



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 Gilbarco manuals.

Installation Procedures

1.

Install a single EMERGENCY POWER CUTOFF control to remove AC power from the site dispensing the equipment.

Note: The control is an additional safety feature, and not a substitute for NEC/NFPA30 circuit breaker requirements. Label the EMERGENCY POWER CUTOFF switch and instruct the owner to keep the area clear of obstacles.
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. For Dispensers and Ultra-Hi Dispensers install power breakers to each circuit leading to the STP also. They must be capable of simultaneously disconnecting hot and neutral conductors.

Note: In Canada, switching neutral is contrary to the Canadian electrical code, reference part 1, rule 14-014.
4.

Only field wiring connections are shown in the junction 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 within any portion of a hazardous vapor area to ensure vapor barrier integrity. See MDE-3985 Encore Installation manual for futher potting information.
6.

Wires - All wires are 14 American Wire Gage (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. Gilbarco two-wire is NEC Class 1 and may share the main power conduit.
7.

Consult manufacturer specifications for wire nuts to determine the maximum number of wires and wires sizes that may be used per nut for the nut used.
8.

For U.S. 240V installations, wires labeled 'HOT' are to be connected to L1 and wires labeled 'NEUTRAL' are to be connected to L2.
9.

Do not provide service loops or leave excess wire in electronics cabinet. Cut all wire lengths to a size sufficient to reach termination without stress or excess. Dress all wires neatly along surfaces so that they do not obstruct access to terminations and devices.

10.

2-Wire Communication Wiring: For installations with 'new' wiring, use unshielded twisted pair (UTP) data wires. Shielded wire must not be used.

Wiring Spec: 2 wire twisted pair with 10 to 12 twists per foot, stranded annealed copper tinned with 18AWG minimum required for runs up to 1000 feet or 14AWG minimum for runs up to 2600 feet. Do not daisy chain communications wiring.

Insulation Spec: PVC insulation of type TFFN or MTW, UL approved gasoline and oil resistant. Reference C&M Corporation Part #27525 (18AWG) 105C or equivalent. See MDE-3802 Site Preparation Manual requirements where 14 AWG may be required.
- Encore 300 Dispensers
- For Encore 300 Ultra-Hi Dispensers and Encore 300 Dispensers only:
11.

STP isolation relay boxes are required by NEC to allow service of one unit safely without removing power from all dispensing equipment.

Gilbarco STP Isolation Box PA0287 is not available for 220/230/240VAC units. (Contact local supplier for these Isolation Relay Boxes.)

For Encore 300 Ultra-Hi Dispensers only:

12.

For any Master, additional conduits and wiring are required to connect the Satellite. Units with main junction box can coexist with units without junction box. Use portion of wiring from the appropriate sheet to match your installation. Wires labeled with a prefix of 'A' signify Side 1/Front, a prefix of 'B' signify Side 2/Rear.

13.

Simultaneous and Independent operation is defined as:

A. Simultaneous - Both Master and Satellite can dispense fuel at the same time.








B. Independent - Master and Satellite can dispense fuel only one at a time. Satellite pump handle determines which unit can dispense fuel.
- For Encore 300 Pumps only:
14.

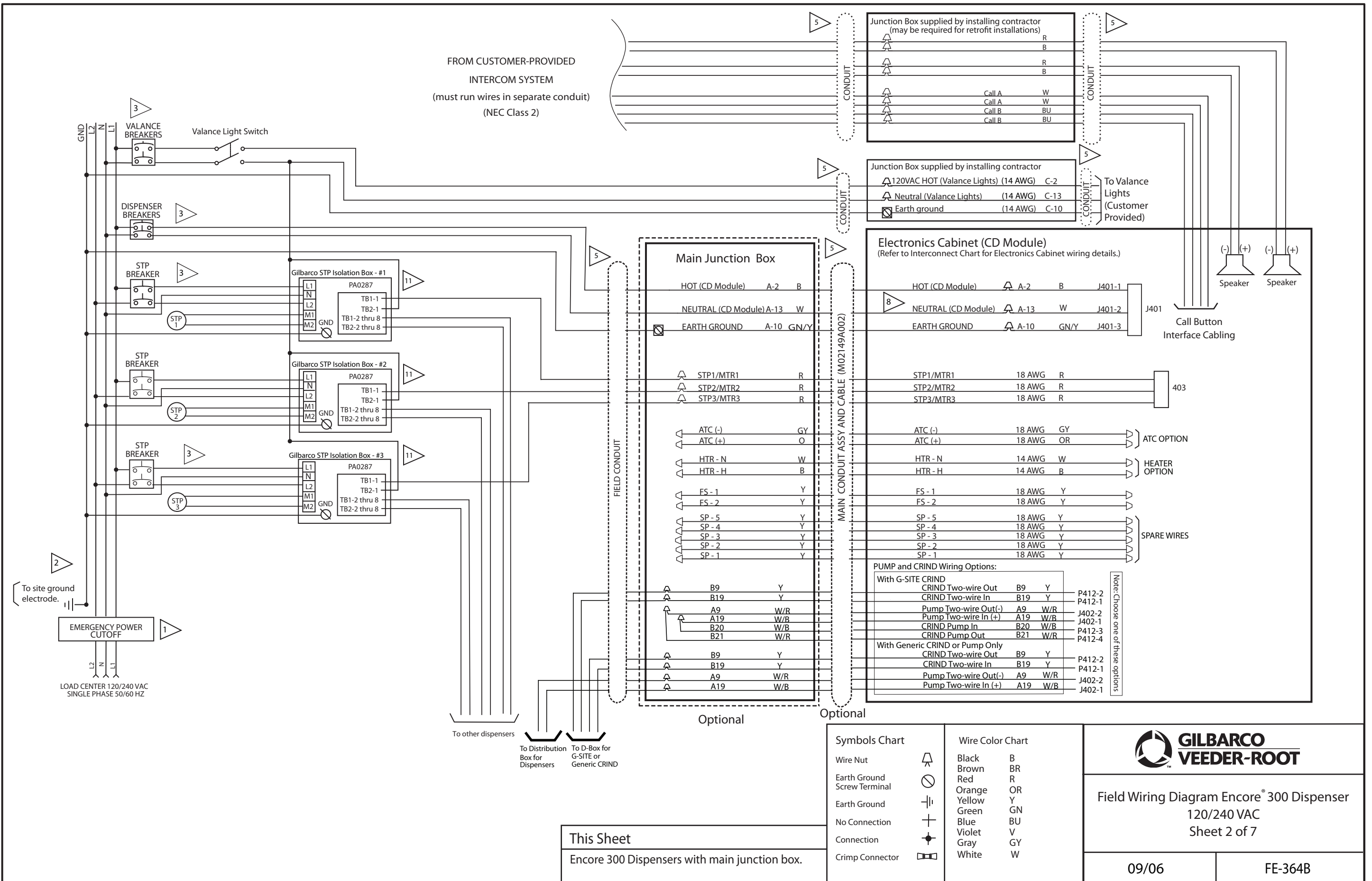
For 3-phase systems, make appropriate connections to AC Hot and Return service. Motors must rotate counterclockwise.
- Reference Manuals
- MDE-2755 STP Isolation Box Installation  
(for Encore 300 Ultra-Hi and Encore 300 Dispenser only)

