

## Junction Box XP<sup>TM</sup>

3A5312C

EN

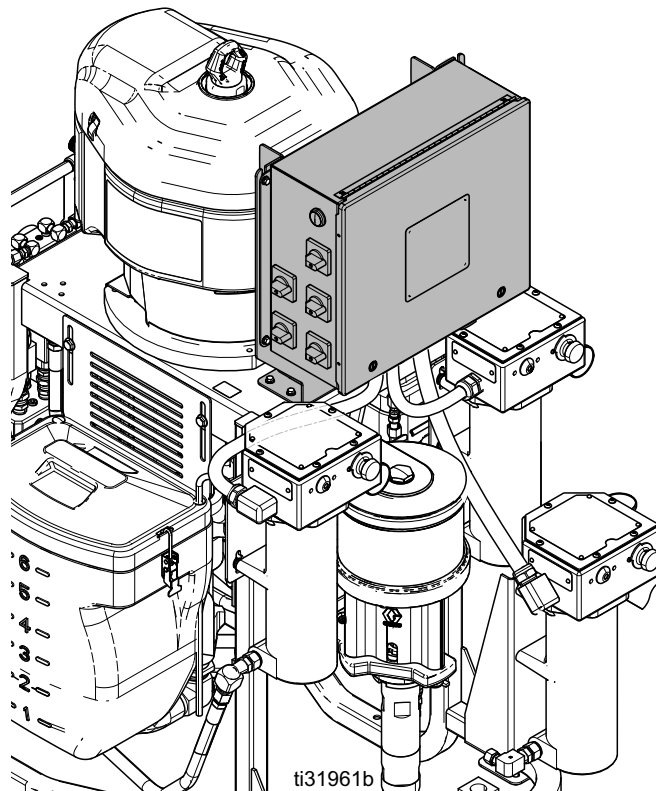
***For distributing power to the heaters of an XP<sup>TM</sup> and XP-hf<sup>TM</sup> Proportioner. For professional use only.  
Not for use in explosive atmospheres or hazardous locations.***

See page 3 for Models, Description, and Approvals information.



### **Important Safety Instructions**

Read all warnings and instructions in this manual and in the XP or XP-hf Proportioner manual before using the equipment. Save these instructions.



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## Related Manuals

Part	Description
3A2954	Viscon <sup>®</sup> HF Heater - Operation, Repair and Parts Manual
3A4381	XP-hf <sup>™</sup> Proportioner - Operation, Repair and Parts Manual
3A0420	XP <sup>™</sup> and XP-h <sup>™</sup> Proportioners - Operation, Repair, and Parts Manual
309524	Viscon <sup>®</sup> HP - Operation, Repair and Parts Manual
3A6283	XP-hf Proportioner - Operation Manual

## Warnings

The following warnings are for the setup, use, grounding, maintenance, and repair of this equipment. The exclamation point symbol alerts you to a general warning and the hazard symbols refer to procedure-specific risks. When these symbols appear in the body of this manual or on warning labels, refer back to these Warnings. Product-specific hazard symbols and warnings not covered in this section may appear throughout the body of this manual where applicable.

 <b>DANGER</b>	
	<p><b>SEVERE ELECTRIC SHOCK HAZARD</b></p> <p>This equipment can be powered by more than 240 V. Contact with this voltage will cause death or serious injury.</p> <ul style="list-style-type: none"> <li>• Turn off and disconnect power at main switch before disconnecting any cables and before servicing equipment.</li> <li>• This equipment must be grounded. Connect only to grounded power source.</li> <li>• All electrical wiring must be done by a qualified electrician and comply with all local codes and regulations.</li> </ul>

## Overview


Heaters for XP or XP-hf Proportioners compatible with junction box 273096:

Part	Description
245869	Viscon HP heater, 240 VAC, (non-hazardous locations)
17X456	Immersion heater kit for 25 gallon hopper
25C961	Viscon HF heater (non-hazardous locations)

Heaters for the XP Proportioners compatible with junction box 273101.

Part	Description
245870	Viscon HP heater, 480 VAC, (non-hazardous locations)

## Models and Approvals

Model	Series	Description	Volts AC	Type	Hz	Maximum Amps	Approvals
273096	B	Junction Box, XP 240V	200-240	1 Phase	50/60	75	 <b>Intertek</b> <b>9902471</b> Conforms to UL STD 508A Certified to CSA STDS C22.2 No. 73 & 286
			200-240 Delta	3 Phase	50/60	65	
			350-415 WYE	3 Phase+N	50/60	40	
273101	A	Junction Box, XP, 480V	480	3 Phase	60	38	

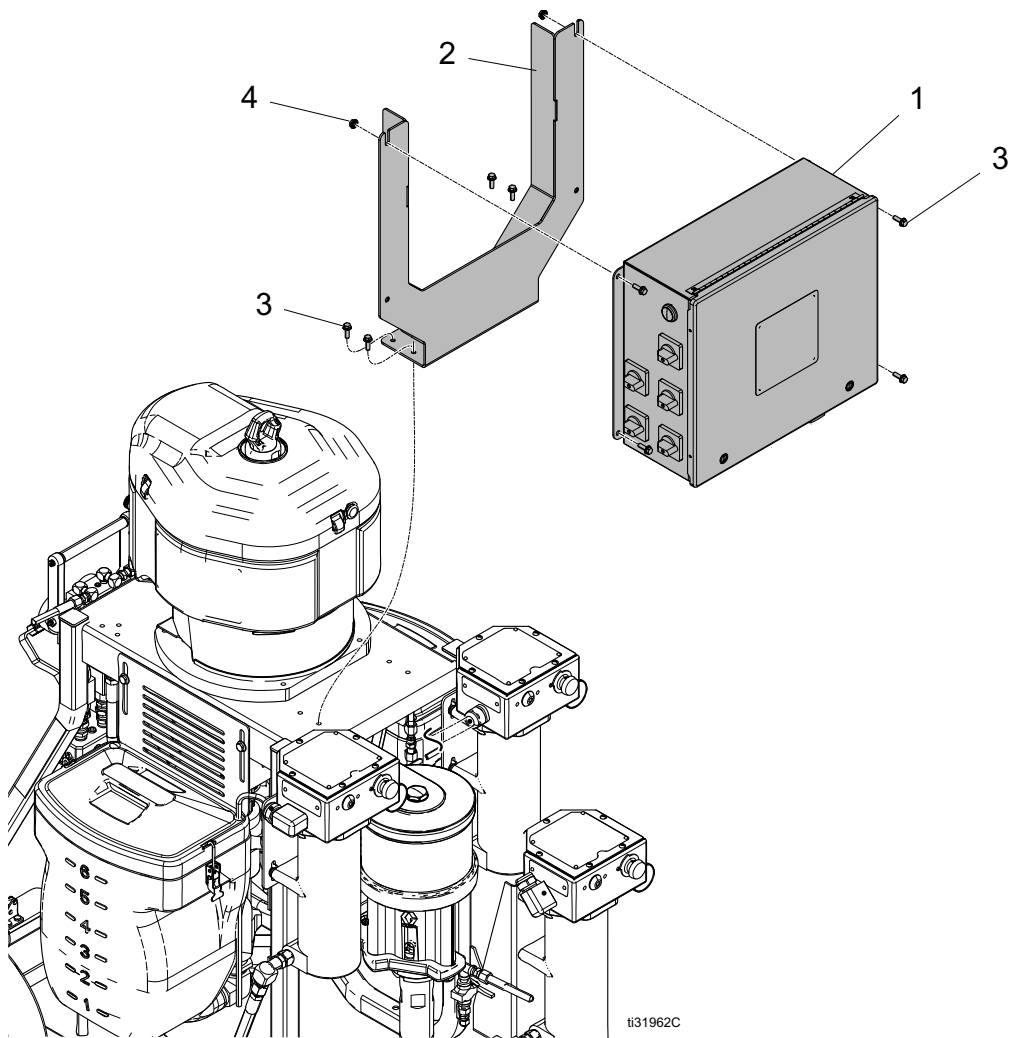
# Installation

## Junction Box

- 1. Tighten four screws (3) to fasten the junction box bracket (2) to the XP cart.

