

Safety Procedures

**WARNING**



Dangerous environment.
Highly flammable/explosive fuels and high voltage are present.

Failure to observe all safety precautions could result in serious injury or death.

Observe all safety precautions as outlined in Gasboy manuals.

Installation Procedures

1.

Install a single EMERGENCY POWER CUTOFF control to remove AC power from site dispensing equipment. (The control is an additional safety feature, and not a substitute for National Electrical Code (NEC®)/National Fire Protection Association (NFPA) 30 circuit breaker requirements). Label the EMERGENCY POWER CUTOFF switch and instruct owner to keep area clear of obstacles.
- IMPORTANT INFORMATION

Devices such as Distribution Boxes (D-Boxes), two-wire, and so on must be de-energized or have wiring disconnected from the dispenser by the Emergency Stop or equivalent mechanism. Third-party devices such as those supplying power or any form of communication to a dispenser (intercoms, third-party controllers and such) must also be de-energized or the wiring supplying that power be disconnected when activating the Emergency Power Cutoff control or equivalent mechanism. Provision to accommodate this must not introduce noise [Radio Frequency Identifier(RFI) or electrical)]into sensitive pump dispenser electronic field wiring circuits during normal pump/dispenser operation. De-energizing of the external equipment through the emergency stop or equivalent device is recommended.
2.

Connect an insulated grounding conductor from the dispenser power panel to the site grounding electrode (size per NEC).
3.

Install power breakers to each circuit leading to the dispensing unit and Submersible Turbine Pump (STP). It must be capable of simultaneously disconnecting hot and neutral conductors. Gasboy requires the Micro breaker rating to be ≤ 15 A.
Note: In Canada switching neutral is contrary to the Canadian Electrical Code (CEC), reference part 1, rule 14-014.
4.

Only field wiring connections are shown in the Junction boxes (J-boxes). Cap all unused wires. Local and National Electrical Codes may apply.
5.

Install conduit per NEC for hazardous locations. Potting is required for conduit that passes through any portion of a hazardous vapor area to ensure vapor barrier integrity.
6.

Wires - All wires are 14 AWG (copper stranded) unless otherwise noted. Dispenser ground - wire is 12 AWG (copper stranded). Power loading and distance run may require larger wire size. Wire all circuits NEC Class 1, except wiring to speaker (intercom) and call button which must be NEC Class 2. Gasboy Two-wire is NEC Class 1 and may share the main power conduit.
7.

Two-Wire Communication Wiring: For installations with ‘new’ wiring, use unshielded twisted pair (UTP) data wires. Wiring Spec: 10-12 twists per foot, 18 AWG up to 1000 foot runs (2000 ft. total) or 14 AWG up to 2600 foot runs (5200 ft. total) unshielded, 300 V minimum, stranded annealed copper tinned wire, PVC insulation of type TFFN, THHN or MTW, UL approved gasoline and oil resistant. Reference C&M Corporation Part #27525 (18 AWG) or equivalent. Refer to Site Preparation Manual requirements where 14 AWG may be required.
8.

Consult manufacturer specifications for wire nuts to determine maximum number of wires that may be used per nut.
9.

For US 240 VAC installations, wires labeled ‘HOT’ are to be connected to L1 and wires labeled ‘NEUTRAL’ are to be connected to L2.
10.

Do not provide service loops or leave excess wire in J-box. Cut all wire lengths to size sufficient to reach termination without stress or excess.

11.

Valve is optional on Mechanical and Commercial pumps - 1 Grade, 1 Hose or 2 Grade, 2 Hose. On commercial units in an international installation (240 VAC single phase), valves must be rated at 240 VAC.

12.

Wires labeled with a prefix of ‘A’ signify Side 1/Front and a prefix of ‘B’ signify Side 2/Rear. Side 1 is the J-box opening side.

13.

The second pump motor is used only with dual product or 9840K.

14.

Wires labeled with two colors signify that the first color is the color of the wire and the second is that of the stripe. For example, BLU/WHT would indicate a blue wire with a white stripe.

15.

Internal wiring that is not field terminated may be white in color.

16.

STP isolation relay boxes are required by NEC 514-6 to:

a.

Allow service of one unit safely without removing power from all dispensing equipment.

b.

Prevent damage to equipment from cross-phasing. Damage caused by cross-phasing is not covered by warranty. (Use local supplier for Isolation Relay Boxes).

17.

To determine which mode of satellite operation is relevant for your application, refer to the Weights and Measures (W&M) Handbook 44. In many cases, the satellite must be wired so it cannot dispense product while the master remote dispenser is dispensing and vice versa. Use the correct wiring diagram according to your application.

18.

The input line AUTH (CONTROL/SUBM FEED) is comprised of two wires which are tied together at the factory.

19.

To avoid damage to the CPU PC board, all unused wires must be individually capped, and before applying power, you must verify that the RESET COMPLETE, FAST FLOW, STP OUT wires are not shorted to conduit or chassis.

20.

STP OUT line can supply 300 mA AC maximum to control submersible starter relays. This line must not be directly connected to a submersible pump.

21.

RESET COMPLETE (switch detect) line can supply 170 mA AC maximum for connecting to fuel management system circuitry and in applications where control of a remote slow flow valve (satellite) is required.

22.

FAST FLOW line can supply 170 mA AC maximum is provided to allow for control of a satellite along with remote control or monitoring of the fast flow valve found in the pump.

23.

If the AUTH (CONTROL/PUMP MOTOR FEED) line is controlled by a fuel management system using solid state relays, a resistor assembly must be installed between the Control Feed line and Feed Neutral to prevent false triggering of the authorization input. The resistor assembly is 8.2K OHM, 10 Watt (P/N C05818) for 115/230 VAC domestic and 30K OHM, 10 Watt (P/N C06683) for 230 VAC international wiring.

24.

When used with an aboveground tank, the valve mounted at the tank MUST NOT be connected to the RESET COMPLETE or STP OUT lines. If the optional internal relay kit is installed AND the valve’s current draw will not exceed 1 Amp, the valve can be connected to the EXTERNAL VALVE line. Otherwise, it should be driven from the external submersible starter relay. In all cases, the tank valve must operate at the same voltage as the pump motor.

25.

If combining a remote dispenser with a fuel management system, the maximum HP limitation for directly driving a remote dispenser without the use of an additional relay of submersible starter must be the lower of the two components.

26.

For Retail electronic units, DC conduit is used only in Pulse-out units.

27.

For Optional TopKAT™ PLUS Only

Refer to *MDE-5013 TopKAT PLUS Installation Manual*.

28.

For T17448-G1 Varistor, the black wire is connected to the AC hot and the white wire is connected to the AC neutral. For T17448-G3 Varistor, the brown wire is connected to the AC hot and the blue wire is connected to the AC neutral.

