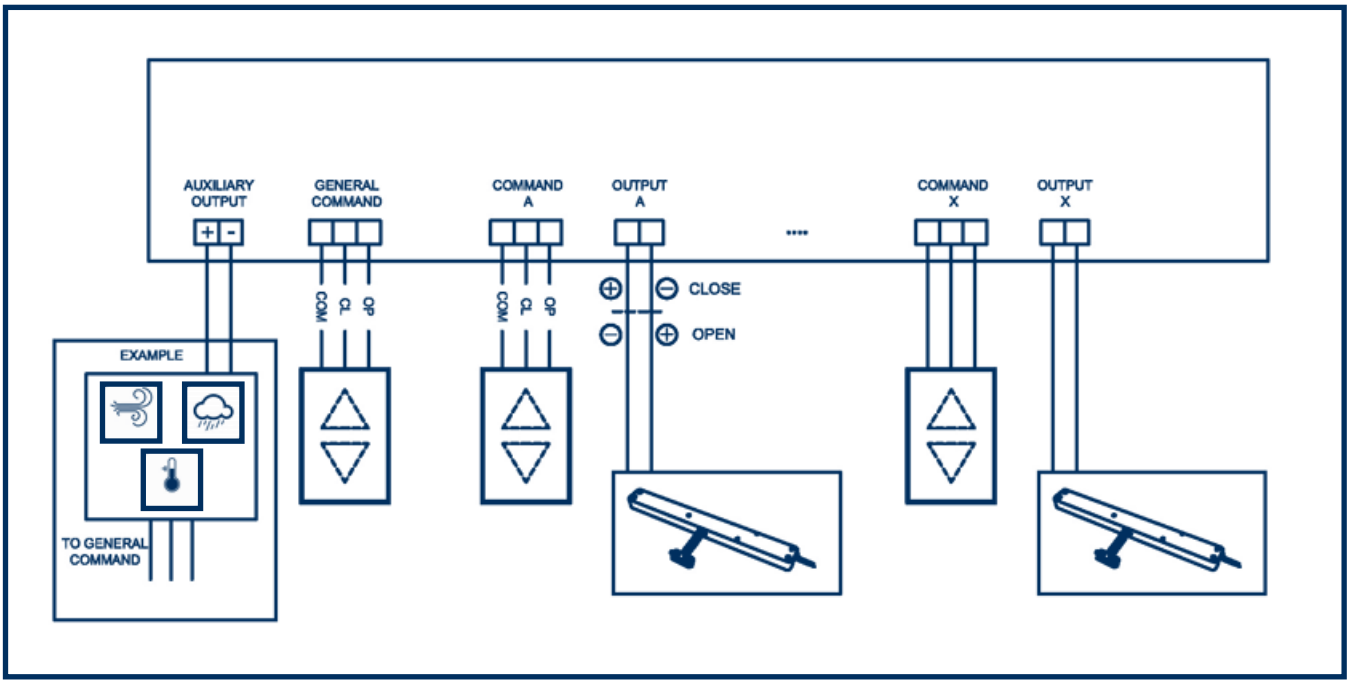
## CONNECTION TO THE MAINS

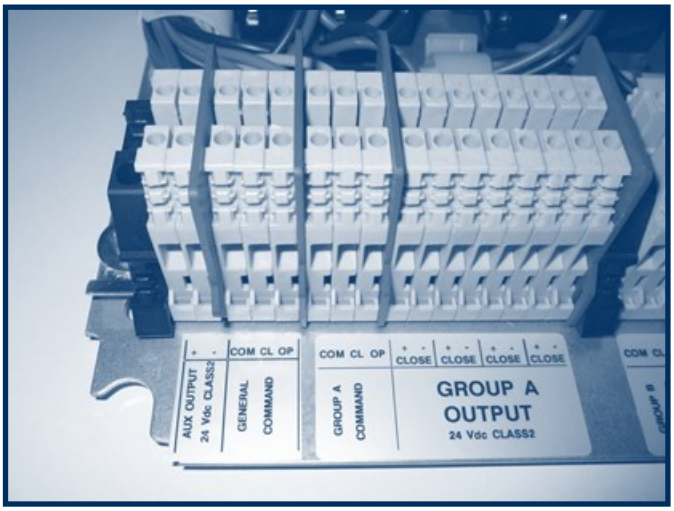


## COMMAND MODULE(S)




## MC-XXX-XX-XX-A (WITHOUT FEEDBACK SIGNAL) COMMAND/OUTPUT MODULE(S)



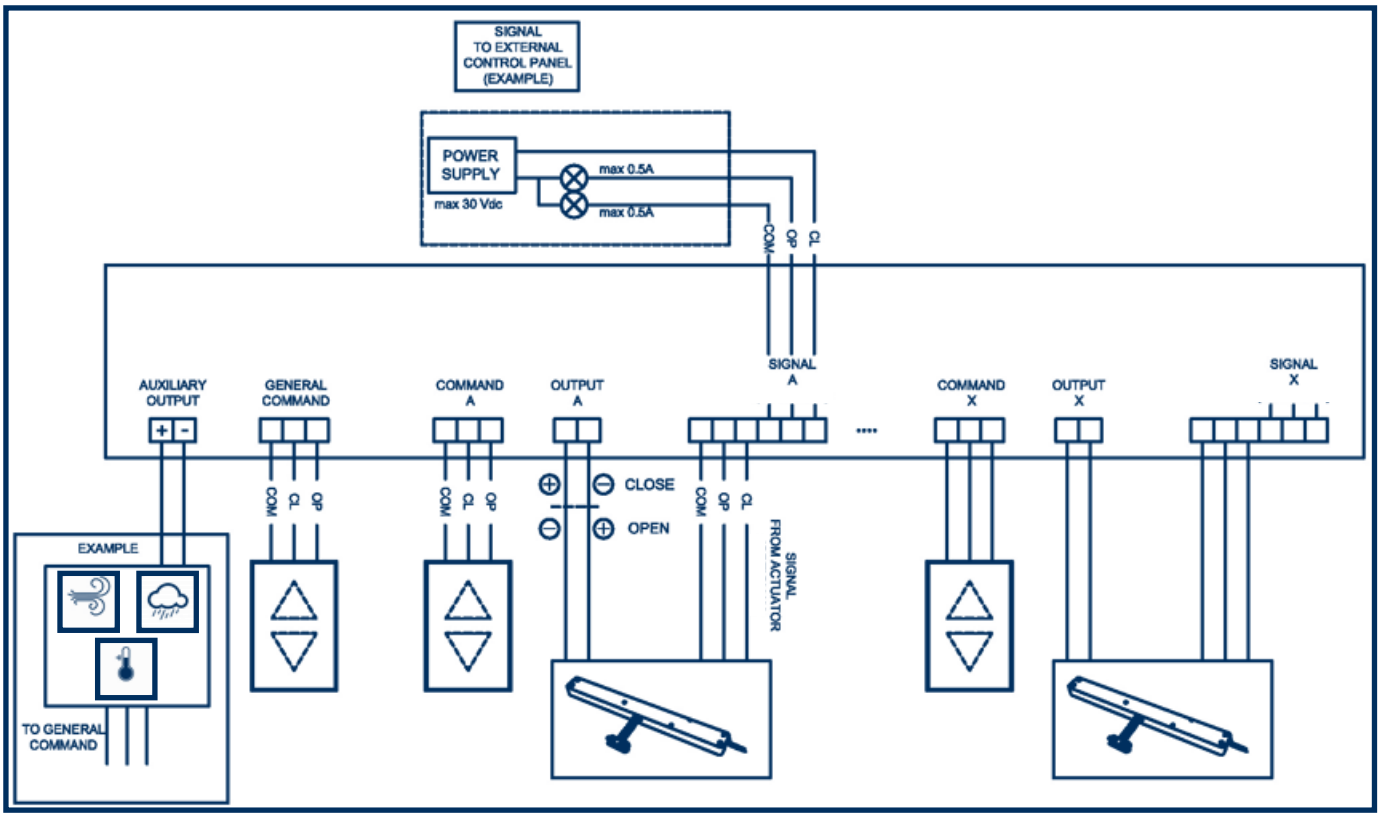

**EXAMPLE OF MC-XXX-XX-XX-A**

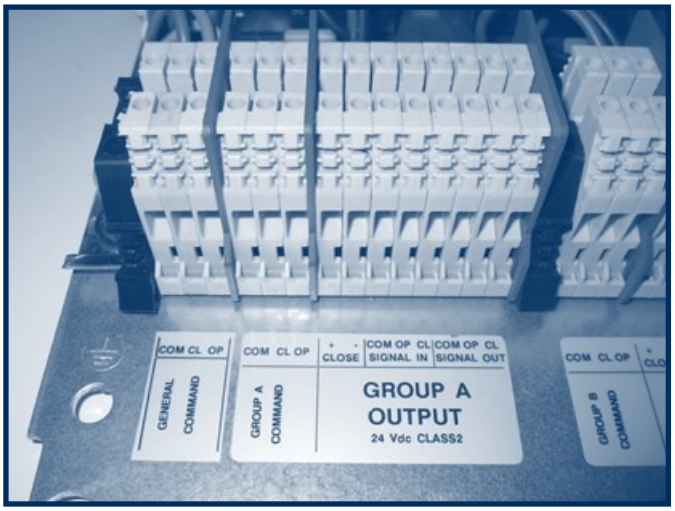
**COMMAND/OUTPUT MODULE CONNECTIONS**

**TO ELECTRICALLY CONNECT THE ACTUATORS AND THE AUXILIARY DEVICES, SEE SPECIFIC USER MANUALS**

**EXAMPLE OF MC-XXX-XX-XX-A FIRST MODULE**

MC-XXX-XX-XX-S (WITH FEEDBACK SIGNAL) COMMAND/OUTPUT MODULE(S)




