

- 25 SYNC CHECK RELAY
- 27/59 OVER/UNDER VOLTAGE
- 32 REVERSE POWER RELAY
- 40 LOSS OF EXCITATION RELAY
- 47 UNDERVOLTAGE PHASE SEQUENCE RELAY
- 50 INSTANTANEOUS OVERCURRENT RELAY
- 51 TIME OVERCURRENT RELAY
- 52 CIRCUIT BREAKER
- 59 OVERVOLTAGE RELAY
- 62 TIME DELAY RELAY
- 65 GOVERNOR
- 810/U OVER/UNDER FREQUENCY RELAY
- 86 LOCKOUT RELAY
- 87 DIFFERENTIAL RELAY
- A AMPERE
- A4-E4 ADEM ENGINE CONTROLLER
- AC ALTERNATING CURRENT
- ADEM ADVANCED DIGITAL ENGINE MANAGEMENT
- AI ANALOG INPUT
- ALT ALTERNATOR
- AMR AUTO MODE RELAY (EMCP IN AUTO)
- ANNUN ANNUNCIATOR
- AO ANALOG OUTPUT
- ASR AUTO START RELAY
- AR ARBITRATION RELAY
- ATS AUTOMATIC TRANSFER SWITCH
- AUX AUXILIARY
- AUTO AUTOMATIC
- BATT BATTERY
- BBSR BEST BATTERY SOURCE RELAY
- BC BATTERY CHARGER
- B- BATTERY NEGATIVE
- B+ BATTERY POSITIVE
- CAE COMMON ALARM RELAY
- CB CIRCUIT BREAKER
- CBG CIRCUIT BREAKER CLOSE
- CBOR CIRCUIT BREAKER OPEN RELAY
- CBS CIRCUIT BREAKER SWITCH
- CBT CIRCUIT BREAKER TRIP
- CDL CAT DATA LINK
- CDVR CATERPILLAR DIGITAL VOLTAGE REGULATOR
- CDTR COOLDOWN TIMER RELAY
- CLFSD CRITICAL LOW FUEL SHUTDOWN
- CONN CONNECTOR
- CT CURRENT TRANSFORMER
- CTR CRANK TERMINATION RELAY
- CTSB CT SHORTING BLOCK
- D DIODE
- DBR DEAD BUS RELAY
- DDI DEDICATED DIGITAL INPUT
- DI DIGITAL INPUT
- DDI DEDICATED ISOLATED DIGITAL INPUT
- DIO DIGITAL INPUT/OUTPUT MODULE
- DO DIGITAL OUTPUT
- DSS DOOR SAFETY SWITCH (RADIATOR)
- ECM ENGINE CONTROL MODULE
- EMCP ELECTRONIC MODULAR CONTROL PANEL
- EPR EMCP POWER RELAY
- ERR ENGINE RUN RELAY
- ESPB EMERGENCY STOP BUTTON
- E-STOP EMERGENCY STOP
- EXC EXCITER
- EXT EXTERNAL
- F FUSE
- FCS FUEL TRANSFER CONTROL SWITCH
- FLG FUEL LEVEL GAUGE
- FLT FAULT
- FMS FUEL TRANSFER MODE SWITCH
- FS FUEL SENSOR
- FAR FUEL ALARM RELAY
- FMR FREQUENCY MODE RELAY
- FMRX FREQUENCY MODE RELAY SLAVE
- FTR FUEL TANK RUPTURE
- G3R GROUP 3 RELAY
- GCB GEN CIRCUIT BREAKER
- GCBR GENERATOR CIRCUIT BREAKER RELAY
- GCM GAUGE CONTROL MODULE
- GCT GROUND SENSE CURRENT TRANSFORMER
- GEN (G) GENERATOR
- GMR GENERATOR MULTIFUNCTION RELAY
- GND GROUND
- GPC GENERATOR PARALLELING CONTROL
- GSH GENERATOR SPACE HEATER
- GSHR GENERATOR SPACE HEATER RELAY

