

ZMK

Chain Motor Control Board



KONTAL

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

- Store the product in a dry environment. Otherwise, the product may malfunction.
- For battery-operated products, batteries are not covered by the warranty. Likewise, malfunctions caused by battery discharge or leakage in products that have exceeded their shelf life are not covered by the warranty.
- All service and repair work may only be carried out by Kontal Elektronik technical service. The product must not be tampered with by any other person.
- The operating voltage of each product is specified on its label. Do not power the product from any source other than the specified voltage.



- ✓ Using the product in a manner that does not comply with the instructions above may cause fire, serious personal injury, or damage to the product or to the structure in which it is installed. Kontal Elektronik San. ve Tic. Ltd. Şti. accepts no responsibility for such situations caused by the user.
- ✓ This symbol is used to indicate important points in the following sections.



- ✓ Do not touch the power supply terminals of the product with bare hands.
- This symbol is used to indicate voltage-related warnings in the following sections.



- 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 this product must not be treated as normal household waste. Instead, the product must be handed over to a designated collection point for the recycling of electronic equipment. Improper disposal or destruction of the product may have adverse consequences for the environment and human health.



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- Make sure that the system is properly grounded to ensure correct operation of the product.

1.PRODUCT DESCRIPTION

ZMK Chain Motor Control Board is an industrial control board designed for the safe, precise and flexible operation and management of chain motor systems.

The system provides long-range wireless access with ROLAN series remote controls, while its built-in external button inputs also allow wired manual control. The integrated photocell safety input instantly detects the risk of trapping and accidents that may occur during motor movement and stops the system or reverses its direction, thus keeping both user and equipment safety at the highest level.

1.1 Box Contents

1x ZMK – Chain Motor Control Board	1x ZMK User Manual 1x ZMK Motor Connection Cable 1x 17cm Internal Wire Antenna
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**For custom orders, the box contents may vary depending on the project or customer requirements.*

2.TECHNICAL SPECIFICATIONS

Model	ZMK
Product Code	K030-01
Operating Voltage	220V AC
Operating Current	15mA @ 220V AC
Operating Frequency	433.92MHz
Operating Temperature	-20 °C +55 °C
Remote Control Capacity	40
Contact Type / Contact Rating	220V AC / 250V AC 10A (max.)
Contact Operating Time	30s (min.) 3min (max.) <i>Adjustable</i>
Weight	475g
Dimensions (W x H x D)	153,5 x 108 x 50mm

3.ZMK – USER SETTING COMPONENTS

BTN1 : Use this component to perform remote control learning/deletion on the control board.

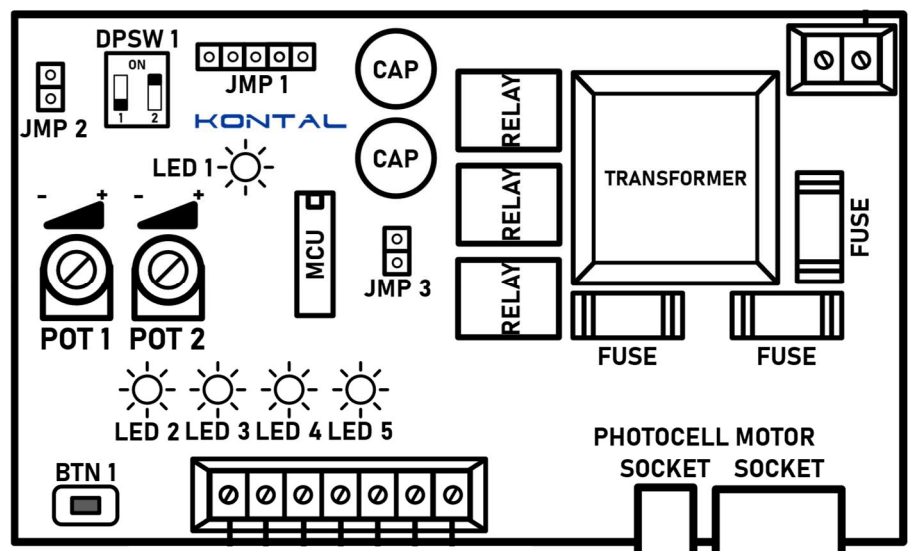
POT1 : Use this component to set the contact operating time of the control board.

POT2: Use this component to set the auto-close time of the control board.

DPSW1 : Use this component to enable/disable the auto-close mode and the auto-learn mode of the control board.