**NOTE:** Older XP carts may only have mounting holes. Use four nuts (4) if necessary.

- 2. Loosely attach two screws (3) and two nuts (4) to the two holes on top of the junction box (1).
- 3. Lower the junction box over the bracket open slots.
- 4. Attach two more screws (3) to the two holes one the bottom of the junction box (1).
- 5. Tighten all four screws.
- 6. Follow the installation instructions for your applicable cable harness.



### 240V Junction Box Kit - 273096

Ref.	Part	Description	Qty.
1	-----	ENCLOSURE, junction box, 240V (see page 10)	1
2	17P846	BRACKET	1
3	113796	SCREW, hex head	8
4	115942	NUT, hex head	4

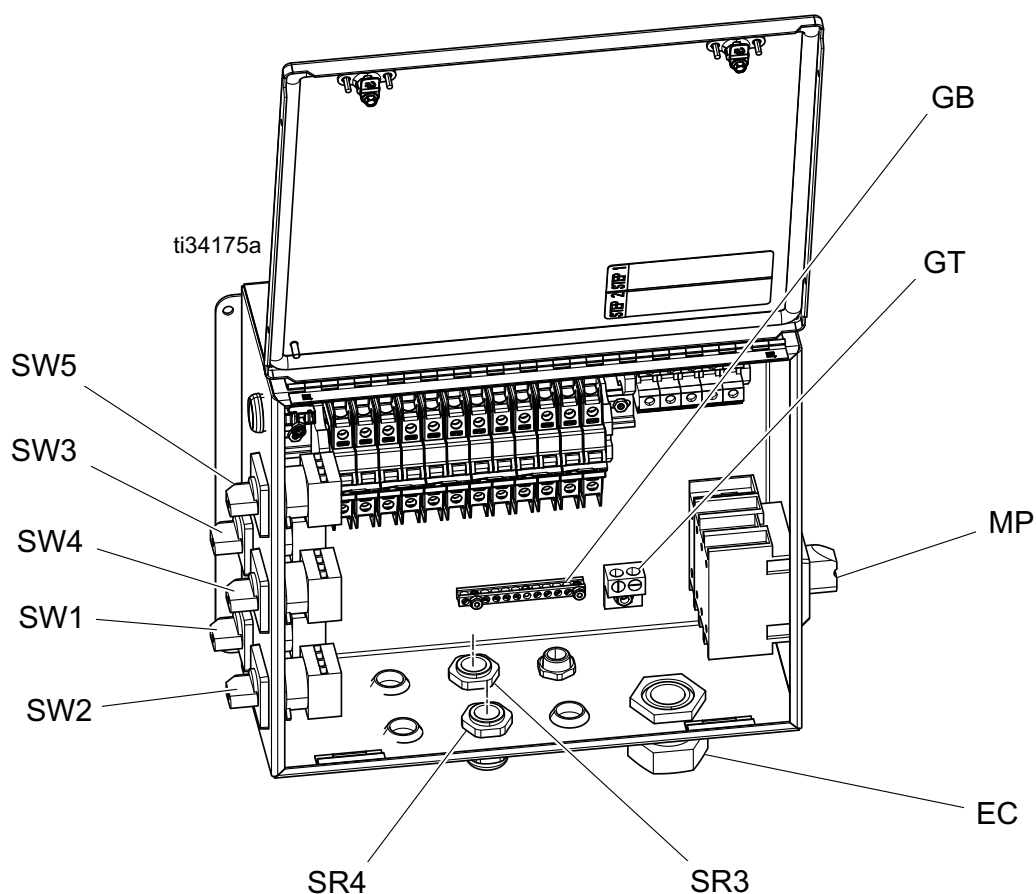
### 480V Junction Box Kit - 273101

Ref.	Part	Description	Qty.
1	-----	ENCLOSURE, junction box, 480V (see page 12)	1
2	17P846	BRACKET	1
3	113796	SCREW, hex head	8
4	115942	NUT, hex head	4

## Connect Fluid Heater Harness

1. Route the “A” fluid heater harness through the existing cord strain relief (SR3).
2. Attach the ground wire securely to the ground bar (GB). See **Heater Wiring Diagram** on page 17.
3. Attach the two wires to heater switch (SW3). See **Heater Wiring Diagram** on page 17.
4. Route the “B” fluid heater harness through the existing cord strain relief (SR4).
5. Attach the ground wire securely to the ground bar (GB). See **Heater Wiring Diagram** on page 17.
6. Attach the two wires to heater switch (SW4). See **Heater Wiring Diagram** on page 17.
7. Tighten strain reliefs (SR3 and SR4).

**NOTE:** The switch body can be easily removed from the knob by rotating the red lock arm upward to unlock.

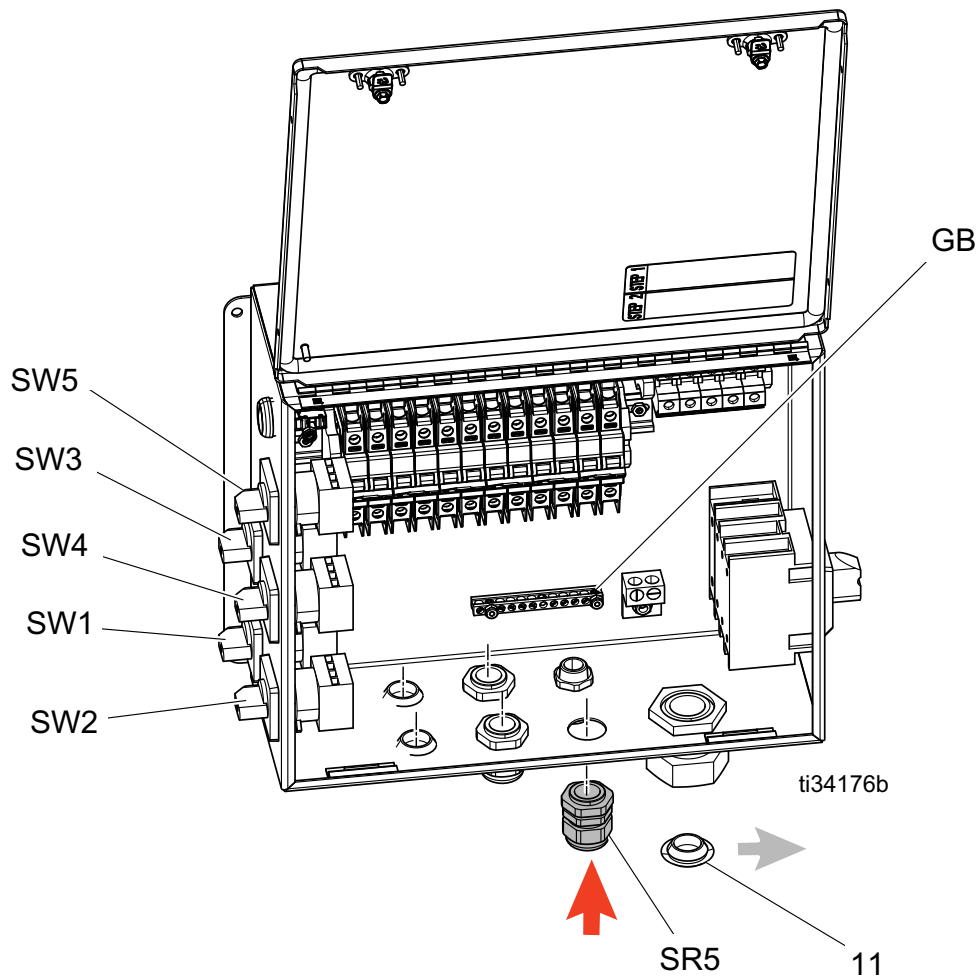


## Connect Hose Heater Harness

1. Knock out the plug (11) in the bottom of the junction box at the location shown.
2. Install strain relief (SR5) in the junction box.
3. Route the hose heater harness through the cord strain relief (SR5).
4. Attach the ground wire securely to the ground bar (GB). See **Heater Wiring Diagram** on page 17.
5. Attach the two cable wires to heater switch (SW5). See **Heater Wiring Diagram** on page 17.