- GRR GLOBAL RUN REQUEST
- HC HEATER CONTACTOR
- HWDBA HARD WIRED DEAD BUS ARBITRATION
- HWL.SLD HARD WIRED LOAD SENSE LOAD DEMAND
- HVL HIGH VOLTAGE LIGHT
- IDI ISOLATED DIGITAL INPUT
- IRS IDLE/RATED SWITCH
- JWH JACKET WATER HEATER
- KW KILOWATT
- LBR LINKBOARD RELAY
- LBS LINKBOARD SWITCH
- LDS LOAD DOOR SOLENOID
- LDSRB LOAD DOOR SOLENOID RESISTOR BOARD
- LFLSA LDW FUEL LEVEL SWITCH ALARM
- LMR LEGACY MODE RELAY
- LR LOAD RELAY (FUEL)
- LRX LOAD RELAY SLAVE (FUEL)
- LVL LDW VOLTAGE LIGHT
- MAN MANUAL
- MCH SPRING CHARGING MOTOR (GCB)
- MCM 1000 CIRCULAR MILS
- MMR MANUAL MODE RELAY (EMCP IN RUN)
- MN UNDERVOLTAGE TRIP (GCB)
- MPU MAGNETIC PICK-UP
- NAC NORMAL AFTER CLOSE
- NAT NORMAL AFTER TRIP
- N.C. NORMALLY CLOSED
- NIA NOT IN AUTO
- NEU (N) NEUTRAL
- N.O. NORMALLY OPEN
- DFS OVERFLOW SWITCH (FUEL TANK)
- DIP OPERATOR INTERFACE PANEL
- DMR OFF MODE RELAY (EMCP IN OFF)
- DVL OVERLOAD
- PAR PARALLELED WITH UTILITY RELAY
- PCS PARALLELING CONTROLS SWITCH (ON/OFF)
- PICR PARALLELING INTERCONNECT RELAY
- PICRX PARALLELING INTERCONNECT RELAY SLAVE
- PIR PARALLELING INHIBIT RELAY
- PF POWER FACTOR
- PLL PUMP LOAD LIGHT
- PS PINION SOLENOID
- PSHD PRIMARY UNIT SHIELD
- PMG PERMANENT MAGNET GENERATOR
- POT POTENTIOMETER
- PPS PRIMING PUMP SWITCH
- PSS PERSONNEL SAFETY SWITCH
- PT POTENTIAL TRANSFORMER
- PTG POTENTIAL TRANSFORMER GENERATOR
- PTL PULL TO LOCK
- PUL PRIMARY UNIT LIGHT
- PULL PUMP UNLOAD LIGHT
- PUR PRIMARY UNIT RELAY
- PWM PULSE WIDTH MODULATION
- PWO PULSE WIDTH OUTPUT
- PWUR PARALLELED w/ UTILITY RELAY
- RBS RUPTURE BASIN SWITCH
- R RELAY
- RDBA RELAY DEAD BUS ARBITRATION
- RES RESISTOR
- REF REFERENCE
- RSES REMOTE START ENABLE SWITCH
- RSS REMOTE START SWITCH
- RSR REMOTE START RELAY
- RTN RETURN
- SC SHUNT COIL
- SCN SCREEN (SHIELD)
- SDE BELL ALARM CONTACT
- SHD SHIELD/SHIELDED
- SHDN SHUTDOWN
- SM STARTER MOTOR
- SPSR SHORE POWER SOURCE RELAY
- SPWR SHORE POWER
- SPWR STARTER MOTOR MAGNETIC SWITCH
- SPD SPEED POTENTIOMETER
- SR SLAVE RELAY
- SSR SOURCE SELECTOR RELAY
- TERM TERMINATION
- T.O.M. TETHERED OPERATING MODULE
- TR TRIP UNIT (GCB)
- UCBR UTILITY CIRCUIT BREAKER RELAY
- UMR UTILITY MULTIFUNCTION RELAY
- UR UNLOAD RELAY (FUEL)
- URX UNLOAD RELAY SLAVE (FUEL)
- UTTR UTILITY TRANSFER TRIP RELAY
- VAR VOLT-AMPERES REACTIVE
- VFSS VOLTAGE/FREQUENCY SELECT SWITCH
- XF CLOSE COIL (GCB)
- a NORMALLY OPEN CONTACT
- b NORMALLY CLOSED CONTACT
- c a AND b WITH COMMON
- mA MILLIAMPERE
- mV MILLIVOLT
- A A PHASE
- B B PHASE
- C C PHASE

