

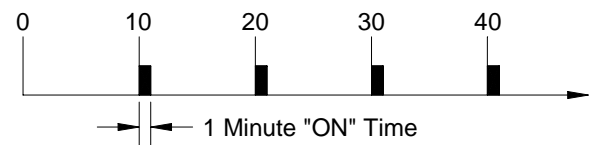
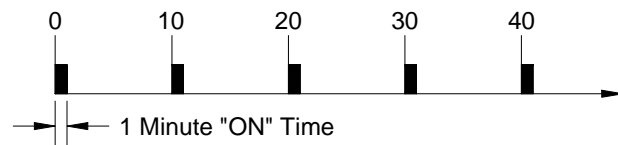
OPERATION

The CT-500/600 circuit board is a cycle timer that controls a pump by repeatedly cycling the “on” time at the end of every “off” time (interval time). The CT-500 version has a 24 VDC pump output, whereas the CT-600 version has a relay that switches power to a 115 or 230 volt motor (or other device). The board has the option to have the pump operate as soon as power is applied (“on” first) or after the “off” interval has expired (“off” first). See details below.

ON-FIRST / OFF-FIRST

DIP switch #7 is used to select on-first/off-first operation. Which setting you choose will be based on your application requirements and how you wish for the pump to operate. In the examples shown below, if the interval time is 10 minutes and the on time is 1 minute, then the pump will run every 10 minutes when the interval time expires. The first activation of the pump is based on DIP switch #7 setting.

- When set to “ON FIRST”, the pump will begin running for the on-time immediately when powered up.
- When set to “OFF FIRST”, the pump will start counting down the interval time when powered up (before running the pump).



PRIMING

The pump can be primed manually while the interval time is counting down (LED flashing). Ensure that the power is on, then press and hold the START button to prime the pump. The pump will run for as long as the button is pressed.

A remote prime switch can be connected to the START terminals on the circuit board if desired. This may be helpful in applications where the pump is not easily accessible.

SETTING “ON” TIME

The maximum ON time is 12 minutes and 42 seconds. The on time must always be shorter than the interval time for the system to “cycle” properly. If the on time is inadvertently set longer than the off time, then the pump will run continuously and will not cycle off.