Electrical Rating

Pump Motor	Control Valves
10.0 A @ 115 VAC 60 Hz.	0.2 A @120 VAC
5 A @ 230 VAC 50 Hz.	0.1 A @ 240 VAC
Lights	Electric Reset Motors
1.0 A @ 120 VAC 50/60 Hz.	2.2 A @120 VAC
0.5 A @ 240 VAC 50/60 Hz.	1.1 A @ 240 VAC

Reference Manuals

MDE-4331 Atlas Fuel Systems Installation Manual

MDE-4333 Atlas Fuel Systems Site Preparation Manual

Note: Voltages mentioned below refer to motor voltages only.

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3	Commercial Electronic, Dual Pump Motors, Single Phase 115/230 VAC	9852K/9853K, 9853KTW1M, 9852KTW2/9853KTW2, 9852KTW1
4	Commercial Electronic, Dual Pump Motors, 3-phase 220 VAC	9852K/9853K, 9853KTW1M, 9852KTW2/9853KTW2, 9852KTW1
5	Commercial Electronic, Dual Pump Motors, 3-phase 380 VAC	9852K/9853K, 9853KTW1M, 9852KTW2/9853KTW2, 9852KTW1, 9840K
6	Commercial Mechanical, Dual Pump Motors, 115/230 VAC	9152K/9153K, 9153KTW1M, 9152KTW2/9153KTW2, 9152KTW1 8752K/8753K, 8753KTW1M, 8752KTW2/8753KTW2, 8752KTW1
7	Retail Electronic, Dual Pump Motors, Pulse-out, 3-phase 380 VAC	8852K/8853K, 8853KTW1M, 8852KTW2/8853KTW2, 8852KTW1
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11	Commercial Mechanical, Single Pump Motor, 3-phase 380 VAC	9152K/9153K, 9153KTW1M, 9152KTW2/9153KTW2
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13	Commercial Electronic, Single Pump Motor, 230 VAC	9850K

Used On

Atlas Pumps - Retail and Commercial Versions with Electronic or Mechanical Computers.



Atlas™ Pump Retail/Commercial Field Wiring Instructions Sheet 1 of 13

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MODELS: 8852K/8853K, 8853KTW1M,
8852KTW2/8853KTW2, 8852KTW1

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NOTE: Pump handle goes to M01598 and Pulser goes to M05200.

SP-1 YEL-18GA(SPARE) ☒ SPARE
 SP-2 YEL-18GA(SPARE) ☒ SPARE
 AUTH A BRN
 AUTH B BRN

1 2 J400

NOTE: J400 connects to P120 or P220 to match incoming AUTH voltage (P120 is for 120 VAC, P220 is for 220 VAC).

A14 BLU-18GA SLOW DOWN VALVE A 5
 A8 YEL-18GA MAIN VALVE A 4
 A10 G/Y-18GA EARTH GROUND 3
 A6 RED-18GA STP A 8
 A2 BLK-18GA CD MODULE 115/230 VAC 1
 A13 WHT-18GA CD MODULE - NEUTRAL 2
 B6 RED-18GA STP B 9
 B8 YEL-18GA MAIN VALVE B 6
 B14 BLU-18GA SLOW DOWN VALVE B 7

A19 W/B-18GA 2 WIRE J402-2 DATA IN (+)
 A9 W/R-18GA J402-1 DATA OUT (-)

A1 BLK J403-3
 A11 WHT J403-1
 ATC - GRA
 ATC + ORG

J401

7.

J402 (To Pump Control Board)

LED DRIVER (115V OR 230V)

BLK-18GA
 RED-18GA

J403 P403

13.

JK1 PK1/PK2
 MOTOR 1 HOT 14GA BLU
 MOTOR 1 FEED 14GA RED

2 2

18GA WHT
 18GA WHT

1 4
 2 3

K1

22GA WHT
 22GA WHT

JK2 PK1/PK2
 MOTOR 2 HOT 14GA BLK
 MOTOR 2 FEED 14GA ORG

2 2

18GA WHT
 18GA WHT

1 4
 2 3

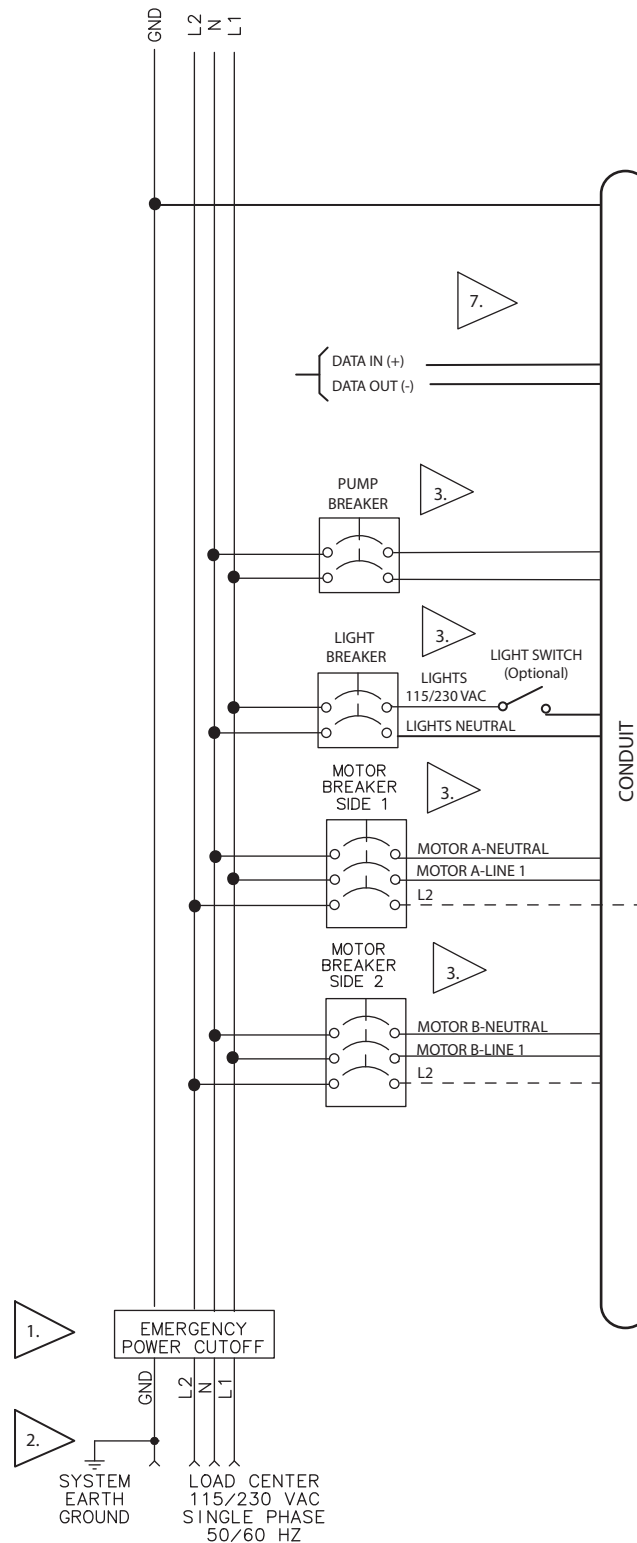
K2

22GA WHT
 22GA WHT

P1 3 TO J1

M05189A004 J404A 4 P404A/B M05718A001 J301 5 TO P301A RETAIL PULSE OUT PCA

M05189A004 J404B 4 P404A/B M05718A001 J301 5 TO P301B RETAIL PULSE OUT PCA



NOTES: 1. Dual sided unit shown. For single sided unit make Side 1 connections and cap Side 2 wiring. All unused wiring must be properly capped.
2. On all 8800K models, if Pulse-out mode is not being used, the AUTH lines must remain open.

