INSTALLATION INSTRUCTIONS

Original Issue Date: **3/16**
Model: **ZCS-5 Automatic Transfer Switches**
Market: **ATS**
Subject: **Controller Conversion Kit GM99316-S2**

Introduction

Use conversion kit GM99316-S2 to replace the M340+ controller with a Decision-Maker® MPAC 1500 controller on model ZCS-5 standard-transition automatic transfer switches. Do not use this conversion kit on model ZCS-6 programmed-transition transfer switches.

See Figure 1 for an illustration of the installed kit. See Figure 3 for controller identification, if necessary.

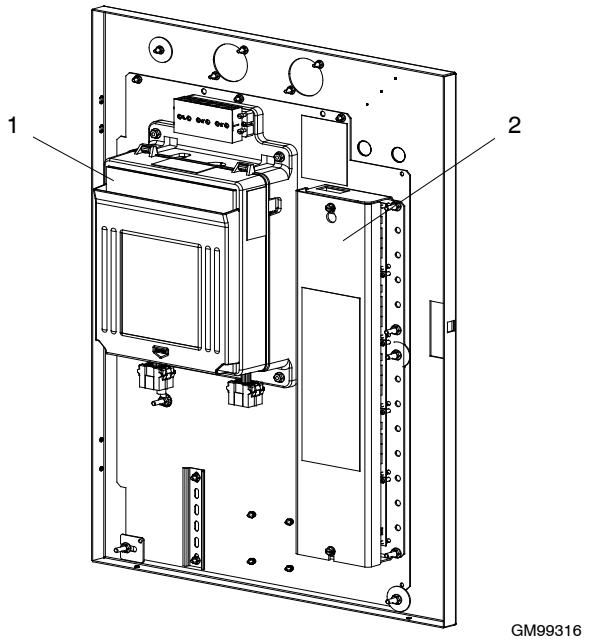
Note: The optional accessory board (I/O) assembly shown in the figures is available separately.

If current sensing is required, obtain the appropriately rated current sensing kit before starting the conversion procedure. If the transfer switch is equipped with current transformers, they will need to be replaced with the new current sensing kit during the controller conversion procedure. See Figure 2 for current sensing kit numbers. Check the amp rating and number of phases of the transfer switch and select the closest current sensing kit with an equal or greater amp rating.

Tools and Materials Required:

- Phillips® screwdriver
- Small flat tip screwdriver
- Wire cutter
- 7/16 nut driver
- 11/32 nut driver
- 5/16 nut driver

Read the entire installation procedure and compare the kit parts with the parts list at the end of this publication before beginning installation. Perform the steps in the order shown.



1. MPAC 1500 controller assembly
2. Optional accessory boards

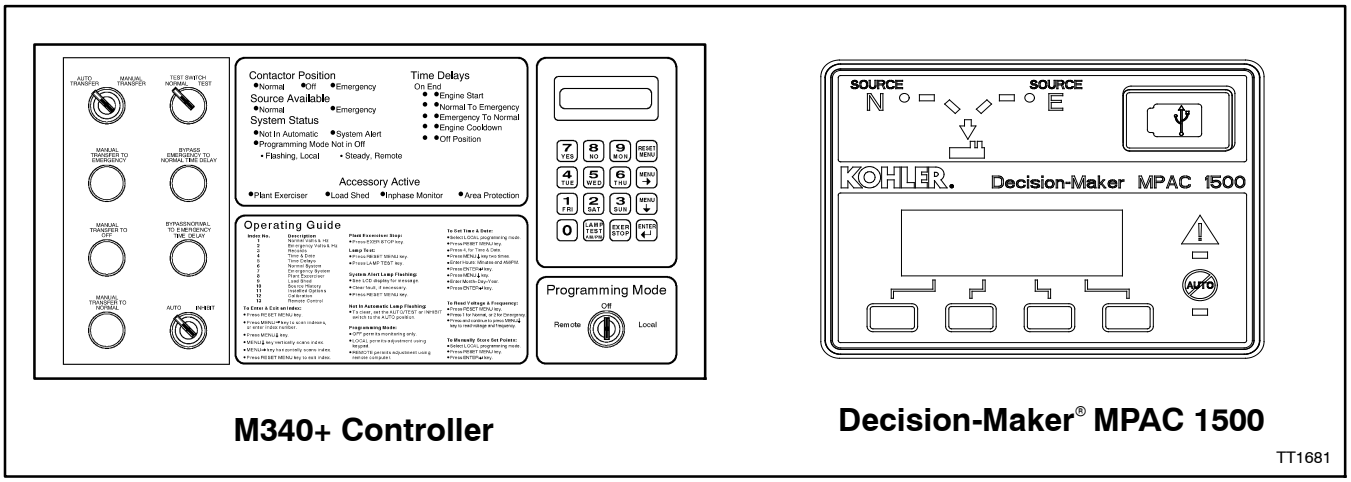
Figure 1 Decision-Maker® MPAC 1500 Controller Conversion Kit, Installed

Kit Description		
Amps	**Phases**	**Current Sensing Kit Number**
1000	3	GM89028-S8
1200	3	GM89028-S11
2000	3	GM89028-S15
3000	3	GM89028-S17
1000	1	GM89028-S26
1200	1	GM89028-S28

Figure 2 Current Sensing Kits (with 3 m [10 ft.] harness)

KOHLER CO., Kohler, Wisconsin 53044 USA
Phone 920-457-4441, Fax 920-459-1646
For the nearest sales and service outlet in the
US and Canada, phone 1-800-544-2444
KOHLERPower.com

Kohler Power Systems
Asia Pacific Headquarters
7 Jurong Pier Road
Singapore 619159
Phone (65) 6264-6422, Fax (65) 6264-6455



M340+ Controller **Decision-Maker® MPAC 1500**

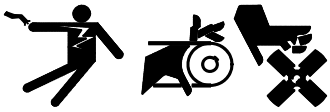
TT1681

Figure 3 Controller Identification

Safety Precautions

Observe the following safety precautions while installing the kit.

⚠ WARNING



Accidental starting.
Can cause severe injury or death.

Disconnect the battery cables before working on the generator set. Remove the negative (–) lead first when disconnecting the battery. Reconnect the negative (–) lead last when reconnecting the battery.

⚠ DANGER

Hazardous voltage.
Will cause severe injury or death.

Disconnect all power sources before opening the enclosure.

Servicing the transfer switch. Hazardous voltage can cause severe injury or death. Deenergize all power sources before servicing. Turn off the main circuit breakers of all transfer switch power sources and disable all generator sets as follows: (1) Move all generator set master controller switches to the OFF position. (2) Disconnect power to all battery chargers. (3) Disconnect all battery cables, negative (–) leads first. Reconnect negative (–) leads last when reconnecting the battery cables after servicing. Follow these precautions to prevent the starting of generator sets by an automatic transfer switch, remote start/stop switch, or engine start command from a remote computer. Before servicing any components inside the enclosure: (1) Remove all jewelry. (2) Stand on a dry, approved electrically insulated mat. (3) Test circuits with a voltmeter to verify that they are deenergized.

Servicing the transfer switch. Hazardous voltage can cause severe injury or death. Deenergize all power sources before servicing. Turn off the main circuit breakers of all transfer switch power sources and disable all generator sets as follows: (1) Press the generator set off/reset button to shut down the generator set. (2) Disconnect power to all battery chargers. (3) Disconnect all battery cables, negative (–) leads first. Reconnect negative (–) leads last when reconnecting the battery cables after servicing. Follow these precautions to prevent the starting of generator sets by an automatic transfer switch, remote start/stop switch, or engine start command from a remote computer. Before servicing any components inside the enclosure: (1) Remove all jewelry. (2) Stand on a dry, approved electrically insulated mat. (3) Test circuits with a voltmeter to verify that they are deenergized.

Availability is subject to change without notice. Kohler Co. reserves the right to change the design or specifications without notice and without any obligation or liability whatsoever. Contact your local Kohler® generator set distributor for availability.

Installation Procedure

1. Place the generator set master switch in the OFF position.
2. Disconnect the power to the battery charger, if equipped or press the OFF/RESET button on the generator set controller.
3. Disconnect the generator set engine starting battery(ies), negative (–) lead first.
4. Disconnect power from the transfer switch on both sources, Normal and Emergency.
5. Remove the plastic protective panel by removing the screws shown in Figure 4.

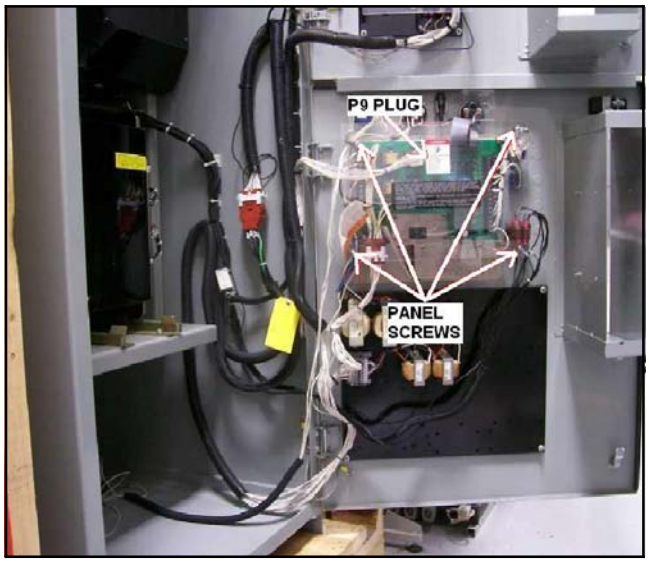


Figure 4 Plastic Panel

6. Disconnect plug P9.

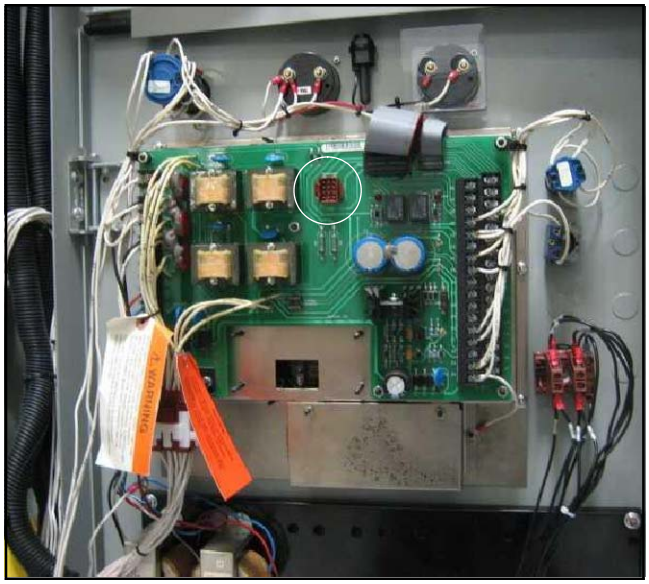


Figure 5 Plug P9 Disconnected

7. If the transfer switch is equipped with current transformers (CTs), remove all CTs from the power lines of the ATS.

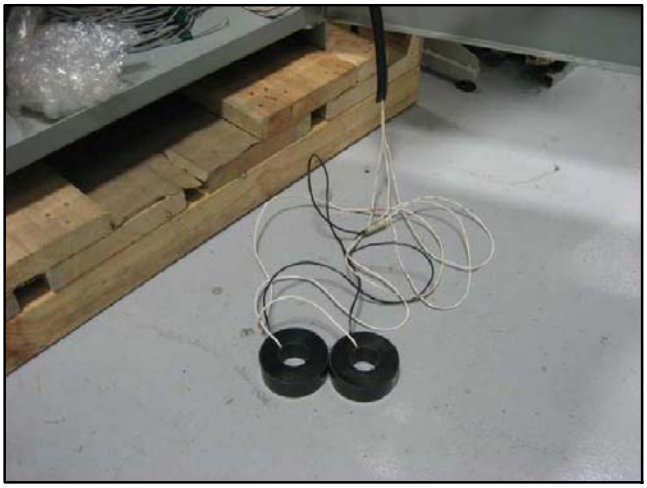


Figure 6 Current Transformers (CTs)

8. If the transfer switch is equipped with an Auto/Inhibit ATS disconnect switch mounted on the enclosure door, disconnect and remove the switch.