**EXAMPLE OF MC-XXX-XX-XX-S COMMAND/OUTPUT MODULE CONNECTIONS**

**TO ELECTRICALLY CONNECT THE ACTUATORS AND THE AUXILIARY DEVICES, SEE SPECIFIC USER MANUALS**

**EXAMPLE OF MC-XXX-XX-XX-S FIRST MODULE**

## NOTE ON AUXILIARY OUTPUT POWER

You can connect any 24Vdc device on the auxiliary output module.

Anyhow, note that as the auxiliary output power request increases, the maximum number of actuators you can connect to the last output module of the Motor Controller decreases, according to the following tables (in case of "twin" version the maximum number of connectable actuators must be halved. Ex: with an auxiliary power request of 45W, you can connect either 2 Quasar, 2 Vega, 1 Twin Quasar or 1 Twin Vega to the last module).

| AUXILIARY OUTPUT POWER REQUEST RANGE | | MAXIMUM N° OF QUASAR ON LAST OUTPUT MODULE |
|---|---|---|
| FROM | UP TO | |
| 0 W | 4,8 W | 4 |
| 4,9 W | 26,4 W | 3 |
| 26,5 W | 48 W | 2 |
| 48,1 W | 69,6 W | 1 |
| 69,7 W | | 0 |

| AUXILIARY OUTPUT POWER REQUEST RANGE | | MAXIMUM N° OF VEGA ON LAST OUTPUT MODULE |
|---|---|---|
| FROM | UP TO | |
| 0 W | 7,2 W | 5 |
| 7,3 W | 24 W | 4 |
| 24,1 W | 40,8 W | 3 |
| 40,9 W | 57,6 W | 2 |
| 57,7 W | 74,4 W | 1 |
| 74,5 W | | 0 |