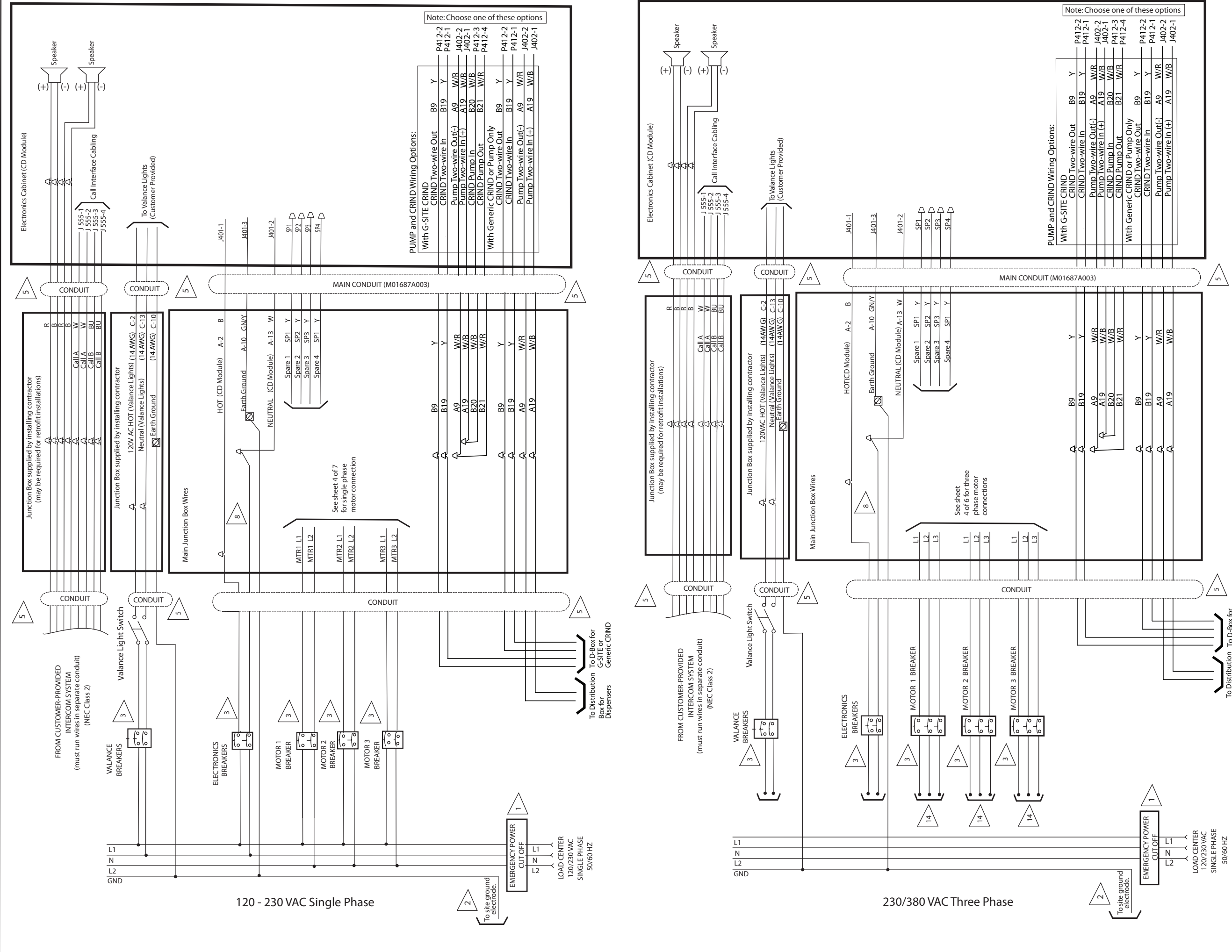
MDE-3116 Distribution Box Installation

MDE-3802 Encore Site Preparation

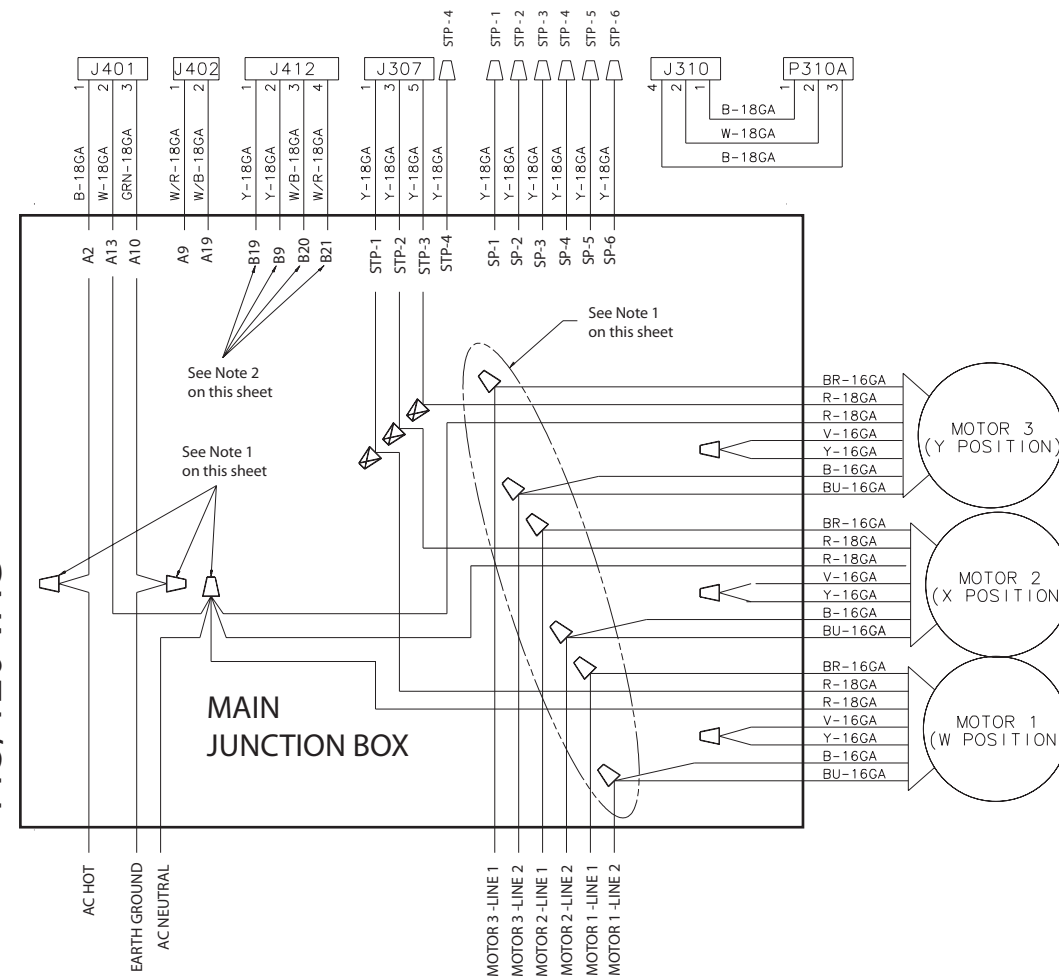
MDE-3804 Start-up and Service Manual

MDE-3985 Encore Installation
- Electrical Rating
- Includes all options except valance lights and motors.
- 9.0 AMP @ 120 VAC 60 Hz.  
4.5 AMP @ 240 VAC 50 Hz.
- Use one 15 AMP breaker per dispenser to power electronics and ensure proper lock-out and tag-out.
- Gilbarco requires valance lights be placed on a separate 15 AMP breaker.
- Important Note: Sharing conduit to the dispensers with other non-Gilbarco devices is contrary to the installation and site preparation manuals and may void warranty. Doing so may result in incorrect/unreliable operation of the unit.
- Motor Load Table - Full Load AMPS (for Encore 300 Pumps)
- |                                       |   |
|---------------------------------------|---|
| Domestic (60HZ)                       |   |
| 3/4 H.P. (Dual Rated):                | 115 VAC/1PH/12.8 AMPS<br>230 VAC/1PH/6.4 AMPS |
| International (50HZ)                  |   |
| 3/4 H.P.                              | 115 VAC/1PH/13.0 AMPS                         |