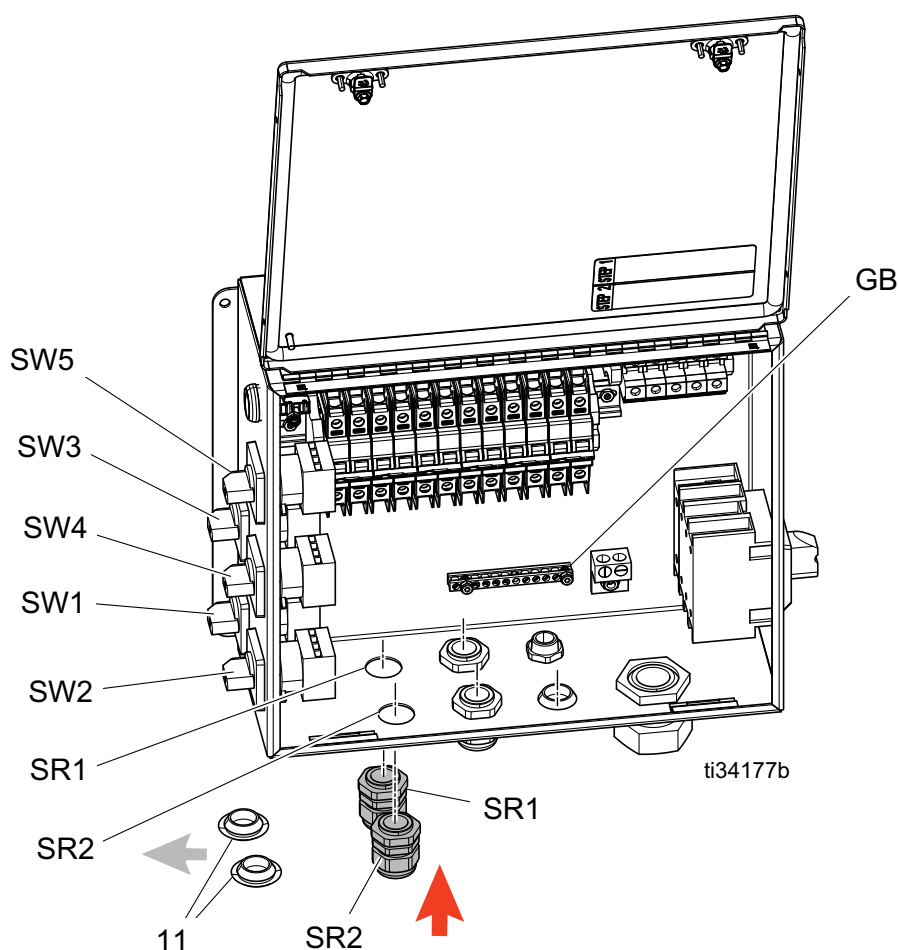
**NOTE:** The switch body can be easily removed from the knob by rotating the red lock arm upward to unlock.

6. Tighten strain relief (SR5).



## Connect Hopper Heater Harness

1. Knock out the plugs (11) in locations shown at the bottom of the junction box.
  2. Install strain reliefs (SR1, SR2).
  3. Route the "A" hopper heater harness through the cord strain relief (SR1).
  4. Attach the ground wire securely to the ground bar (GB). See **Heater Wiring Diagram** on page 17.
  5. Attach the two cable wires to (SW1). See **Heater Wiring Diagram** on page 17.
- NOTE:** The switch body can be easily removed from the knob by rotating the red lock arm upward to unlock.
6. Route the "B" hopper heater harness through (SR2).
  7. Attach the ground wire securely to the ground bar (GB). See **Heater Wiring Diagram** on page 17.
  8. Attach the two cable wires to (SW2). See **Heater Wiring Diagram** on page 17.
  9. Tighten strain reliefs (SR1, SR2).



# Connect Power

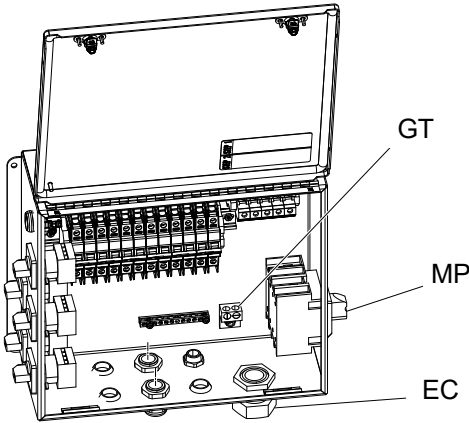


All electrical wiring must be done by a qualified electrician and comply with all local codes and regulations.

1. Turn the main power disconnect switch (MP) OFF.
2. Open the electrical enclosure door.
3. Route the power cord through the strain relief (EC) into the electrical enclosure.
4. Connect the ground wire to the ground terminal (GT).
5. Connect the power cord to the disconnect switch (MP) as shown (see FIG. 1). Gently pull on all connections to verify that they are properly secured.
6. Tighten strain relief (EC).

