



# SOLID STATE INTERFACE INSTRUCTION MANUAL

## OPERATION

The Solid State Interface (SSI) circuit board is designed for washers that are microprocessor controlled. The SSI will active a pump from the signal sent by the washer's microprocessor and will remain running as long as the signal is present. The board can operate up to ten pumps (maximum), and has the ability to split commons for washers that require it.

## MAIN POWER & PUMP OUTPUT CONNECTION

The main power used must always match the motor voltage, and the voltage select switch should be set to match the motor voltage.

Connect the main power for the dispenser to the power input connection, located next to the power outputs for the pumps. Set the main power switch on the board for the correct incoming voltage either 115V or 230V.

Connect the pumps to the appropriate pump output connections, ensuring that no strands of wire are loose, or contacting other terminals.

## PRIMING PUMPS

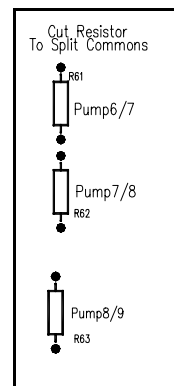
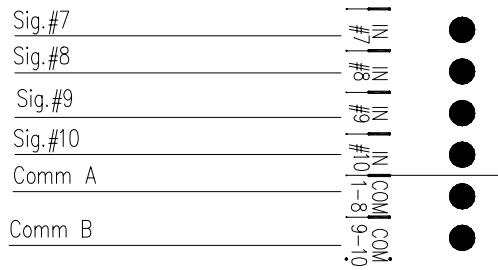
To prime any of the pumps, push the corresponding push-button for the pump that you wish to prime. The corresponding pump LED will be lit indicating which pump is running.

## CONNECTING SIGNALS & SPLITTING COMMONS

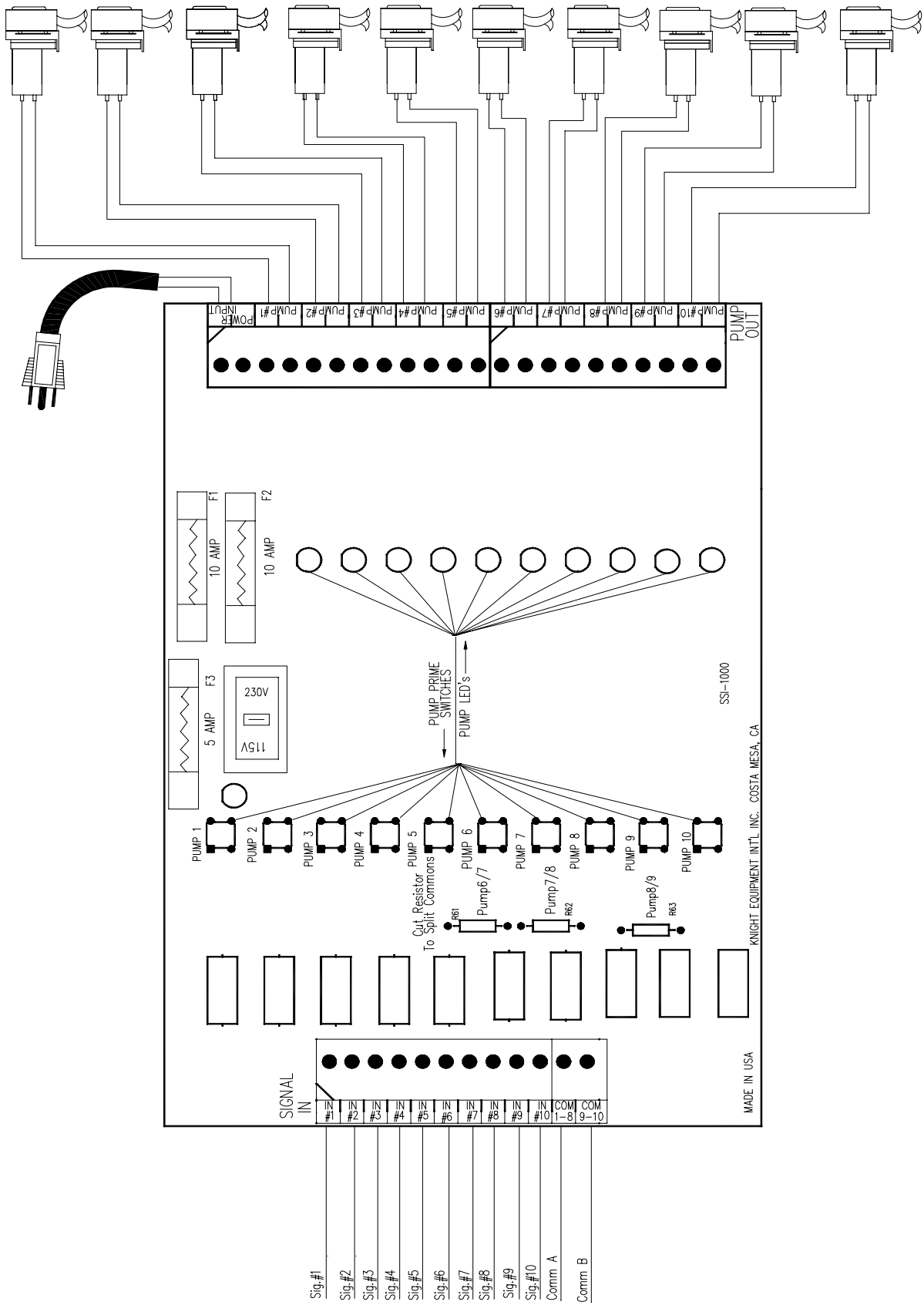
It's very important to verify signal voltages with a meter before connecting the signal wires to the corresponding signal input on the (SSI) board. Ensure the signal voltage is between 24V and 240V before connecting any signal wires to the pumps inputs. Do not use case ground as common for the signal inputs.