| 3/4 H.P.                              | 220-230 VAC/1PH/6.5 AMPS                      |
| 3/4 H.P.                              | 380 VAC/3PH/1.5 AMPS                          |
| International (50HZ, Not U.L. Listed) |   |
| 3/4 H.P. (Dual Rated):                | 220 VAC/3PH/2.5 AMPS<br>380 VAC/3PH/1.3 AMPS  |
- Active STP Connections (for Encore 300 Dispensers)
- |                       |        |        |        |
|-----------------------|--------|--------|--------|
| The Encore            | STP1   | STP2   | STP3   |
| MPD Three-Grade.....  | X..... | X..... | X..... |
| MPD Single-Hose.....  | X..... | X..... | X..... |
| Dual One-Grade.....   | X..... |        |        |
| Quad Two-Grade.....   | X..... | X..... |        |
| Blender Six-Hose..... | X..... | X..... |        |
| Blender X+1.....      | X..... | X..... | X..... |
| Blender X+0.....      | X..... | X..... |        |
- | Contents |  |
|----------|--|
| Sheet    | Description  |
| 1        | Cover Sheet (safety, notes and specifications)                             |
| 2        | Encore 300 Dispenser   |
| 3        | Encore 300 Pump Units Wiring   |
| 4        | Encore 300 Pump Motor Connections  |
| 5        | Encore 300 Ultra-Hi  |