4.ZMK – CONTROL BOARD

Figure 4.1 ZMK Control Board





A STOP button must be connected to the product in order to perform the following steps. If no STOP button is used, JMP3 must be fitted/active. Otherwise, the following steps cannot be applied and the operation cannot be performed.



Always disconnect power from the device before changing the jumper or dipswitch settings on the product. Power must be reapplied to the device after the settings have been changed. Otherwise, the changes will not be detected by the system and will not take effect.

4.1 ZMK – LED Indications

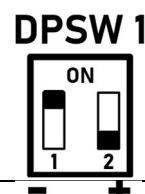
LED	ON	OFF
LED 1	Remote Learning Mode On	Remote Learning Mode Off
LED 2	OPEN Button Pressed	OPEN Button Not Pressed
LED 3	CLOSE Button Pressed	CLOSE Button Not Pressed
LED 4	STOP Button Not Pressed	STOP Button Pressed
LED 5	Photocell Contact Active (Obstacle Detected Between Photocells)	Photocell Contact Inactive (No Obstacle Between Photocells)

4.2 ZMK – Auto-Close Time Setting



Disconnect power from the product before performing this step!

Step 1 : Set dipswitch no. 1 to the **ON** position as shown in the figure.



Step 2 : Use POT2 to set the auto-close time of the product. Turning POT2 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 **90 seconds**.



4.3 ZMK – Contact Operating Time Setting

Step 1 : Use POT1 to set the contact operating time of the product. Turning POT1 clockwise increases the contact operating time, while turning it counterclockwise decreases it. The contact operating time can be set to a minimum of **30 seconds** and a maximum of **180 seconds**.



4.4 ZMK – Jumper Settings



Disconnect power from the product before performing these steps!

JMP NO	JMP POSITION	VIEW	DESCRIPTION
JMP1	ACTIVE	 JMP 1	Corrects the system's operating direction if the motor cable connections are wired in reverse and the motor runs in the opposite direction.
	INACTIVE	 JMP 1	Keep this setting disabled/off if the motor cable connections are correct and the motor runs in the intended direction.
JMP2	ACTIVE	 JMP 2	OTK feature enabled. The device is triggered only in the opening direction (remote control / OPEN button). It stops at the fully open position and closes automatically at the end of the set Auto-Close Time , without any further command.
	INACTIVE	 JMP 2	OTK feature disabled.
JMP3	ACTIVE	 JMP 3	Stop button input disabled.
	INACTIVE	 JMP 3	Stop button input enabled.  If a stop button is to be connected to the product, JMP3 must be in this position!

5. ZMK – REMOTE CONTROL LEARNING / DELETION

5.1 Remote Control Learning

1. Remote Control Programming:

Before registering a new remote control to the receiver board, *your Rolan model remote control* must be properly programmed with the **LCD CODER** device.

2. Powering the Board:

To operate the receiver board, activate the system by applying the appropriate supply voltage to your control board.

3. Start-up Signal:

When the board is powered, the buzzer on the board will give an audible signal:

- **3 short beeps:** No remote control has been registered yet.
- **1 short beep:** A remote control has already been registered.

4. Remote Control Learning and Deletion:

The single button on the receiver board is used for the following operations:

• Registering a New Remote Control:

Press and hold the button for approximately **1–2 seconds**, then release it. The board will enter learning mode and the buzzer will sound continuously for approximately **6–7 seconds**. During this time, press the relevant button of the remote control you want to register. If the remote control is registered successfully, the buzzer gives **3–4 short, rapid beeps**.

If no remote control is registered, learning mode will end and the audible signal will stop.

• If the First Remote Control Is Being Registered:

If a remote control is being registered to the receiver board for the **first time**, the **channel** of the registered button is set as the operating channel of the system. All remote controls registered

afterwards must have the **same channel** as this channel. In other words, only remote controls with the **same channel** can be learned by a receiver board.

5. Channel and Relay Mapping:

On 2- and 4-channel receivers, the relevant channel of the registered remote control controls the **1st relay**. The following channels automatically trigger the other relays in sequence.

For example:

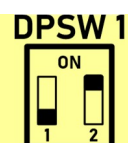
- Remote control **button 1** → **relay 1**
- Remote control **button 2** → **relay 2**
- Remote control **button 3** → **relay 3**
- Remote control **button 4** → **relay 4**

These channels do not need to be learned separately by the receiver board.

5.2 Remote Control Learning with Auto-Learn Mode



To enable this feature, dipswitch no. 2 on DPSW1 must be in the ON position.
(Disconnect power from the product before changing the DIPSW position.)



