MKF3 - T / C

3-Phase Motor Control Board





KONTAL

CE

Read this user manual carefully before using your device. Follow the steps in order, paying particular attention to the sections on installation, electrical connection and initial start-up. The product owner/user must keep this manual in a known, accessible place throughout the life of the product.

- Store the product in a dry environment. Otherwise, the product may malfunction.
- Batteries and accumulators in battery- or accumulator-powered products are not covered by the warranty. Likewise, failures caused by battery or accumulator discharge or leakage in products that have exceeded their shelf life are not covered by the warranty.
- All service and repair work may be performed only by the Kontal Elektronik technical service. No other persons may tamper with the product in any way.
- The operating voltage of each product is indicated on its label. Do not power the product from any source other than this voltage.



✓ Use of the product contrary to the items above may cause fire, serious personal injury, or damage to the product or the structure in which it is installed. Kontal Elektronik San. ve Tic. Ltd. Şti. accepts no liability in such cases caused by the user.

✓ This symbol is used to mark important points in the sections that follow.



✓ Do not touch the supply terminals of the product with bare hands.

- This symbol is used for voltage-related warnings in the sections that follow.



- This symbol on the label indicates that the supply voltage of the product is DC.



- This symbol on the label indicates that the product has reinforced insulation.



- This symbol on the product or its packaging indicates that the product must not be disposed of as household waste. It must instead be delivered to a designated collection point for electronic equipment recycling. Improper disposal may harm the environment and human health.



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- Make sure that the system is properly grounded so that the product can operate reliably.

1. DESCRIPTION

MKF3 is a high-performance control board designed for the safe and efficient control of 3-phase motors. Available in single-button (MKF3-T) and double-button (MKF3-C) models, the MKF3 offers practical use and full compatibility with ROLAN series remote controls, thanks to its photocell safety input and external RGA socket input.

1.1 Package Contents

1x MKF3-T/C Motor Control Board	**1x** MKF3 User Manual

**In custom orders, the package contents may vary depending on the project or customer request.*

2. TECHNICAL SPECIFICATIONS

Model	MKF3-T	MKF3-C
Product Code	K122-01	K032-01
Operating Voltage	380V AC	380V AC
Operating Current	~40 mA Phase-3 / 220V AC	~40 mA Phase-3 / 220V AC
Contact Type	380V AC 3-PHASE	380V AC 3-PHASE
Contact Rating (max.)	690V AC 50/60Hz 20A	690V AC 50/60Hz 20A
Contact Pull-in Time	4 s (min.) 70 s (max.)	4 s (min.) 70 s (max.)
Weight	1447 g	1447 g
Dimensions	220 x 250 x 95mm	220 x 250 x 95mm

3. MKF3 – User Adjustment Components

JMP1 *(Applies to MKF3-T only.)*: Used to determine the response/operating behavior of the board when the photocell detects an obstacle.

JMP2: Use this jumper to enable or disable operation of the control board by remote control.

DIPSW: This component allows you to enable or disable the operating mode and the auto-close function of the control board.

POT1 : This component allows you to set the auto-close time of your control board.

POT2 : This component allows you to set the contact pull-in time of your control board.



Always disconnect the power to the device before making any electrical connections. Failure to do so may result in electric shock or device malfunction.



The photocell and stop button are NC (Normally Closed). Disconnect the power before making any wiring changes. Otherwise, the device may malfunction.



Never touch the connection points after the product's power connections have been made!

