

GAF

Funcitonal Motor Control Board



Before operating the device, be sure to read this user manual carefully. Follow the steps described in the installation, electrical connection, and initial startup sections with attention. After completing these steps, the product owner/user must keep this manual in a known and easily accessible location for the entire service life of the product.



- Store the product in a dry environment. Otherwise, malfunctions may occur.
- In battery- or accumulator-powered products, batteries and accumulators are not covered under warranty. Similarly, failures caused by battery discharge or leakage in products that have exceeded their shelf life are not covered under warranty.
- All service and repair operations must be carried out exclusively by Kontal Elektronik technical service. The product must not be tampered with by unauthorized personnel.
- The operating voltage of each product is indicated on the label. Do not supply the device with a voltage different from the specified value.



- ✓ Failure to comply with the above-mentioned conditions may result in fire, serious personal injury, or damage to the product or the structure in which it is installed. In such cases caused by user negligence or misuse, **Kontal Elektronik San. ve Tic. Ltd. Şti.** assumes no responsibility.
- ✓ This symbol will be used to highlight important notes in the following sections.



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



- This symbol on the label indicates that the device operates with a DC supply voltage.



- This symbol on the label indicates that the device is equipped with reinforced insulation.



- This symbol on the product or its packaging indicates that the product must not be disposed of as household waste. Instead, it should be delivered to designated collection points for the recycling of electrical and electronic equipment. Improper disposal or destruction of the product may have adverse effects on the environment and human health.



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- Ensure that the system is properly grounded for the device to operate reliably.

1. DEFINITION

The GAF Functional Motor Control Board is a versatile control module designed to enable advanced and flexible operation of motorized gate and barrier systems. The device can be controlled wirelessly via ROLAN series remote controls, or through wired button inputs.

With the onboard settings, users can easily configure motor operating durations, relay activation times, and automatic closing functions.

Equipped with photocell inputs, limit switch inputs, and various configurable digital inputs, the system offers enhanced safety and functionality. These features allow for customized applications tailored to different field requirements.

1.1 BOX CONTENT

1x GAF – Functional Motor Control Board	1x GAF User Manual 1x 17 cm Internal Cable Antenna
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**For special orders, the box contents may vary depending on the project or customer requirements.*

2. TECHNICAL SPECIFICATION

Model	GAF – GAF – Functional Motor Control Board
Product Code	K008-01
Operating Voltage	220V AC 50Hz
Operating Current	14mA @ 220V AC 50Hz
Operating Frequency	433,92MHz
Operating Temperature	-20 °C +55 °C
Contact Type	220V AC
Contact Capacity	250V AC 10A (max.)
Relay Activation Duration	0,3sn(min.) / 180sn(max.) (Adjustable)
Remote Capacity	500
Weight	423gr
Dimensions (W X H X D)	98,3 x 157,5 x 50mm

3. USER ADJUSTMENT

BUTTON: This component allows you to pair or delete remote controls from your device. [\(See also Sections 4.2 & 4.3\)](#)

DIPSWITCH: This component allows you to configure the operating modes of your device. [\(See also Section 4.1\)](#)

JUMPER1 / JUMPER2 / JUMPER3 / JUMPER4: These components allow you to configure the operating modes of your device. [\(See also Section 4.6\)](#)

POT1: This component allows you to adjust the automatic closing duration of your device. [\(See also Section 4.4\)](#)

POT2: This component allows you to adjust the relay activation duration of your device. [\(See also Section 4.5\)](#)