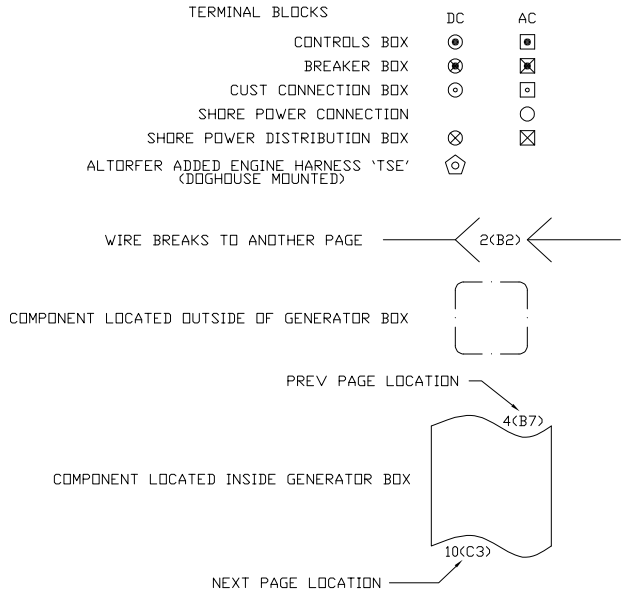
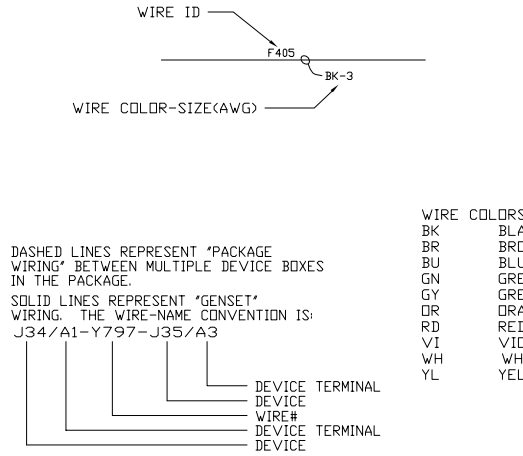
INPUT/OUTPUT CONTENTS

| I/O# | FUNCTION |
|-------------------------------|---|
| EMCP RELAYS (DIGITAL OUTPUTS) | |
| R01 | STARTER CONTROL RELAY |
| R02 | FUEL CONTROL RELAY |
| R03 | REDUCED POWER MODE OFF (NOTE D) |
| R04 | ENGINE START INITIATED |
| R05 | COMMON SHUTDOWN |
| R06 | STOP MODE |
| R07 | STOP MODE |
| R08 | COMMON ALARM |
| R09 | AUTO MODE |
| R10 | ENGINE RUNNING |
| R11 | VOLTS/ HZ WITHIN LIMITS |
| R12 | TRANSFER FUEL IN |
| R13 | TRANSFER FUEL OUT |
| R14 | FREQUENCY SELECTION IS LOW |
| R15 | DISABLE AUX AC |
| R16 | FUEL LEVEL LOW ALARM |
| R17 | LIVE BUS INDICATION |
| EMCP INPUTS | |
| DDI-01 | EMERGENCY STOP INPUT |
| DDI-02 | REMOTE INITIATE COMMAND |
| DDI-03 | GENERATOR CIRCUIT BREAKER AUX a |
| DDI-04 | GENERATOR CIRCUIT BREAKER AUX b |
| DI-01 | IDLE MODE COMMAND |
| DI-02 | EMERGENCY STOP SWITCH (EXTERNAL) |
| DI-03 | UTILITY BREAKER AUX a (BASELOAD MODE) |
| DI-04 | TANK LEAK |
| DI-05 | AUTO LOAD FUEL |
| DI-06 | AUTO UNLOAD FUEL |
| DI-07 | PARALLELING DISABLE |
| DI-08 | SMS IN CHECK |
| IDI-01 | CUSTOM EVENT (RADIATOR DOOR CLOSED) |
| IDI-02 | FREQUENCY SELECTION IS LOW |
| IDI-03 | CUSTOM EVENT (LOCK-OUT RELAY TRIPPED) |
| IDI-04 | KVAR POWER SHARE INHIBIT |
| DDI-01 | GROUP START INPUT |
| DDI-02 | BELL ALARM |
| DDI-03 | GENERATOR CIRCUIT BREAKER TRIP COMMAND |
| DDI-04 | GENERATOR CIRCUIT BREAKER CLOSE COMMAND |
| EMCP ANALOG INPUTS | |
| A11 | DISABLED |
| A12 | DISABLED |
| A13 | FUEL LEVEL |
| A14 | DISABLED |
| EMCP ANALOG OUTPUTS | |
| A01 | FUEL LEVEL DISPLAY |
| A02 | DISABLED |
| A03 | DISABLED |
| EMCP PWM OUTPUTS | |
| PW01 | DISABLED |
| PW02 | DISABLED |