4. MKF3 – CONTROL BOARD AND INITIAL START-UP

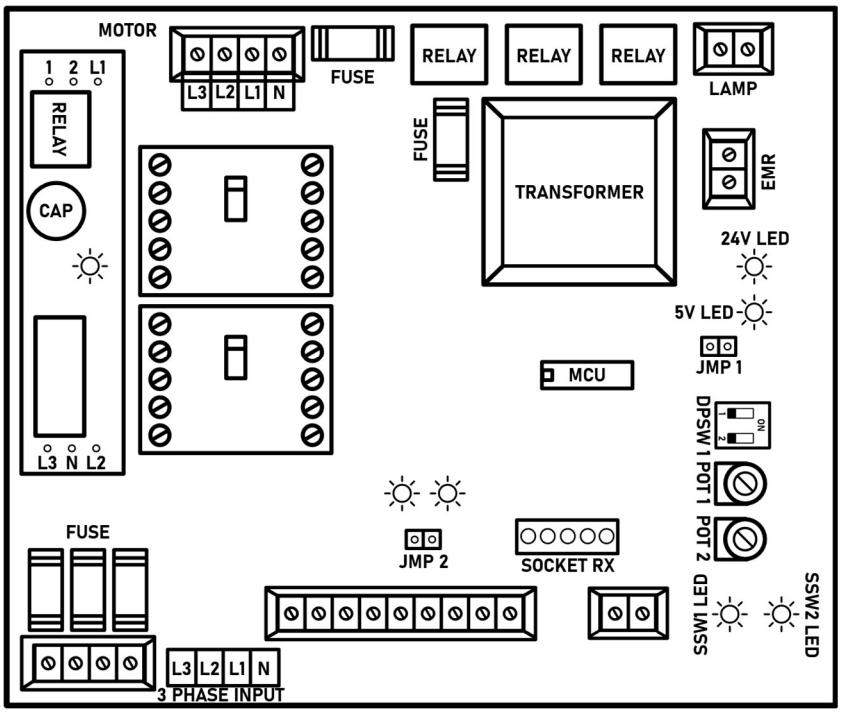
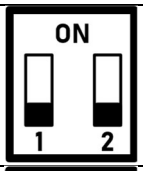
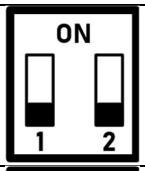
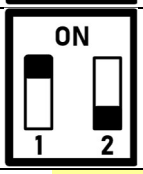
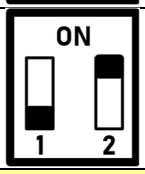


Figure 4.1 MKF3 Control Board

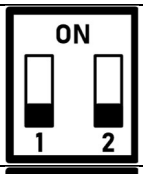
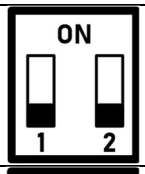
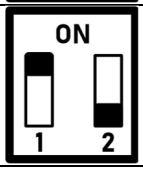
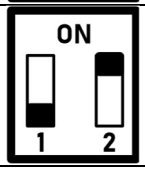
4.1 MKF3 – DIP Switch Functions

4.1.1 MKF3-T *(Single-Button)* DIP Switch Functions

Switch Position	Function	Switch Position	Function
	No. 1 OFF: Motor direction reversal is disabled		No. 2 OFF: Auto-close function is disabled.
	No. 1 ON: Motor direction reversal is enabled		No. 2 ON: Auto-close function is enabled.

If the motor cables are wired incorrectly, you can reverse the operating direction of the system without disconnecting the cables by setting DIP switch No. 1 to the ON position.
(In this case, limit switch terminal connections must be swapped.)

4.1.2 MKF3-C *(Double-Button)* DIP Switch Functions

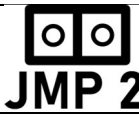
Switch Position	Function	Switch Position	Function
	No. 1 OFF: Hold-to-run mode is disabled.		No. 2 OFF: Auto-close function is disabled.
	No. 1 ON: Hold-to-run mode is enabled.		No. 2 ON: Auto-close function is enabled.

4.2 MKF3 – Jumper Functions

4.2.1 MKF3-T *(Single-Button)* Jumper Functions

Jumper Status	Function
	**Disabled:** When an obstacle enters the photocell detection area while the motor is moving in the closing direction, the door stops. When the obstacle leaves the area, the door resumes closing from the point where it stopped.
	**Enabled:** When an obstacle enters the area between the photocells while the motor is moving in the closing direction, the door stops and automatically moves in the opening direction.
	**Disabled:** Remote control operation is disabled.
	**Enabled:** Remote control operation is enabled.  **This feature requires the external receiver socket (RGA) to be connected.**

4.2.2 MKF3-C (Double-Button) Jumper Functions

Jumper Status	Function
	**Disabled:** Remote control operation is disabled.
	**Enabled:** Remote control operation is enabled.  **This feature requires the external receiver socket (RGA) to be connected.**

 **JMP1 is not used on the double-button model.**

4.3 MKF3 – Auto-Close Time Setting

 **For this feature to be available, DIP switch No. 2 must be set to the ON position!**

Use POT1 to set the auto-close time of the product. Turning POT1 clockwise increases the auto-close time, while turning it counterclockwise decreases it. The auto-close time can be set to a minimum of **5 seconds** and a maximum of **80 seconds**.



