

# MSG1 compact

## Motor Control Unit

### Technical specifications and installation instructions

Article number 70454



### 1. Description

The **Motor Control Unit MSG1 compact** controls 230 V drives, e.g. shading or window motors. The relay at the motor output is a low-wear zero-crossing switch.

The device is equipped with inputs for central control and for a manual switch. The central input can be set to dead man's switch or lock and is suitable e. g. for timers, push buttons or control systems. An unlocked twin push button is connected to the switch input for manual operation. This input is equipped with time-automated buttons (step operation/lock).

#### Functions:

- Output for a **230 V AC drive** (Up/Down)
- Use as a **central, group and single controller**
- **Central input** up/down 12...28 V DC (with priority) e.g. for switches, controls
- Setting the central control unit to "Dead man" or "Lock". As long as voltage is present at the central input, the manual operation is blocked
- **Manual operation** by connecting an unlocked double push-button to the Input "Local".

Push-button timer automatic: Inching mode (press for less than 1 second): Drive inches, for example for positioning slats on shutters.

Drive mode (press for longer than 1 second): Drive travels automatically to the final position

- **Lockout inputs** for Local Up, Local Down, Central Down
- Direction change pause 1 second

### 1.1. Deliverables

- Motor control unit

### 1.2. Technical specification

Assembly	Installation
Protection category	IP 20
Dimensions	Ø approx. 53 mm, depth approx. 29 mm
Weight	approx. 80 g
Ambient temperature	Operation -20...+45°C, storage -55...+90°C. Avoid condensation
Operating voltage	230 V AC
Power consumption	Operation maximum 2.0 W
Maximum load	Each terminal contact may be loaded with a maximum of 10 A.
Output	1x 230V drive (Up/Down/PE/N)
Inputs (SELV)	1x Central command (Up/Down/+-) 1x Manual command via present button (Up/Down/+-) 1x Lock Local Down 1x Lock Local Up 1x Lock Central Down Voltage for inputs 12...28 V DC Maximum line length 100 m
Lock mode	Command at least 1 s Travel time 4 min
Direction change pause	1 s

The product conforms with the provisions of EU directives.

### 2. Installation and start-up

#### 2.1. Installation notes



Installation, testing, operational start-up and troubleshooting should only be performed by an electrician.



#### DANGER!

#### Risk to life from live voltage (mains voltage)!

There are unprotected live components within the device.

- VDE regulations and national regulations are to be followed.
- Ensure that all lines to be assembled are free of voltage and take precautions against accidental switching on.

- Do not use the device if it is damaged.
- Take the device or system out of service and secure it against unintentional use, if it can be assumed, that risk-free operation is no longer guaranteed.

The device is only to be used for the intended purpose described in this manual. Any improper modification or failure to follow the operating instructions voids any and all warranty and guarantee claims.

After unpacking the device, check it immediately for possible mechanical damage. If it has been damaged in transport, inform the supplier immediately.

The device may only be used as a fixed-site installation; that means only when assembled and after conclusion of all installation and operational start-up tasks and only in the surroundings designated for it.

Elsner Elektronik is not liable for any changes in norms and standards which may occur after publication of these operating instructions.

### 2.2. Safety notice for automatic functions



#### WARNING!

#### Risk of injury from automatically moving components!

Parts of the system can be started by the automatic controls and be a danger to persons.

- No persons may remain in the travelling range of parts driven by an electric motor.
- Adhere to the relevant building regulations.
- Ensure that the return path/access to the building is not blocked if spending time outside the building (danger of being locked out).
- Correctly decommission the system for maintenance and cleaning work.

If there is a power outage, the system does not work. Therefore, shadings should be moved to a save position if there are anticipated weather conditions, for example, if this has not already been done by the automatic function (product protection).

If the power supply is removed, the connected drive switches off. When the power is restored, the consumer remains switched off until a new movement command is received by the actuator.

