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PROTECO Q80S

PROTECO Q80S Central Management Unit for Sliding Gates

Instruction Manual

1. INTRODUCTION

This manual provides essential information for the proper installation, operation, and maintenance of the PROTECO Q80S Central Management Unit for sliding gates. Please read this manual thoroughly before proceeding with any installation or operation to ensure safety and optimal performance of the unit.

The Q80S is designed to control the movement of a sliding gate, integrating various safety and operational features for reliable automation.

2. SAFETY INFORMATION

Important Safety Instructions:

- Installation and maintenance must be performed by qualified personnel only.
- Disconnect power before performing any work on the control unit or gate system.
- Ensure all electrical connections comply with local regulations and standards.
- Do not modify the control unit in any way. Unauthorized modifications can lead to malfunction and void the warranty.
- Keep children and pets away from the gate area during operation.
- Install appropriate safety devices such as photocells and safety edges to prevent entrapment or injury.
- Verify proper functioning of all safety devices after installation and periodically thereafter.

3. PRODUCT OVERVIEW

The PROTECO Q80S control unit is a printed circuit board (PCB) with various components for managing sliding gate operations. Key components include power input terminals, motor output terminals, safety device inputs, accessory connections, a 7-segment display, and programming buttons.

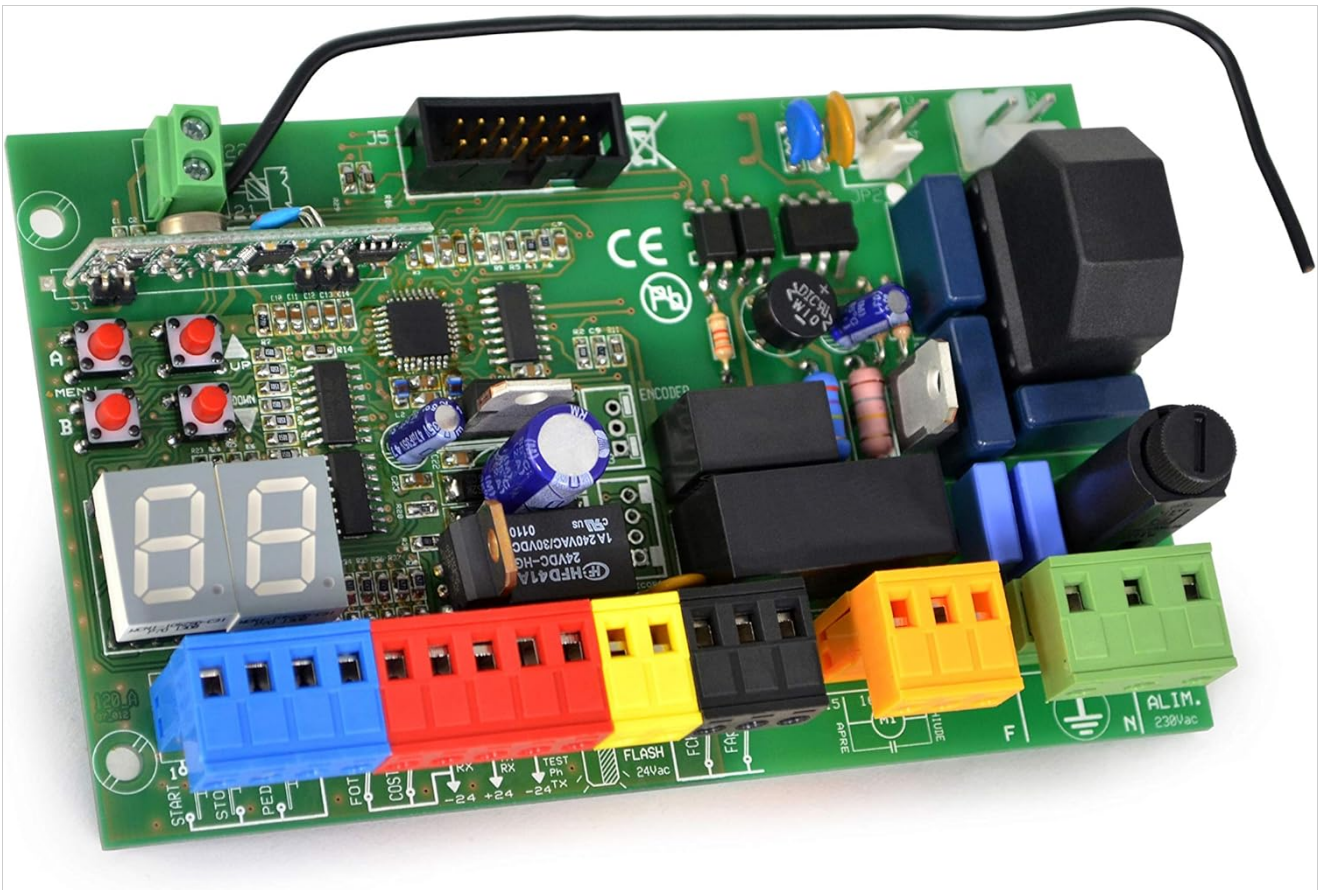


Figure 3.1: Overview of the PROTECO Q80S Central Management Unit. The board features clearly labeled terminal blocks for power (green), motor (orange), and various inputs (blue, red, yellow, black). A two-digit 7-segment display and four red programming buttons (A, B, UP, DOWN) are visible on the left side of the board. Various electronic components, including capacitors, resistors, and integrated circuits, are distributed across the green PCB.