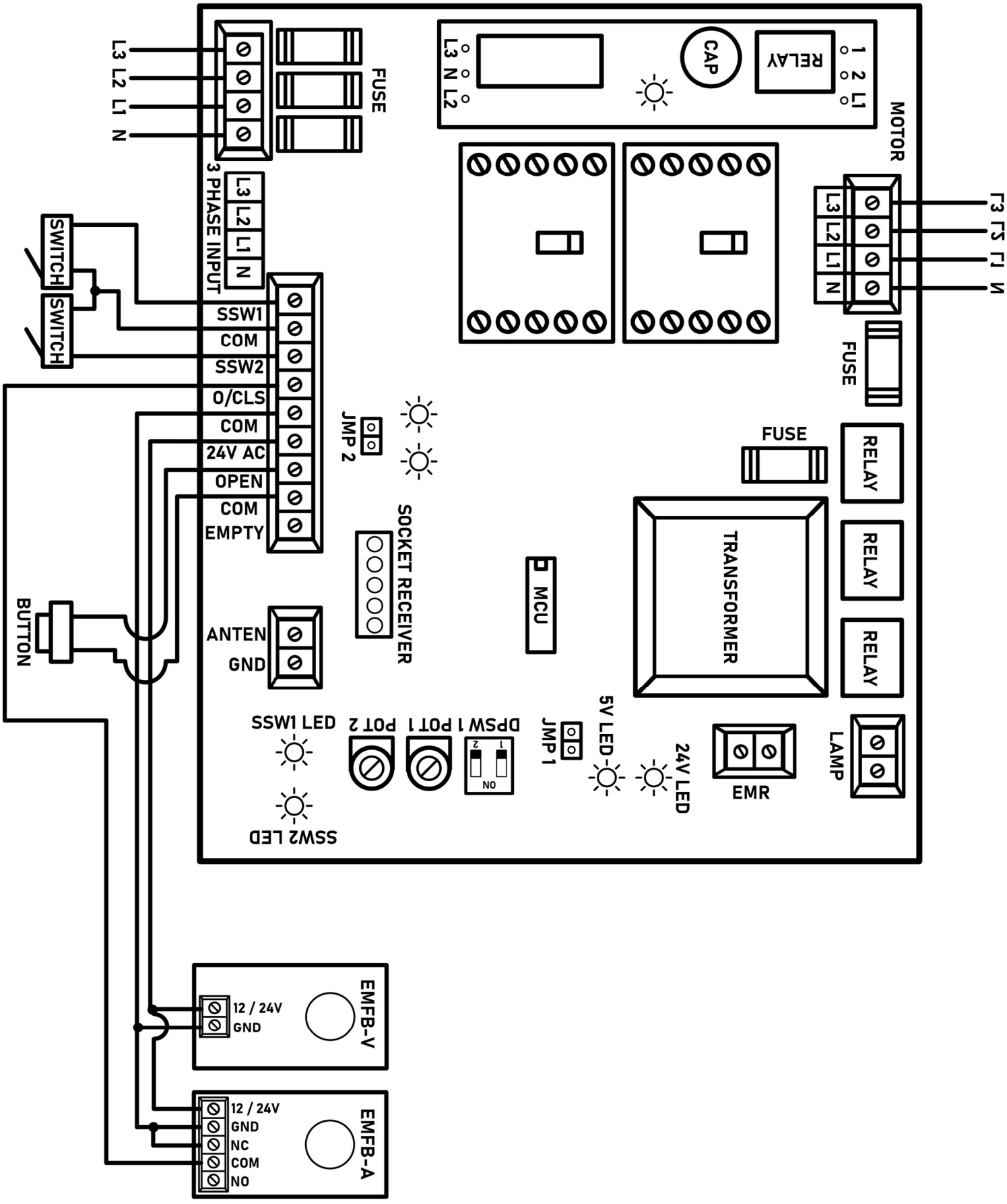
4.4 MKF3 – Contact Pull-in Time Setting

Use POT2 to set the contact pull-in time. Turning POT2 clockwise increases the contact pull-in time, while turning it counterclockwise decreases it. The contact pull-in time can be set to a minimum of **4 seconds** and a maximum of **70 seconds**.