| 400V 50Hz | | 480V 60Hz | |
|-----------------|------|------------|--------|
| POSITION 1 | | POSITION 2 | |
| GROUP SELECTION | | | |
| SELECTION | VFSS | LINKBOARD | GROUP# |
| 480V 60Hz | 2 | NA | 1 |
| 400V 50Hz | 1 | NA | 2 |
| 480V 60Hz | 2 | NA | 3 |
| 480V 60Hz | 1 | NA | 4 |

- NOTE A: CLOSURE PLUG MUST BE INSTALLED WHEN UMR IS NOT INSTALLED.
- NOTE B: INSTALL SCREWS IN EACH HOLE ON SHORTING BLOCK WHILE CTS ARE NOT IN USE. WHEN CTS ARE IN USE, REMOVE SCREWS ON WIRES LABELED F448, F450, & F452. DO NOT REMOVE SCREWS FOR F453 WIRES..
- NOTE C: WHEN OPERATING EMCP 4.4 IN LEGACY MODE, ONLY ONE UNIT (PRIMARY UNIT) SHOULD JUMPER 93 TO 94 IN INTERCONNECT BOX. WHEN OPERATING EMCP 4.4 IN STAND ALONE MODE JUMPER 93 TO 94. WHEN OPERATING EMCP 4.4 IN PARALLELING MODE (EMCP 4.4 ONLY BASED CONTROLS) JUMPER 93 TO 94 ON ALL UNITS. ALLOWS BREAKER CLOSURE TO A DEAD BUS.
- NOTE D: SPARE CIRCUITS BETWEEN INTERCONNECT BOX AND AC/DC BOX.
- NOTE E: UTILITY CKT BKR STATUS. CONNECT TO AUX "a" NORMALLY OPEN CONTACT OF UTILITY CIRCUIT BREAKER.
- NOTE F: UTILITY TRANSFER TRIP. OPENS CKT BKR AND ACTIVATES 86 LOCKOUT UNTIL MANUALLY RESET.
- NOTE G: SHIELD WIRES SHOULD BE CONNECTED TO TERMINAL BLOCKS ON PRIMARY UNIT ONLY. ON MIDDLE UNITS, CONNECT SHIELDS TOGETHER. ON END UNIT, DO NOT CONNECT SHIELD WIRES.
- NOTE H: WHEN CONNECTING THE EMCP 4.4 TO LEGACY UNITS (WITH LOAD SHARE MODULES) FOR ISLAND MODE LOAD SHARING, VAR SHARING IS NOT AVAILABLE. CONNECT LS+ AND LS- AMONG ALL UNITS AND USE VOLTAGE DROOP TO REGULATE VARS. DO NOT CONNECT VS+ AND VS- ON ANY UNITS.
- NOTE I: PARAMETER SET TO DISABLED AS DEFAULT, OPERATOR TO SET AS LISTED WHEN DESIRED AND NOT USING GROUP START
- NOTE J: END USER TO INSTALL JUMPER ON FIRST UNIT ONLY WHEN CONNECTED FOR PARALLELING
- NOTE K: RELOCATE WIRE NUMBER F702-E174 IN ENGINE HARNESS J1 CONNECTOR FROM PIN 20 TO PIN 61