Familiarize yourself with the layout and labeling of the board before proceeding with connections.

4. INSTALLATION AND SETUP

4.1 Mounting the Control Unit

- Mount the Q80S control unit inside a suitable, weather-resistant enclosure, away from direct sunlight and moisture.
- Ensure adequate ventilation within the enclosure to prevent overheating.
- Secure the board firmly using appropriate fasteners to prevent vibration.

4.2 Electrical Connections

Refer to the labels on the terminal blocks shown in Figure 3.1 for correct wiring. All wiring should be done with the main power supply disconnected.

- **Power Input (ALIM. N 230Vac):** Connect the main 230Vac power supply to the green terminal block labeled "ALIM." and "N". Ensure proper grounding.
- **Motor Connection:** Connect the sliding gate motor to the orange terminal block. The specific connections (e.g., common, open, close) will depend on your motor type.
- **Safety Devices:**
 - **Photocells (FOT):** Connect safety photocells to the designated terminals (e.g., "FOT" on the red terminal block).
 - **Stop Button (STO):** Connect an emergency stop button to the "STO" terminal on the blue terminal

block.

- **Safety Edge (COST):** Connect safety edges or other constant contact safety devices to the "COST" terminal on the red terminal block.
- **Control Inputs:**
 - **Start Command (START):** Connect a push button or access control system for gate activation to the "START" terminal on the blue terminal block.
 - **Pedestrian Opening (PED):** Connect a separate input for pedestrian access to the "PED" terminal on the blue terminal block.
- **Accessories:** Connect any additional accessories such as flashing lights (FLASH) or antenna (RX/TX) to their respective terminals. The "FLASH" terminal provides 24Vac output.

5. OPERATION

Once the unit is correctly installed and wired, apply power. The 7-segment display will show the current status or programming mode. Basic operation involves activating the gate via the START input or a remote control (if connected and programmed).

- **Opening Cycle:** A signal to the START input initiates the opening sequence.
- **Closing Cycle:** After a set pause time (if configured), the gate will automatically close, or a second START signal can initiate closing.
- **Stop:** The STO input or activation of safety devices will halt gate movement.
- **Pedestrian Mode:** The PED input will open the gate partially for pedestrian access.

6. PROGRAMMING AND CONFIGURATION

The Q80S unit features a 7-segment display and four programming buttons (A, B, UP, DOWN, MENU) for adjusting operational parameters. Specific programming steps will vary based on the desired functionality (e.g., setting opening/closing limits, pause time, force adjustment, remote control pairing).

Consult the detailed programming guide provided by PROTECO for specific menu options and parameter adjustments. Generally, the "MENU" button is used to enter programming mode, "UP" and "DOWN" to navigate options, and "A" or "B" to select or confirm settings.

7. MAINTENANCE

Regular maintenance ensures the longevity and safe operation of your gate system. While the Q80S control unit itself requires minimal maintenance, periodic checks of the overall system are recommended.

- **Visual Inspection:** Periodically inspect the control unit for any signs of damage, loose connections, or corrosion.
- **Cleanliness:** Keep the control unit and its enclosure clean and free from dust, insects, and moisture.
- **Wiring Checks:** Ensure all terminal connections remain secure.
- **Safety Device Testing:** Regularly test all connected safety devices (photocells, safety edges, emergency stop) to confirm they are functioning correctly.
- **Gate Mechanics:** Ensure the gate mechanism itself (motor, rails, wheels) is well-maintained and lubricated according to the gate manufacturer's instructions.

8. TROUBLESHOOTING

Before attempting any troubleshooting, ensure the main power supply is disconnected. If you are unsure about any step, consult a qualified technician.

Problem	Possible Cause	Solution
Gate does not move.	No power; Safety device activated; Motor issue; Remote control not programmed.	Check power supply; Inspect safety devices (photocells, stop button); Verify motor connections; Program remote control.
Gate opens but does not close.	Photocells obstructed or misaligned; Safety edge activated; Auto-close timer not set.	Clear photocell path, align them; Check safety edge wiring; Adjust auto-close timer in programming.
Gate stops unexpectedly.	Obstruction detected; Safety device triggered; Motor overheating.	Remove obstruction; Check all safety devices; Allow motor to cool down.
Display shows error code.	Specific system fault.	Refer to the detailed programming manual for error code definitions and solutions.

9. SPECIFICATIONS

- **Model:** Q80S
- **Brand:** PROTECO
- **Input Voltage:** 230Vac (as indicated on board)
- **Relay Output:** 1A 240VAC / 30VDC (as indicated on board)
- **Application:** Sliding Gate Automation
- **Features:** Integrated control logic, safety inputs, accessory outputs, digital display for programming.

10. WARRANTY AND SUPPORT

For information regarding the warranty period and terms for your PROTECO Q80S control unit, please refer to the documentation provided at the time of purchase or contact your authorized PROTECO dealer or the seller directly. Technical support may also be available through these channels. Always provide your product model (Q80S) and purchase details when seeking support.