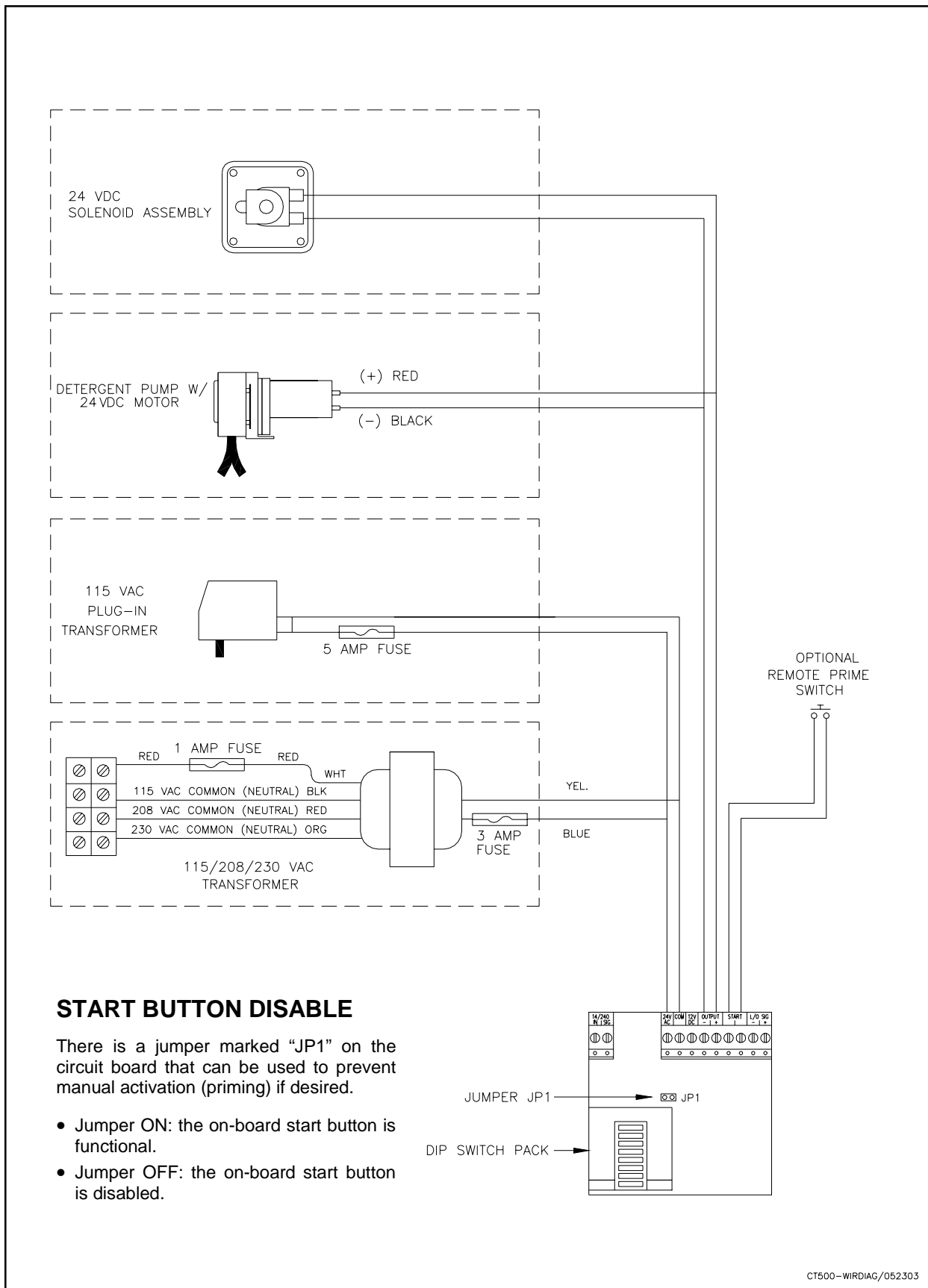
- (1) Locate the DIP-switch pack on the circuit board — set switch #8 to PROGRAM.
- (2) Using a measuring cup or beaker, press Start switch and release when pump starts. Let the pump run until desired amount of chemical is dispensed then press Start switch again to stop. The on time is now programmed.
- (3) Set mode switch #8 to RUN MODE.

SETTING “OFF” (INTERVAL) TIME

The maximum OFF time (interval time) is 63 minutes. The interval time is set by selecting a combination of DIP switches 1 – 6. All switches that are turned ON will be added up to determine the total interval time. For example, if you wish to set a 20 minute interval time, set switches #3 and #5 to ON with all other switches OFF.

- For maximum off time (63 min) set all switches ON.
- When the interval time expires, it resets and begins counting down again. The pump runs for the duration of the on time each time the interval time resets.

