



**DEXTER.**  
LAUNDRY

# WRITTEN WIRING SCHEMATICS

## 18LB., 25LB., 40LB., 55LB., 75LB.

### V-Series Vended Washer Schematic

#### START CIRCUIT

Power travels into the machine on L1 & L2 & (L3) ( if 3 phase used). 208- 240VAC goes to a Control Transformer (must be checked at start -up to coincide with machine operating voltage) that steps the voltage down to 115VAC for the controls. 115VAC then travels from the transformer out on [X-1 red wire to the (1.5 amp Circuit Breaker )] or [ X-1 blk/red wire] to TB-4 then to the red wire to the fuse,( fuse in fuseholder). X-2 Blk/blu wire is the neutral side of the transformer.

From the Circuit Breaker or Fuse holder, 115VAC travels on the red wire to the #5 terminal on the terminal strip and then on the black wire to the Step-Down Transformer where it is stepped down to 2.3 and 24 VAC that proceeds to the P 7 connection to power the micro-controller PCB. With the PCB now powered up, 5 VDC will be present between the 2 yellow wires and between the 2 brown wires from the coin switches and will now be ready to count coins through the P-2 connection at the micro-controlled PCB. The Door must be closed to satisfy the S5 door closed switch mounted on masking ring at front door. With data going out from Front PCB on the black wire through S5 door closed switch and red wire out of S5 door closed switch and over to S1 door latched switch to await vend price being added. The coin blocking solenoid on the coin acceptor is powered with 115 V from wht/grn at P11 on the relay PCB and blu at terminal board. The 115 volts will drop off as door closed switch S5 is closed and handle closed and S1 is closed . Once vend price amount is added and satisfied a 5 VDC signal is sent out of P4 connection on the white/red to the S1 door switch. The S1 door switch is closed and 5 VDC is now on the red wire at the P4 connector of the micro-controlled PCB and then a 115VAC signal will go to the Door Lock Solenoid from the P17 connector of the Main Relay PCB on the white/ red wire. The Door Lock Solenoid pulls in, locking the door and closing the S2 and S3 Switches. The S2 Switch is a backup to the S1 Switch so that the adjustment on S1 isn't as critical. The S3 Switch provides 5 VDC on the org. wire back to P4 connector at micro-controlled PCB and P15 connector at the main relay PCB and this is the signal to know the loading door is closed and locked. Org. wire @ P15 turns on the enable to the drive to allow motion. With no signal on P15 (org. wire) there will be no motion of the tub. The black wire and white wire between main PCB controller PCB P21 and the main relay PCB P 20 is where door lock data is supplied to indicate door closed and locked to relay PCB and allows 120 volts to pass through relays to drain valve and water valves. The blue wire from the terminal strip will provide the 115 VAC neutral for solenoid, thermoactuators and all valves and the white wire from the terminal to the step down transformer.

#### FILL CIRCUIT-WARM

S1, S2, S3 and S5 Door Switches are now closed . The green On LED and the Door Lock Solenoid(discussed in Start Circuit) will remain on throughout the cycle. The Lock Thermoactuator receives 115VAC on orange/blue from P17 on main relay PCB and will alternate open and closed keeping the Lock Thermoactuator activated until 1 1/2 minutes before the end of the cycle. At this point the contact opens and removes power to the Lock Thermoactuator. The micro-controlled PCB also sends a signal to the main relay PCB and out through P17. The brown/yellow wire from P17 at main relay PCB supplies 115VAC to Drain valve which closes the valve. The reversing operation which will alternately

provide the direction of tumble for the wash basket will be given commands to the VFD through the data cables at P6 micro-controlled PCB. The Prewash or Wash LED will illuminate at this time powered through the white wires from the micro-control PCB P3 to LED printed circuit board. Now with a temperature cycle previously selected; we'll use Normal Wash as an example; the washer fills the tub through the back of the machine with either one or both the C1 Cold and H1 Hot Water Valves. At the beginning of the wash cycle bath only after a 90 sec. delay, the detergent dispenser flushes the detergent into the tub for 20 sec.. This is accomplished when 120VAC travels through the red/orange wire to the H2 Hot Water Valve Solenoid. As the washer fills with water, the Wash Basket will tumble one direction for 12 seconds, pause, and then reverse direction for 12 seconds. 120VAC goes through the P19 connection of main relay PCB on wht/brn to the C1 cold water valve and the red/yellow wire to the H1 hot water valve if programmed. When the water reaches the predetermined level the Pressure Switch moves switch contacts to the full position and shuts neutral voltage off to the both water valves. Between red wire from P5 micro controlled PCB on pressure switch contact and yellow and orange wire from P5 micro-controlled PCB at other pressure switch contact a 5 VDC reading will open.

### WASH CIRCUIT

As the washer fills the tub through the back of the machine with either one or both the C1 Cold and H1 Hot Water Valves, the Wash Basket will tumble one direction for 19 seconds, pause 4 seconds, and then reverse direction for 19 seconds. This is accomplished through the use of a variable frequency drive and a reversing timer. The time of the bath is programmable up to 15 minutes per bath used.

### DRAIN, RINSE 1 & 2, & FINAL RINSE CIRCUIT

When the bath ends the micro-controller PCB removes 115 VAC power from brn/yel coming from main relay PCB at P17 to the Drain Valve. The normally-open spring-loaded Drain Valve opens and empties the tub. For Rinse 1 & 2, the Rinse LED will illuminate. the rinse water temperatures are programmable and will fill as above. For the Final Rinse, the Final Rinse LED will illuminate. these water temperatures are programmable also and will fill as described above. Also the softener dispenser will flush cold water from C2 cold water valve solenoid at beginning of final rinse bath for 20 sec.

### EXTRACT CIRCUIT

The Spin LED will illuminate at washer front and the washer controller PCB sends an extract signal to the Variable frequency drive via the data cable at P6 to VFD RJ-11. The rotation as viewed from front during spin will be CCW except 1816 twill be CW. The motor is a 3 phase 230 VAC single speed type motor.

### THERMOACTUATOR AND SHAKE OUT CIRCUIT

The Lock Thermoactuator loses power and opens 1 1/2 minutes before the end of the cycle. This allows the Thermoactuator time to retract by the end of the cycle. To insure that the Lock Thermoactuator has retracted by the end of the cycle, 1 minute prior to the end of the cycle, the Unlock Thermoactuator is powered with 115VAC through the org/red wire from P17 at main relay PCB. The basket will come to a stop from extract speed with the assistance of 2 dynamic braking resistors wired in parallel to the variable frequency drive. The washer will then tumble for 45 seconds to let the clothes shake loose and then stop.

### END OF CYCLE CIRCUIT

The machine is now stopped and does 2 things:

1. The beeper will signal for 5 seconds letting the user know that it is the end of the cycle.
2. The micro-controlled PCB resets and display will reset when door is opened and it is now ready to accept coins again.