| 6        | Encore 300 Ultra-Hi Master and Satellite                                   |
| 7        | Satellite Signal Wiring with J-Box<br>(Independent/Simultaneous Operation) |
- Symbols Chart
- |                             |   |
|-----------------------------|---|
| Wire Nut                    |  |
| Earth Ground Screw Terminal |  |
| Earth Ground                |  |
| No Connection               |  |
| Connection                  |  |
| Crimp Connector             |  |
- Wire Color Chart
- |        |    |
|--------|----|
| Black  | B  |
| Brown  | BR |
| Red    | R  |
| Orange | OR |
| Yellow | Y  |
| Green  | GN |
| Blue   | BU |
| Violet | V  |
| Gray   | GY |
| White  | W  |
- |  |   |         |
|--|---|---------|
| Used On  |  |         |
| Encore 300 Dispensers with and without junction box  |   |         |
| Encore 300 Self Contained Pumps  | Field Wiring Diagram Encore® 300<br>Sheet 1 of 7                                      |         |
| • Encore 300 Ultra-Hi Dispensers with and without junction box<br>• Encore Satellites with and without junction box and Legacy Satellite |   |         |
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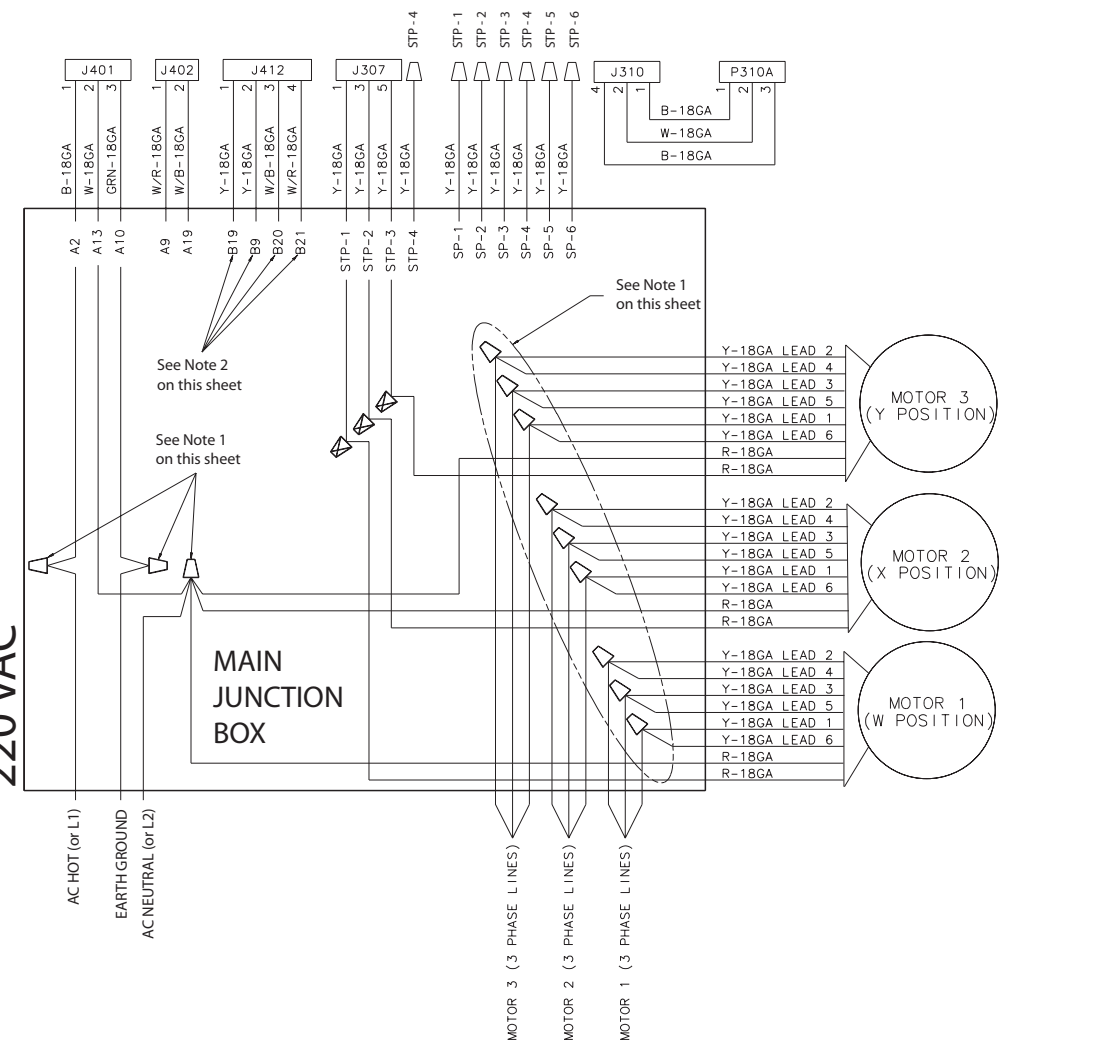