7. Install the supplied terminal jumpers in the positions shown in the image below for the power source used.

**NOTE:** Terminal jumpers are attached inside the electrical enclosure door.



8. Verify that all items are connected properly as shown below, then close the electrical enclosure door.

**NOTE:** See the XP or XP-hf proportioner manual for operation instructions.

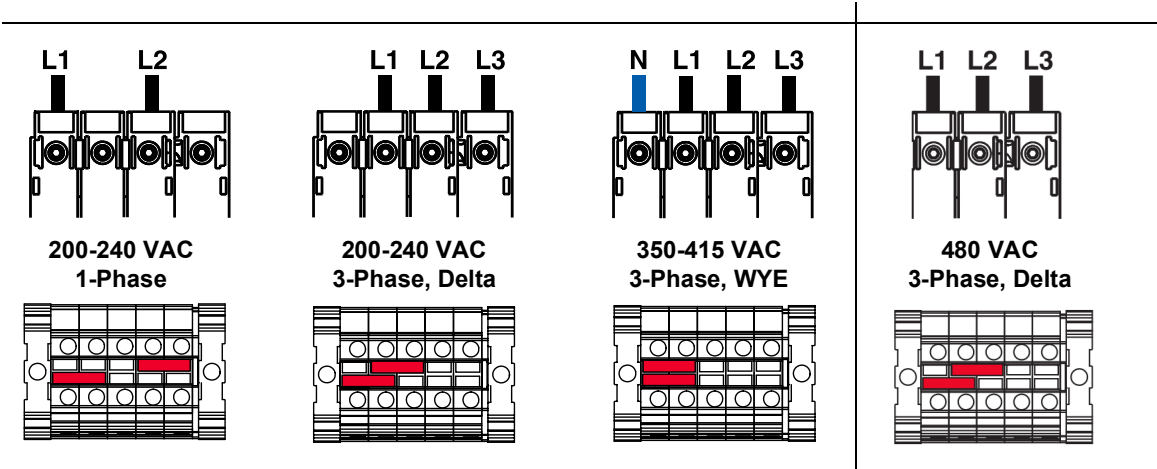


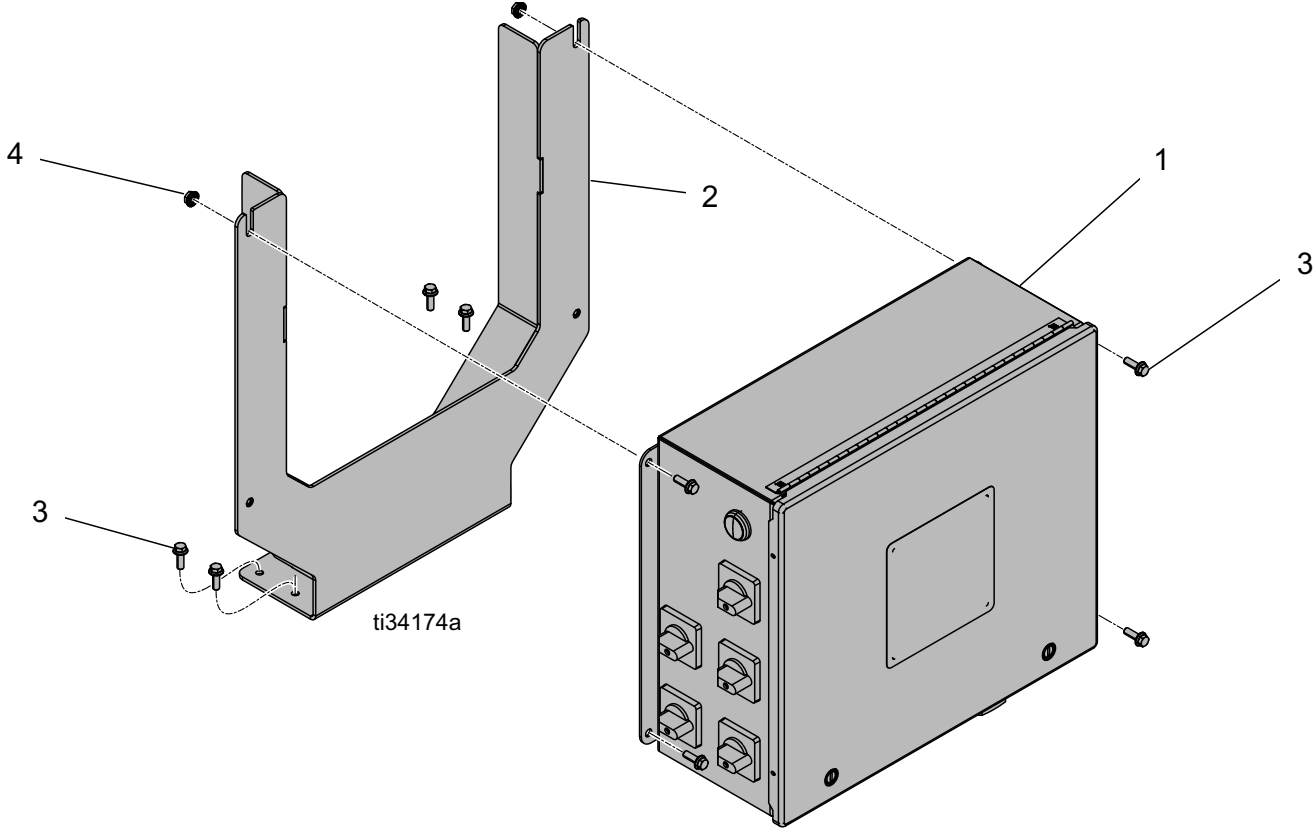
Fig. 1 Terminal Jumpers and Positions

Power Requirements				
XP Configuration	200-240 VAC 1-Phase	200-240 VAC 3-Phase, Delta	350-415 VAC 3 Phase , WYE	480 VAC 3 Phase, Delta
	Max A	Max A	Max A	Max A
A & B Heaters	45	41	23	19
A & B Heaters and Heated Hose	62	56	36	27
A & B Heaters and Hopper Heaters	70	65	43	31
A & B Heaters, Heated Hose, and Hopper Heaters	87	78	46	38