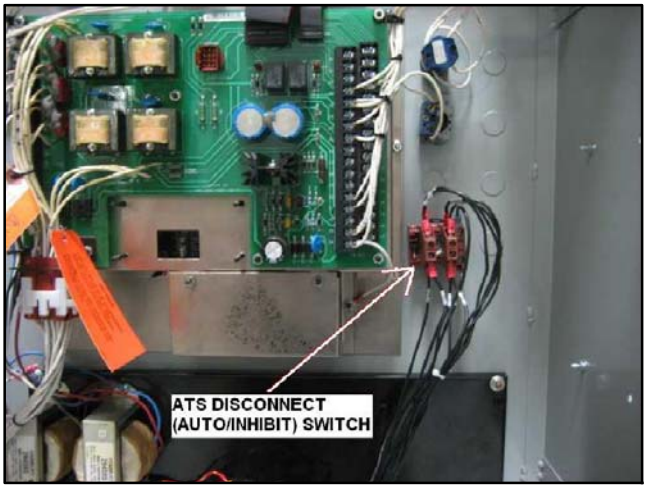


Figure 7 Auto/Inhibit ATS Disconnect Switch

9. If the transfer switch is equipped with gauges, disconnect and remove all gauges and the selector switch.

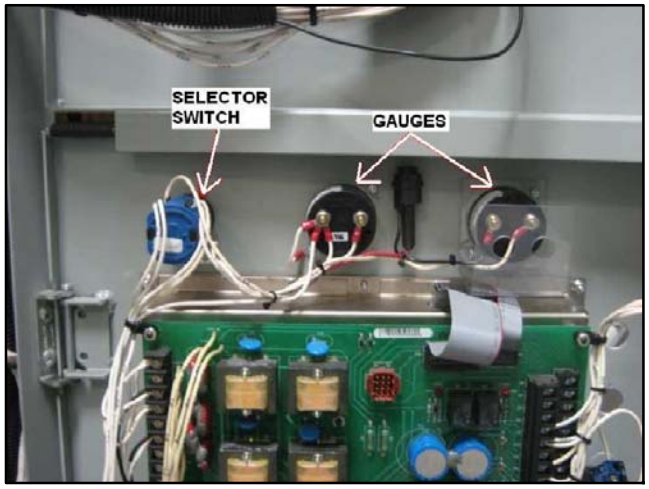


Figure 8 Disconnect the Gauges and Selector Switch

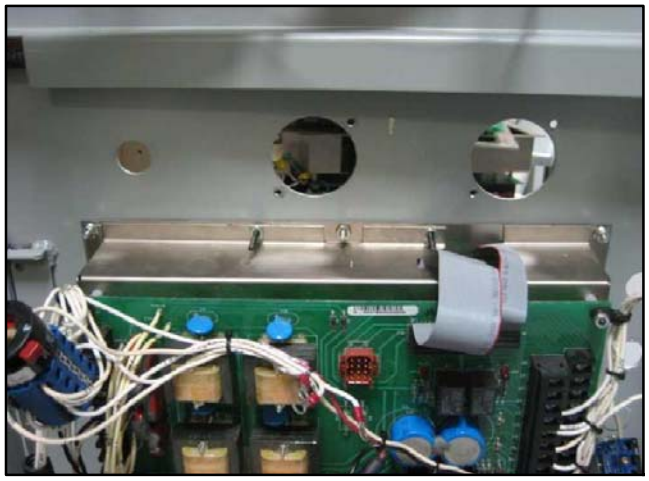


Figure 9 Gauges and Selector Switch Removed

10. Disconnect plug P24 and ground.

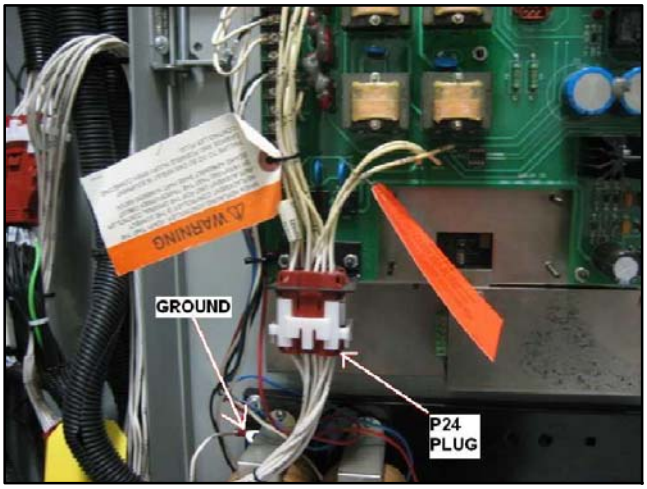


Figure 10 Disconnect P24 and Ground

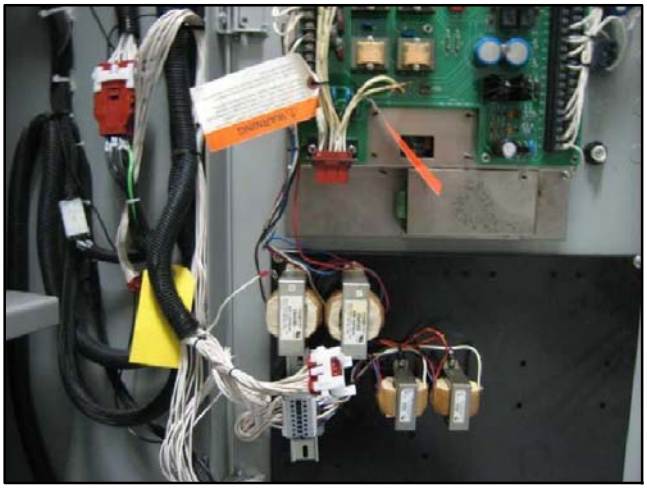


Figure 11 P24 Disconnected

11. Without disconnecting the leads, remove the mounting screws that secure transformers NCPT and ECPT and the terminal block to the lower panel. See Figure 12 and Figure 13. The transformers and terminal blocks will be secured to the new mounting plate later.

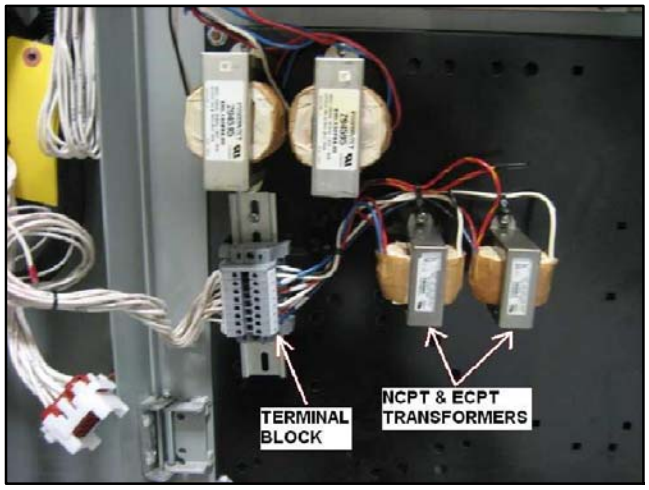


Figure 12 Transformers and Terminal Block on Lower Panel (do not disconnect electrical connections)

Figure 13 Transformers and Terminal Block Removed from Lower Panel but Not Disconnected