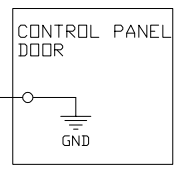
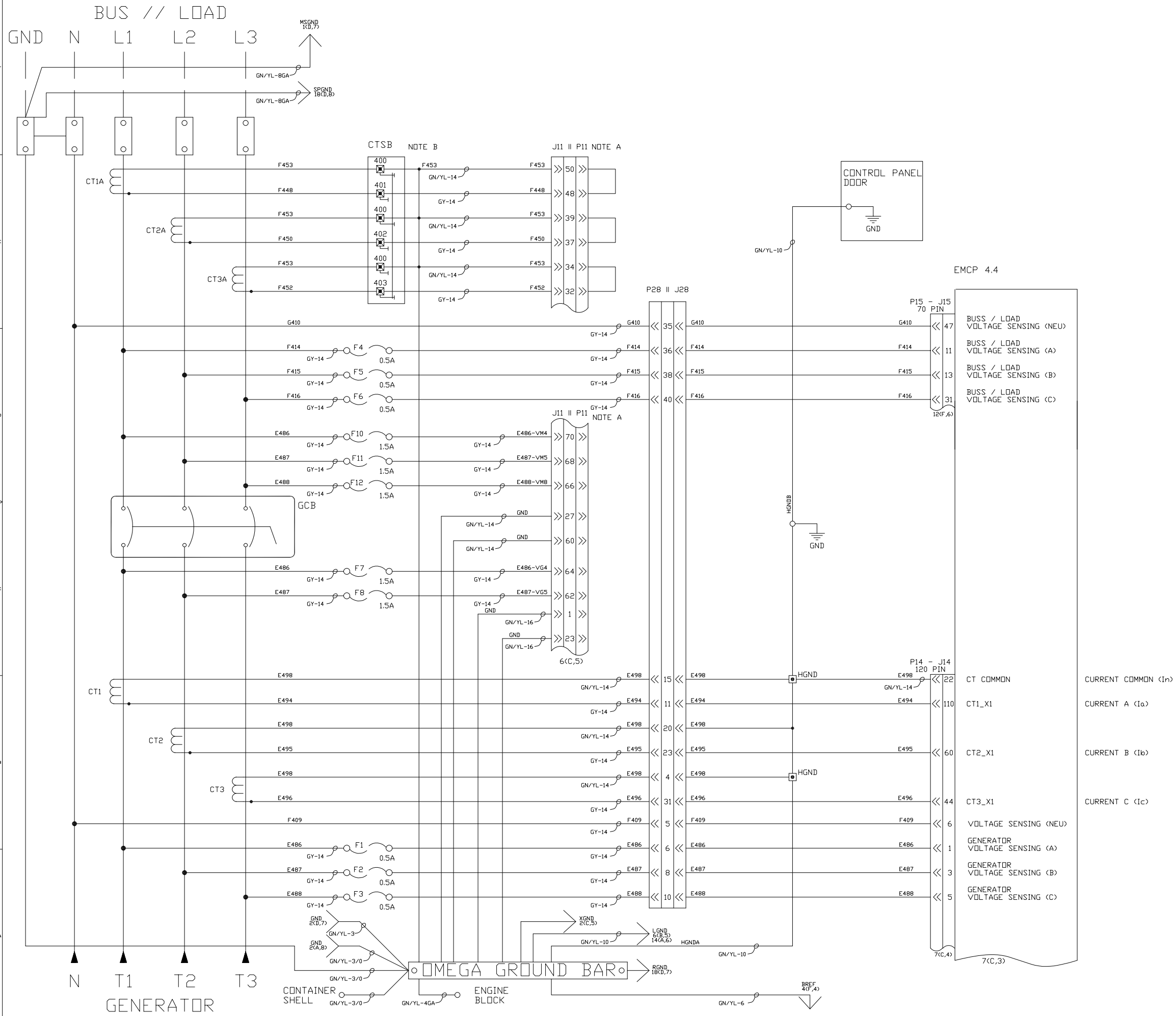
CONTROL PANEL WIRING _____
 INTERCONNECT WIRING _____
 CUSTOMER WIRING _____
 OPTIONAL WIRING _____
 ALL CONTROL PANEL WIRING GY-16, UNLESS OTHERWISE NOTED.
 ALL INTERCONNECT WIRING GY-16, UNLESS OTHERWISE NOTED.