### 2.3. Design of the MSG1 compact / Connection

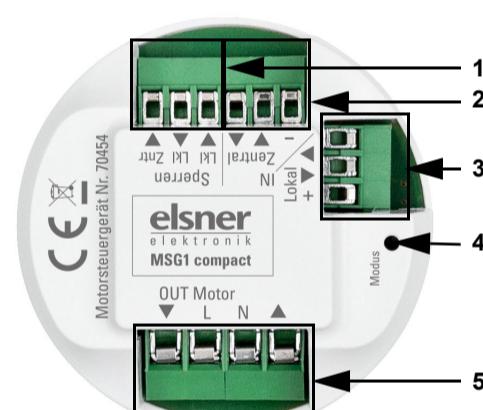


Fig. 1

- 1 Lock inputs: Local down/up, Central down
- 2 Central input (up/down), Voltage - (12...28 V DC) for inputs
- 3 Voltage + (12...28 V DC) for inputs, Push-button input local (up/down)
- 4 Mode LED
- 5 Actuator output (down/L/N/up), Operating voltage (L/N)

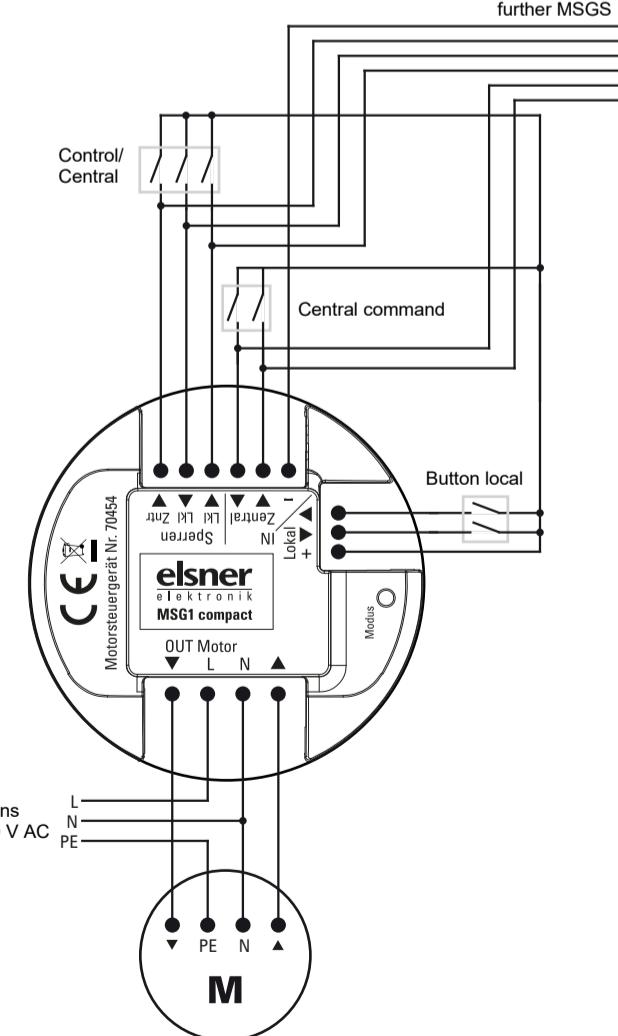
#### Connection example 1

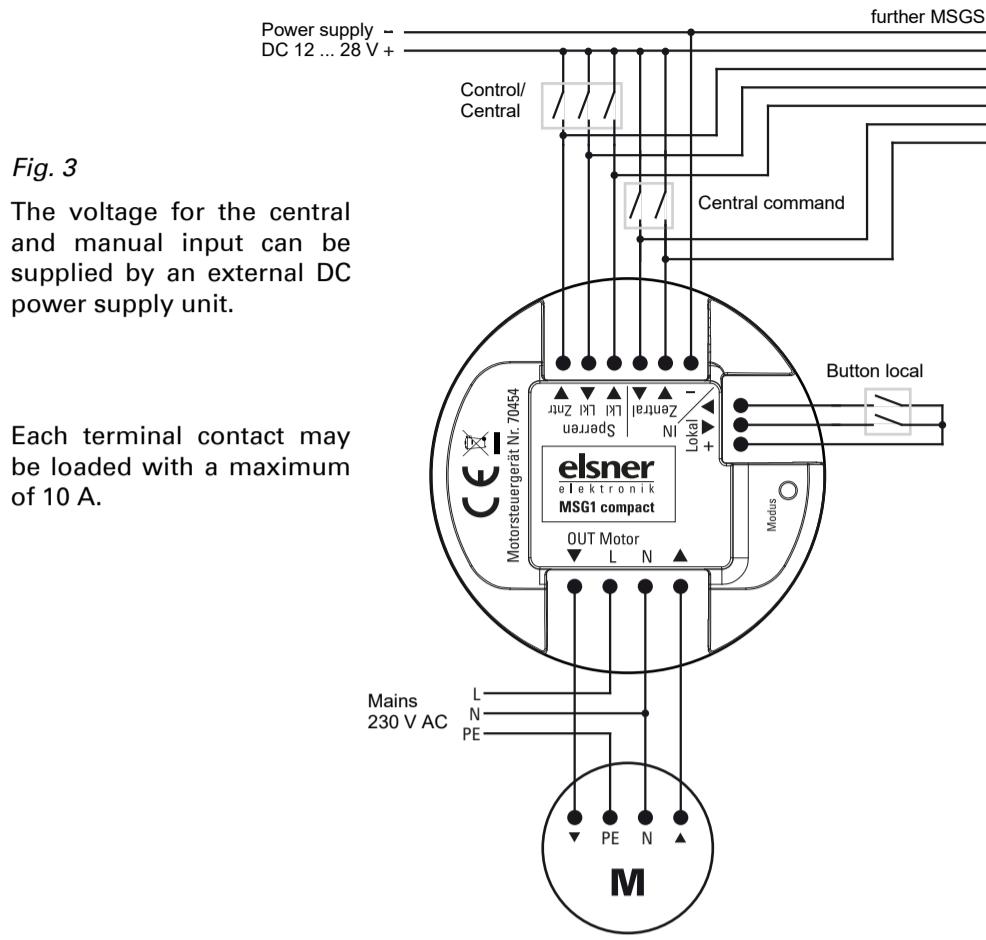
Fig. 2

The internal voltage (9 ... 12 V DC) is used to supply the inputs. When using several motor control units which receive the same central command, the "-" connections must be bridged for potential equalisation.

In this way, a **MSG1 compact** can supply up to 100 additional motor control units with power for central control.

Each terminal contact may be loaded with a maximum of 10 A.



**Connection example 2****2.4. Notes on mounting and commissioning**

Device must not be exposed to water (rain). This could result in the electronic being damaged. A relative air humidity of 95% must not be exceeded. Avoid bedewing.

**3. Operation****3.1. Central operation**

At the central input of the **MSG1 compact** e. g. an automatic control unit, a timer or even a normal unlocked twin push button (Up/Down) is connected, to control the drive connected to the output. As long as voltage is applied to the central input, the local input is disabled.

If there are "Up" and "Down" movement commands at the central input at the same time, the drive moves up (secure position).

**Set operating mode**

The central control unit can be set to the operating modes "Lock" (default) or "Dead man".

Dead man mode: As long as voltage is present at the input, the drive output is closed and the engine is running. As soon as there is no voltage left at the input, the drive output opens and the motor stops.