**NOTE:** 350-415 VAC are not designed to operate from 480 VAC power source.

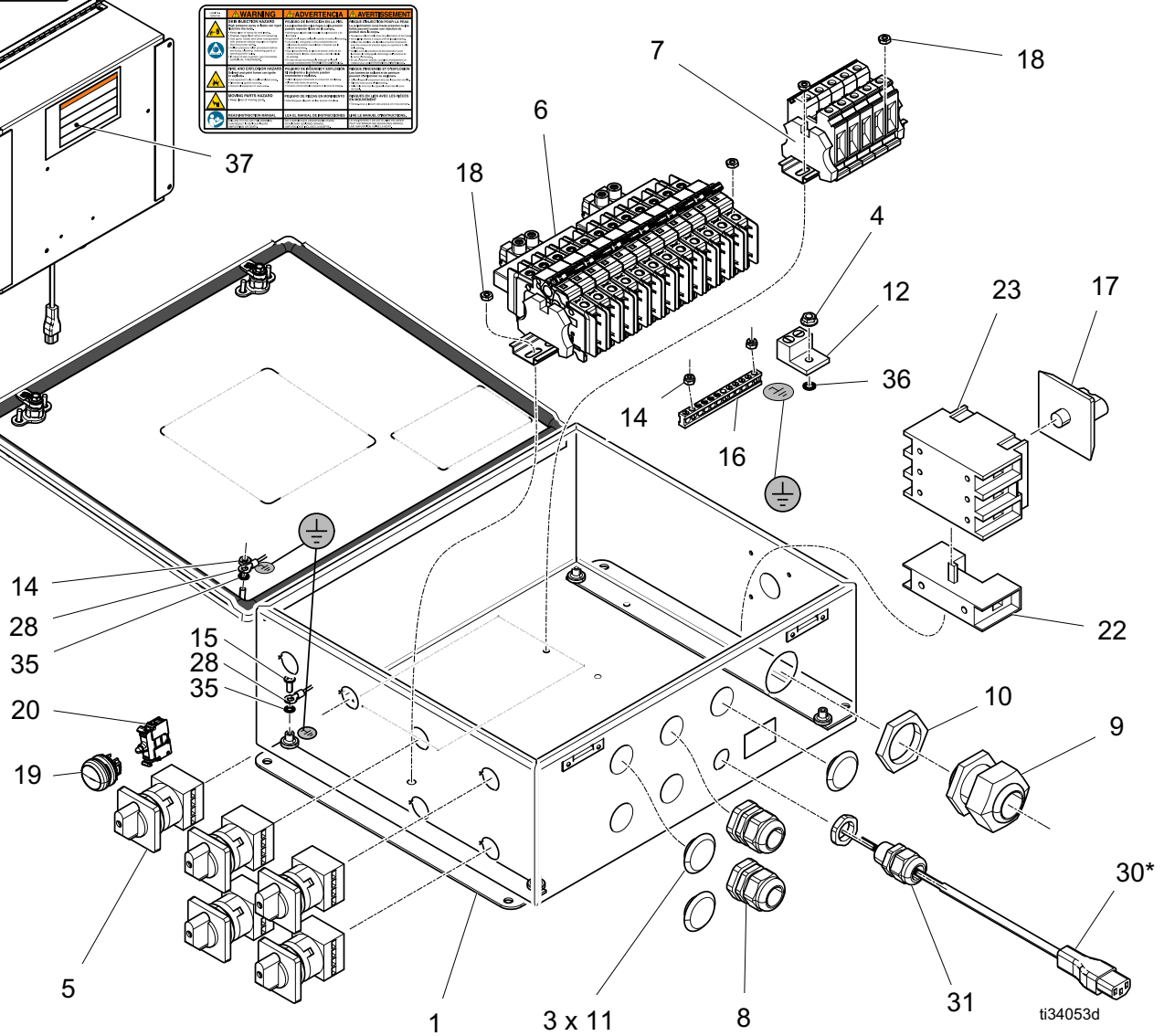
# Parts

## Junction Box

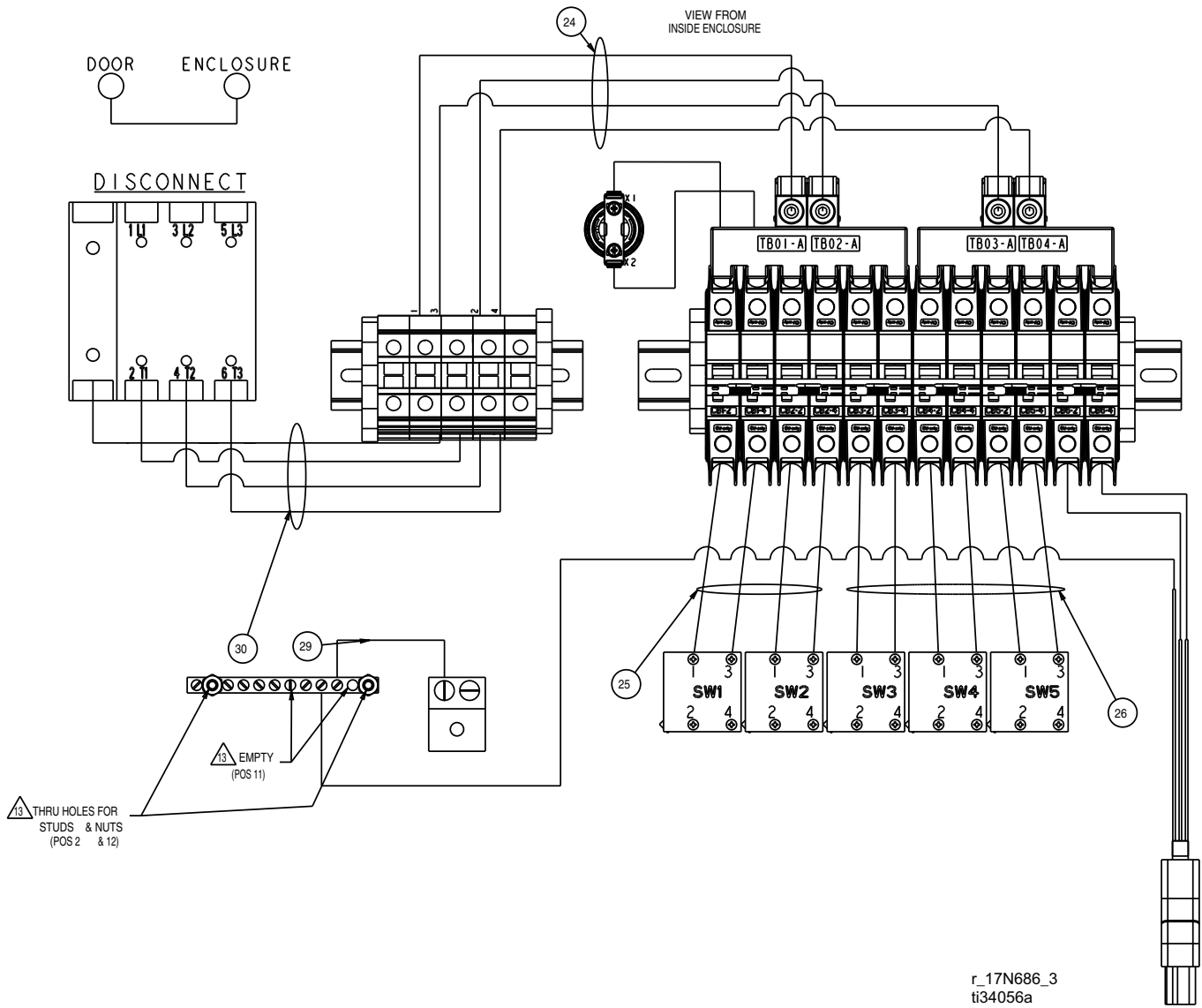


# Enclosure Junction Box, 240 VAC

Kit 273096

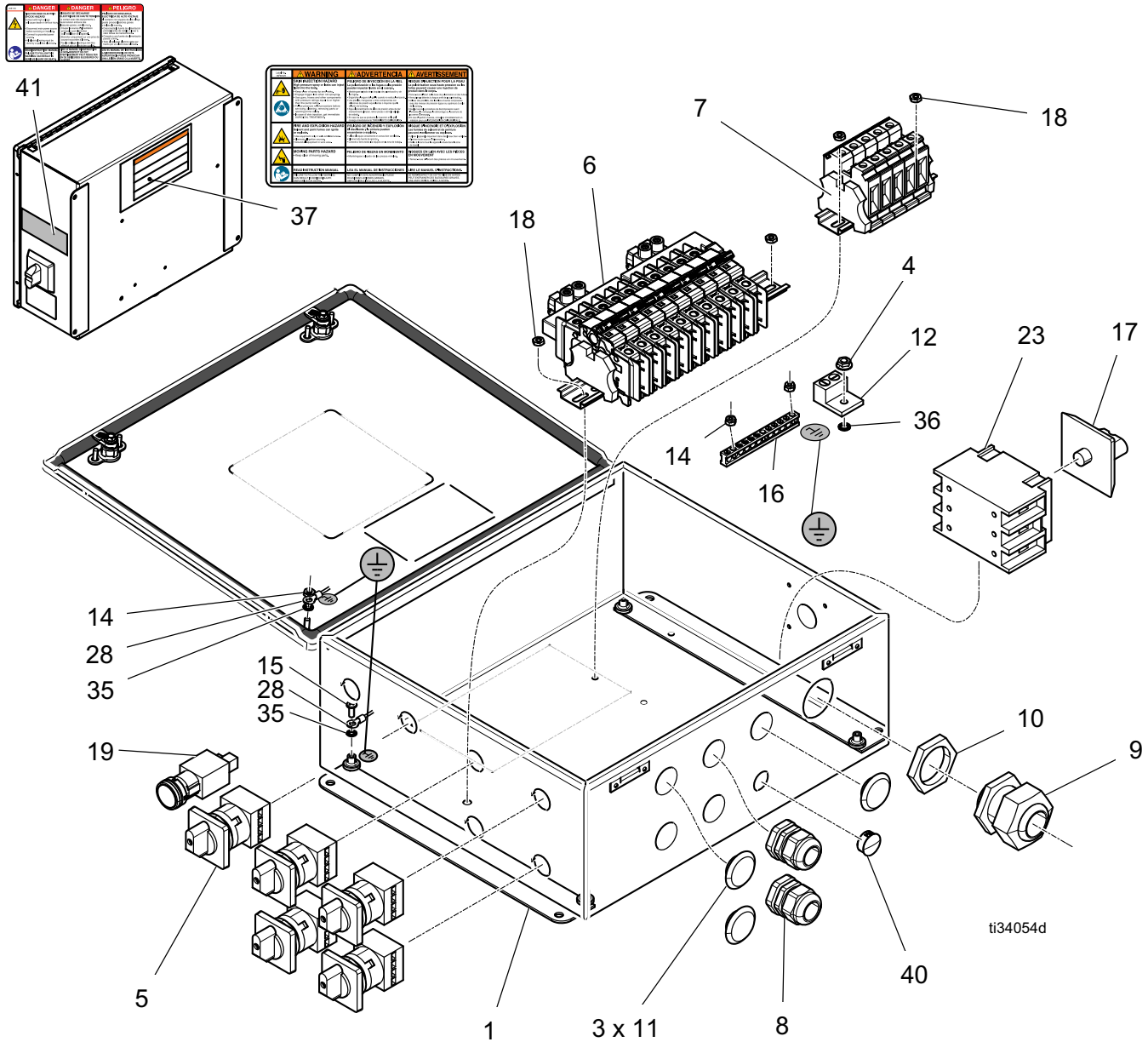


Enclosure Junction Box, 240 VAC, Kit 273096 (continued)