Retail Electronic, Dual Pump Motors,
Pulse-out, 120/230 VAC

Wire Color Chart

Black
Brown
Red
Orange
Yellow
Green
Blue
Violet
Gray
White
White with black stripe
White with red stripe
Green with yellow stripe

Wire Nut	
Crimp on Wire Connector	
Earth Ground Screw Terminal	
Earth Ground	
No Connection	
Connection	



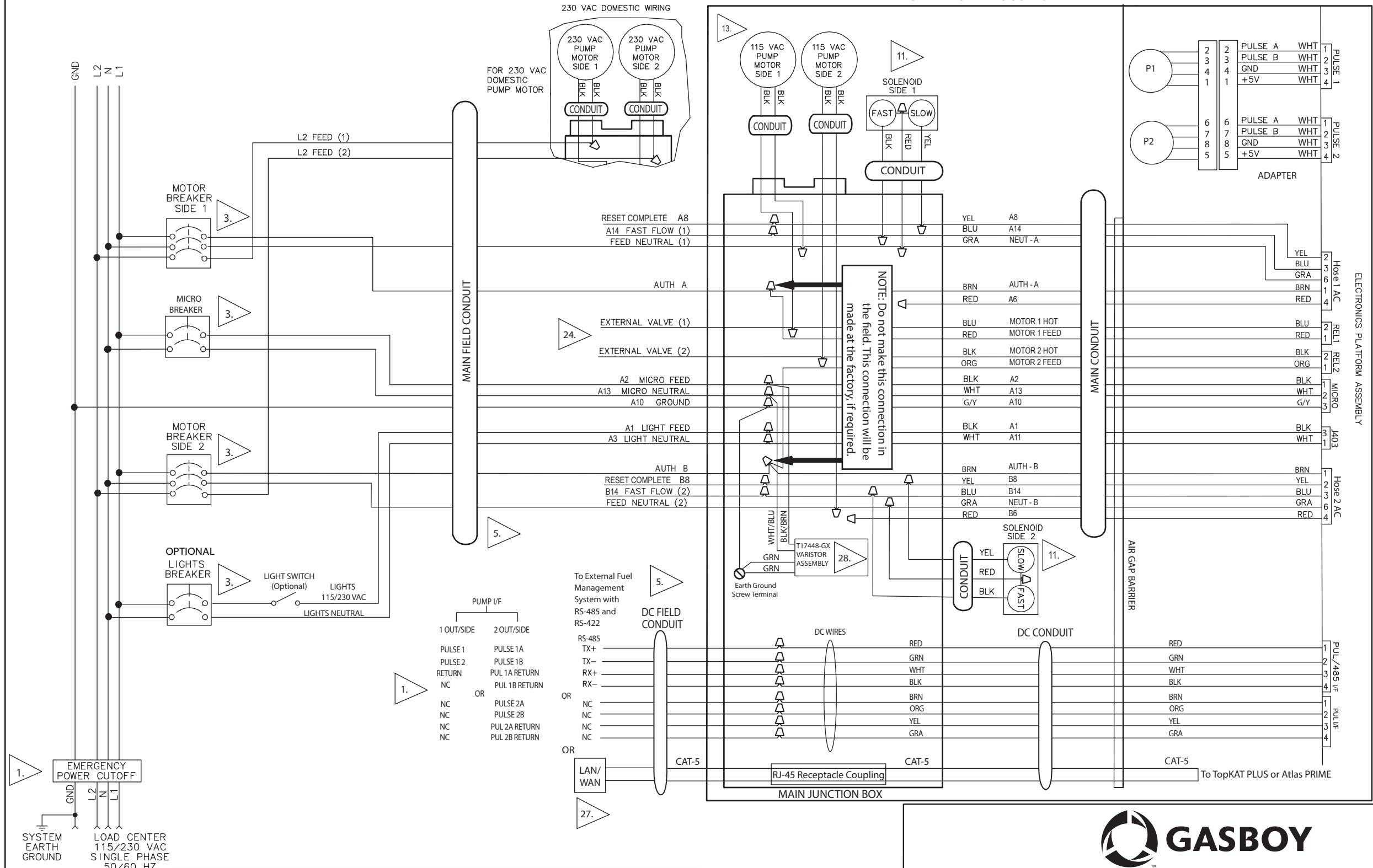
Atlas™ Pump Retail/Commercial Field Wiring Instructions

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COMMERCIAL ELECTRONIC UNIT MODELS: 9852K/9853K, 9853KTW1M, 9852KTW2/9853KTW2, 9852KTW1



Symbols Chart

Wire Nut	
Crimp on Wire Connector	
Earth Ground Screw Terminal	
Earth Ground	
No Connection	
Connection	

Wire Color Chart

Black	BLK
Brown	BRN
Red	RED
Orange	ORG
Yellow	YEL
Green	GRN
Blue	BLU
Violet	VIO
Gray	GRA
White	WHT
White with black stripe	W/B
White with red stripe	W/R
Green with yellow stripe	G/Y