4. GAF – CONTROL BOARD

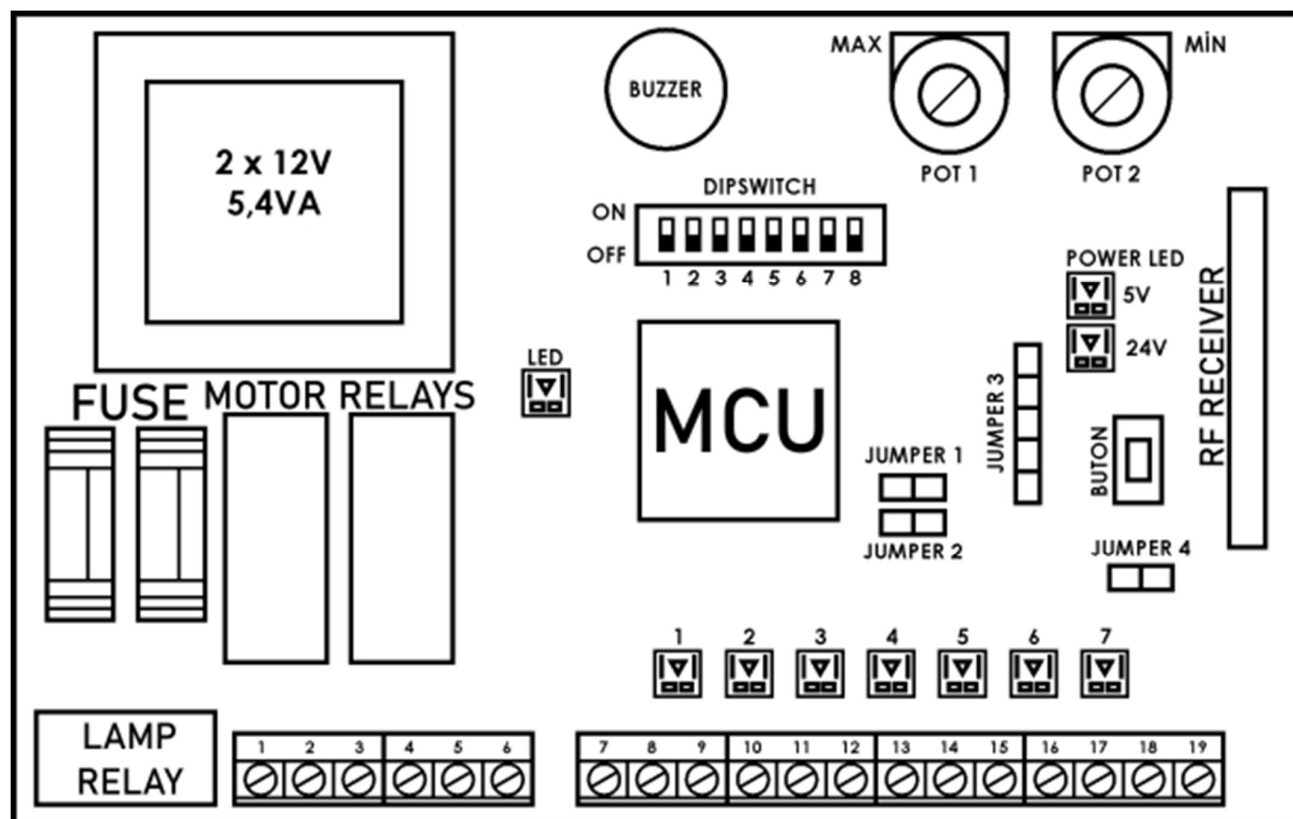


Figure 4.1 GAF Control Board



To perform the following steps, you must connect a stop button to the device. If you do not intend to use a stop button, activating the JUMPER 4 component is mandatory. Otherwise, you will not be able to execute any of the steps listed below!

4.1 GAF – DIPSWITCH FUNCTION

	SW1	SW2	SW3	SW4	SW5	SW6	SW7	SW8
REMOTE			✓				✓	✓
EXTERNAL BUTTON	✓		✓					
RELAY TIME					✓			
PHOTOCELL				✓				
OTHER		✓				✓		

DIPSWITCH NO	DIPSWITCH POSITION	DIPSWITCH FUNCTION
1	ON	When external buttons are pressed, the system operates until either one of the limit switch inputs is activated or the preset relay activation time expires.
	OFF	The system operates continuously while external buttons are pressed. A single press is sufficient to initiate the opening operation. The door continues to move until either one of the limit switches is activated or the preset relay activation time elapses.
2	ON	At the end of the duration set by POT1, the system automatically closes the door. (Minimum: 5 seconds, Maximum: 60 seconds)
	OFF	This feature is disabled.
3	ON	The door is activated by a triggering button or remote control; the same button or remote can deactivate the door again (open/close function).
	OFF	This feature is disabled.
4	ON	When an obstacle is detected by the photocell sensor, the door automatically opens; when the obstacle is removed, the door closes.
	OFF	When an obstacle is detected by the photocell sensor, the door opens. If the automatic closing feature is active, the door will automatically close after the preset time once the obstacle is cleared.
5	ON	The transition time between relays is short (particularly suitable for mushroom barrier systems).
	OFF	The transition time between relays is long.
6	ON	Limit switch inputs operate on the NO (Normally Open) principle.
	OFF	Limit switch inputs operate on the NC (Normally Closed) principle.