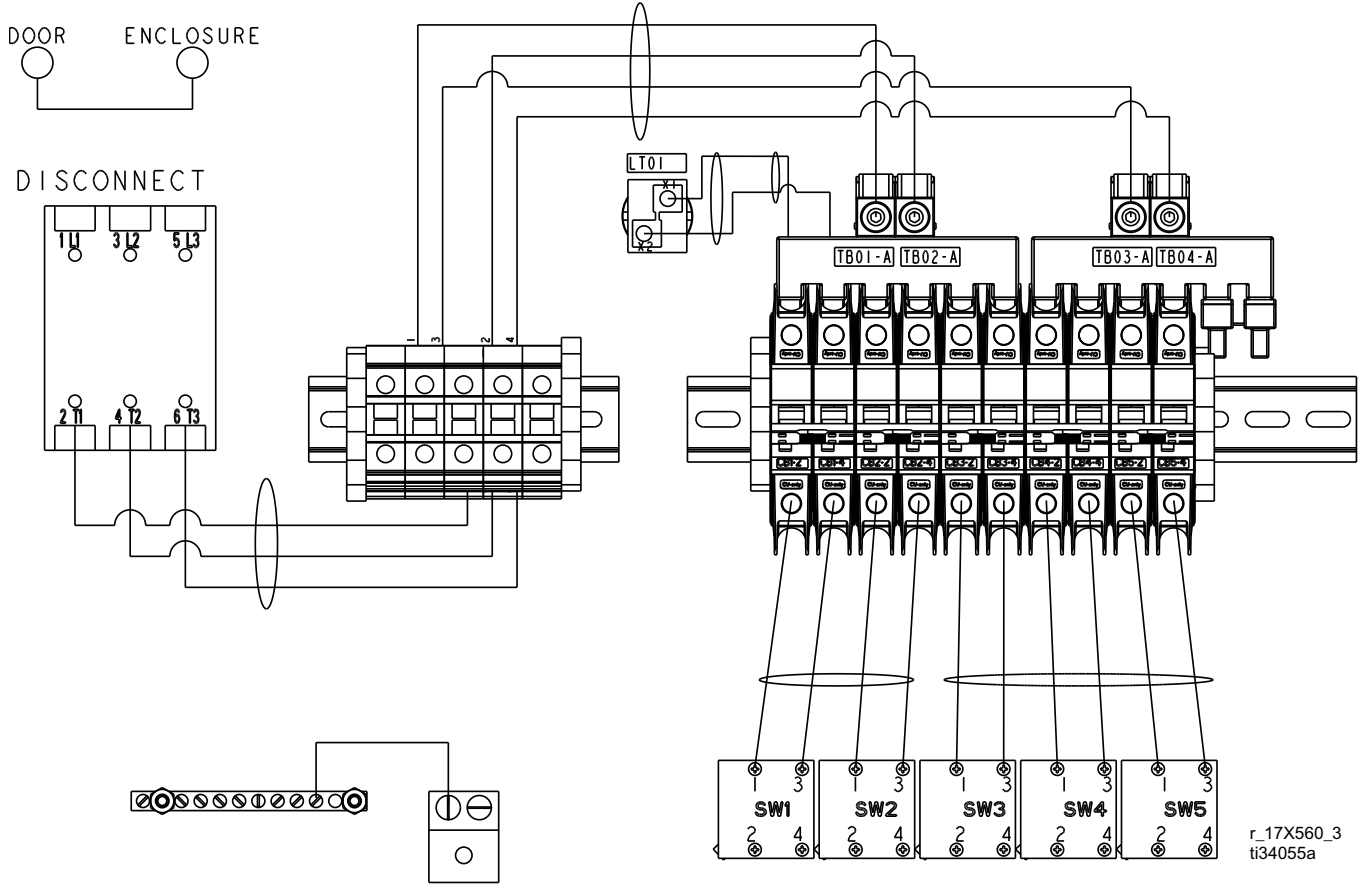


## Enclosure Junction Box, 480 VAC

## Kit 273101

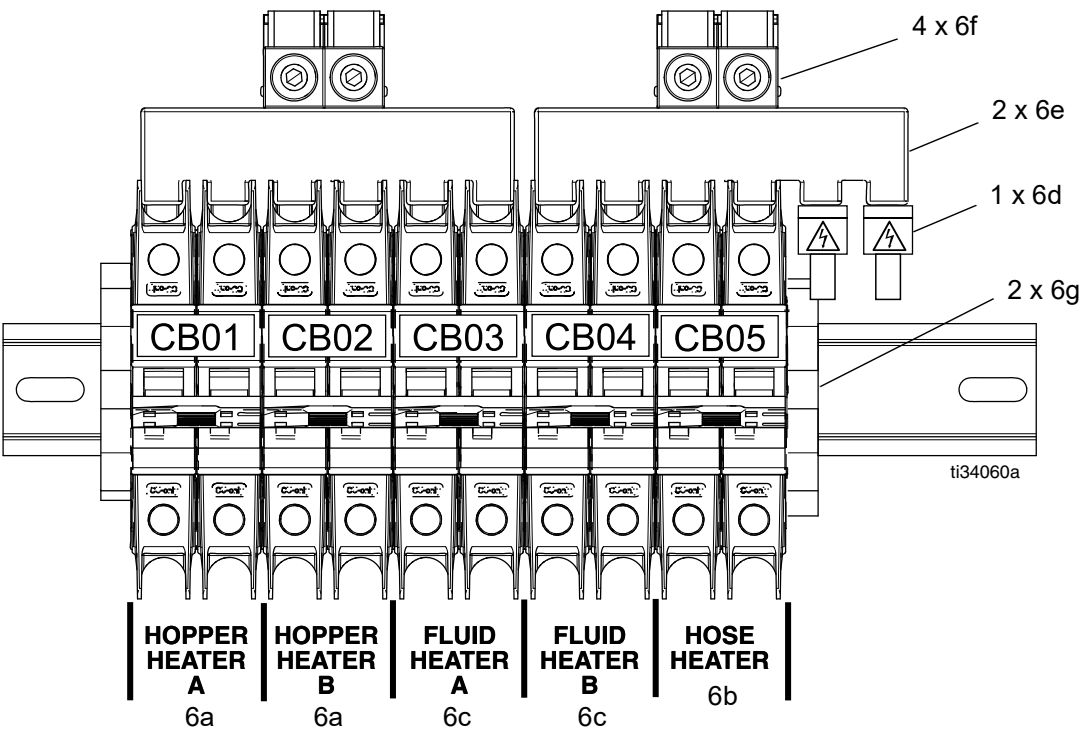


Enclosure Junction Box, 480 VAC, Kit 273101 (continued)