To use this feature, at least 1 remote control must have been previously learned by the control board.

In this mode, unregistered remote controls with the same company code as the remote control registered to the control board can be learned without accessing the board, simply by pressing and releasing the relevant button of the ROLAN series remote control. The buzzer gives **2 short beeps** for each successfully learned remote control. The control board can learn up to **40 ROLAN** series remote controls.

5.3 Remote Control Deletion

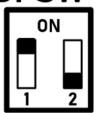
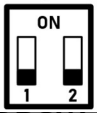
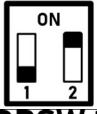
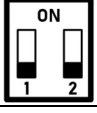
Step 1 : Disconnect power from the control board, then reconnect it while holding down BTN1.

Step 2 : The buzzer on the board will beep; keep holding the button until the sound stops. When the sound stops, release the button. When the buzzer then beeps 4 times, all remote controls have been deleted.

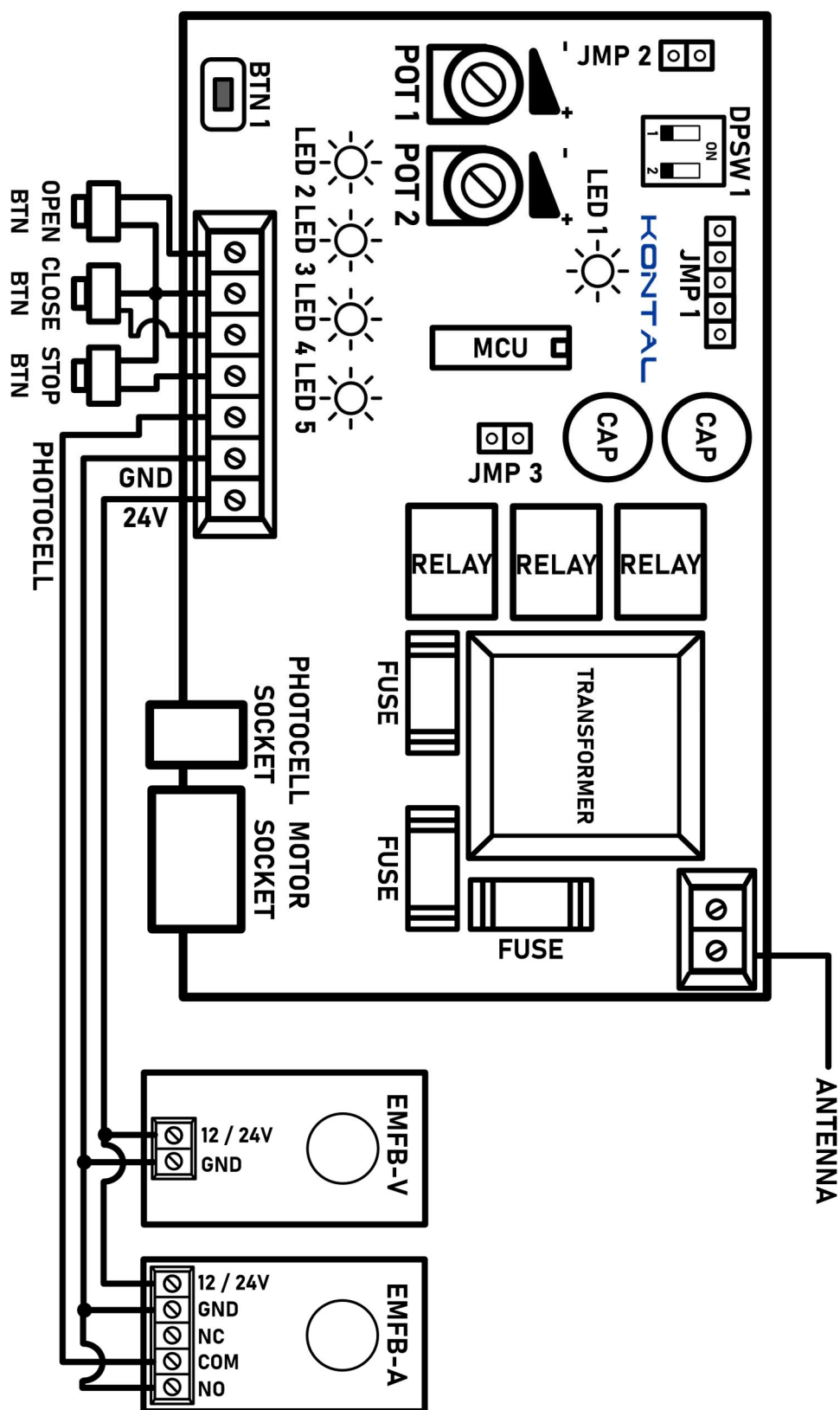
6.ZMK – DIPSWITCH FUNCTIONS



Disconnect power from the product before performing these steps!