12. Remove the metal cover over the communication module, if present.

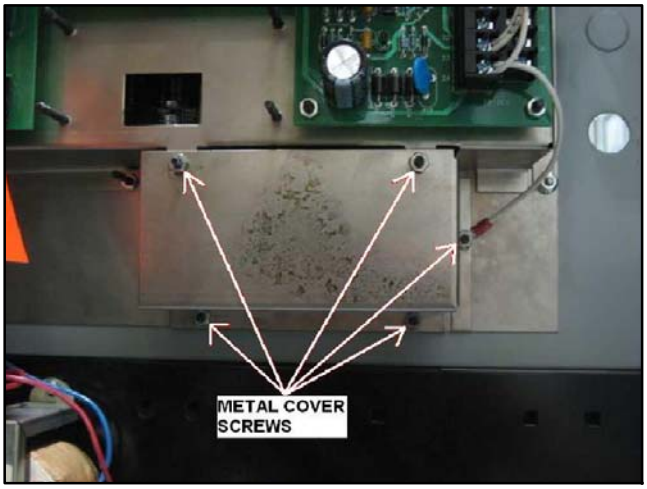


Figure 14 Remove Cover Screws

Figure 15 Cover Removed

13. Remove the controller and the lower panel.

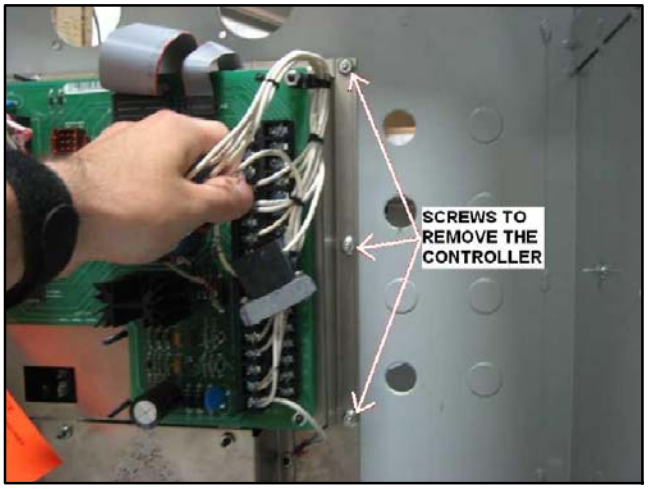


Figure 16 Remove Controller Screws

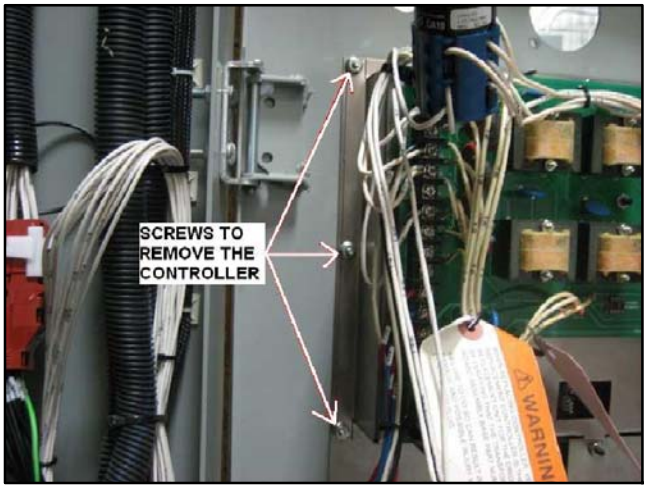


Figure 17 Remove Controller Screws

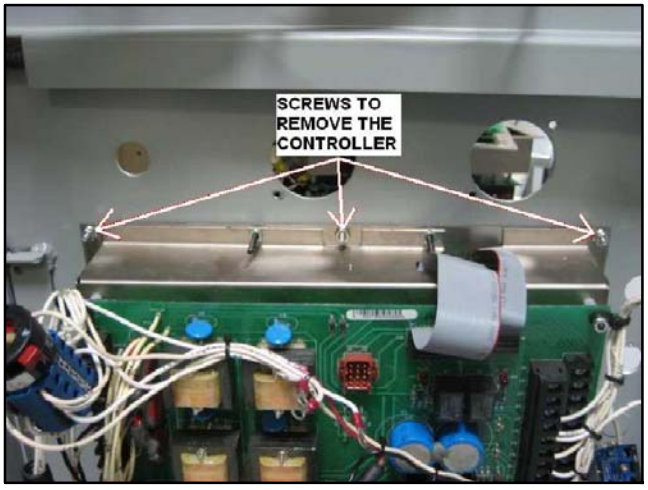


Figure 18 Remove Controller Screws

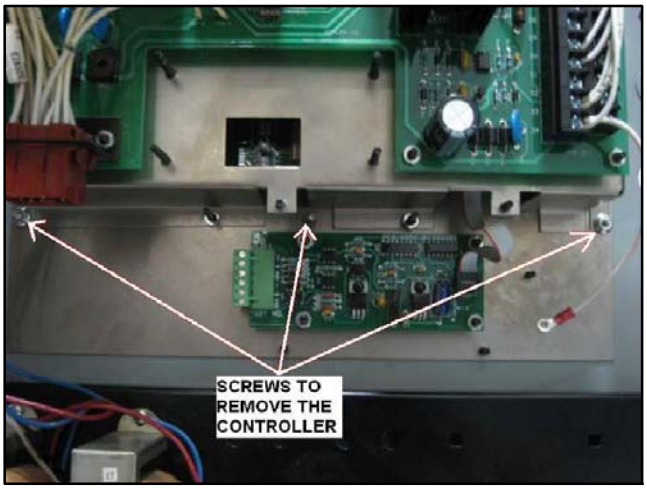


Figure 19 Remove Controller Screws

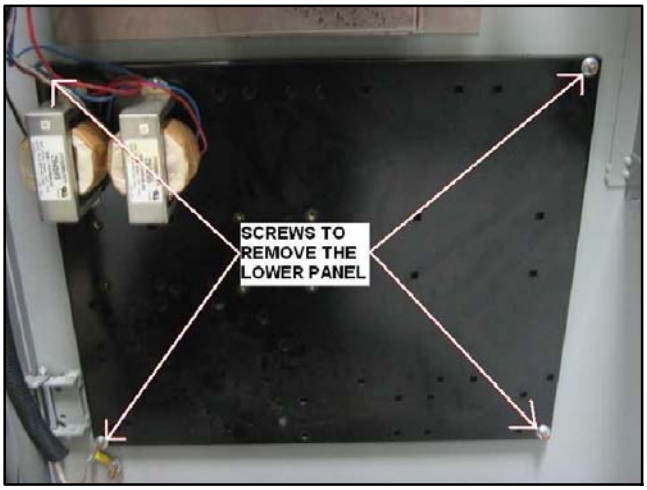


Figure 20 Remove Lower Panel Screws

Figure 21 Controller and Lower Panel Removed

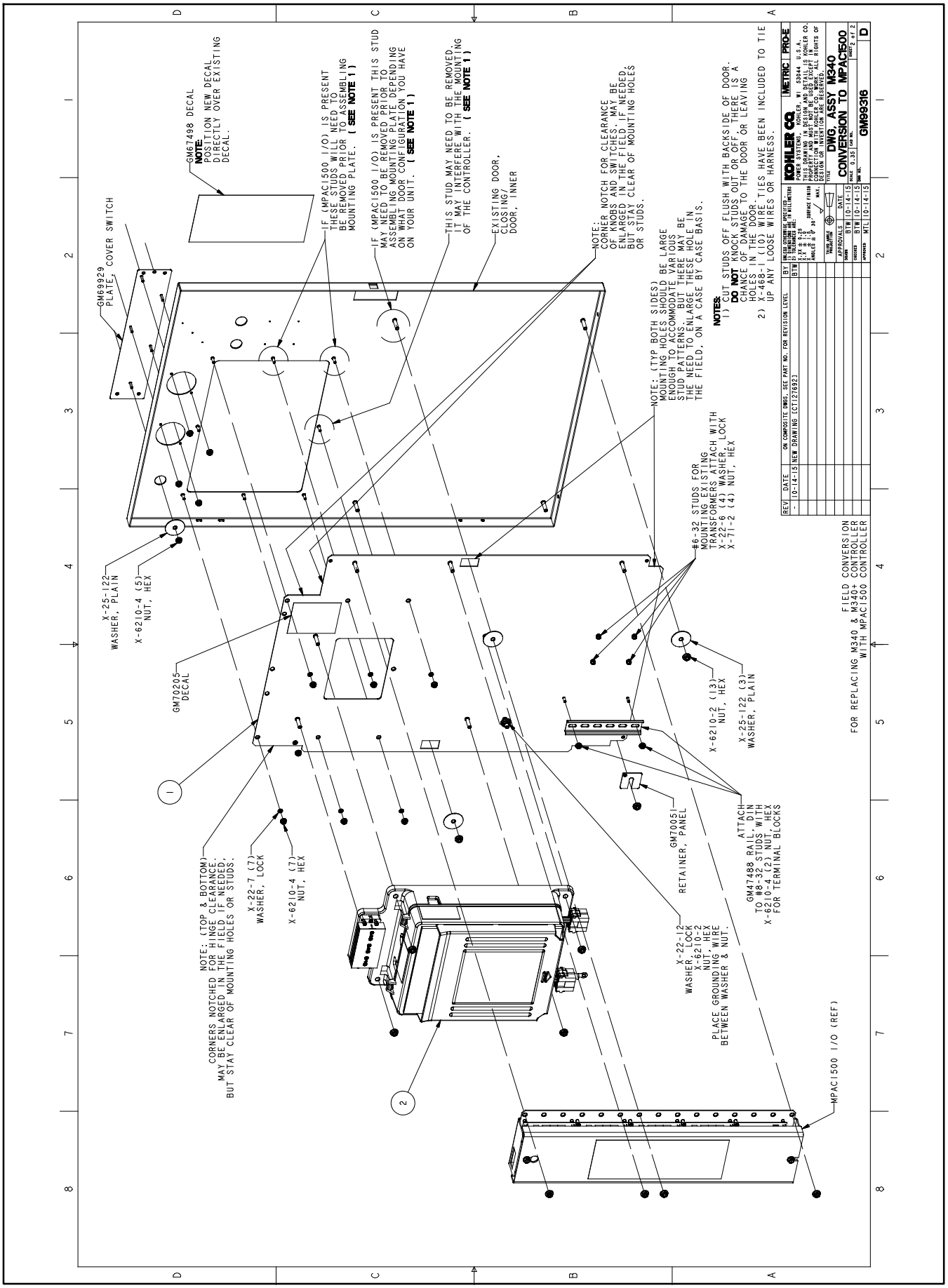


Figure 22 Conversion Kit Assembly

Note: Refer to the notes in Figure 22 before installing the mounting plate and switch cover plate.

14. Install the conversion kit mounting plate (GM99317). Use seven lock washers (X-22-7) and seven nuts (X-6210-4) to install the mounting plate as shown in Figure 22 and Figure 23. Install three flat washers (X-25-122) with three nuts (X-6210-2) as shown.

15. Install the DIN rail (GM47488) using two nuts (X-6210-4).

16. Install the panel retainer (GM70051).

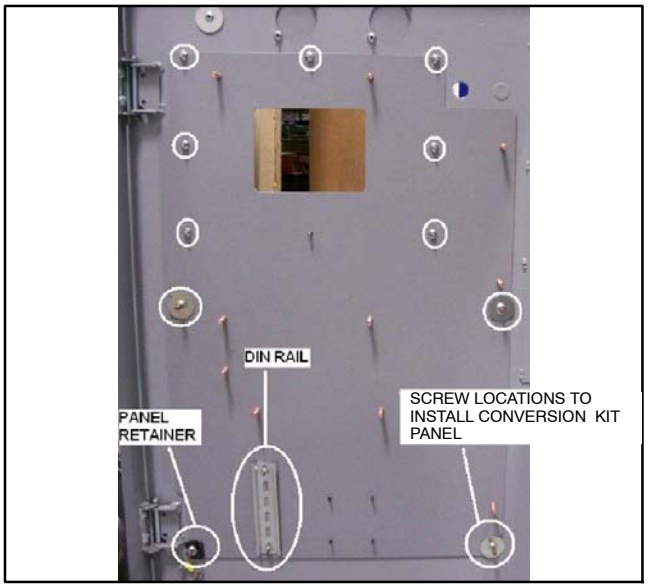


Figure 23 Mounting Plate Installation

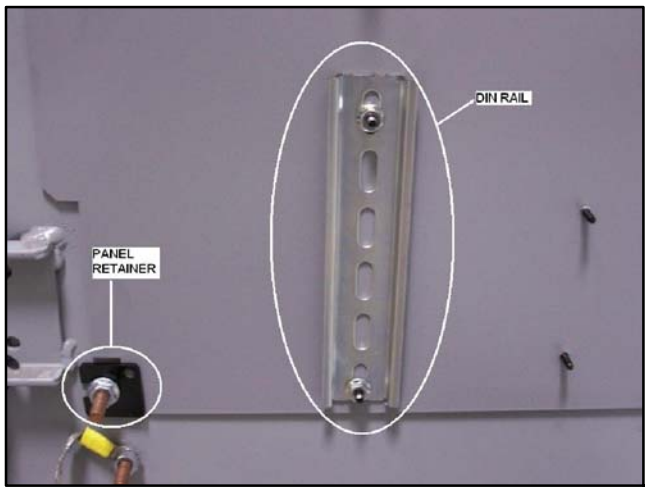


Figure 24 DIN Rail and Panel Retainer

17. Install the switch cover plate (GM69929). Use one washer (X-25-122) and five nuts (X-6210-4) to install the cover plate as shown in Figure 22 and Figure 25.

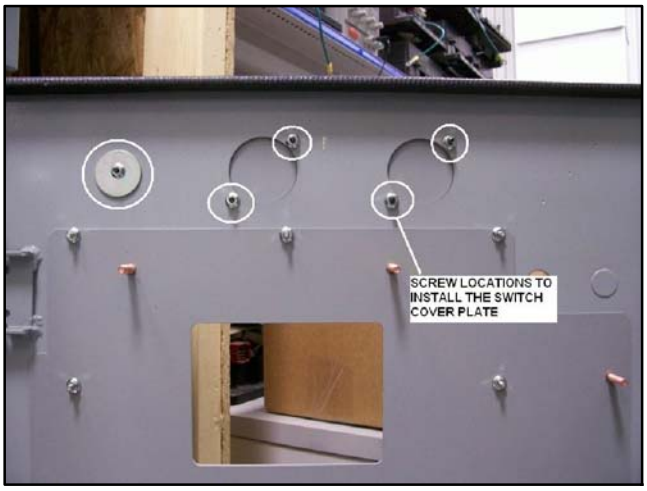
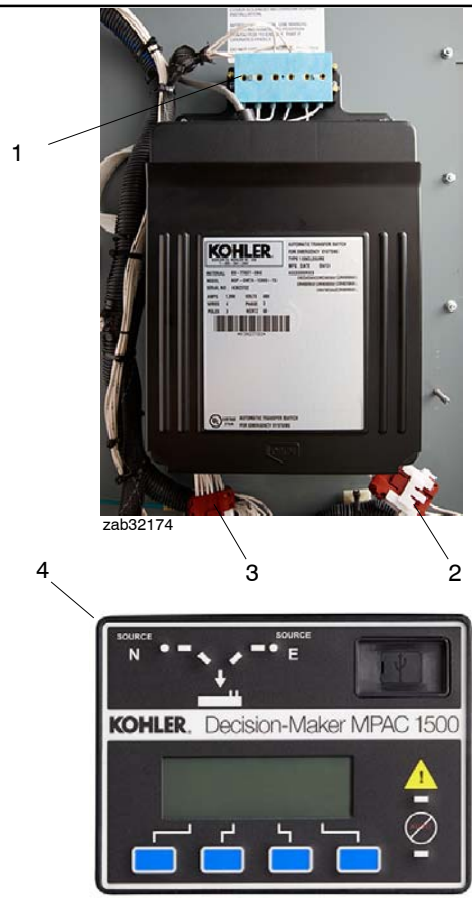


Figure 25 Switch Cover Plate GM69929

Figure 26 Door with Mounting Plate and Switch Cover Plate

Note: The illustrations in the following steps may not show the latest controller design. See Figure 27 for the updated current sensing kit terminal block, harness connection, and programmed-transition interface board connection.



1. Current sensing terminal block with insulation and harness (optional)
2. Programmed-transition interface board connection (programmed- and closed-transition models only)
3. Contactor harness
4. Controller user interface

Figure 27 Decision-Maker® MPAC Controller Updated Features

18. Install the Decision-Maker® MPAC 1500 controller controller assembly (GM85884-1) onto the conversion kit mounting plate using four nuts (X-6210-2). See Figure 28.

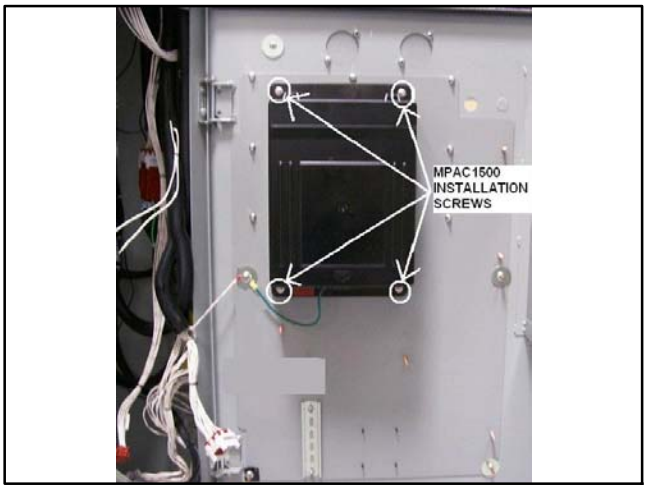
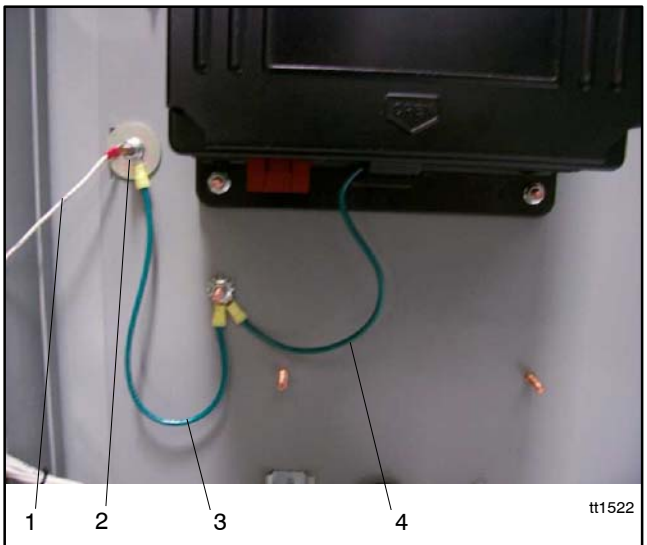


Figure 28 Controller Assembly Installation

19. See Figure 29 for ground connections. Use green grounding lead LK-1212-1515 to connect the ground stud on the conversion panel to the ground lug on the door. Using a lock washer (X-22-12), connect the ground wires to the ground stud on the door. Place the grounding wires between the washer and the nut.