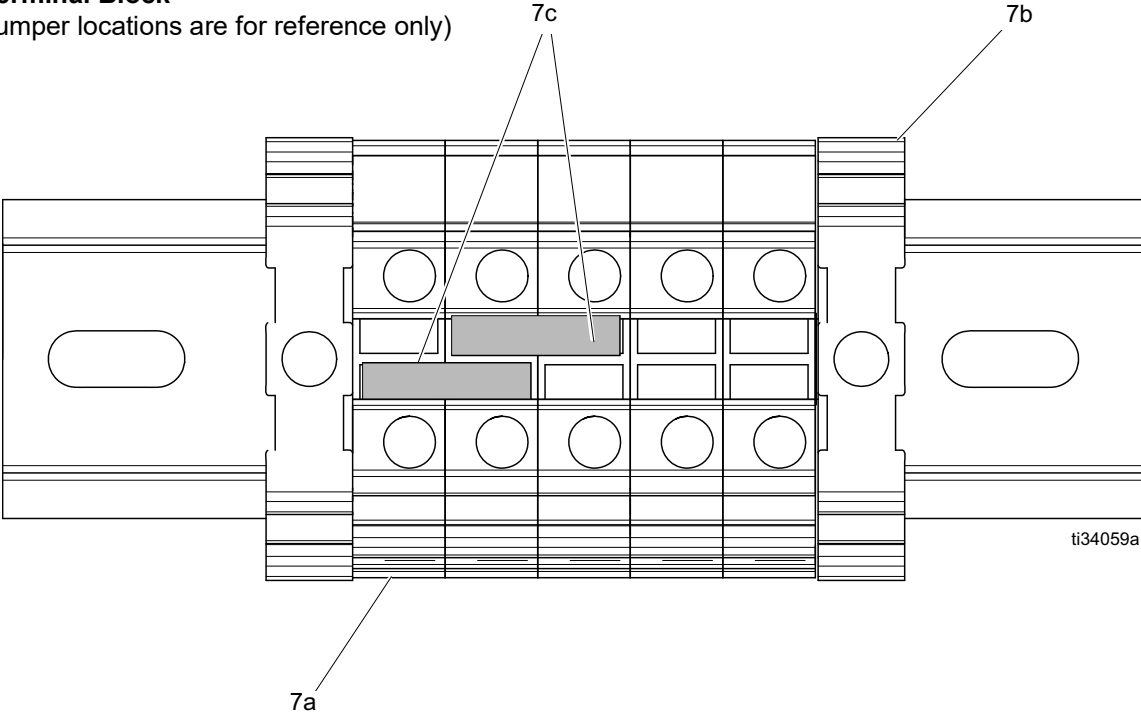


# Enclosure Junction Box

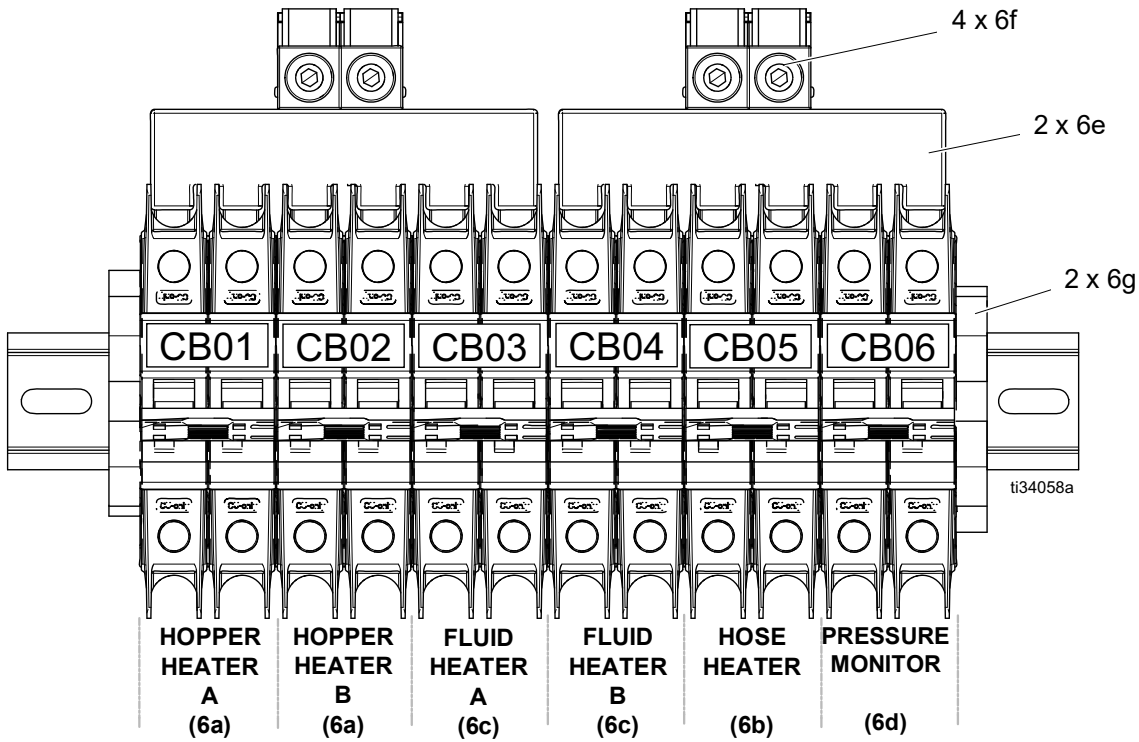
## Circuit Breaker Module 273101 (480 VAC)



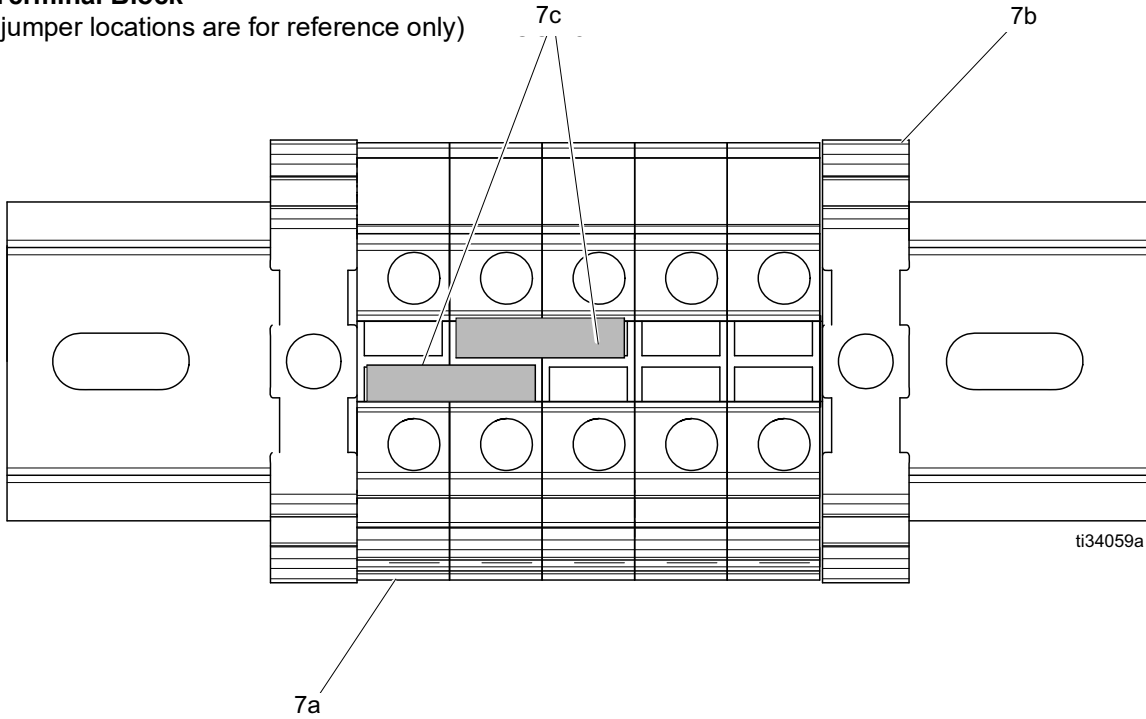
### Terminal Block (jumper locations are for reference only)