When splitting commons for washers that require it, there is a resistor that will need to be removed to make the split for the signal common wire. Removal of one of the resistors will divide the pumps into two groups with separate commons, you can choose which pumps to split the commons between but remove only one resistor.

- Removing R61 will separate pumps 1 thru 6 from 7 thru 10.
- Removing R62 will separate pumps 1 thru 7 from 8 thru 10.
- Removing R63 will separate pumps 1 thru 8 from pumps 9 & 10.



# WIRING DIAGRAM



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## TROUBLESHOOTING

### ❑ **No power:**

Check the fuses on the control board.

Check input terminals on board for loose screws and correct input voltage. Refer to the wiring diagram for voltage input terminals.

Check voltage select switch.

### ❑ **Pump will not activate:**

Check pump output terminals for loose screws and disconnected wires.

Check for proper voltage across motor windings.

Check for obstruction in pump head.

Verify signal voltage.

### ❑ **Pump runs too slowly:**

Check roller block for binding.

Check for proper voltage across motor windings

Check for lubrication on squeeze tube.

### ❑ **Pump will not shut off:**

Check for stuck prime switch.

Try shutting off main power for a few minutes.

Check signal input for lingering voltage.

Possible damaged circuit board.

### ❑ **Loss of pump prime:**

Check pickup line for any holes or air leaks.

Check squeeze tubing in pump for any cracks or pin holes.

Check tubing for deterioration.

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## DISCLAIMER

Knight Inc. does not accept responsibility for the mishandling, misuse, or non-performance of the described items when used for purposes other than those specified in the instructions. For hazardous materials information consult label, MSDS, or Knight Inc.

## WARRANTY

All Knight controls and pump systems are warranted against defects in material and workmanship for a period of ONE year. All electronic control boards have a TWO year warranty. Warranty applies only to the replacement or repair of such parts when returned to factory with a Knight Return Authorization (KRA) number, freight prepaid, and found to be defective upon factory authorized inspection. Bearings and pump seals or rubber and synthetic rubber parts such as "O" rings, diaphragms, squeeze tubing, and gaskets are considered expendable and are not covered under warranty. Warranty does not cover liability resulting from performance of this equipment nor the labor to replace this equipment. Product abuse or misuse voids warranty.

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