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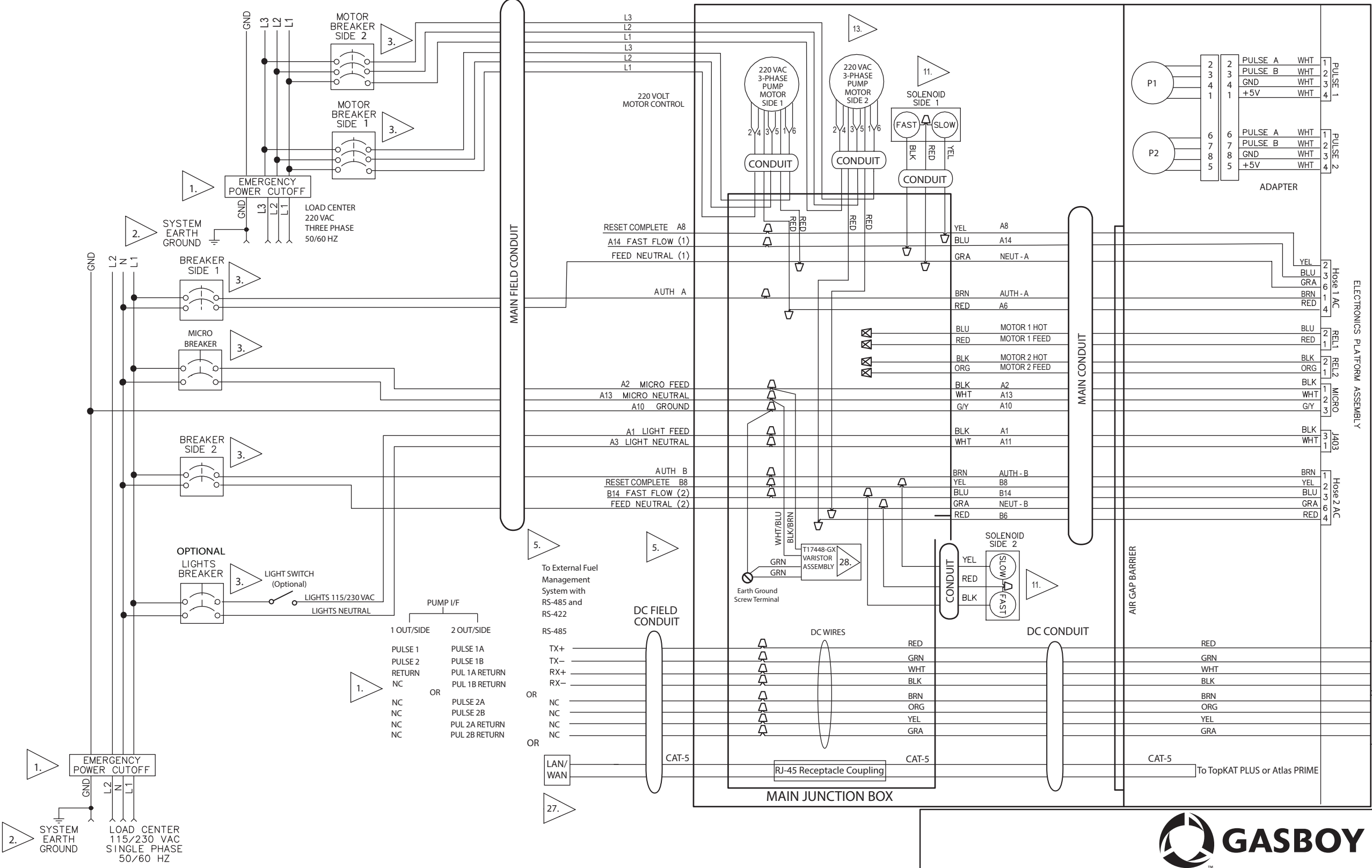
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This Sheet
Commercial Electronic, Dual Pump
Motors, Single Phase 115/230 VAC

COMMERCIAL ELECTRONIC UNIT

MODELS: 9852K/9853K, 9853KTW1M, 9852KTW2/9853KTW2, 9852KTW1

LOWER PUMP HOUSING



Symbols Chart

- Wire Nut
- Crimp on Wire Connector
- Earth Ground Screw Terminal
- Earth Ground
- No Connection
- Connection

Wire Color Chart

Black	BLK
Brown	BRN
Red	RED
Orange	ORG
Yellow	YEL
Green	GRN
Blue	BLU
Violet	VIO
Gray	GRA
White	WHT
White with black stripe	W/B
White with red stripe	W/R
Green with yellow stripe	G/Y

NOTE: Dual sided unit shown. For single sided unit make Side 1 connections and cap Side 2 wiring. All unused wiring must be properly capped.

This Sheet
Commercial Electronic,
Dual Pump Motors, 3-phase 220 VAC

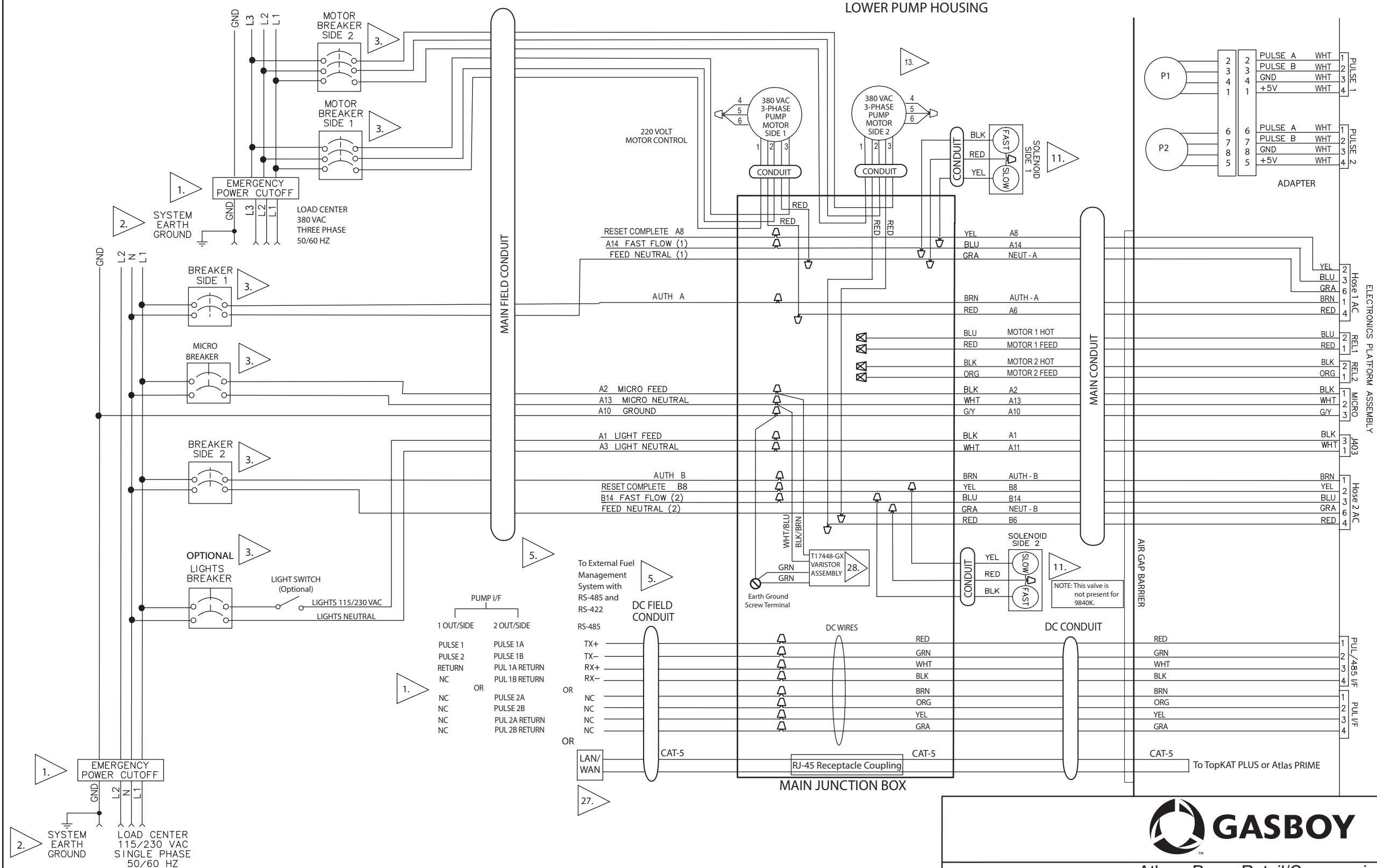


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COMMERCIAL ELECTRONIC UNIT MODELS: 9852K/9853K, 9853KTW1M, 9852KTW2/9853KTW2, 9852KTW1, 9840K