**Circuit Breaker Module 273096 (240 VAC)**



**Terminal Block**  
(jumper locations are for reference only)



## Enclosure Junction Box Parts List

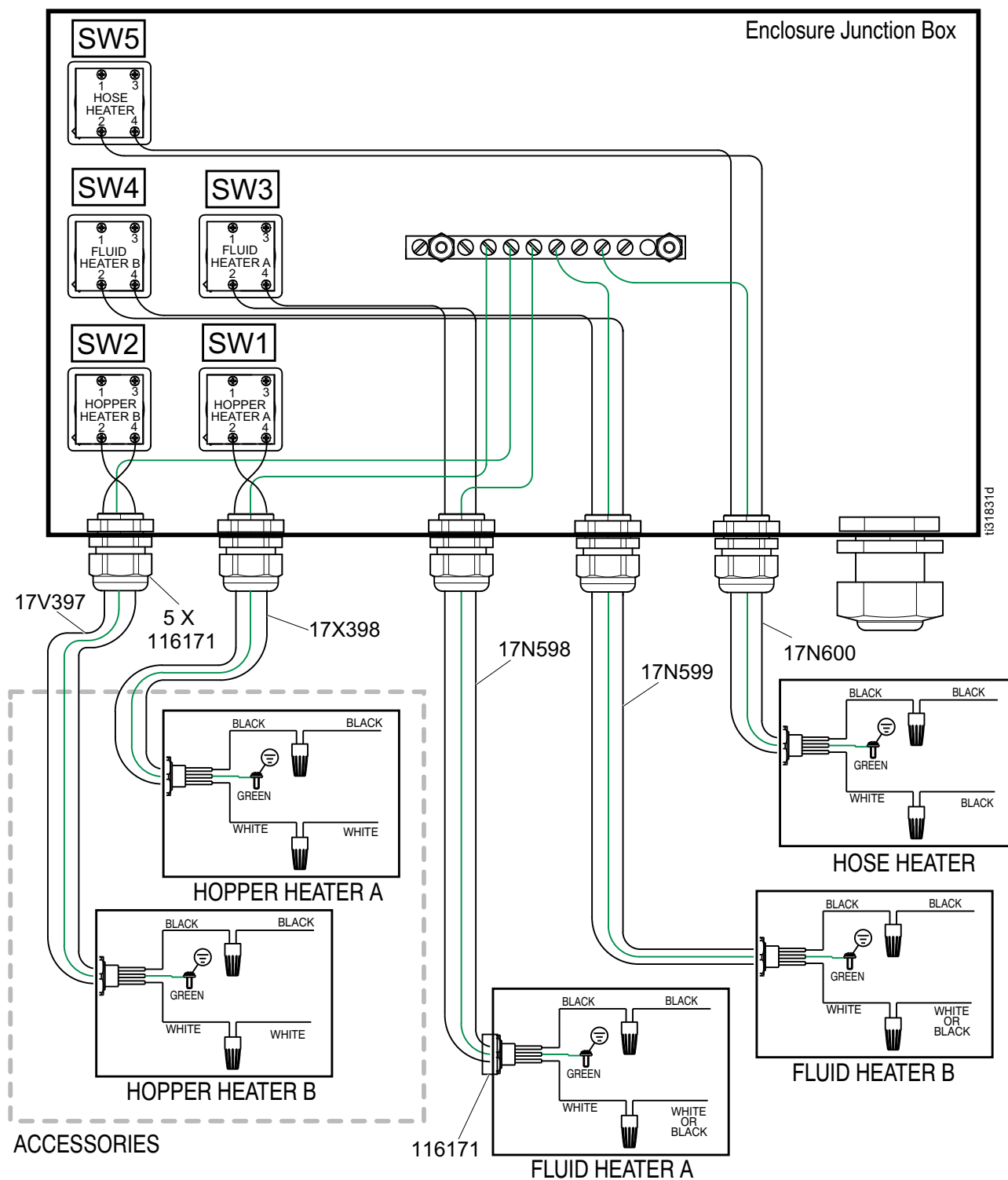
Ref.	Description	273096		273101	
		Part	Qty.	Part	Qty.
1	ENCLOSURE, XP, electrical	-----	1	-----	1
2	BRACKET, painted, junction box	17P846	1	17P846	1
3	SCREW, flanged, hex hd	113796	8	113796	8
4	SCREW, flanged, hex hd	115942	5	115942	5
5	SWITCH, 2p, 25a	15U423	5	15U423	5
6	MODULE, ASM, circuit breaker	17N687	1	17X663	1
6a	CIRCUIT BREAKER, 2P, 15A	17A313	2	-----	--
	CIRCUIT BREAKER, 2P, 10A	-----	--	17A311	2
6b	CIRCUIT BREAKER, 2P, 25A	17N315	1	-----	--
	CIRCUIT BREAKER, 2P, 15A	-----	--	17N313	1
6c	CIRCUIT BREAKER, 2P, 30A	17N316	2	-----	--
	CIRCUIT BREAKER, 2P, 15A	-----	--	17N313	2
6d	CIRCUIT BREAKER, 2P, 1A	17C190	1	-----	--
	CAP, bus bar, protection	-----	--	131616	1
6e	BAR, power bus, 2P, 6 pin	17N690	2	-----	--
6f	CONNECTOR, terminal, buss bar	17N691	4	17N691	4
6g	BLOCK, clamp ends	255045	2	255045	2
7	MODULE, ASM, terminal blocks	17N688	1	17N688	1
7a	BLOCK, terminal	24R724	5	24R724	5
7b	BLOCK, clamp ends	255045	2	255045	2
7c	BRIDGE, jumper	24R725	2	24R725	2
8	BUSHING, strain relief	116171	2	116171	2
9	BUSHING, strain relief, M40	255047	1	255047	1
10	NUT, strain relief, M40	120859	1	120859	1
11	PLUG, 1/1/8 in.	15U544	3	15U544	3
12	TERMINAL, gnd	117666	1	117666	1
14	NUT, lock, hex	109466	3	109466	3
15	SCREW, mach	112948	1	112948	1
16	BAR, ground	122313	1	122313	1
17	KNOB, operator disconnect	123967	1	123967	1
18	NUT, keps, hex hd	113505	4	113505	4
19	LIGHT, indicator, green	17V468	1	131618	1
20	MODULE, LED	17V480	1	-----	--
22	SWITCH, neutral	123968	1	-----	1
23	SWITCH, disconnect, 100 amp	123969	1	123969	1
24	HARNESS, term block to circuit breaker	17N590	1	17N590	1

Ref.	Description	273096		273101	
		Part	Qty.	Part	Qty.
25	HARNESS, circuit breaker to SW1, SW2	17N592	1	17N592	1
26	HARNESS, circuit breaker to SW3, SW4, SW5	17N593	1	17N593	1
27	HARNESS, disconnect to terminal block	17N720	1	17N720	1
28	WIRE, ground, door to enclosure	17N595	1	17N595	1
29	WIRE, ground, GND1 to GND2	17N594	1	17N594	1
30*	PLUG, pressure monitor	17N601	1	-----	--
31	BUSHING, strain relief	114421	1	-----	--
35	WASHER, #10 lock ext	555629	2	555629	2
36	WASHER, 1/4 ext tooth	558685	1	558685	1
37	LABEL, safety	15F674	1	15F674	1
40	PLUG, .812 in.	-----	--	17X749	1
41	LABEL, danger	25E178	1	25E178	1

*Replacement Safety labels, tags, and cards are available at no cost.*

\* Used to connect line-powered pressure monitor kit.

# Heater Wiring Diagram



# Graco Standard Warranty

Graco warrants all equipment referenced in this document which is manufactured by Graco and bearing its name to be free from defects in material and workmanship on the date of sale to the original purchaser for use. With the exception of any special, extended, or limited warranty published by Graco, Graco will, for a period of twelve months from the date of sale, repair or replace any part of the equipment determined by Graco to be defective. This warranty applies only when the equipment is installed, operated and maintained in accordance with Graco's written recommendations.

This warranty does not cover, and Graco shall not be liable for general wear and tear, or any malfunction, damage or wear caused by faulty installation, misapplication, abrasion, corrosion, inadequate or improper maintenance, negligence, accident, tampering, or substitution of non-Graco component parts. Nor shall Graco be liable for malfunction, damage or wear caused by the incompatibility of Graco equipment with structures, accessories, equipment or materials not supplied by Graco, or the improper design, manufacture, installation, operation or maintenance of structures, accessories, equipment or materials not supplied by Graco.

This warranty is conditioned upon the prepaid return of the equipment claimed to be defective to an authorized Graco distributor for verification of the claimed defect. If the claimed defect is verified, Graco will repair or replace free of charge any defective parts. The equipment will be returned to the original purchaser transportation prepaid. If inspection of the equipment does not disclose any defect in material or workmanship, repairs will be made at a reasonable charge, which charges may include the costs of parts, labor, and transportation.

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Graco's sole obligation and buyer's sole remedy for any breach of warranty shall be as set forth above. The buyer agrees that no other remedy (including, but not limited to, incidental or consequential damages for lost profits, lost sales, injury to person or property, or any other incidental or consequential loss) shall be available. Any action for breach of warranty must be brought within two (2) years of the date of sale.

**GRACO MAKES NO WARRANTY, AND DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, IN CONNECTION WITH ACCESSORIES, EQUIPMENT, MATERIALS OR COMPONENTS SOLD BUT NOT MANUFACTURED BY GRACO.** These items sold, but not manufactured by Graco (such as electric motors, switches, hose, etc.), are subject to the warranty, if any, of their manufacturer. Graco will provide purchaser with reasonable assistance in making any claim for breach of these warranties.

In no event will Graco be liable for indirect, incidental, special or consequential damages resulting from Graco supplying equipment hereunder, or the furnishing, performance, or use of any products or other goods sold hereto, whether due to a breach of contract, breach of warranty, the negligence of Graco, or otherwise.

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For patent information, see [www.graco.com/patents](http://www.graco.com/patents).

**TO PLACE AN ORDER, contact your Graco distributor or call to identify the nearest distributor.  
Phone: 612-623-6921 or Toll Free: 1-800-328-0211 Fax: 612-378-3505**

*All written and visual data contained in this document reflects the latest product information available at the time of publication.  
Graco reserves the right to make changes at any time without notice.*

Original instructions. This manual contains English. MM 3A5312

**Graco Headquarters:** Minneapolis

**International Offices:** Belgium, China, Japan, Korea

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