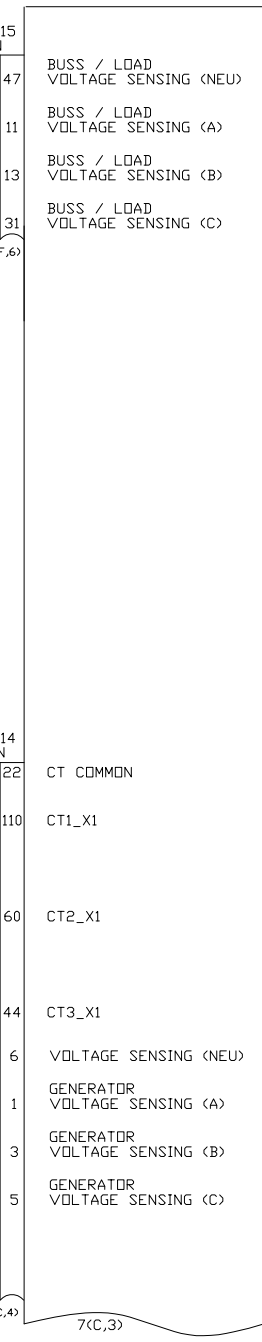
| REV | DATE | BY | CHKD | DESCRIPTION |
|-----|------------|----|------|-----------------------|
| 1 | 08/02/2017 | | | REVISED PER TRM BUILD |

| | | | |
|-----------------------|--|-------------------------------|--|
| ALTORFER | | ALTORFER POWER SYSTEMS | |
| 6315 W. FAUBER RD. | | PHONE (309) 697-1234 | |
| BARTONVILLE, IL 61607 | | FAX (309) 252-7546 | |

| | | | |
|---|------------------------|----------------------------|--------------------------|
| THIS DOCUMENT CONTAINS PROPRIETARY INFORMATION OF ALTORFER, INC. WITHOUT THE WRITTEN PERMISSION OF ALTORFER, INC., ANY COPYING OR OTHER USE EXCEPT THAT FOR WHICH IT WAS INTENDED IS PROHIBITED | | | |
| ALL DIMENSIONS IN INCHES UNLESS OTHERWISE SPECIFIED | FILE | PROJECT REFERENCE | |
| TOLERANCES: XX ± 0.100 XXX ± 0.060 XXXX ± 0.005 | THIRD ANGLE PROJECTION | DF/83E | 3516B REMAN POWER MODULE |
| ANGULAR ± 1° | | SCALE/SHEET SIZE 1=40/D | DRAWN BY - |
| TITLE | SHEET | DATE | WORK ORDER NUMBER |
| 3516B REMAN POWER MODULE EMCP 4.4 | 1 OF 23 | 08/02/2017 | - |
| | | | DRAWING NUMBER |
| | | | 83E200-02 |