Symbols Chart	
Wire Nut	
Crimped Wire Nut	
Earth Ground Screw Terminal	
Earth Ground	
No Connection	
Connection	

Wire Color Chart	
Black	BLK
Brown	BRN
Red	RED
Orange	ORG
Yellow	YEL
Green	GRN
Blue	BLU
Violet	VIO
Gray	GRA
White	WHT
White with black stripe	W/B
White with red stripe	W/R
Green with yellow stripe	G/Y

NOTE: Dual sided unit shown. For single sided unit make Side 1 connections and cap Side 2 wiring. All unused wiring must be properly capped.

This Sheet
Commercial Electronic, Dual Pump Motors, 3-phase 380 VAC



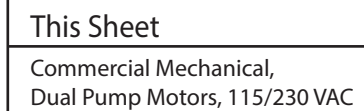
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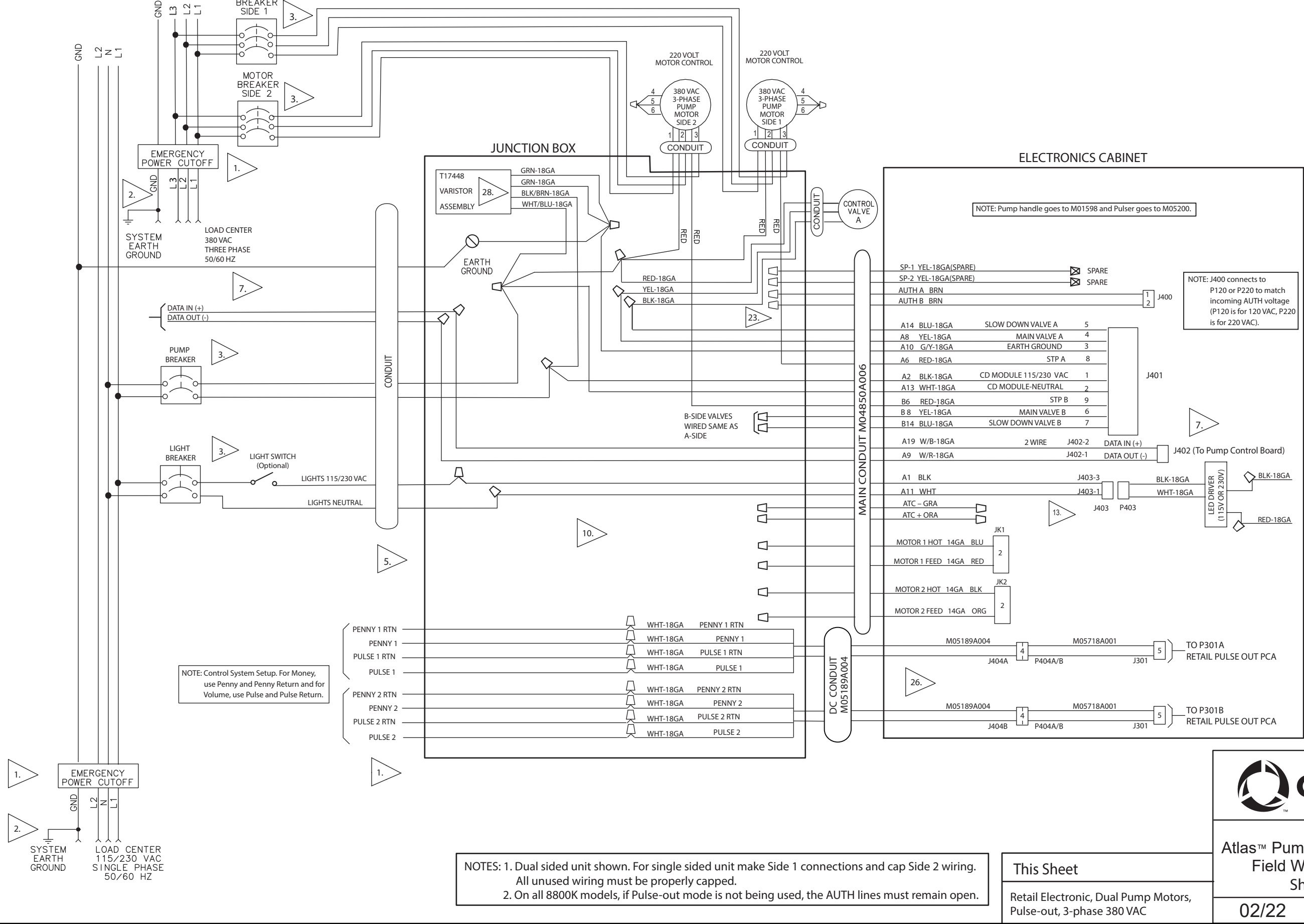
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MODELS: 9152K/9153K, 9153KTW1M, 9152KTW2/9153KTW2, 9152KTW1
8752K/8753K, 8753KTW1M, 8752KTW2/8753KTW2, 8752KTW1



RETAIL ELECTRONIC UNIT

MODELS: 8852K/8853K, 8853KTW1M, 8852KTW2/8853KTW2, 8852KTW1



Symbols Chart

Wire Nut	
Crimp on Wire Connector	
Earth Ground Screw Terminal	
Earth Ground	
No Connection	
Connection	

Wire Color Chart

Black	BLK
Brown	BRN
Red	RED
Orange	ORG
Yellow	YEL
Green	GRN
Blue	BLU
Violet	VIO
Gray	GRA
White	WHT
White with black stripe	W/B
White with red stripe	W/R
Green with yellow stripe	G/Y