1. Enclosure ground lead
2. Ground stud and hardware
3. Ground lead LK-1212-1515 (provided with kit)
4. Controller ground lead

Note: This illustration does not show the latest design for the contactor harness.

Figure 29 Ground Lead Connections

20. Use four lock washers (X-22-6) and four nuts (X-71-2) to re-install transformers NCPT and ECPT and the terminal block onto the conversion kit mounting plate.

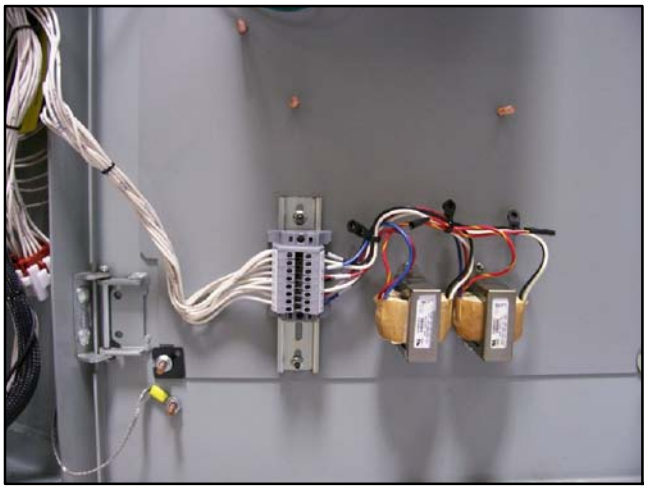


Figure 30 Transformer and Terminal Block Installation

Note: This photo does not show the latest controller design. See Figure 27.

Figure 31 Transformers and Terminal Block Installed

21. Remove the existing switchplate, if necessary. Affix conversion kit decal GM67498 (for disconnect switch) or GM70533 over the old decal on the outside of the ATS door.

Note: This photo does not show the latest controller design. See Figure 27.

Figure 32 Before Decal Installation

Note: This photo does not show the latest controller design. See Figure 27.

Figure 33 After Decal Installation (decal GM67498 shown)

Note: Photos on this page do not show the latest controller design. See Figure 27.

22. If the transfer switch was equipped with an Auto/Inhibit disconnect switch mounted on the enclosure door, re-install the disconnect switch through the conversion kit mounting plate. Otherwise, proceed to step 24.

Figure 34 Disconnect Switch Re-Installed

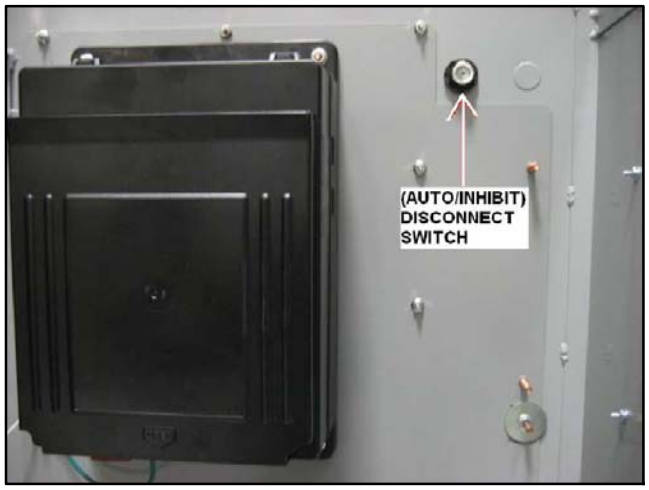


Figure 35 Disconnect Switch (inside door)

23. Connect the AUTO/INHIBIT disconnect switch.

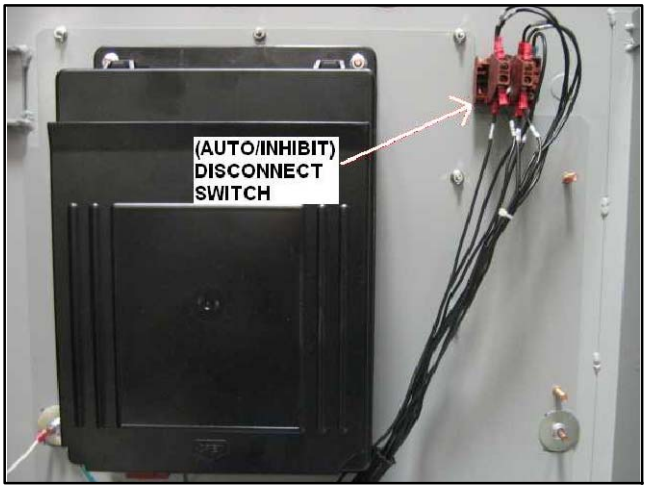


Figure 36 AUTO/INHIBIT Switch Connection

24. See Figure 38 for conversion kit wire harness GM69403 and Figure 37 for harness connections.

    Connect plug P24 of the conversion kit wire harness (GM69403) to J24 of the ATS harness, which was disconnected in step 10. Connect plug P1 of the conversion kit harness to the Decision-Maker® MPAC 1500 controller. Route the conversion kit wire harness appropriately using the cable ties provided.

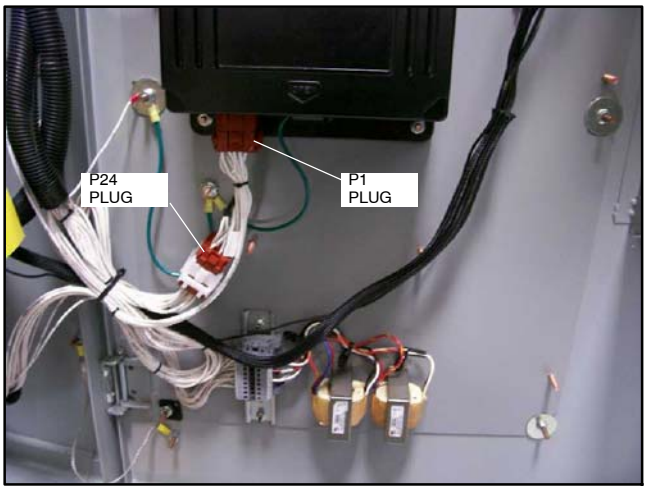


Figure 37 Conversion Kit Harness Connection to Controller Assembly

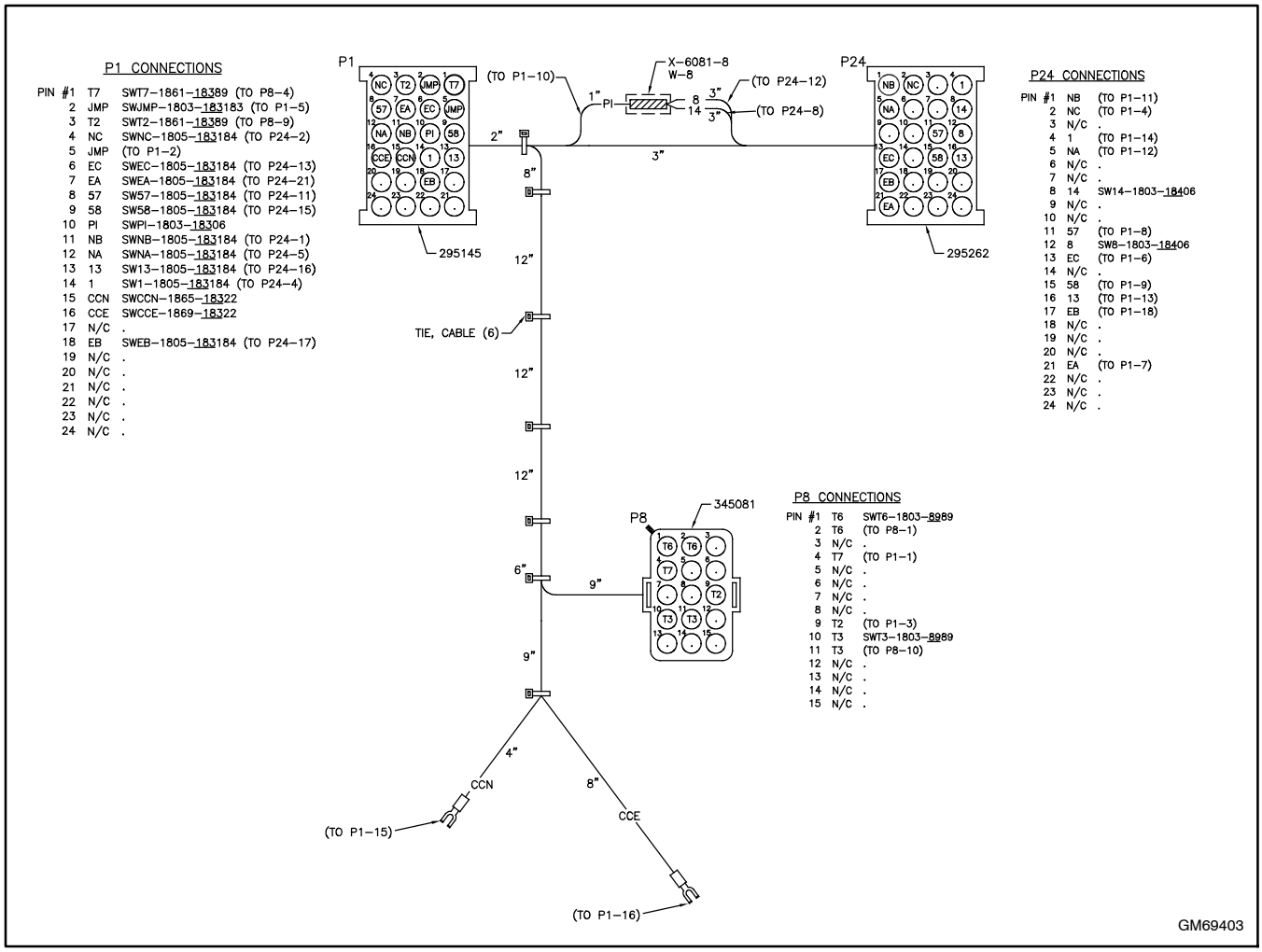


Figure 38 Conversion Kit Harness GM69403

25. Remove the upper plastic panel.

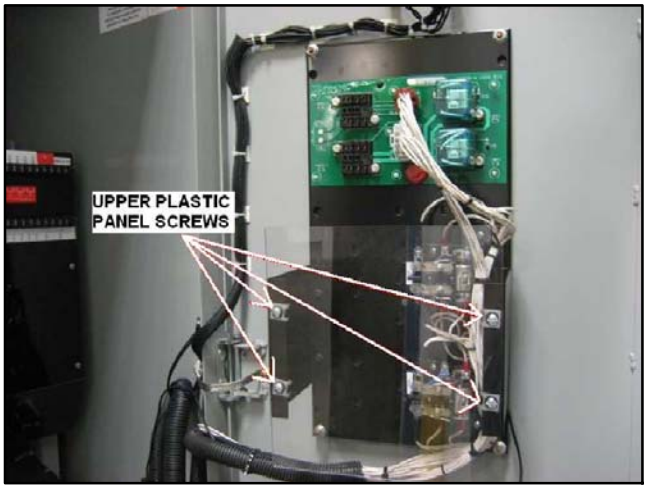


Figure 39 Plastic Panel on Upper Assembly

Figure 40 Upper Assembly with Plastic Panel Removed

26. Disconnect the leads labelled 33 from terminals CCN-1 and CCE-1. See Figure 41.

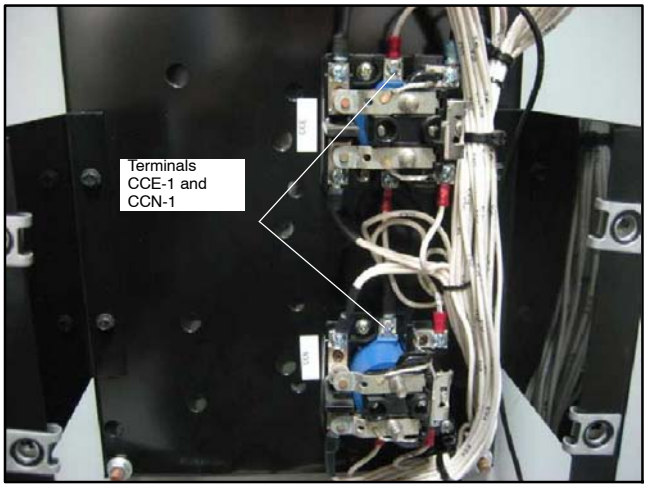


Figure 41 Disconnect Lead 33 from CCN-1 and CCE-1

27. Cut the terminal from the pair of leads marked 33 and separate the leads. See Figure 43. Discard the short jumper lead (33) that was connected from CCE-1 to CCN-1. See Figure 42. The remaining lead 33 will not be used.