7. AND 8. DIPSWITCH		FUNCTION
7	8	
OFF	OFF	The first channel of the registered remote control opens the door, while the second channel closes it.
OFF	ON	The first channel of the remote control opens the door; the door continues to move until a limit switch is activated or the preset relay activation time expires. The second channel of the remote control closes the door; the door continues to move until a limit switch is activated or the preset relay activation time expires.
ON	OFF	The first channel of the remote control operates with the following sequential functions: 1st press: Opens the door, 2nd press: Stops the door, 3rd press: Closes the door, 4th press: Stops the door
ON	ON	Kumandanın 1. kanalına basıldığında kapı açılır ve sınır switch aktif olana veya tanımlanan röle çekme süresi dolana kadar hareket eder.

4.2 GAF – REMOTE LEARN

1. Remote Control Programming:

Before registering a new remote control to the receiver board, ensure that your Rolan model remote has been properly programmed using the LCD CODER device.

2. Powering the Board:

Activate the receiver board by applying the appropriate supply voltage to your control board.

3. Startup Notification:

When powered on, the board's buzzer will sound an audio signal:

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

4. Remote Control Learning Procedure:

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

- **Registering a New Remote Control:**
 - Remove the product's top cover.
 - Connect the power supply to the device.
 - Press and release the button on the device once.
 - The buzzer will emit a beep lasting about 7–8 seconds. During this period, press the desired button(s) on the ROLAN series remote(s) you want to register to the GAF control board.
 - If registration is successful, the buzzer will sound 3–4 short and rapid beeps.
 - If no remote is registered, the learning mode will end, and the sound will stop.
- **When Registering the First Remote Control:**

When the receiver board registers its first remote control, the channel of the button being programmed is set as the system's operating channel. All subsequently registered remotes must have the same channel. Therefore, only remotes with the same channel can be registered to a single receiver board.

5. Channel and Relay Matching:

For 2- and 4-channel receivers, the relevant channel of the registered remote control operates the 1st relay. Subsequent channels automatically trigger the other relays accordingly.

For example:

- Remote button 1 → Relay 1 / Remote button 3 → Relay 3
- Remote button 2 → Relay 2 / Remote button 4 → Relay 4

There is no need to separately register these channels to the receiver board. The control board automatically recognizes consecutive channels.

4.3 GAF – REMOTE DELETE

- Remove the product's top cover.
- Disconnect the product's power supply.
- Press and hold the button on the product, then restore power to the product.
- Then, the buzzer on the device will emit a beep warning sound.
Continue holding the button during this time.
- When you hear approximately 5–6 intermittent beep sounds from the buzzer, you may release the button. At the end of this process, the device's remote control memory will be erased.

4.4 GAF - AUTOMATIC CLOSING TIME ADJUSTMENT

The automatic closing time of the device can be adjusted using the POT1 potentiometer.

- Turning POT1 clockwise decreases the automatic closing time; turning it counterclockwise increases the time. The automatic closing duration can be set between a minimum of 5 seconds and a maximum of 60 seconds. (For example: After your door or barrier system is fully opened, it will automatically switch to closing mode after the set time.)



To enable this feature, DIPSWITCH number 2 must be activated!