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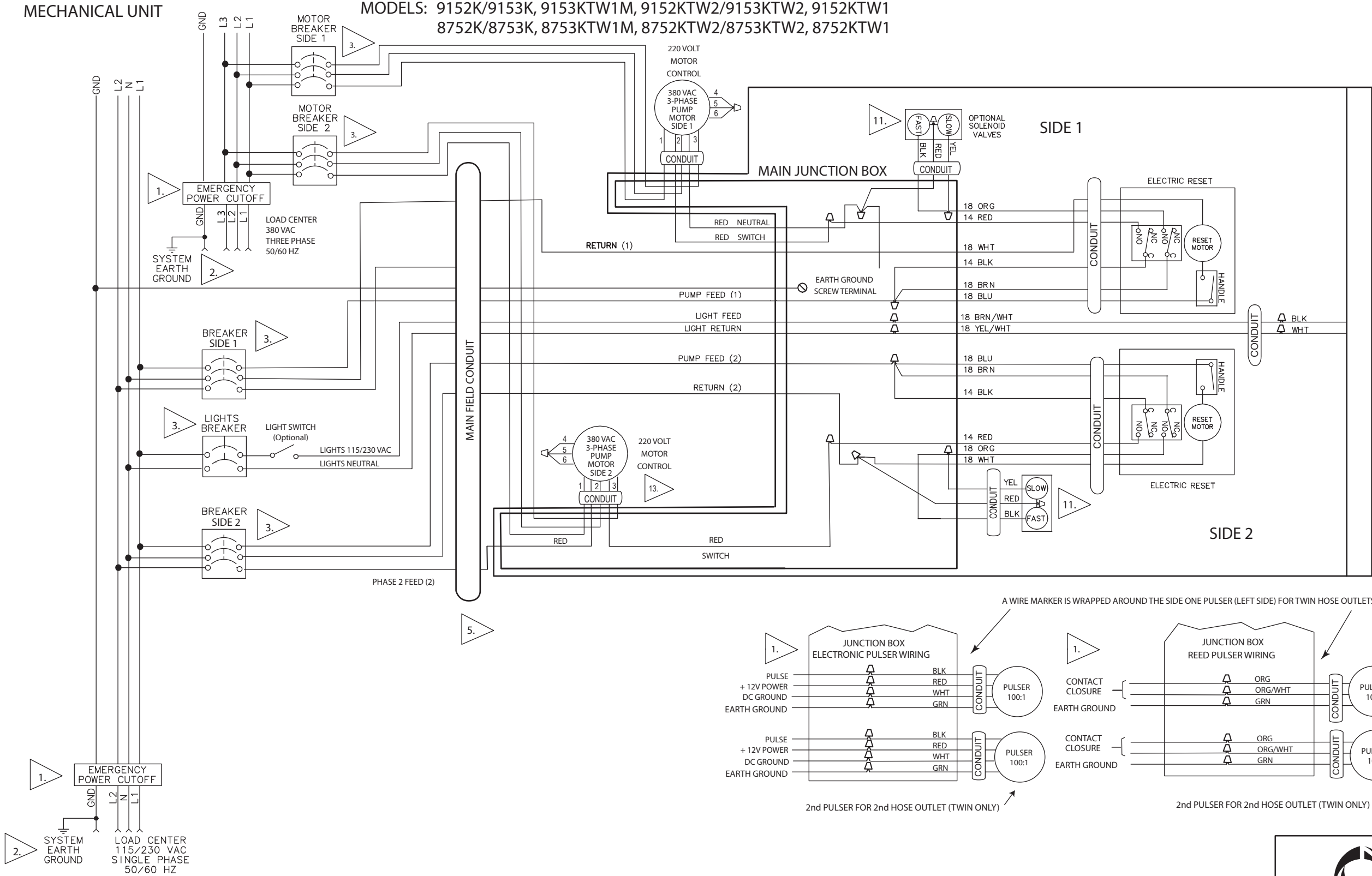
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NOTES: 1. Dual sided unit shown. For single sided unit make Side 1 connections and cap Side 2 wiring.
All unused wiring must be properly capped.
2. On all 8800K models, if Pulse-out mode is not being used, the AUTH lines must remain open.

This Sheet
Retail Electronic, Dual Pump Motors,
Pulse-out, 3-phase 380 VAC

MECHANICAL UNIT

MODELS: 9152K/9153K, 9153KTW1M, 9152KTW2/9153KTW2, 9152KTW1
8752K/8753K, 8753KTW1M, 8752KTW2/8753KTW2, 8752KTW1



Symbols Chart

Wire Nut	
Crimp on Wire Connector	
Earth Ground Screw Terminal	
Earth Ground	
No Connection	
Connection	

Wire Color Chart

Black	BLK
Brown	BRN
Red	RED
Orange	ORG
Yellow	YEL
Green	GRN
Blue	BLU
Violet	VIO
Gray	GRA
White	WHT
White with black stripe	W/B
White with red stripe	W/R
Green with yellow stripe	G/Y

NOTE: Dual sided unit shown. For single sided unit make Side 1 connections and cap Side 2 wiring.
All unused wiring must be properly capped.

This Sheet
Commercial Mechanical,
Single Pump Motor, 3-phase 380 VAC



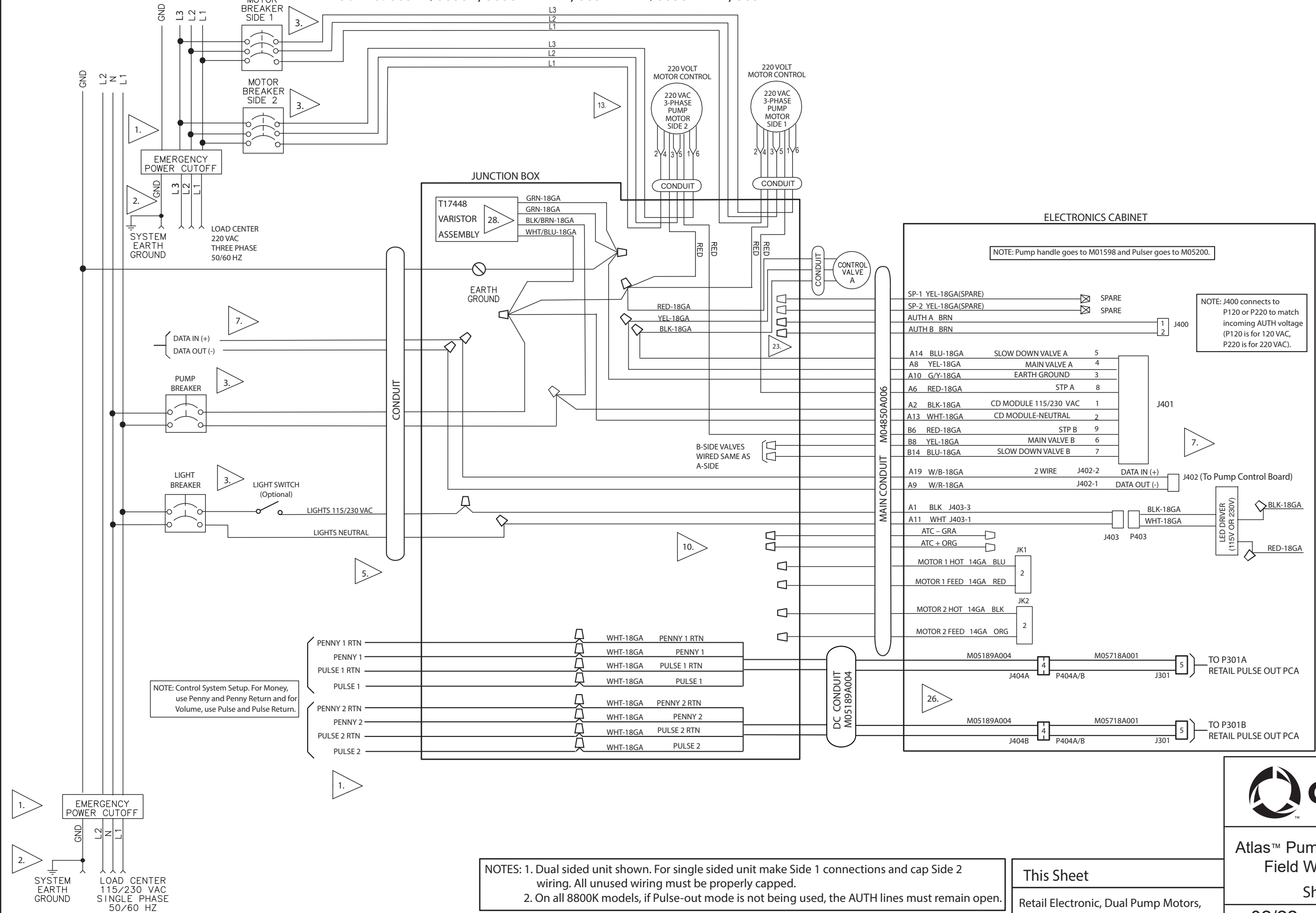
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RETAIL ELECTRONIC UNIT