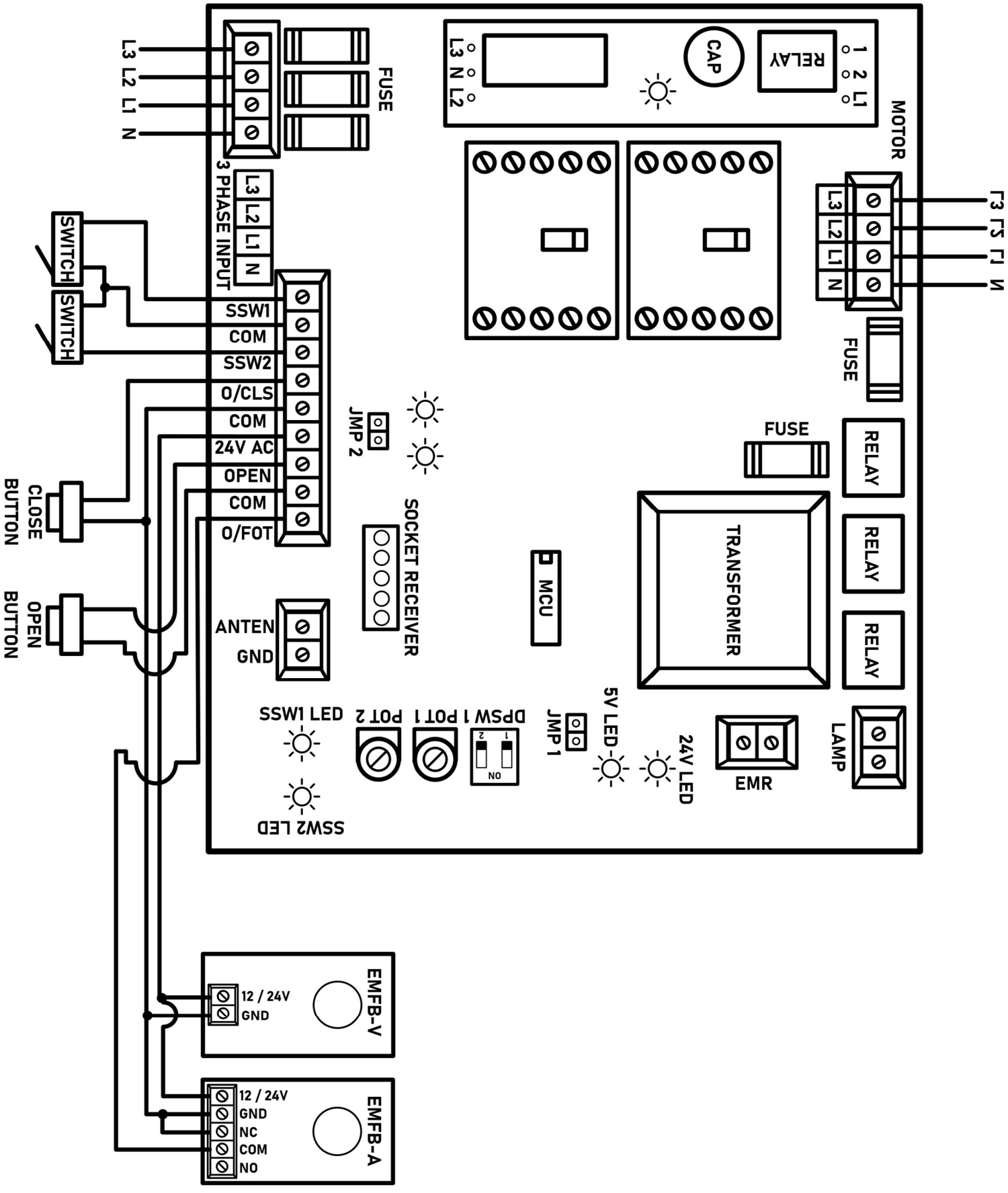


5. MKF3 – WIRING DIAGRAM

5.1 MKF3-T *(Single-Button)* Wiring Diagram



5.2 MKF3-C (Double-Button) Wiring Diagram



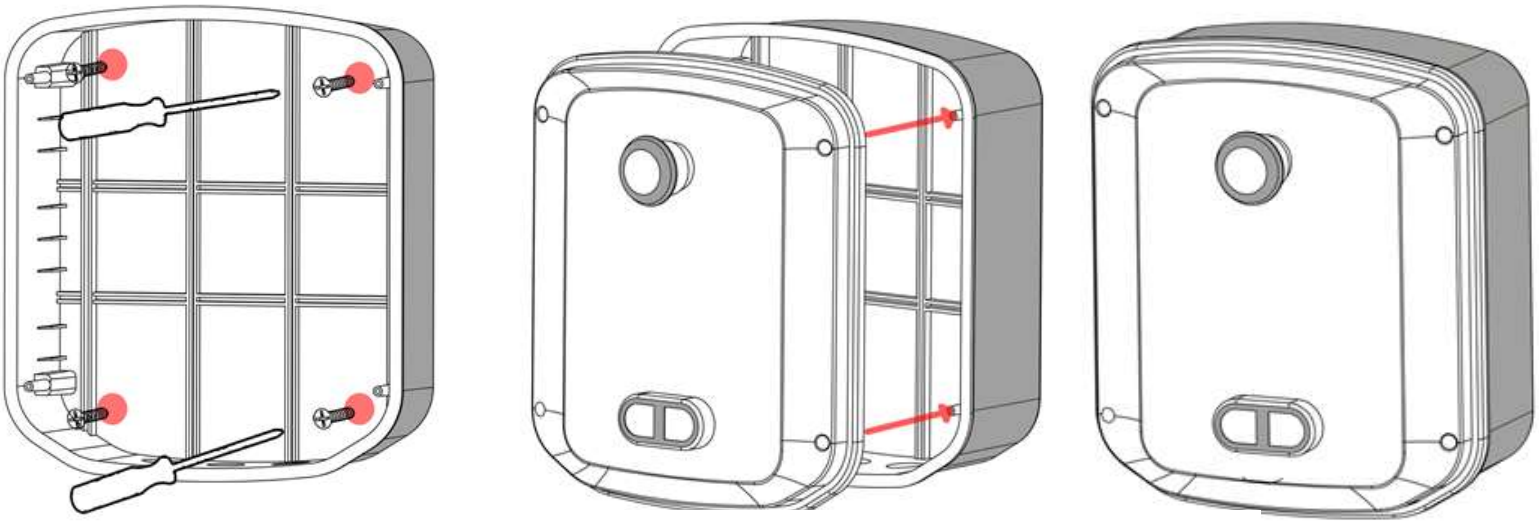
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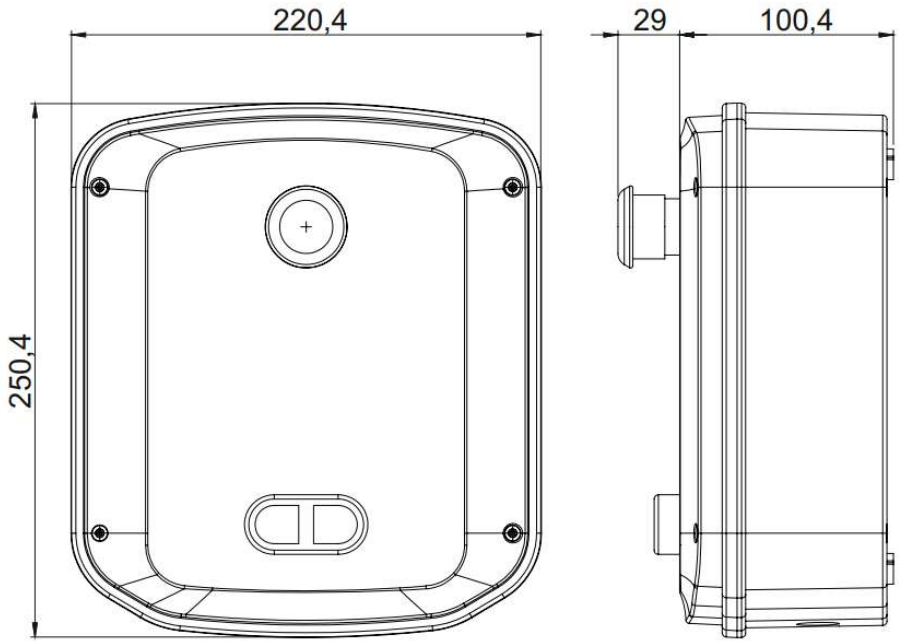
The photocell and stop button are NC (Normally Closed). Disconnect the power before making any wiring changes. Otherwise, the device may malfunction.

Never touch the connection points after the product's power connections have been made!

The fuses on the product are placed by design so that they can be easily accessed and replaced whenever necessary.

6. MKF3 - MOUNTING





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