4.4.1 GAF – DISABLING THE AUTOMATIC CLOSING FEATURE

1. METHOD

- For this function to operate, DIPSWITCH 2 and 7 must be set to the ON position. In this case, the system runs in Step-by-Step (Sequential Operation) mode.
- **When automatic closing (DIPSWITCH 2) is active and the door starts closing, pressing the 1st channel of a previously registered remote will stop the door.**
- **Once the automatic closing time is completed, the door will resume closing from where it stopped.**
- **However, if a stop signal is sent again via the remote's 1st channel during this period, the door will no longer close automatically and will maintain its current position.**

2. METHOD

- For this function to operate:
DIPSWITCH 2 and 3 must be ON, and DIPSWITCH 7 must be OFF.
- In this scenario, the system is not in Step-by-Step (Sequential Operation) mode.
- When the door is closing, pressing the 2nd channel of the remote control will stop the door.
- **Since automatic closing is active, the door will resume closing after the preset time expires.**
- Pressing the 2nd channel again during closing will stop the door once more.
- If the 2nd channel is pressed a second time during this pause, the door stops and the automatic closing feature is disabled. The door maintains its current position, and the closing operation will not be repeated.

4.5 GAF – RELAY ACTIVATION TIME ADJUSTMENT

You can adjust the relay activation time of your device using POT2, and additionally, by activating DIPSWITCH 5, you can further reduce this duration.

- o The POT2 adjustment sets the relay activation time. Turning it clockwise decreases the duration, while turning it counterclockwise increases the duration.

JMP3 STATE	DIPSWITCH 5 POSITION	Relay Activation Duration	
ACTIVE	ACTIVE	Minimum: 10 sn	Maksimum: 30 sn
ACTIVE	PASSIVE	Minimum: 60 sn	Maksimum: 180sn
PASSIVE	ACTIVE	Minimum: 0,3 sn	Maksimum: 10 sn
PASSIVE	PASSIVE	Minimum: 1 sn	Maksimum: 60 sn

4.6 GAF – JUMPER SETTINGS

JUMPER NO	STATE	FUNCTION
1	ACTIVE	When operating in the motor closing direction, if an object enters the photocell detection area, the door moves in the opening direction.
	PASSIVE	When operating in the motor closing direction, if an object enters the photocell detection area, the door stops; when the object leaves the detection area, the door resumes closing from where it stopped.
2	ACTIVE	After the first remote control is registered, additional remotes can be registered directly without pressing the button on the board.
	PASSIVE	To register a remote control, the button on the board must be pressed.
3	ACTIVE	The relay activation time can be adjusted between a minimum of 60 seconds and a maximum of 180 seconds using POT2. (This applies when DIPSWITCH No. 5 is inactive.)
	PASSIVE	The relay activation time can be adjusted between a minimum of 1 second and a maximum of 60 seconds using POT2. (This applies when DIPSWITCH 5 is inactive.)
4	ACTIVE	The STOP button input is inactive.
	PASSIVE	The STOP button input is active.