MODELS: 8852K/8853K, 8853KTW1M, 8852KTW2/8853KTW2, 8852KTW1



Symbols Chart

Wire Nut	
Crimp on Wire Connector	
Earth Ground Screw Terminal	
Earth Ground	
No Connection	
Connection	

Wire Color Chart

Black	BLK
Brown	BRN
Red	RED
Orange	ORG
Yellow	YEL
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Blue	BLU
Violet	VIO
Gray	GRA
White	WHT
White with black stripe	W/B
White with red stripe	W/R
Green with yellow stripe	G/Y



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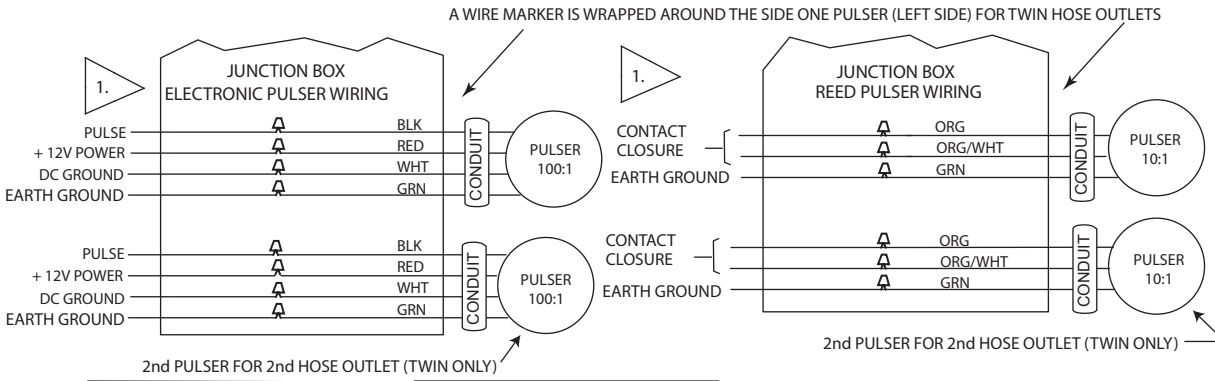
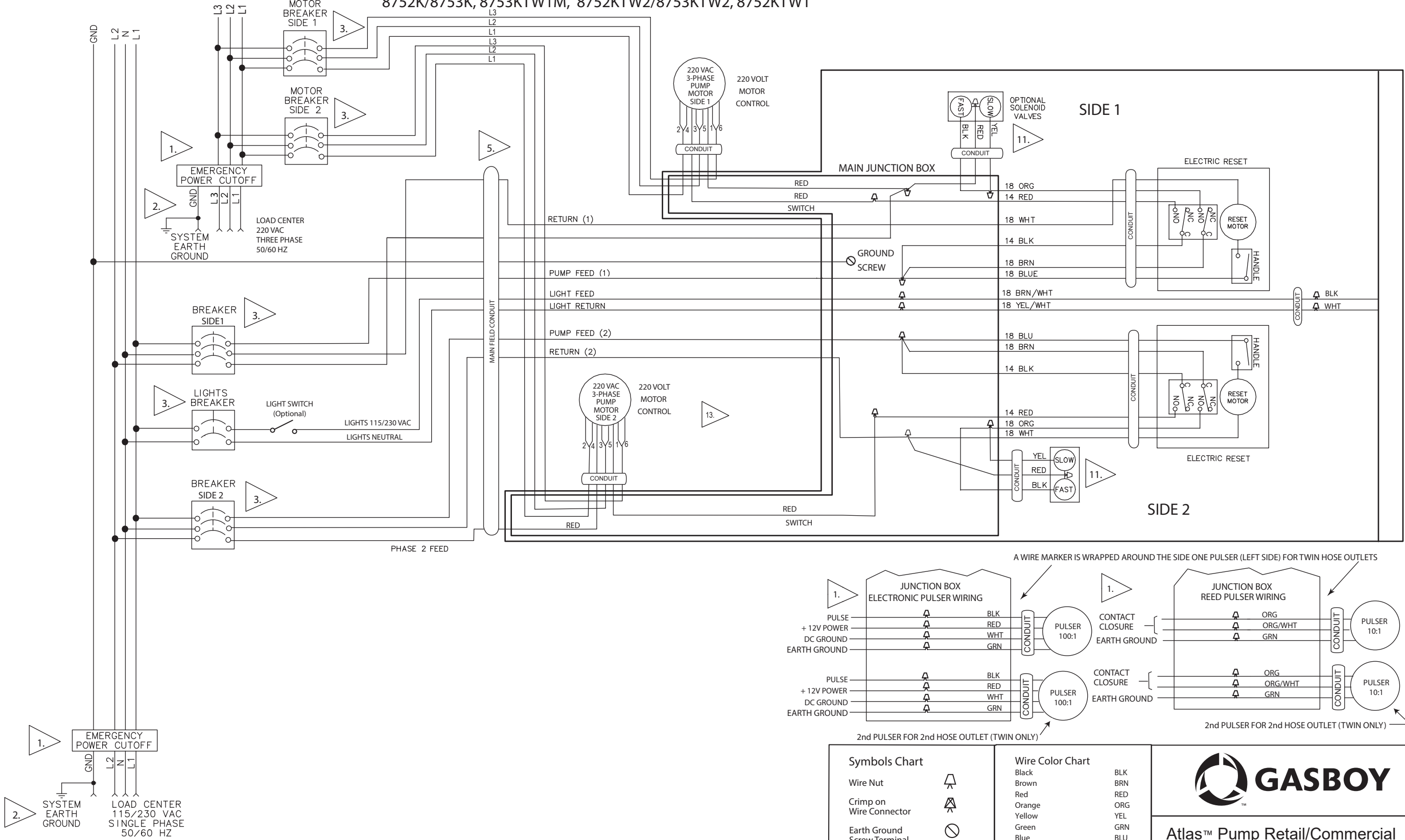
NOTES: 1. Dual sided unit shown. For single sided unit make Side 1 connections and cap Side 2 wiring. All unused wiring must be properly capped.
2. On all 8800K models, if Pulse-out mode is not being used, the AUTH lines must remain open.