**SINGLE PHASE MOTOR CONNECTION**  
**115/120 VAC**



THREE PHASE MOTOR CONNECTION  
220 VAC





Notes unique to this sheet:

- \* Three Phase Motors must rotate counterclockwise

1. Connections made in field
2. For MOC CRIND, connect B-20 to A-19 and B-21 to A-9. Two-wire data IN and OUT from Distribution Box should be connected to B-19 and B-9 respectively.

LEGEND

B	BLACK
BR	BROWN
BU	BLUE
GRN	GREEN
R	RED
V	VIOLET
W	WHITE
Y	YELLOW
W/B	WHITE WITH BLACK STRIPE
W/R	WHITE WITH RED STRIPE
	SCREW ON WIRE CONNECTOR
	CRIMP ON WIRE CONNECTOR



Field Wiring Diagram Encore<sup>®</sup> 300 Pump Motor  
Connections  
120/240/380 VAC  
Sheet 4 of 7

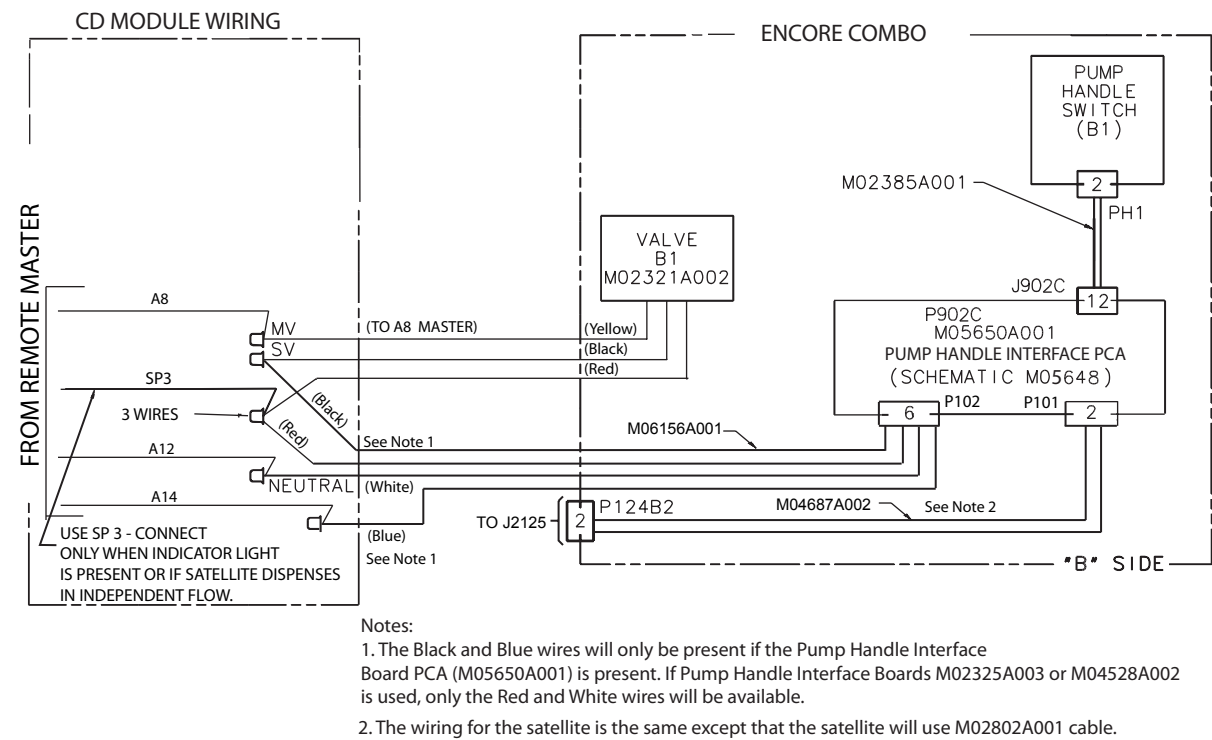
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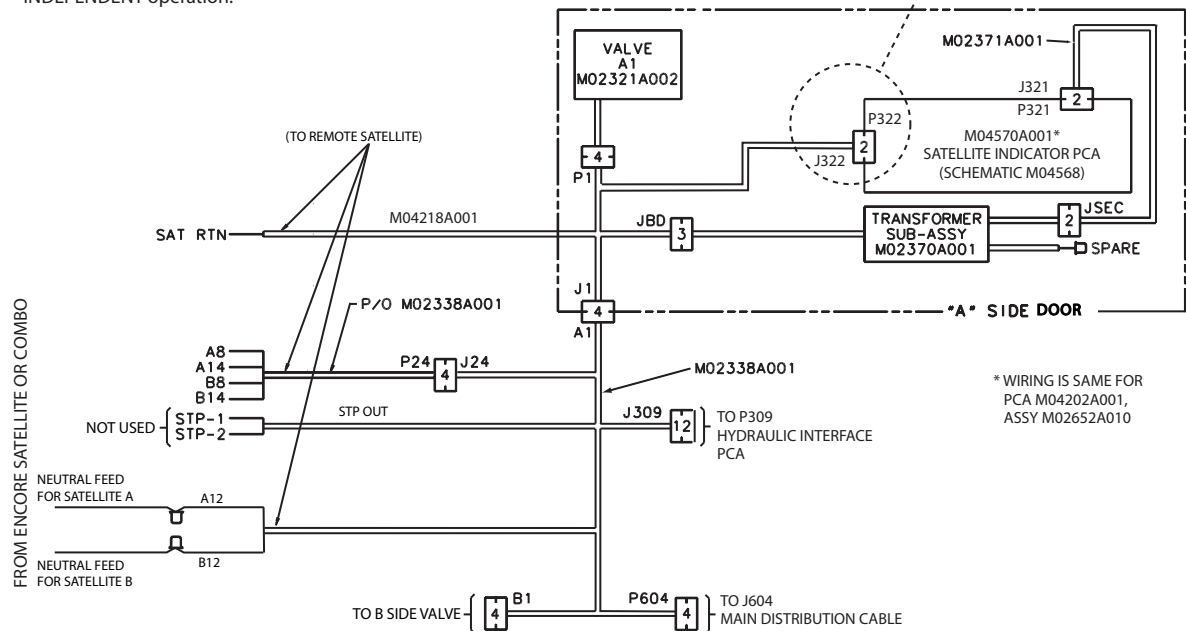
ENCORE MASTER ELECTRONICS CABINET - SATELLITE PORTION OF MASTER/COMBO OPTION



ENCORE MASTER ELECTRONICS CABINET - MASTER OPTION WITH SATELLITE INDICATOR LIGHT AND VALVE CONTROL ASSY. (M02652A010/M02652A011)