5. GAF – LED STATUS INDICATIONS

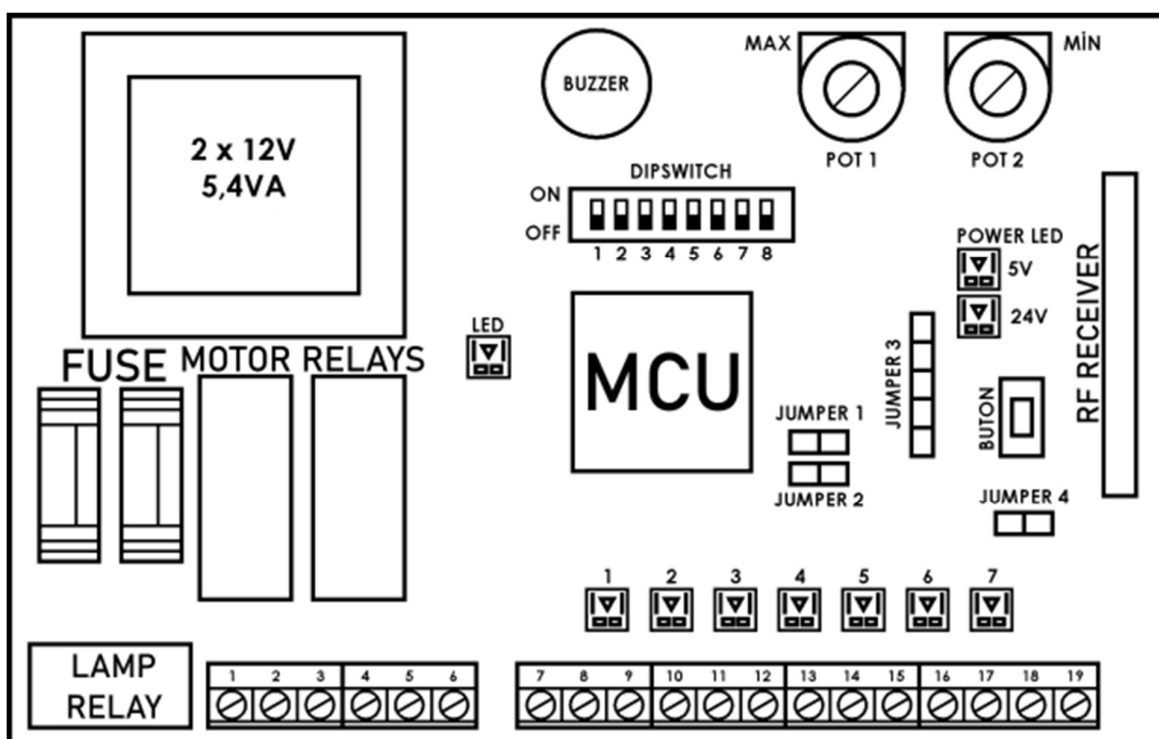


Figure 5.1 GAF – Control Board

LED NO	STATUS
LED1	Lights up when the open limit switch is activated.
LED2	Lights up when the close limit switch is activated.
LED3	Lights up when the photocell contact is active.
LED4	Lights up when the open button is pressed.
LED5	Lights up when the close button is pressed.
LED6	Lights up while the step button is being pressed.
LED7	Lights up when the stop button is not pressed.