This Sheet

Retail Electronic, Dual Pump Motors,
Pulse-out, 3-phase 220 VAC

MECHANICAL UNIT

MODELS: 9152K/9153K, 9153KTW1M, 9152KTW2/9153KTW2, 9152KTW1
8752K/8753K, 8753KTW1M, 8752KTW2/8753KTW2, 8752KTW1



Symbols Chart

Wire Nut	
Crimp on Wire Connector	
Earth Ground Screw Terminal	
Earth Ground	
No Connection	
Connection	

Wire Color Chart

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Blue	BLU
Violet	VIO
Gray	GRA
White	WHT
White with black stripe	W/B
White with red stripe	W/R
Green with yellow stripe	G/Y



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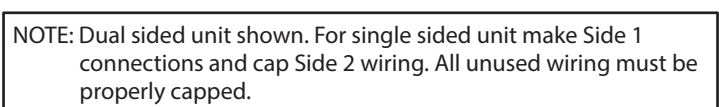
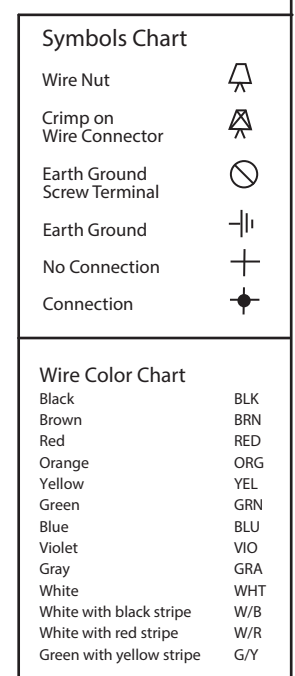
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NOTE: Dual sided unit shown. For single sided unit make Side 1 connections and cap Side 2 wiring. All unused wiring must be properly capped.

This Sheet

Commercial Mechanical,
Dual Pump Motors, 3-phase 220 VAC

MODEL: 9152K/9153K, 9153KTW1M, 9152KTW2/9153KTW2



This Sheet
Commercial Mechanical, Single Pump Motor, 3-phase 380 VAC



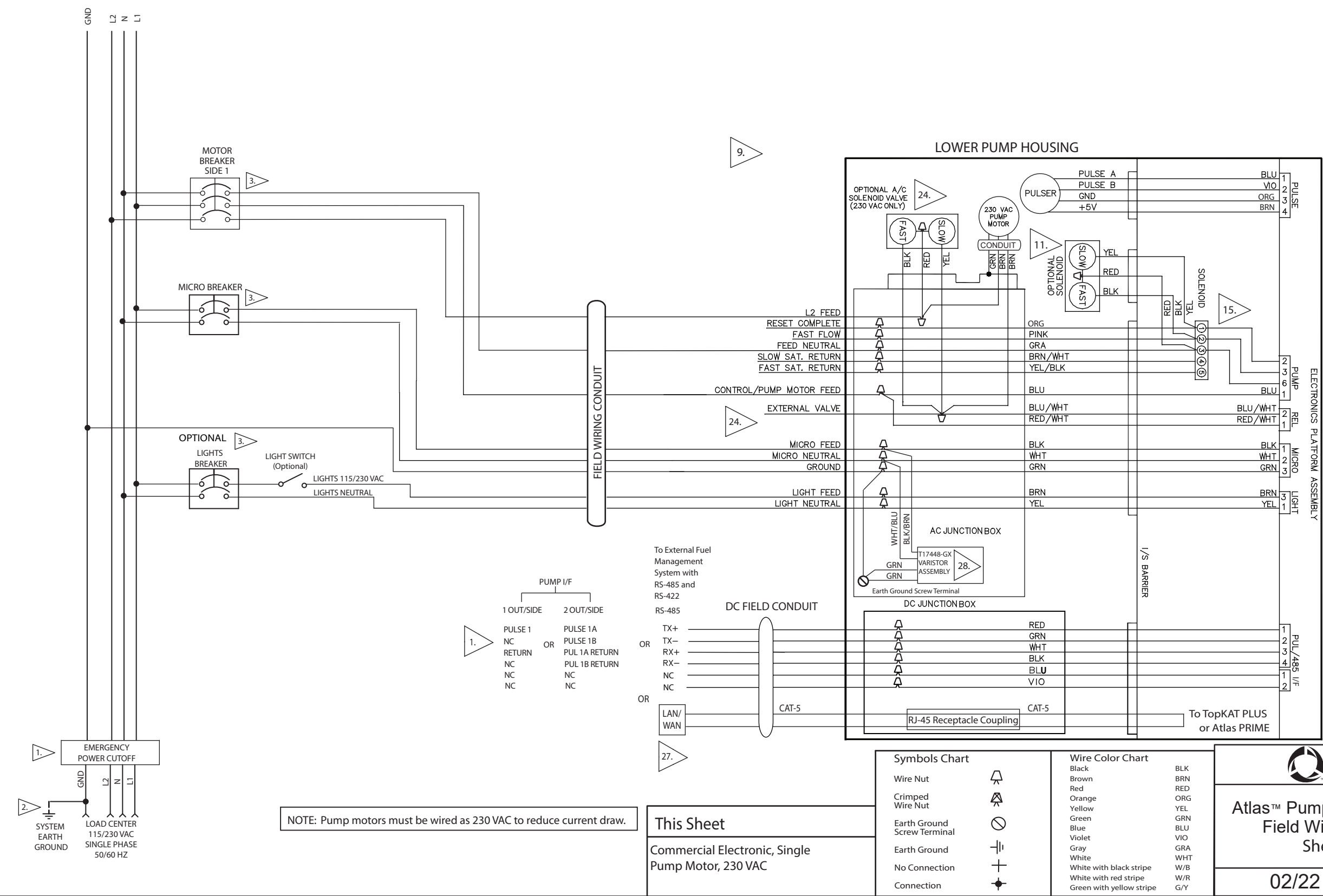
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MODEL: 9840K





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