Lock mode: When voltage is applied to the input for at least 1 second, the drive output closes for 4 minutes and the motor runs for this time. On Command in the opposite direction stops the drive.

By simultaneously pressing the Up and Down buttons at the local input, you can switch between the operation modes:

1. Press the buttons *Local-Up* and *Down* simultaneously for 5 seconds, in order to set the device to readiness for change.  
**OR**  
Switch the operating voltage briefly off and on again.  
After the mains voltage is connected, the device is also in a state of readiness for change.
2. The device is now ready for change and it indicates the currently active mode via the mode-LED.  
LED flashes: Dead man mode  
LED on: Lock mode.
3. To change the mode, please press *Up* and *Down* again for 5 seconds.
4. The device leaves the state of readiness for change after 60 seconds of inactivity or if you press *Up* and *Down* again for a short time.

**3.2. Individual operation (local)**

The manual individual operation of the drive connected to the output is performed via an unlocked twin push button at the local input. This input is equipped with time-automated buttons.

- By a short button stroke, the drive can be exactly positioned (e.g. slats of blinds).
- At a button stroke longer than 1 second, the drive travels in lock mode to the end position (motor running time 4 min).
- A short stroke of one of the two buttons stops the travel.

As long as voltage is applied to the central input, the local input is disabled.

**4. Disposal**

After use, the device must be disposed of or recycled in accordance with the legal regulations. Do not dispose of it with the household waste!