6.GAF - MOUNTING

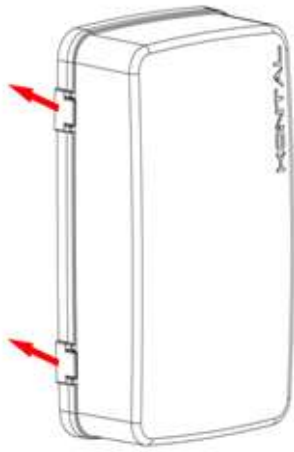


Figure 6.1 Removing the GAF top cover



Figure 6.2 Screwing the GAF onto a flat surface

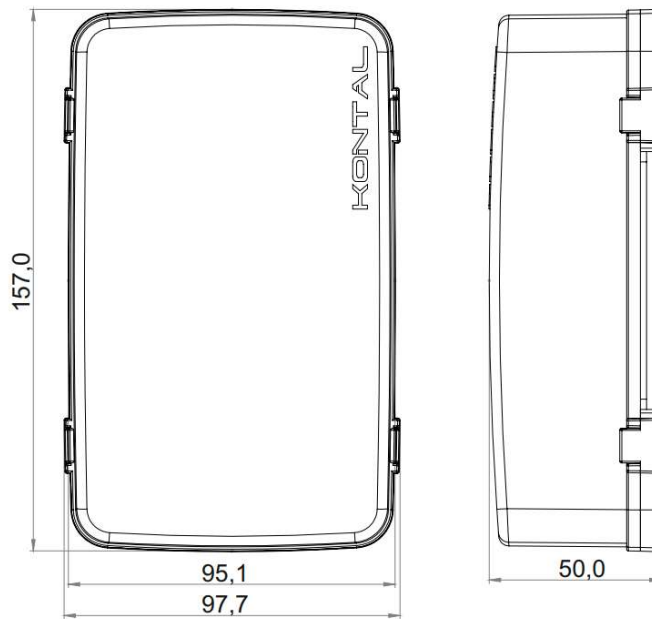
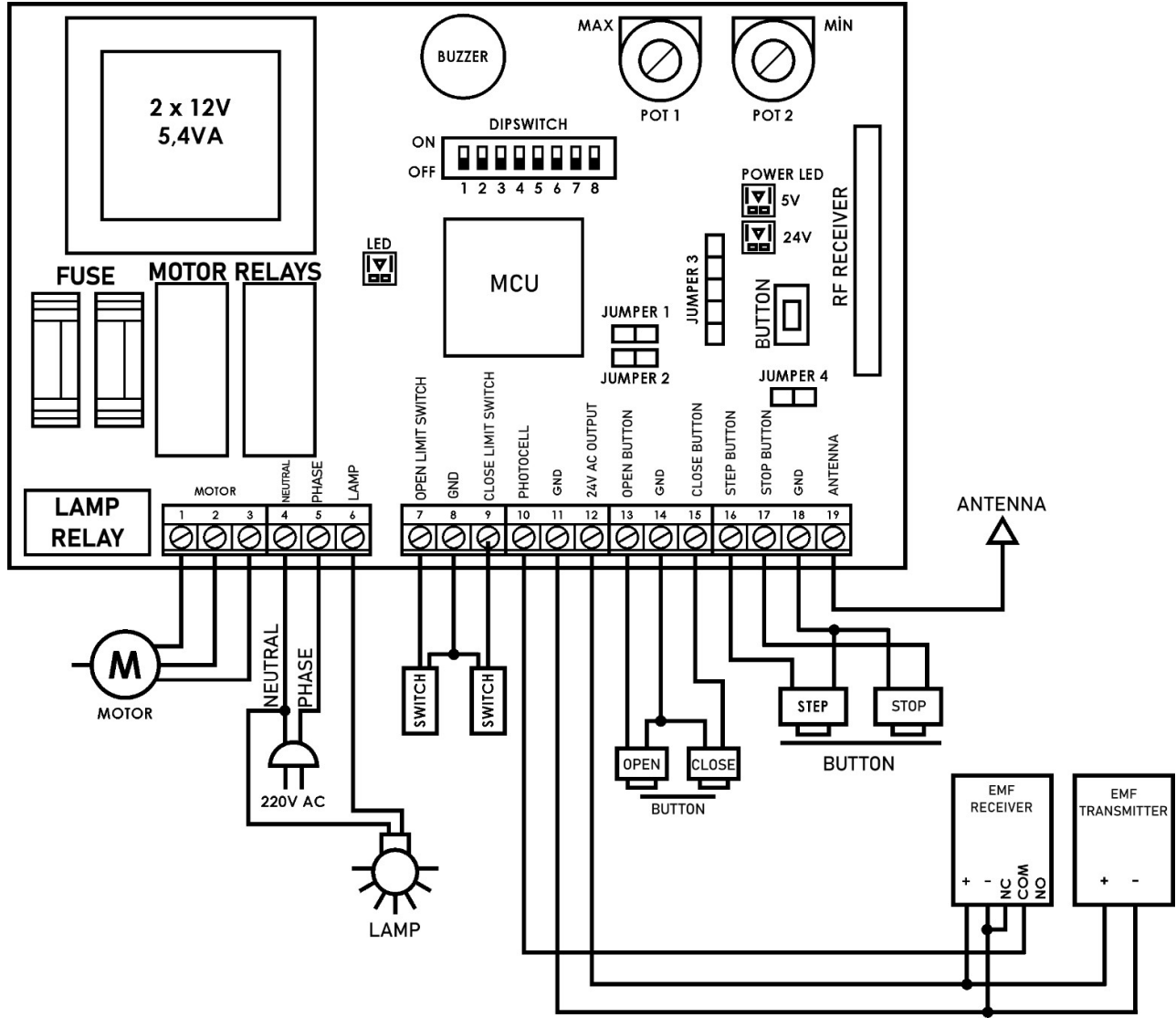


Figure 6.2 GAF Dimensions (Unit: mm)

7.GAF – CONNECTION SCHEMA



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



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



Do not touch the connection terminals after the device has been powered on under any circumstances!



The fuses in the device are designed for easy access and replacement in case of any necessary situations.



Manufacturer / Authorized Service

Kontal Elektronik San. Ve Tic. Ltd. Şti.

Çorapçılar Sanayi Sitesi A Blok NO: 1-2 İkitelli OSB

İSTANBUL / TÜRKİYE

+90 212 485 61 11

info@kontal.com.tr

www.kontal.com

