

PS860AM+KC118

Porcheson PS860AM+KC118 Controller/Computer/Control System User Manual

Comprehensive guide for installation, operation, and maintenance.

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1. INTRODUCTION

This manual provides essential information for the installation, operation, and maintenance of the Porcheson PS860AM+KC118 Controller/Computer/Control System for Plastic Injection Molding Machines. This system is designed to provide precise and reliable control over various aspects of the injection molding process. Please read this manual thoroughly before attempting any installation or operation to ensure safe and efficient use.

2. SAFETY INFORMATION

Always adhere to the following safety precautions to prevent injury to personnel and damage to equipment.

- **Qualified Personnel:** Only trained and qualified personnel should install, operate, or maintain this control system.
- **Power Disconnection:** Always disconnect power to the injection molding machine and the control system before performing any installation, maintenance, or repair work.
- **Electrical Safety:** Ensure all wiring is correctly connected and grounded according to local electrical codes and standards. Avoid contact with live electrical components.
- **Environmental Conditions:** Operate the system within specified environmental conditions (temperature, humidity) to prevent malfunction.
- **Emergency Stop:** Familiarize yourself with the location and operation of all emergency stop buttons on the injection molding machine and the control system.
- **Original Parts:** Use only original or approved replacement parts for repairs to maintain system integrity and safety.

3. SYSTEM COMPONENTS OVERVIEW

The Porcheson PS860AM+KC118 system comprises two primary units:

- **PS860AM Main Controller:** This unit serves as the central processing unit, managing all control logic, data processing, and communication within the injection molding machine. It features various input/output ports for sensors, actuators, and other peripheral devices.
- **KC118 Operator Panel:** The KC118 is the human-machine interface (HMI) that allows operators to monitor machine status, adjust parameters, and initiate/terminate operations. It typically includes a display screen, keypads, and function buttons for intuitive control.

These two components work in conjunction to provide a comprehensive control solution for plastic injection molding processes.

4. SETUP AND INSTALLATION

Proper installation is crucial for the reliable operation of the PS860AM+KC118 system. Refer to the detailed wiring diagrams provided with your specific machine model for precise connections.

4.1. Mounting

- Mount the PS860AM main controller securely within the electrical cabinet of the injection molding machine, ensuring adequate ventilation.
- Install the KC118 operator panel in an easily accessible location on the machine's control console, ensuring clear visibility for the operator.

4.2. Wiring Connections

1. **Power Supply:** Connect the main power supply to the PS860AM controller according to the voltage and current specifications. Ensure proper grounding.
2. **Communication Cable:** Connect the dedicated communication cable between the PS860AM and the KC118 operator panel.
3. **Input/Output (I/O) Wiring:** Connect all sensors (e.g., temperature, pressure, position) and actuators (e.g., heaters, valves, motors) to the appropriate I/O terminals on the PS860AM. Double-check all connections against the machine's wiring diagram.
4. **Safety Interlocks:** Ensure all safety interlock circuits are correctly wired and functional before powering on the system.

4.3. Initial Power-Up

1. After all connections are verified, apply power to the system.
2. Observe the KC118 display for initial boot-up sequences and any error messages.
3. Perform a basic functional test of key machine movements and sensor readings to confirm correct installation.

5. OPERATING INSTRUCTIONS

This section outlines general operating procedures. Specific machine parameters and sequences will vary based on the mold and material being processed.

5.1. User Interface (KC118)

The KC118 operator panel provides access to all machine functions. Navigate through menus using the dedicated function keys and arrow buttons. The display will show current machine status, process parameters, and alarm messages.