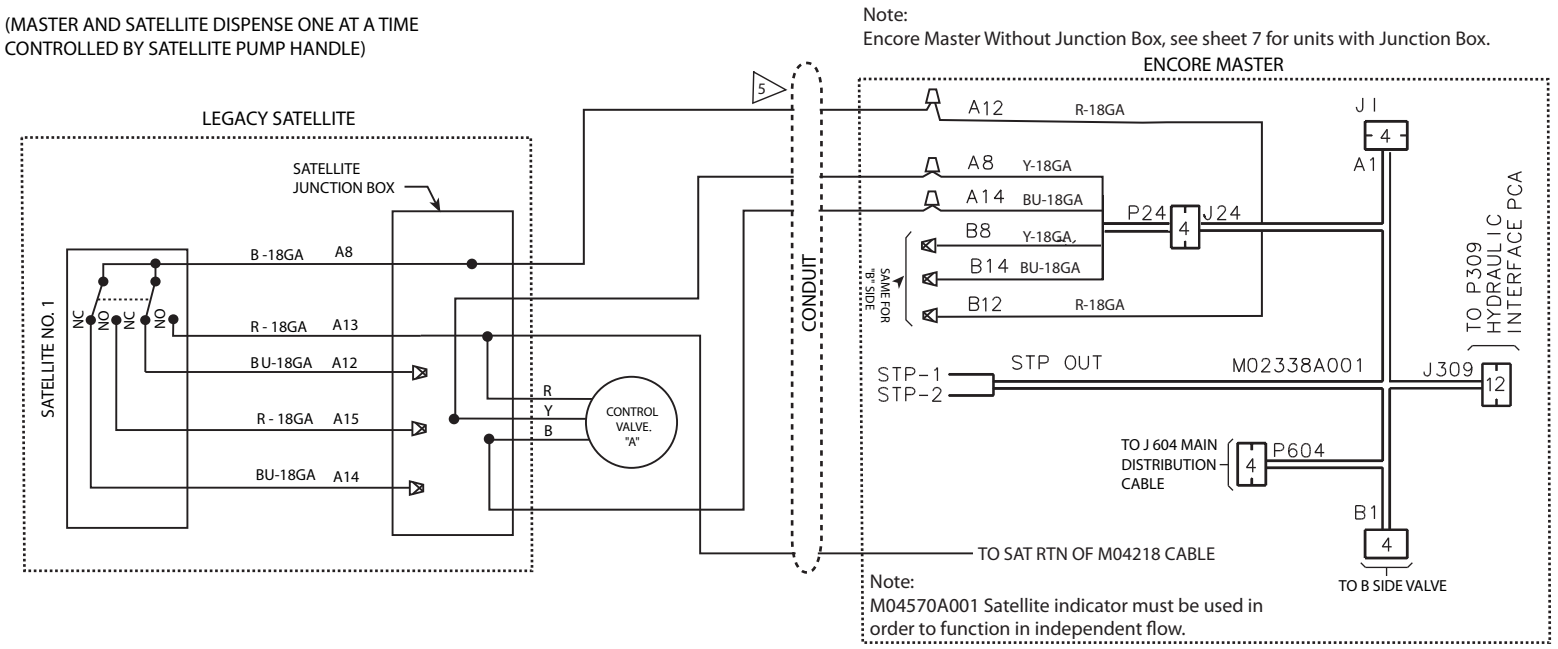
SIMULTANEOUS AND INDEPENDENT OPERATION SHOWN

Note:  
Satellite Indicator PCA (M2297A001)/Assy M02652A009 will not support INDEPENDENT operation.



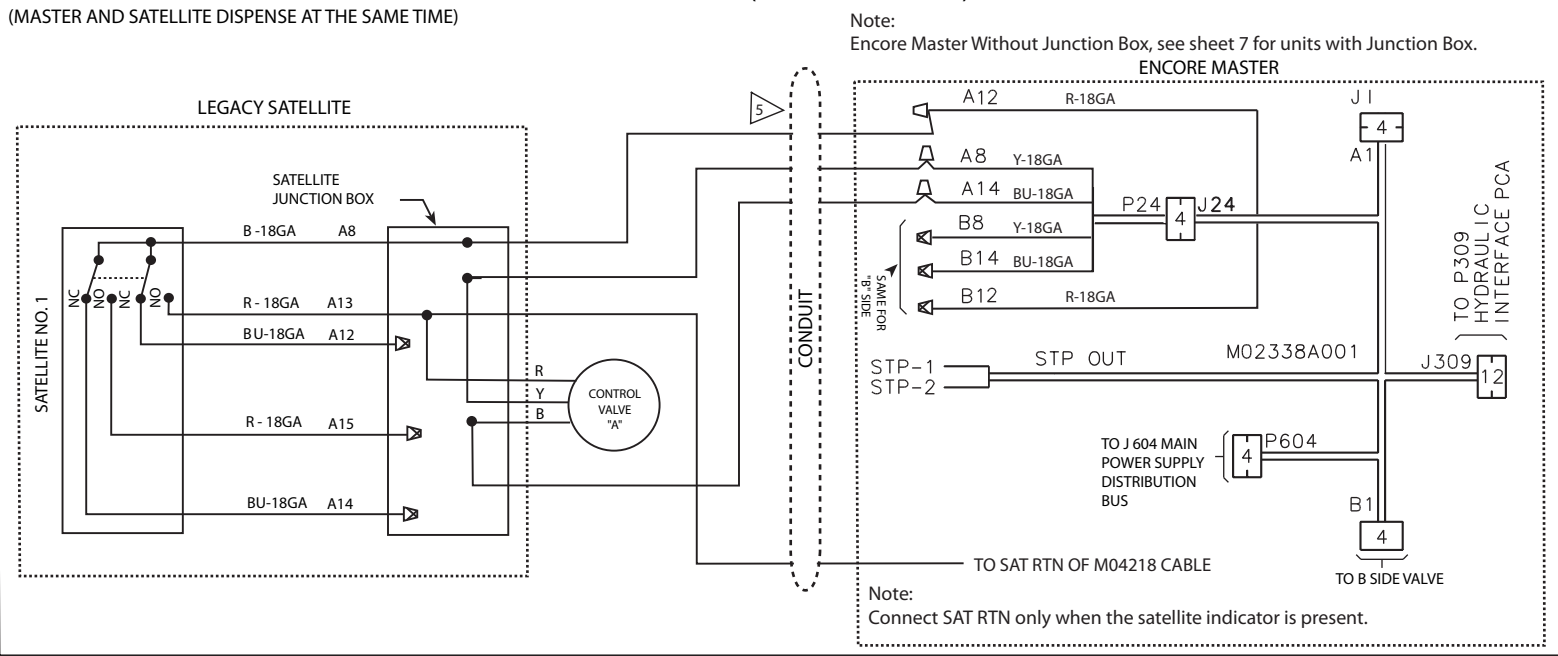
ENCORE MASTER/LEGACY SATELLITE - INDEPENDENT OPERATION (TWO STAGE VALVE)

(MASTER AND SATELLITE DISPENSE ONE AT A TIME CONTROLLED BY SATELLITE PUMP HANDLE)



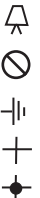
ENCORE MASTER/LEGACY SATELLITE - SIMULTANEOUS OPERATION (TWO STAGE VALVE)

(MASTER AND SATELLITE DISPENSE AT THE SAME TIME)



Symbols Chart

Wire Nut  
Earth Ground Screw Terminal  
Earth Ground  
No Connection  
Connection