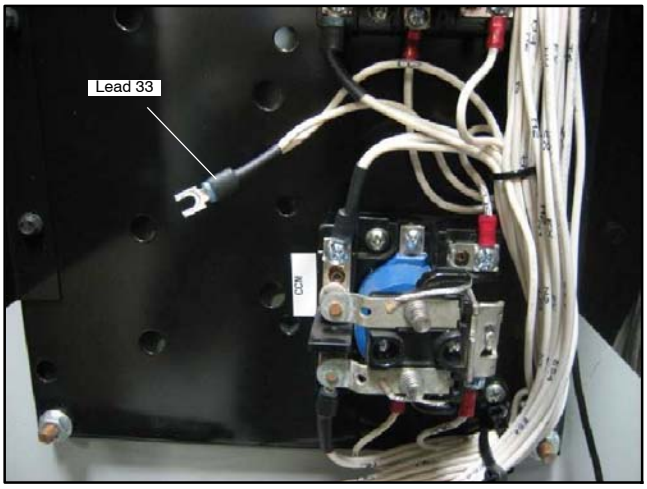


Figure 42 Cut Connector from Two Leads Labelled 33

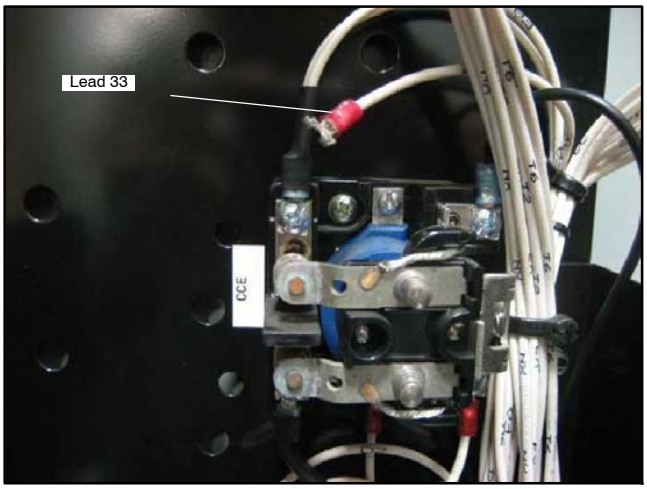


Figure 43 Single Jumper Lead 33 (separate and discard)

28. Disconnect plug P8 from the upper board.

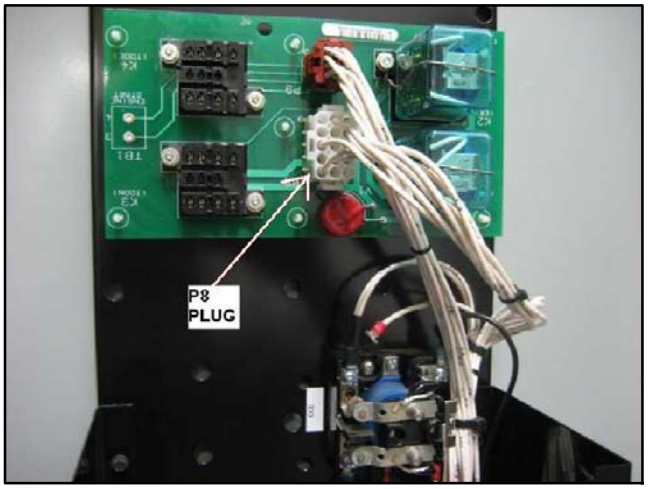


Figure 44 Disconnect Plug P8

29. Connect the conversion kit wire harness GM69403 to plug P8, which was disconnected from the upper board in the previous step.

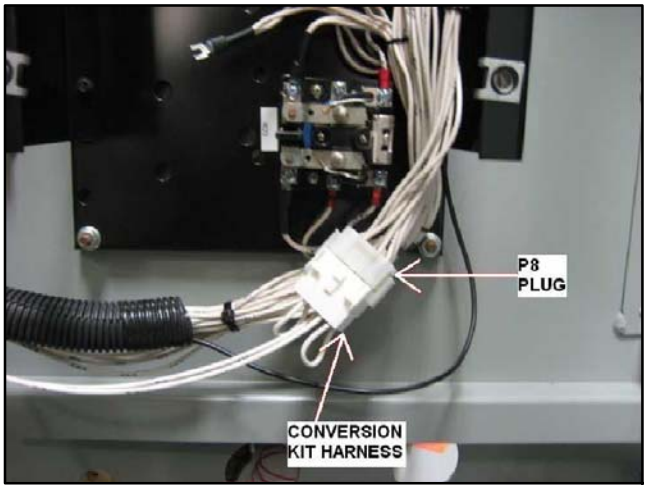


Figure 45 Connect Conversion Kit Wire Harness GM69403 to Plug P8

Figure 46 P8 has been disconnected from the upper board and connected to conversion kit harness GM69403.

30. Connect lead CCN from the conversion kit wire harness to CCN-1 on the CCN relay.

    Connect lead CCE from the conversion kit wire harness to CCE-1 on the CCE relay. Route the conversion kit wire harness appropriately using the cable ties provided.

Figure 47 CCN and CCE Relay Location

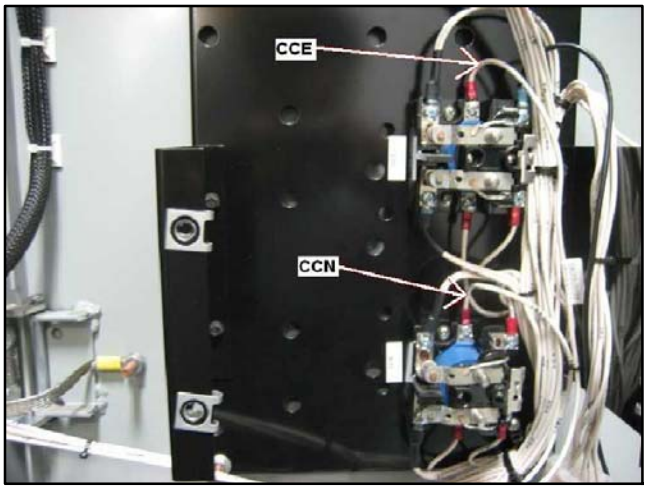


Figure 48 Connections to CCN and CCE Relays

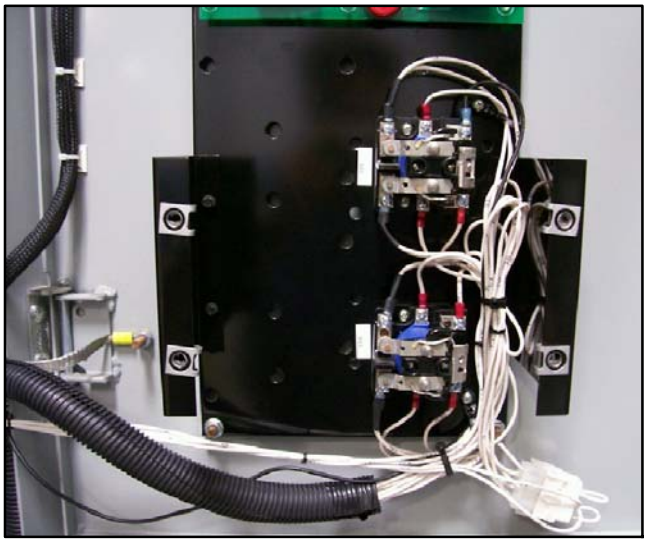


Figure 49 Harness Routing

31. Remove the circuit board from the upper panel.

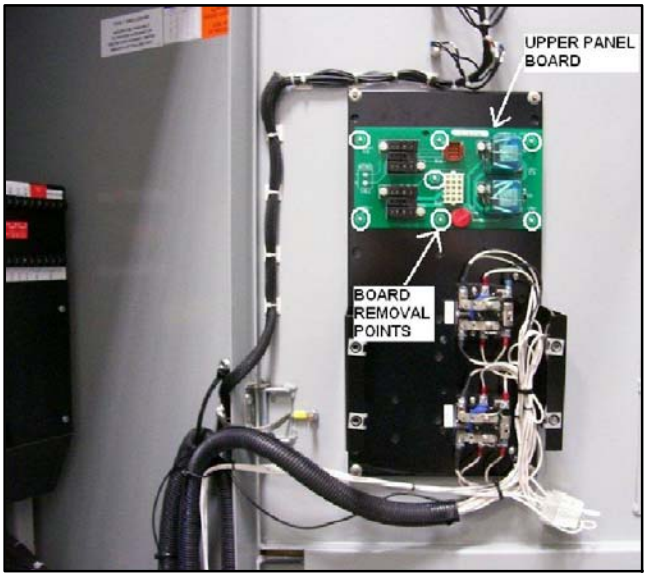


Figure 50 Remove the Upper Panel Circuit Board

Figure 51 Upper Circuit Board Removed

32. Re-install the upper plastic panel, and finish routing the conversion kit wire harness neatly using the cable ties provided.

Figure 52 Re-Install Plastic Panel

33. For current sensing, obtain the appropriately rated current sensing kit, and install according to Figure 55. Connect the current transformers as shown in Figure 56. See the Parts List at the end of this document for current sensing kit numbers.

34. Place decal GM70205 on the mounting plate as shown in Figure 54 and record the required information on the decal.

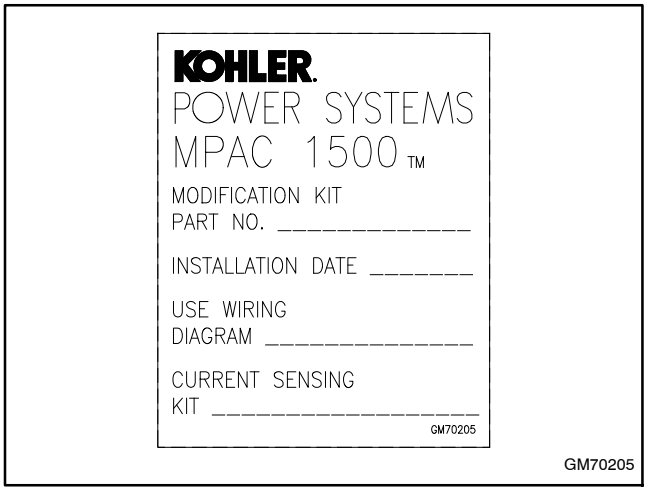


Figure 53 Decal GM70205

Note: This photo does not show the latest controller design. See Figure 27.

Figure 54 Decal GM70205 Location

35. The controller installation is now complete. For installation of optional accessories, refer to the instructions provided with the accessory kit or to the Decision-Maker® MPAC 1500 Operation/Installation manual, TP-6883.

36. Reconnect power to the transfer switch.

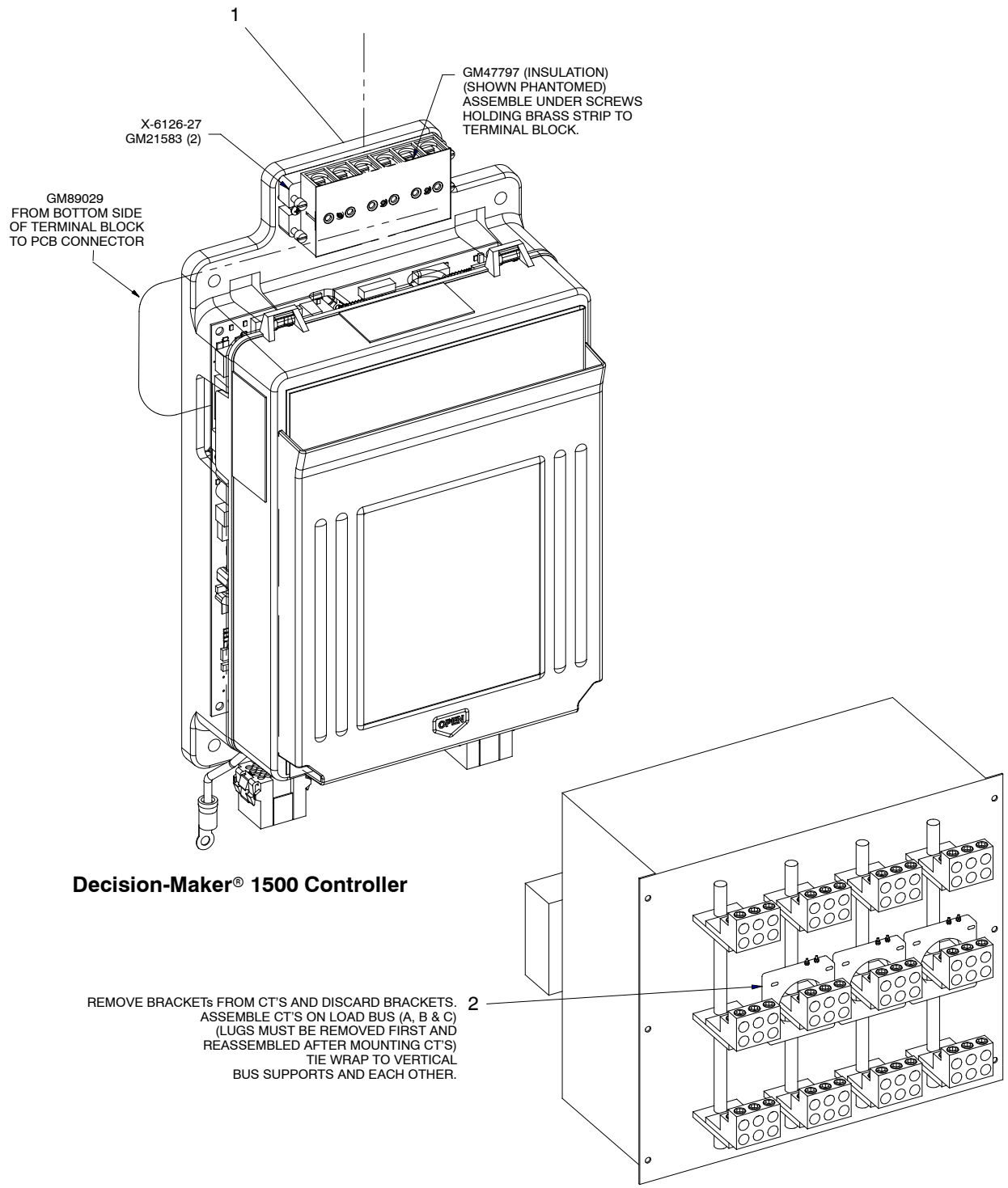
37. Check that the generator set master switch is in the OFF position.