5.2. Starting a Production Cycle

1. **Pre-Checks:** Ensure the mold is correctly installed, material hopper is filled, and all safety guards are in place.
2. **Parameter Setting:** Access the parameter setting menu on the KC118. Input or load the appropriate molding parameters (e.g., injection pressure, holding pressure, temperature profiles, cooling time, clamping force) for the current job.
3. **Heating:** Activate the barrel heaters and allow them to reach the set temperature. Monitor the temperature display on the KC118.
4. **Manual Operations (if needed):** Perform any necessary manual operations, such as mold opening/closing or screw rotation, to prepare for automatic mode.
5. **Automatic Mode:** Select "Automatic" or "Cycle Start" on the KC118. The machine will begin the injection molding cycle according to the programmed parameters.
6. **Monitoring:** Continuously monitor the process parameters and machine status on the KC118 display.

5.3. Adjusting Parameters During Operation

Minor adjustments to parameters can often be made during operation via the KC118. Always make small, incremental changes and observe the effect on the molded parts. Consult your machine's specific operating manual for guidelines on dynamic parameter adjustments.

5.4. Stopping the Machine

- **Normal Stop:** Select "Stop" or "Cycle End" on the KC118. The machine will complete the current cycle and then cease operation.
- **Emergency Stop:** In case of an emergency, press any accessible emergency stop button. This will immediately cut power to critical machine functions. After an emergency stop, identify and resolve the cause before resetting and restarting.

6. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your Porcheson control system.

6.1. Daily Checks

- Visually inspect the KC118 operator panel for any damage or loose connections.
- Ensure the cooling fans on the PS860AM controller are operating correctly and are free from dust accumulation.
- Check for any unusual noises or odors emanating from the control cabinet.

6.2. Weekly/Monthly Checks

- **Power Off:** Disconnect power before performing these checks.
- **Cleanliness:** Gently clean the KC118 display and keypad with a soft, damp cloth. Avoid abrasive cleaners.
- **Internal Cleaning:** Open the control cabinet (if qualified) and carefully remove any dust or debris from the PS860AM controller and surrounding components using compressed air or a soft brush.
- **Connection Integrity:** Check all terminal connections for tightness. Loose connections can lead to intermittent faults or system damage.

6.3. Software Updates

Periodically check with your supplier for any available software or firmware updates for the PS860AM+KC118 system. Follow the provided instructions carefully for any update procedures.

7. TROUBLESHOOTING

This section provides solutions for common issues. For complex problems, contact technical support.

Problem	Possible Cause	Solution
System does not power on.	No power supply; loose power cable; blown fuse.	Check main power supply; verify power cable connection; inspect and replace fuses if necessary (with power off).
KC118 display is blank.	Communication cable disconnected; power issue to KC118; system fault.	Check communication cable between PS860AM and KC118; verify power to KC118; restart the system.
Machine not responding to commands.	Emergency stop engaged; safety interlock open; incorrect operating mode.	Check all emergency stop buttons; ensure all safety guards are closed; verify operating mode (e.g., Automatic, Manual).
Inaccurate sensor readings.	Faulty sensor; loose sensor wiring; sensor calibration required.	Inspect sensor and wiring; perform sensor calibration if applicable; replace faulty sensor.
System displays an error code.	Specific system fault.	Refer to the system's error code list (if available) for detailed explanations and corrective actions. Contact support if the issue persists.

8. SPECIFICATIONS

The following are general specifications for the Porcheson PS860AM+KC118 system. Specific details may vary.

- **Model:** PS860AM+KC118
- **Type:** Controller/Computer/Control System
- **Application:** Plastic Injection Molding Machines
- **Manufacturer:** Generic (Porcheson)
- **Part Number:** ZGLg_Serk_10332
- **ASIN:** B0C2F5SFKS
- **First Available:** April 13, 2023
- *Note: Detailed electrical, environmental, and performance specifications are typically provided in a separate technical data sheet.*

9. WARRANTY AND SUPPORT

For warranty information, please refer to the terms and conditions provided at the time of purchase or contact your supplier directly. This product is typically covered by a standard manufacturer's warranty against defects in materials and workmanship.

For technical support, service, or spare parts, please contact your authorized Porcheson distributor or the point of purchase. When contacting support, please have your system model (PS860AM+KC118) and any relevant error codes or symptoms readily available.