Wire Color Chart

Black  
Brown  
Red  
Orange  
Yellow  
Green  
Blue  
Violet  
Gray  
White

B  
BR  
R  
OR  
Y  
GN  
BU  
V  
GY  
W



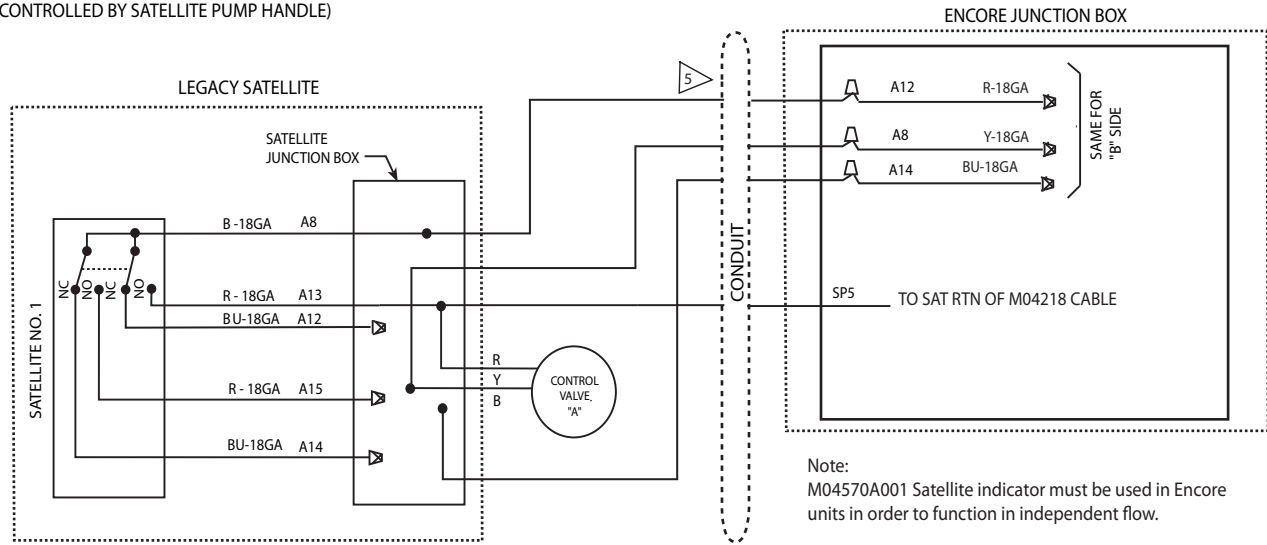
Field Wiring Diagram Encore® 300 Ultra-Hi™ Dispenser  
Master and Satellite  
120/240 VAC  
Sheet 6 of 7

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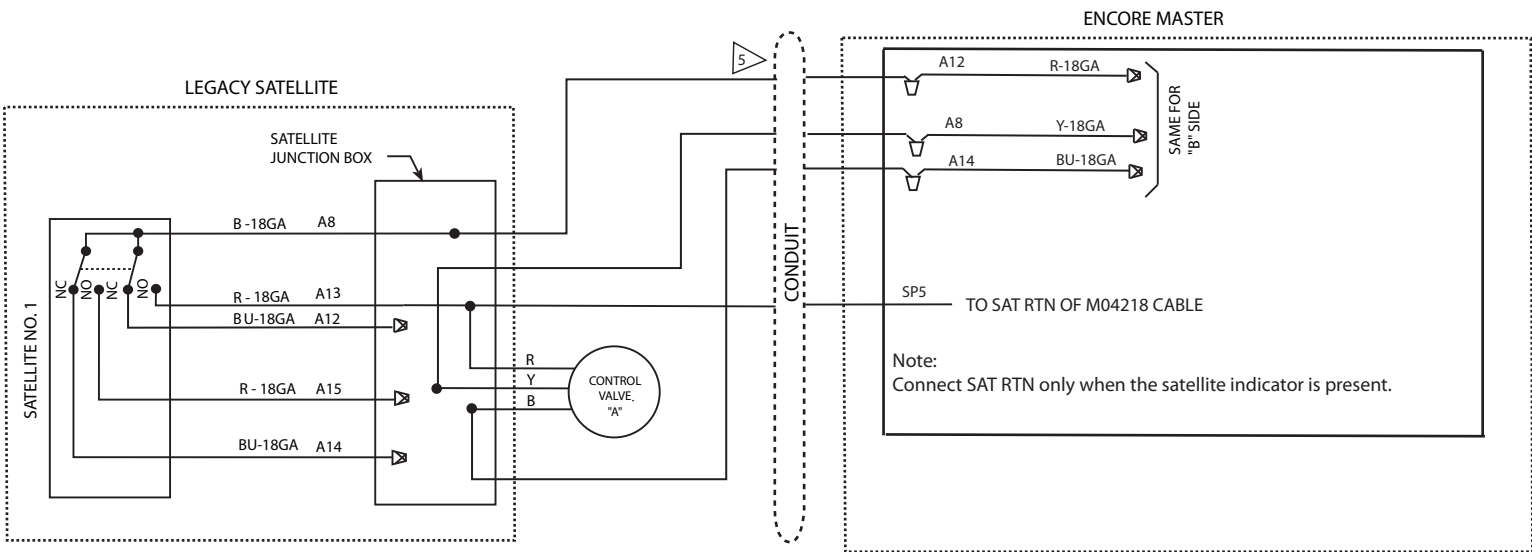
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ENCORE MASTER WITH JUNCTION BOX TO LEGACY SATELLITE (TWO STAGE VALVE) INDEPENDENT OPERATION