38. Reconnect the generator set engine starting battery, negative (–) lead last.

39. Reconnect power to the battery charger, if equipped.

40. Program the MPAC1500 controller voltages, time delays, and system phases. See TP-6883, Operation Manual, for instructions.

41. Run the operation tests outlined in Operation Manual TP-6883 to verify system operation.



NOTES:

HI SIDE OF CT'S MUST ALWAYS FACE TOWARD THE CONTACTOR.
Route CT harness neatly to controller with controller/contactor harness. Use cable ties as necessary.
See wiring diagram GM47803 (Figure 56).

1. Connect harness GM40562 (10 ft. harness). See Figure 56 for electrical connections.
2. Current transformers. See Parts List for part numbers.

Figure 55 Current Sensing Kit Installation

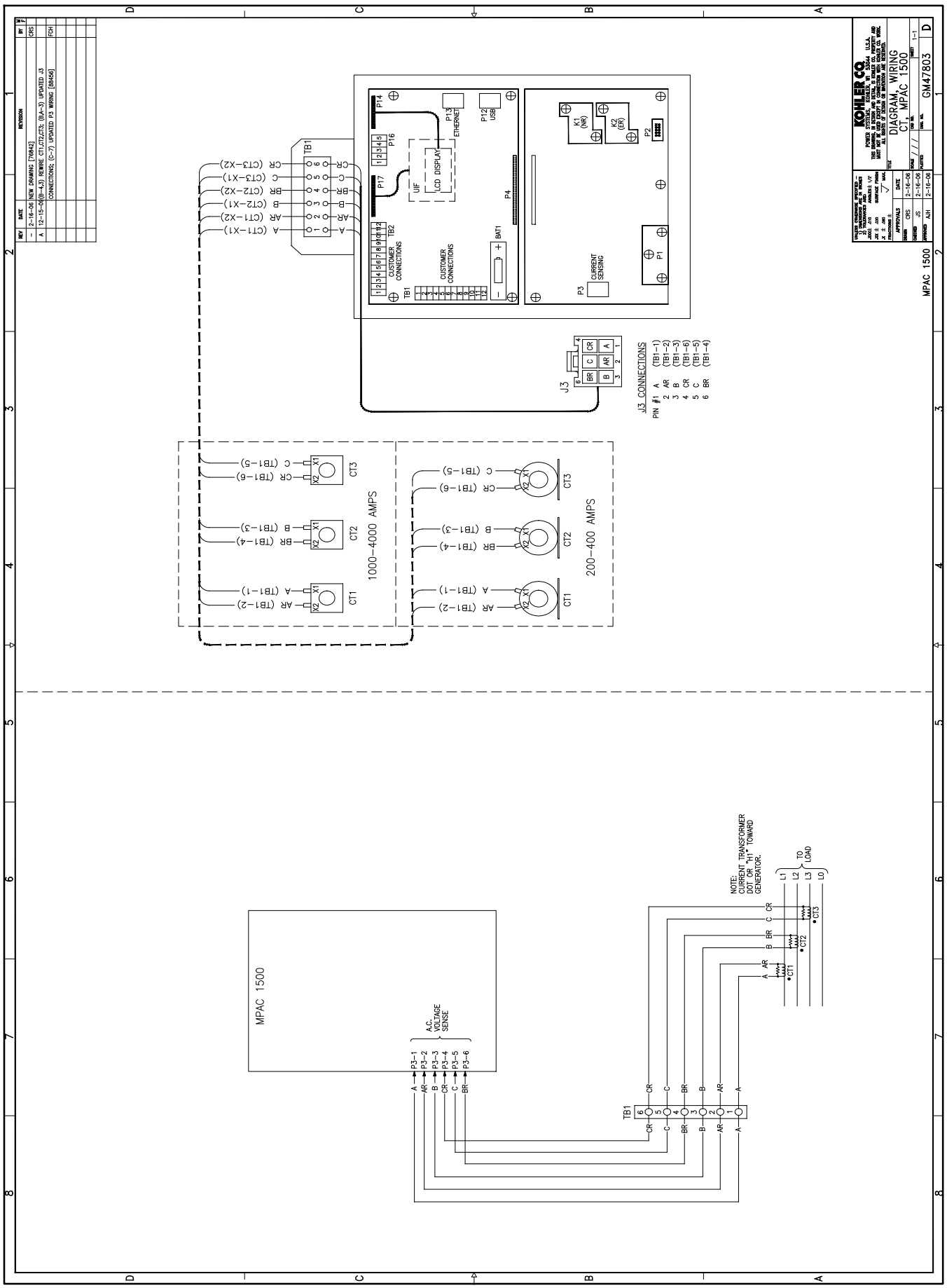


Figure 56 Current Sensing Kit Wiring Diagram, GM47803

Parts Lists

Conversion Kit, M340+ to Decision Maker® MPAC1500 (ZCS-5)

Kit: GM99316-S2		
Qty.	**Description**	**Part Number**
1	Rail, Din	GM47488
1	Harness, Wiring Controller	GM69403
1	Plate, Cover Switch	GM69929
1	Retainer, Panel	GM70051
1	Decal, Kohler Power Systems MPAC 1500	GM70205
1	Decal, ATS M340 To MPAC1500 Conversion	GM70355
1	MPAC1500 Assembly	GM85884-1
1	Plate, Mounting	GM99317
1	Lead	LK-1212-1515
1	O/I/M Model ZCS with MPAC 1500, ATS	TP-7039
1	O/M MPAC 1500 Controls , ATS	TP-6883
1	Installation Instructions	TT-1682
1	Washer, lock.262 ID x.743 in.OD	X-22-12
5	Washer, lock.146 ID x .285 in.OD	X-22-6
8	Washer, lock.172 ID x.333 in.OD	X-22-7
5	Washer, plain, .312 ID x 1.5 in. OD	X-25-122
10	Cable tie	X-468-1
2	Cable tie, nylon	X-468-3
10	Nut, flange spiralock, 1/4-20	X-6210-2
15	Nut, flange whiz, 8-32	X-6210-4
5	Nut, hex machine screw, 6-32	X-71-2

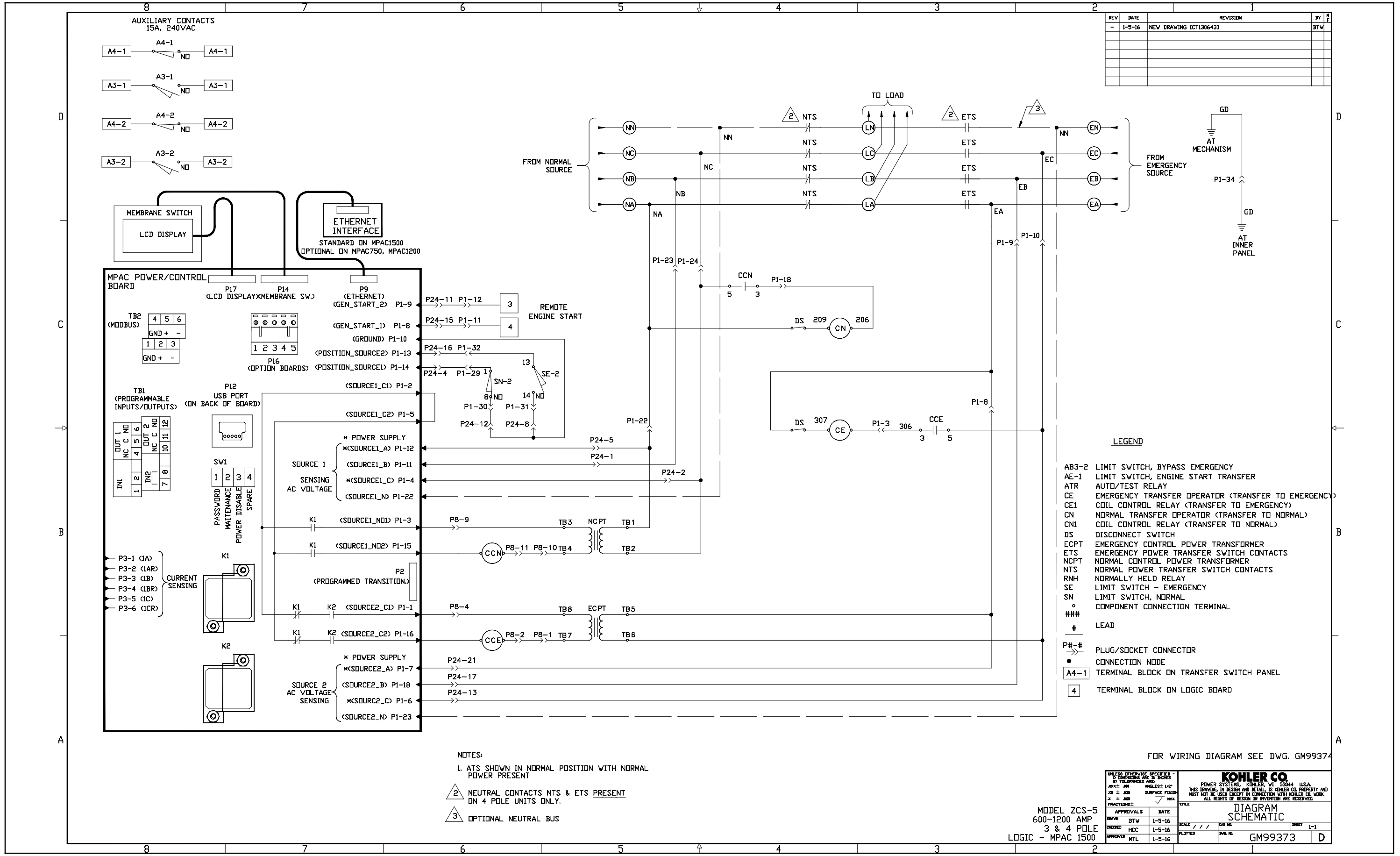
Wiring Diagrams

The schematic and wiring diagrams for the transfer switch with Decision-Maker® MPAC 1500 controls are arranged in alpha-numeric order on the following pages.