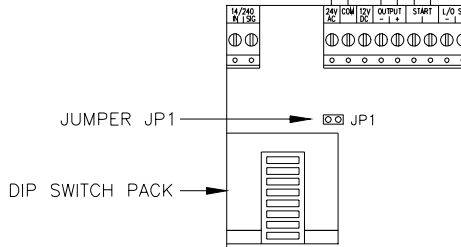
CT-500 WIRING DIAGRAM



START BUTTON DISABLE

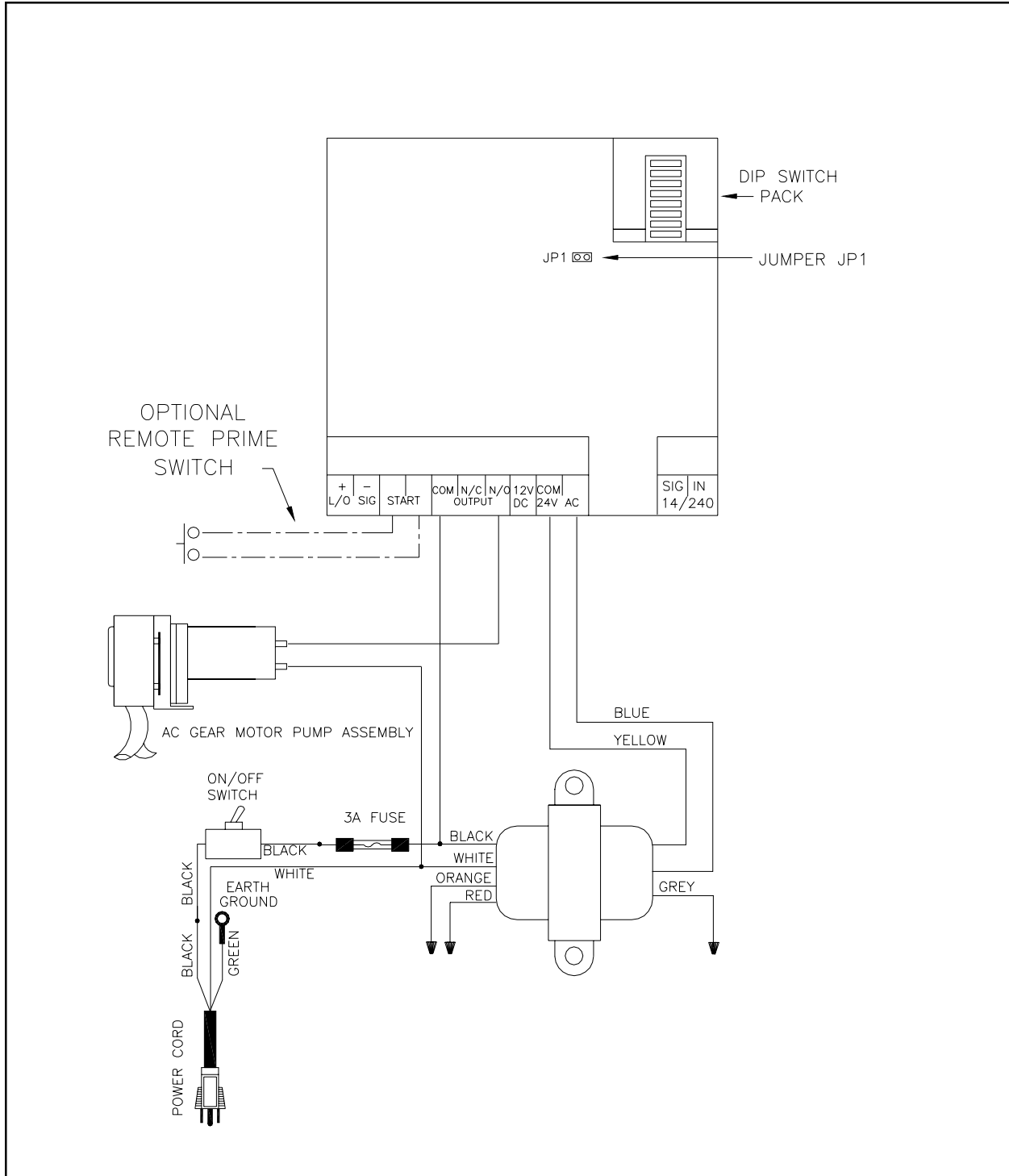
There is a jumper marked "JP1" on the circuit board that can be used to prevent manual activation (priming) if desired.

- Jumper ON: the on-board start button is functional.
- Jumper OFF: the on-board start button is disabled.



CT500-WIRDIAG/052303

CT-600 WIRING DIAGRAM



IMPORTANT NOTES

- 1) WIRING AS SHOWN IS FOR 115 VAC MAIN POWER. FOR 230 VAC MAIN POWER, USE THE WHITE AND ORANGE WIRES ON THE XFMR.
- 2) USING 230 VAC MAIN POWER REQUIRES A 230 VAC PUMP MOTOR.

CT600-WIRDIAG/062703

DISCLAIMER

Knight LLC 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 LLC. Knight products are not for use in potentially explosive environments. Any use of our equipment in such an environment is at the risk of the user, Knight does not accept any liability in such circumstances.

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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