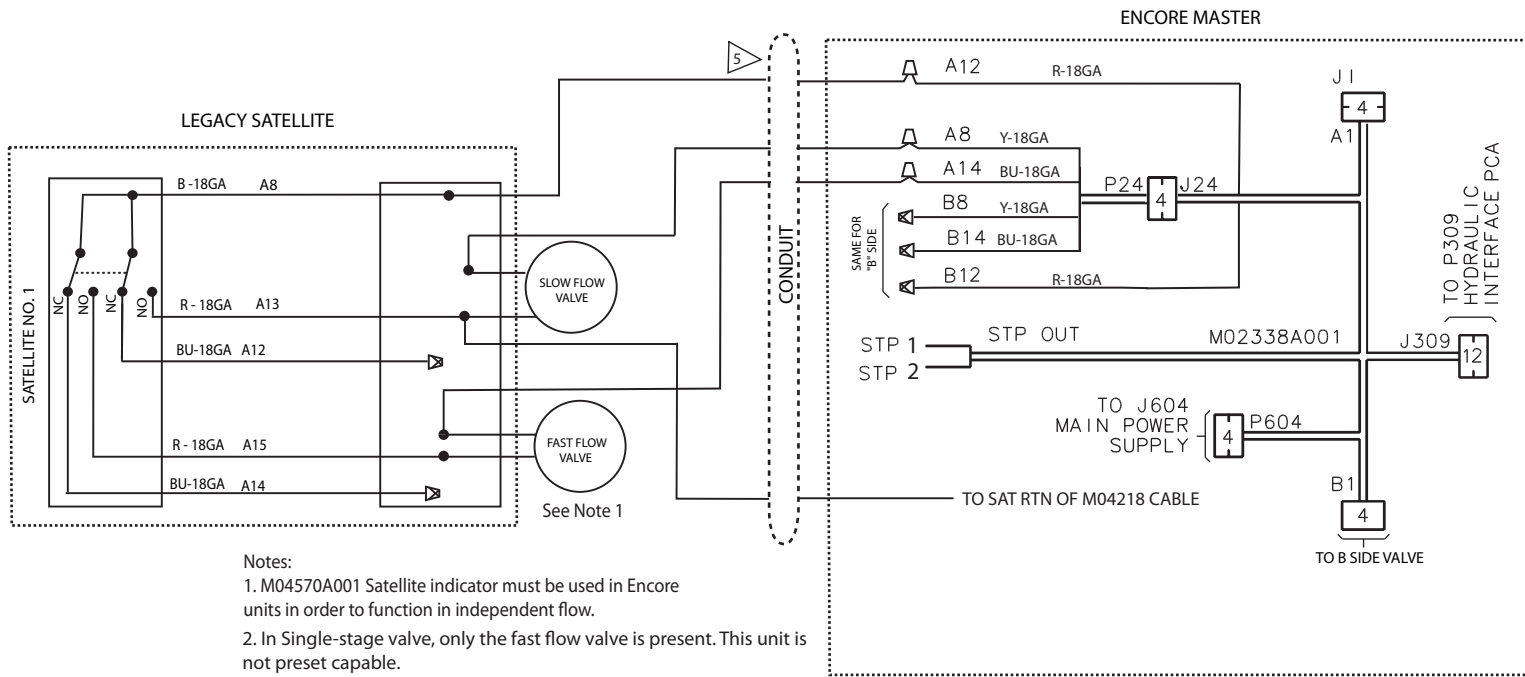
(MASTER AND SATELLITE DISPENSE ONE AT A TIME  
CONTROLLED BY SATELLITE PUMP HANDLE)



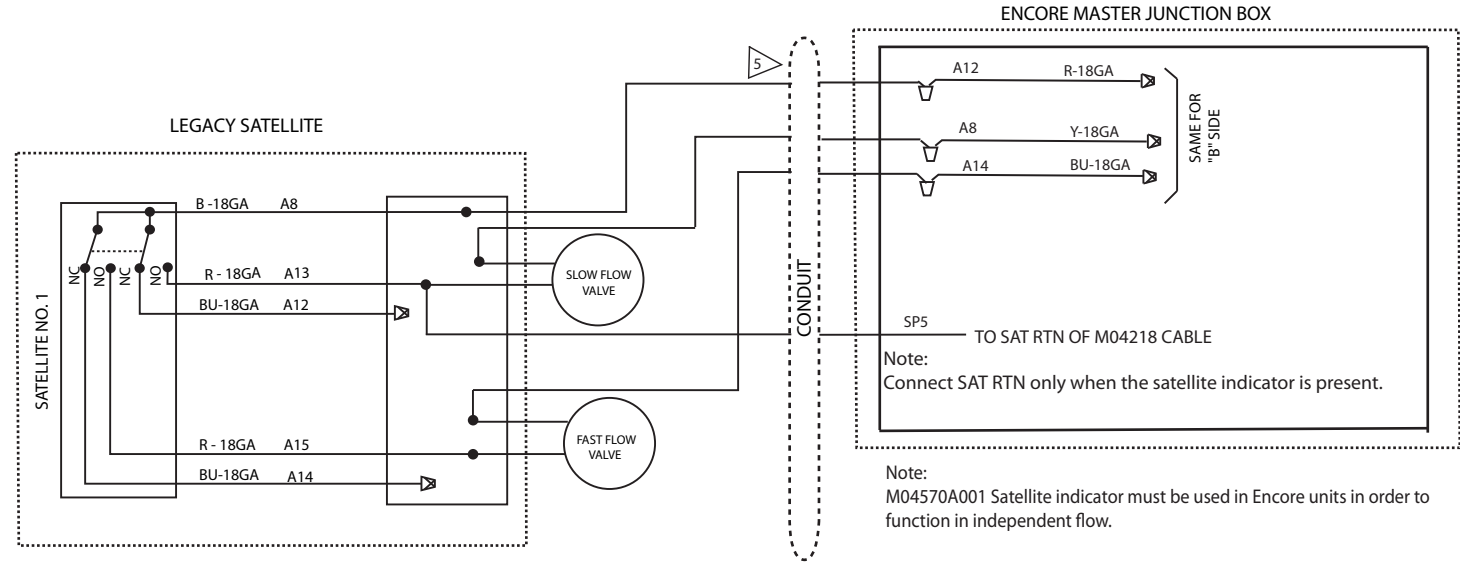
ENCORE MASTER/LEGACY SATELLITE WITH JUNCTION BOX - SIMULTANEOUS OPERATION (TWO STAGE VALVE)



ENCORE MASTER WITHOUT JUNCTION BOX TO SATELLITE FOR  
LEGACY SATELLITES WITH TWO SINGLE STAGE VALVES - INDEPENDENT OPERATION



ENCORE MASTER WITH JUNCTION BOX TO LEGACY SATELLITE WITH TWO SINGLE STAGE  
VALVES - SIMULTANEOUS OPERATION



Symbols Chart

Wire Nut	
Earth Ground Screw Terminal	
Earth Ground	
No Connection	
Connection	

Wire Color Chart

Black	B
Brown	BR
Red	R
Orange	OR
Yellow	Y
Green	GN
Blue	BU
Violet	V
Gray	GY
White	W



Field Wiring Diagram Satellite Signal with J-Box  
120/240 VAC  
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