Drawing Description	Drawing Number
Schematic, 600–1200 A	GM99373
Wiring Diagram, 600–1200 A	GM99374
Schematic, 1600–3000 A	GM99375
Wiring Diagram, 1600–3000 A	GM99376

Current Sensing Kit Parts

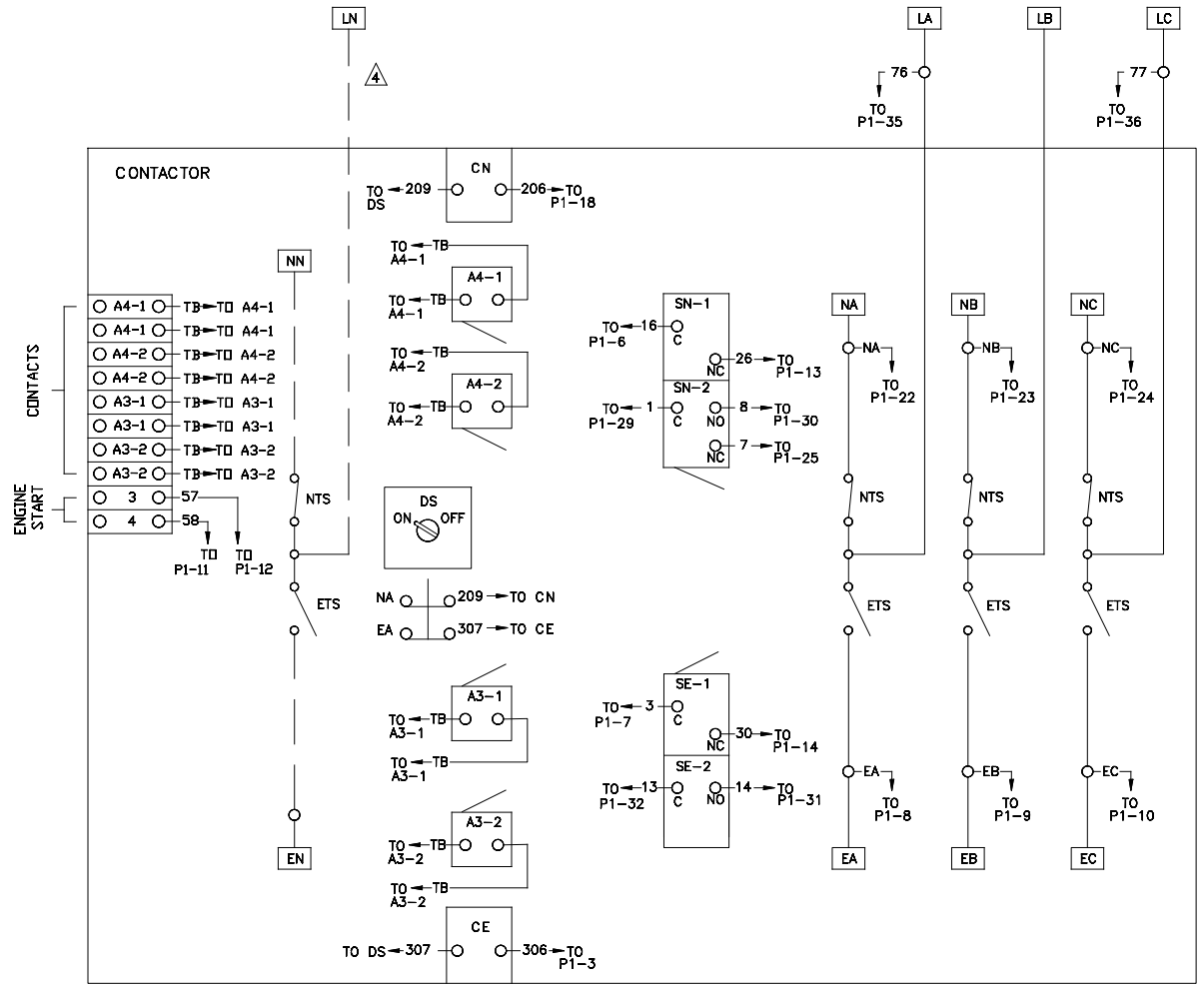
Description	Part Number	Part Quantity					
		Kit number GM89028:					
		-S8	-S11	-S15	-S17	-S26	-S28
		1000 A 3 ph	1200 A 3 ph	2000 A 3 ph	3000 A 3 ph	1000 A 1 ph	1200 A 1 ph
Screw, Plastic Tapping	GM21583	2	2	2	2	2	2
Harness, CT 10 FT.	GM40562	1	1	1	1	1	1
Transformer, Current	GM47788						
Transformer, Current	GM47789						
Transformer, Current	GM47790	3				3	
Transformer, Current	GM47791		3				2
Transformer, Current	GM47792			3			
Transformer, Current	GM47793				3		
Insulation, Terminal Block	GM47797	1	1	1	1	1	1
Bracket, CT Mounting	GM47800						1
Diagram, Wiring CT MPAC 1500	GM47803	1	1	1	1	1	1
Drawing, Assembly Current Sensing	GM89028	1	1	1	1	1	1
Harness, CT	GM89029	1	1	1	1	1	1
Terminal Block	X-6126-27	1	1	1	1	1	1
Nut, Flange Spirallock	X-6210-2						4
Screw, Thread Forming	X-67-114						8



REV	DATE	REVISION	BY	N F
-	1-5-16	NEW DRAWING (CT1306643)	BTW	

Schematic Diagram, ZCS Standard Transition with Decision-Maker® MPAC 1500 Controls, 600-1200 Amps, GM99373

REV	DATE	REVISION	BY	N F
–	12-21-15	NEW DRAWING [CT130643]	BTW	

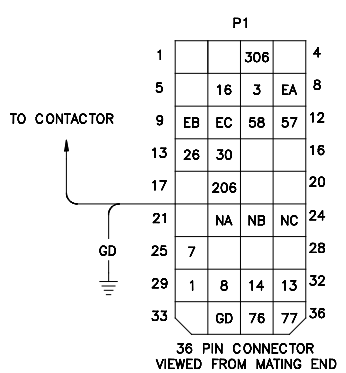


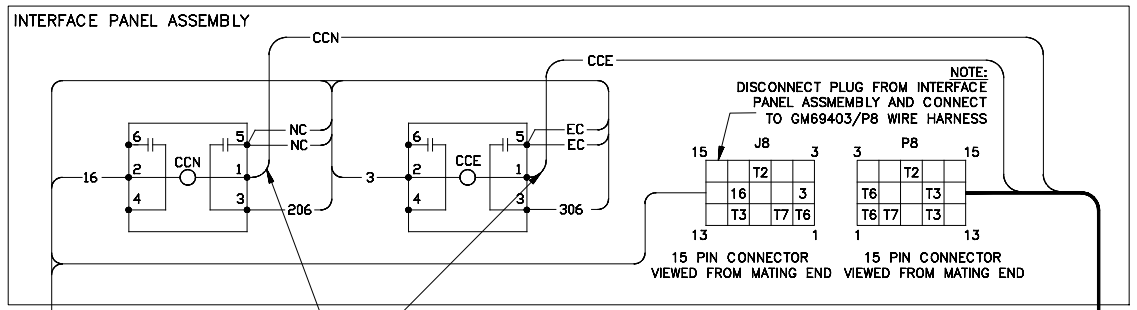
NOTES

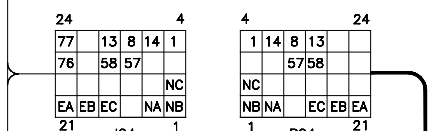
1. SWITCH SHOWN DE-ENERGIZED CONNECTED TO NORMAL SOURCE.
2. OPERATORS MANUAL IS FURNISHED WITH EACH AUTOMATIC TRANSFER SWITCH REFER TO THIS PUBLICATION PRIOR TO INSTALLATION AND OPERATION OF THE SWITCH.
3. ALL PLUGS & SOCKETS VIEWED FROM MATING SIDE.
4. NEUTRAL NOT USED ON 3 WIRE SYSTEMS.

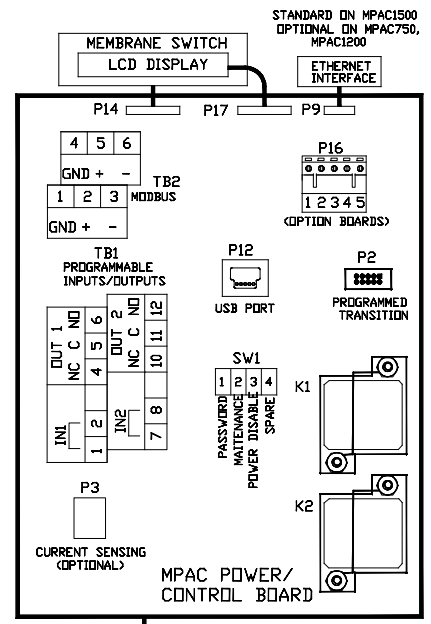
LEGEND

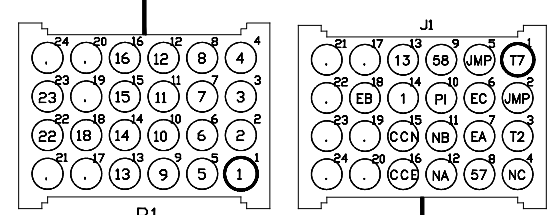
CE	EMERGENCY TRANSFER OPERATOR (TRANSFER TO EMERGENCY)
CCE	COIL CONTROL RELAY (TRANSFER TO EMERGENCY)
CN	NORMAL TRANSFER OPERATOR (TRANSFER TO NORMAL)
CCN	COIL CONTROL RELAY (TRANSFER TO NORMAL)
DS	DISCONNECT SWITCH
ECPT	EMERGENCY CONTROL POWER TRANSFORMER
ETS	EMERGENCY POWER TRANSFER SWITCH CONTACTS
NCPT	NORMAL CONTROL POWER TRANSFORMER
NTS	NORMAL POWER TRANSFER SWITCH CONTACTS
UIF	CONTROLLER USER INTERFACE
SE	LIMIT SWITCH – EMERGENCY
SN	LIMIT SWITCH – NORMAL
TB	TERMINAL BLOCK
P	PLUG

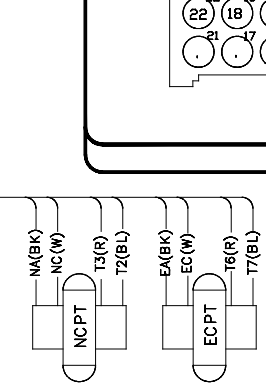












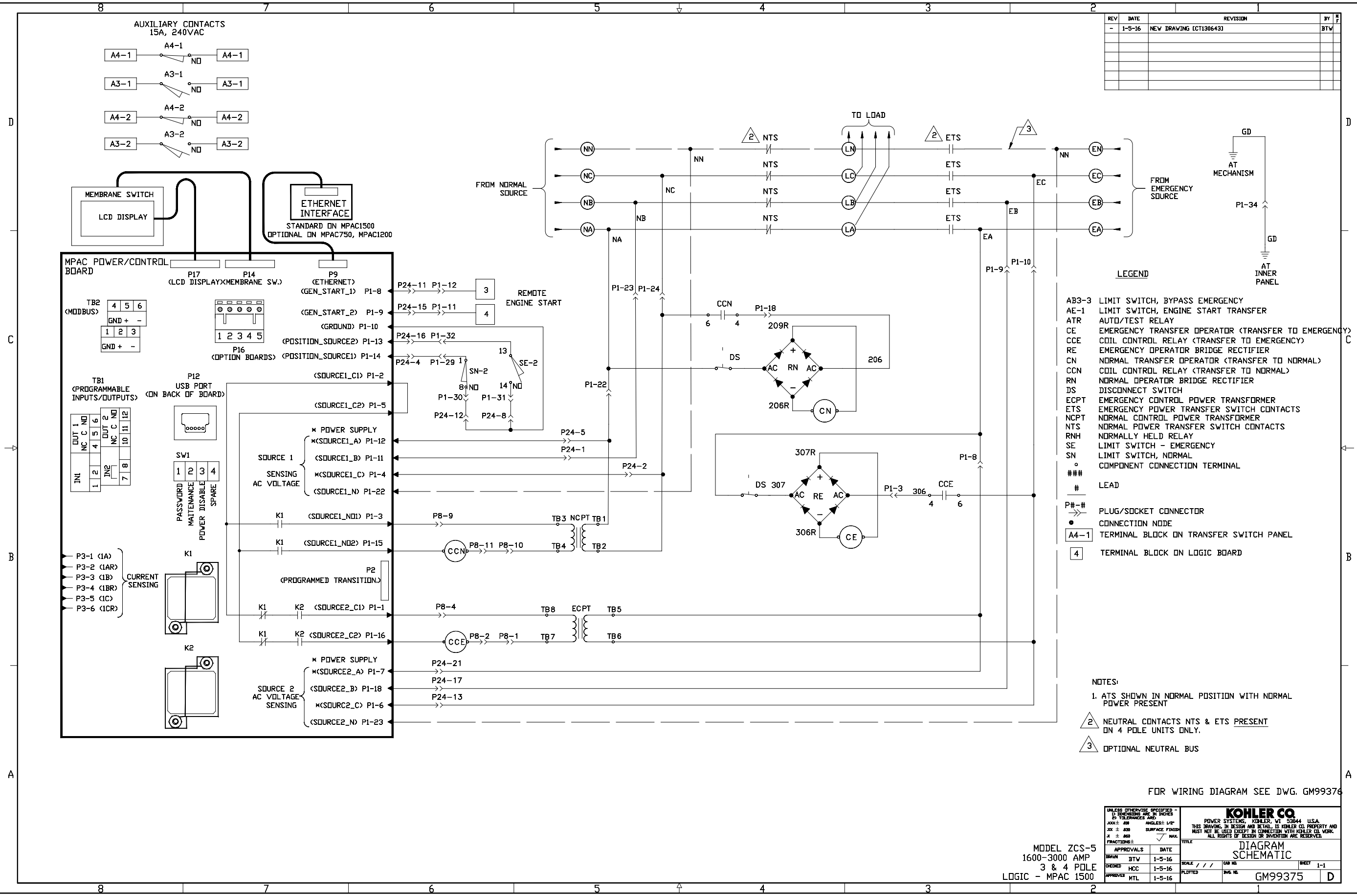
MODEL ZCS-5
600-1200 AMP
3 & 4 POLE, LOGIC - MPAC 1500
FOR SCHEMATIC SEE DWG. GM99373

UNLESS OTHERWISE SPECIFIED - DIMENSIONS ARE IN INCHES - TOLERANCES ARE: .XXX ± .010, .XX ± .020, .X ± .040, FRACTIONS ±, ANGLES ± 1/2°, SURFACE FINISH 125 MAX.