DIPSW NO	DIPSW POSITION	VIEW	DESCRIPTION
1	ON		Auto-close feature enabled.
	OFF		Auto-close feature disabled.
2	ON		Auto-learn feature enabled.
	OFF		Auto-learn feature disabled.

7.ZMK – CONNECTION DIAGRAM



Always disconnect power from the device before making electrical connections. Otherwise, electric shock or device failure may occur.



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



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

8.ZMK – INSTALLATION

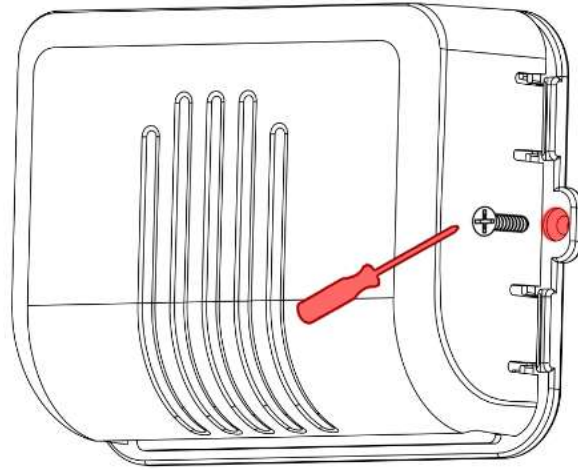


Figure 8.1 ZMK Flat Surface Mounting

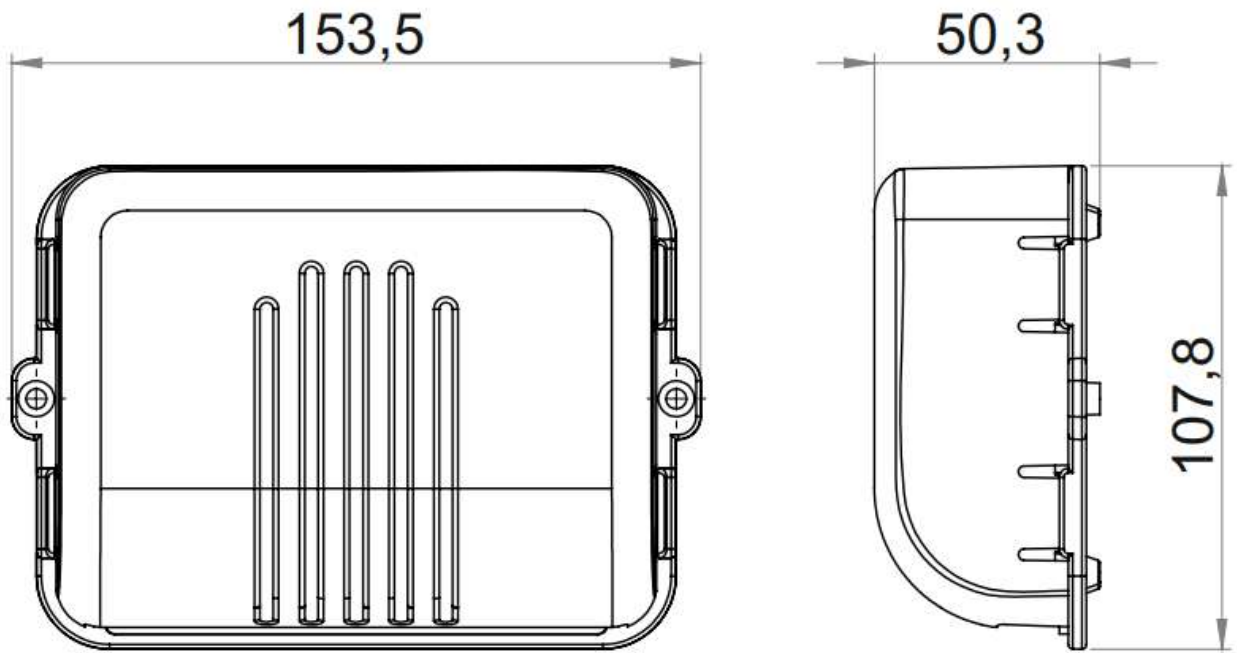


Figure 8.2 ZMK Dimensions (unit: mm)

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