APPROVALS		DATE
DRAWN	BTW	12-21-15
CHECKED	HCC	12-21-15
APPROVED	MTL	12-21-15

TITLE: DIAGRAM, WIRING
SCALE: / / /
SHEET 1-1
DWG. NO. GM99374 D

Wiring Diagram, ZCS Standard Transition with Decision-Maker® MPAC Controls, 600-1200 Amps, GM99374



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LEGEND

AB3-3	LIMIT SWITCH, BYPASS EMERGENCY
AE-1	LIMIT SWITCH, ENGINE START TRANSFER
ATR	AUTO/TEST RELAY
CE	EMERGENCY TRANSFER OPERATOR (TRANSFER TO EMERGENCY)
CCE	COIL CONTROL RELAY (TRANSFER TO EMERGENCY)
RE	EMERGENCY OPERATOR BRIDGE RECTIFIER
CN	NORMAL TRANSFER OPERATOR (TRANSFER TO NORMAL)
CCN	COIL CONTROL RELAY (TRANSFER TO NORMAL)
RN	NORMAL OPERATOR BRIDGE RECTIFIER
DS	DISCONNECT SWITCH
ECPT	EMERGENCY CONTROL POWER TRANSFORMER
ETS	EMERGENCY POWER TRANSFER SWITCH CONTACTS
NCPT	NORMAL CONTROL POWER TRANSFORMER
NTS	NORMAL POWER TRANSFER SWITCH CONTACTS
RNH	NORMALLY HELD RELAY
SE	LIMIT SWITCH - EMERGENCY
SN	LIMIT SWITCH, NORMAL
° ###	COMPONENT CONNECTION TERMINAL
#	LEAD
P#-#	PLUG/SOCKET CONNECTOR
•	CONNECTION NODE
A4-1	TERMINAL BLOCK ON TRANSFER SWITCH PANEL
4	TERMINAL BLOCK ON LOGIC BOARD

NOTES:

1. ATS SHOWN IN NORMAL POSITION WITH NORMAL POWER PRESENT
2. NEUTRAL CONTACTS NTS & ETS PRESENT ON 4 POLE UNITS ONLY.
3. OPTIONAL NEUTRAL BUS

FOR WIRING DIAGRAM SEE DWG. GM99376

MODEL ZCS-5
1600-3000 AMP
3 & 4 POLE
LOGIC - MPAC 1500

APPROVALS	DATE
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APPROVED MTL	1-5-16

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SCALE: / / /
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SHEET 1-1
PLOTTED
DWG NO. GM99375 D

Schematic Diagram, Model ZCS Standard Transition with Decision-Maker® MPAC 1500 Controls, 1600-3000 Amps, GM99375

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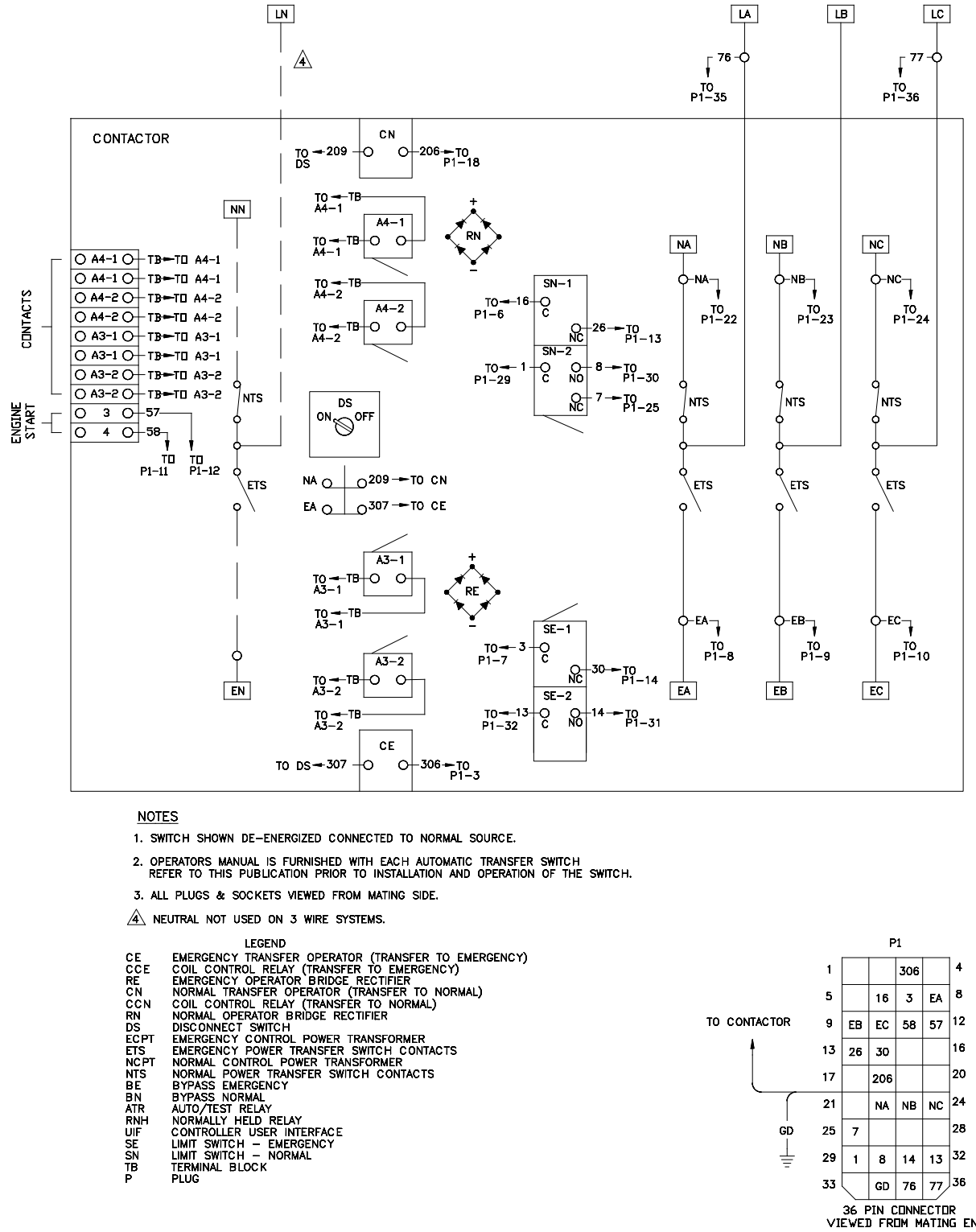

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LEGEND

CE	EMERGENCY TRANSFER OPERATOR (TRANSFER TO EMERGENCY)
CCE	COIL CONTROL RELAY (TRANSFER TO EMERGENCY)
RE	EMERGENCY OPERATOR BRIDGE RECTIFIER
CN	NORMAL TRANSFER OPERATOR (TRANSFER TO NORMAL)
CCN	COIL CONTROL RELAY (TRANSFER TO NORMAL)
RN	NORMAL OPERATOR BRIDGE RECTIFIER
DS	DISCONNECT SWITCH
ECPT	EMERGENCY CONTROL POWER TRANSFORMER
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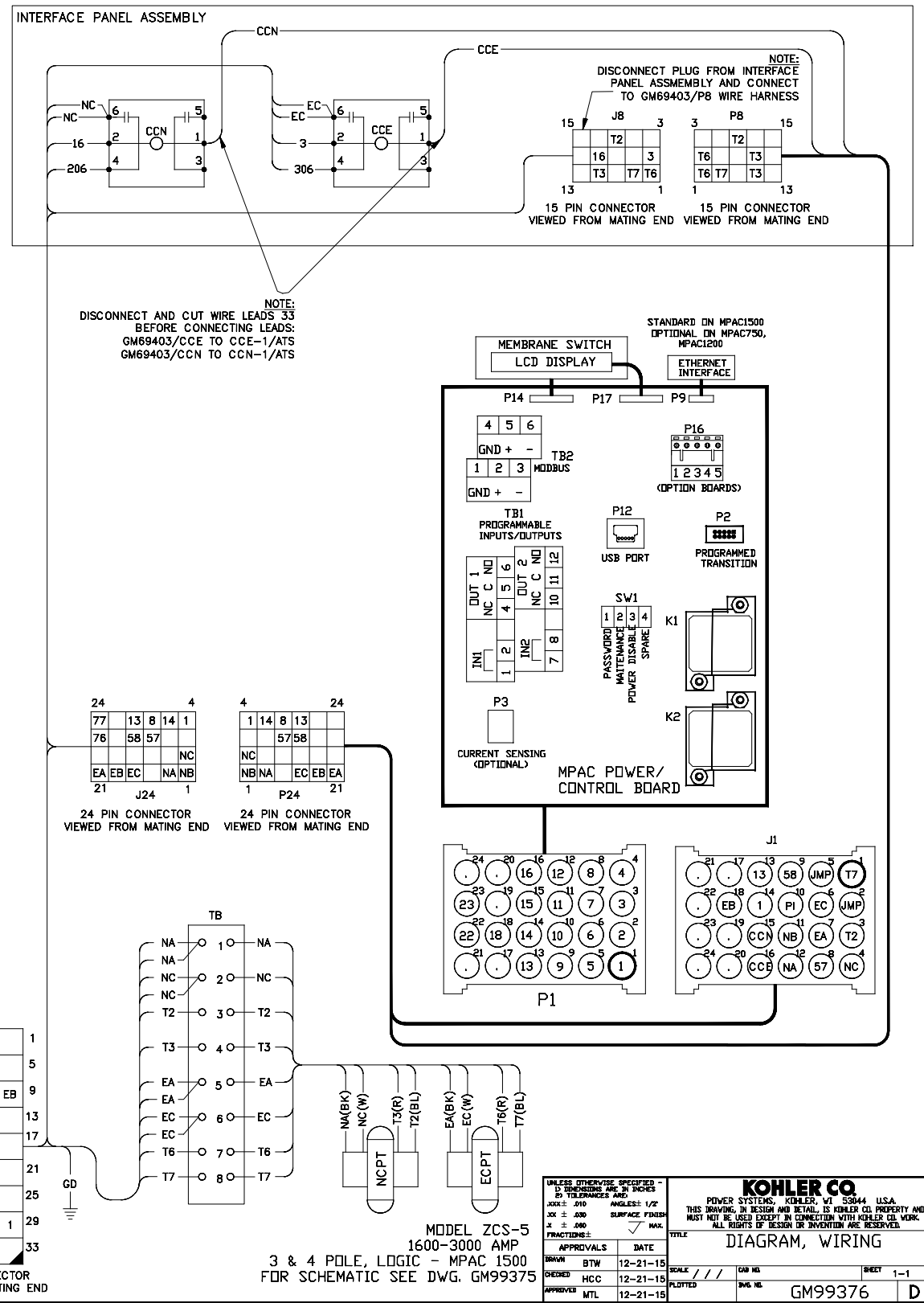
NCPT	NORMAL CONTROL POWER TRANSFORMER
NTS	NORMAL POWER TRANSFER SWITCH CONTACTS
BE	BYPASS EMERGENCY
BN	BYPASS NORMAL
ATR	AUTO/TEST RELAY
RNH	NORMALLY HELD RELAY
UIF	CONTROLLER USER INTERFACE
SE	LIMIT SWITCH – EMERGENCY
SN	LIMIT SWITCH – NORMAL
TB	TERMINAL BLOCK
P	PLUG

P1

1			306		4
5		16	3	EA	8
9	EB	EC	58	57	12
13	26	30			16
17		206			20
21		NA	NB	NC	24
25	7				28
29	1	8	14	13	32
33		GD	76	77	36

TO CONTACTOR

36 PIN CONNECTOR VIEWED FROM MATING END



MODEL ZCS-5
1600-3000 AMP
3 & 4 POLE, LOGIC – MPAC 1500
FOR SCHEMATIC SEE DWG. GM99375

UNLESS OTHERWISE SPECIFIED – DIMENSIONS ARE IN INCHES – TOLERANCES ARE: FRACTIONS ± ; .XXX ± .010 ; .XX ± .030 ; .X ± .090 ; ANGLES ± 1/2° ; SURFACE FINISH MAX.

APPROVALS		DATE
DRAWN	BTW	12-21-15
CHECKED	HCC	12-21-15
APPROVED	MTL	12-21-15

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SCALE: / / / | CAD NO. | SHEET 1–1

PLOTTED | DWG. NO. GM99376 | D

Wiring Diagram, Model ZCS Standard Transition with Decision-Maker® MPAC 1500 Controls, 1600-3000 Amps, GM99376