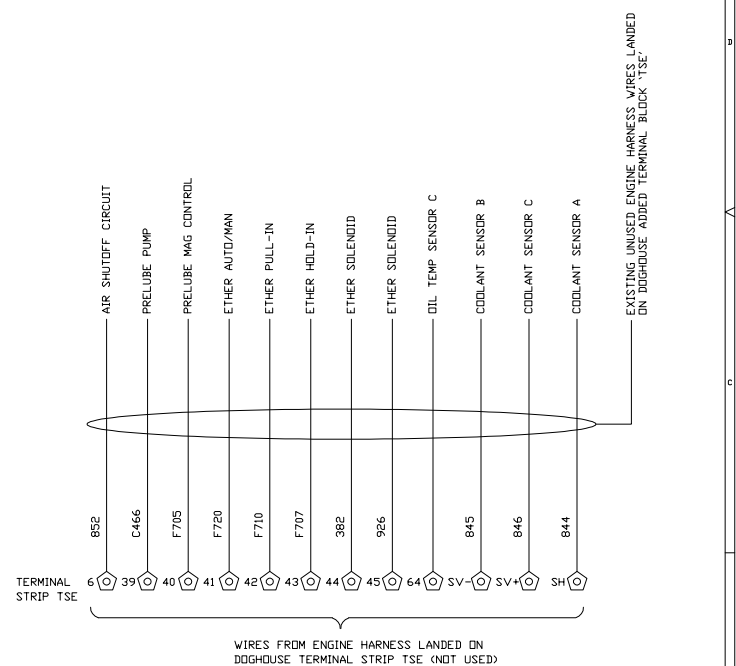
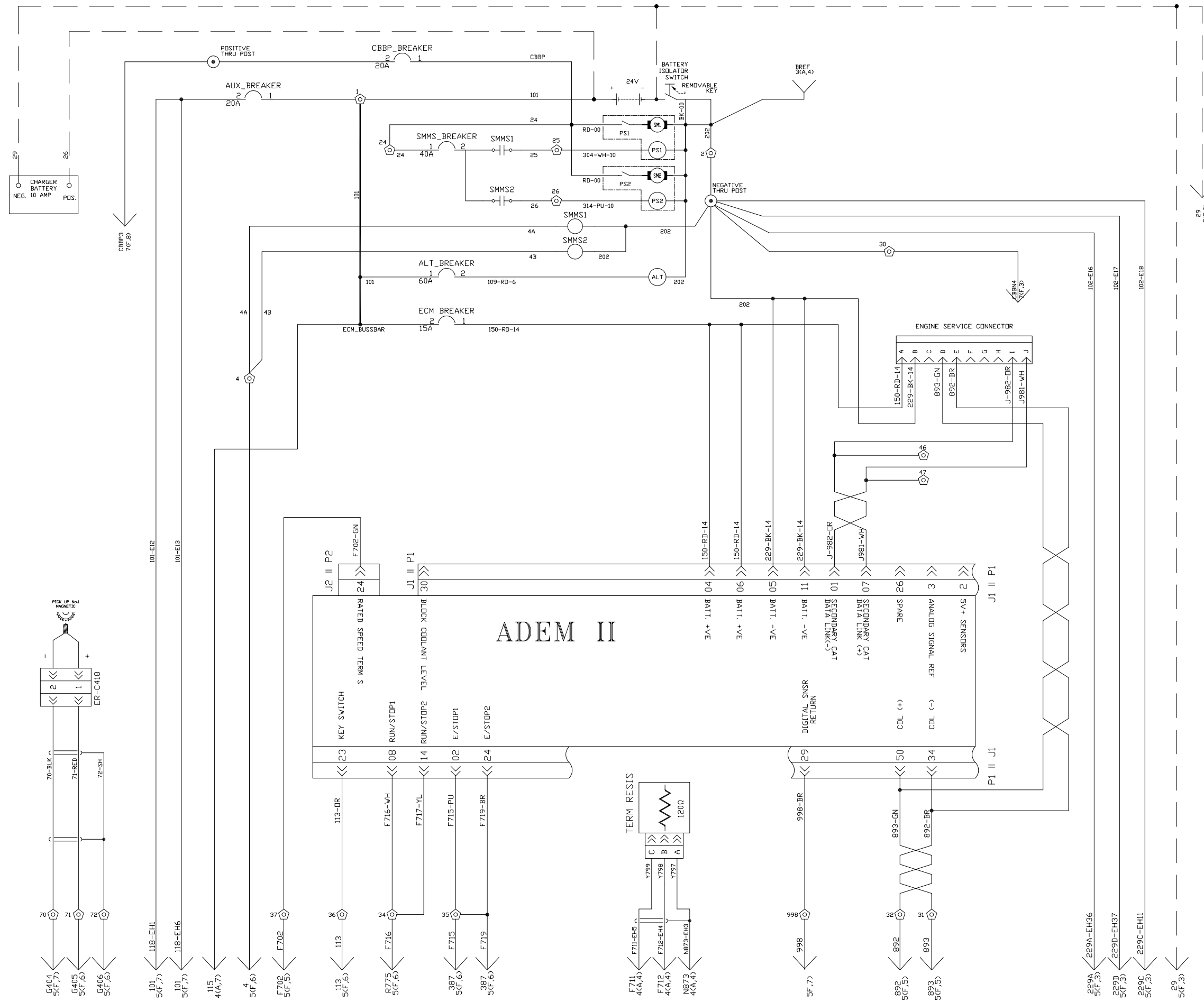


EMCP 4.4



AC EMCP SENSING
FOR NOTES SEE SHEET ONE

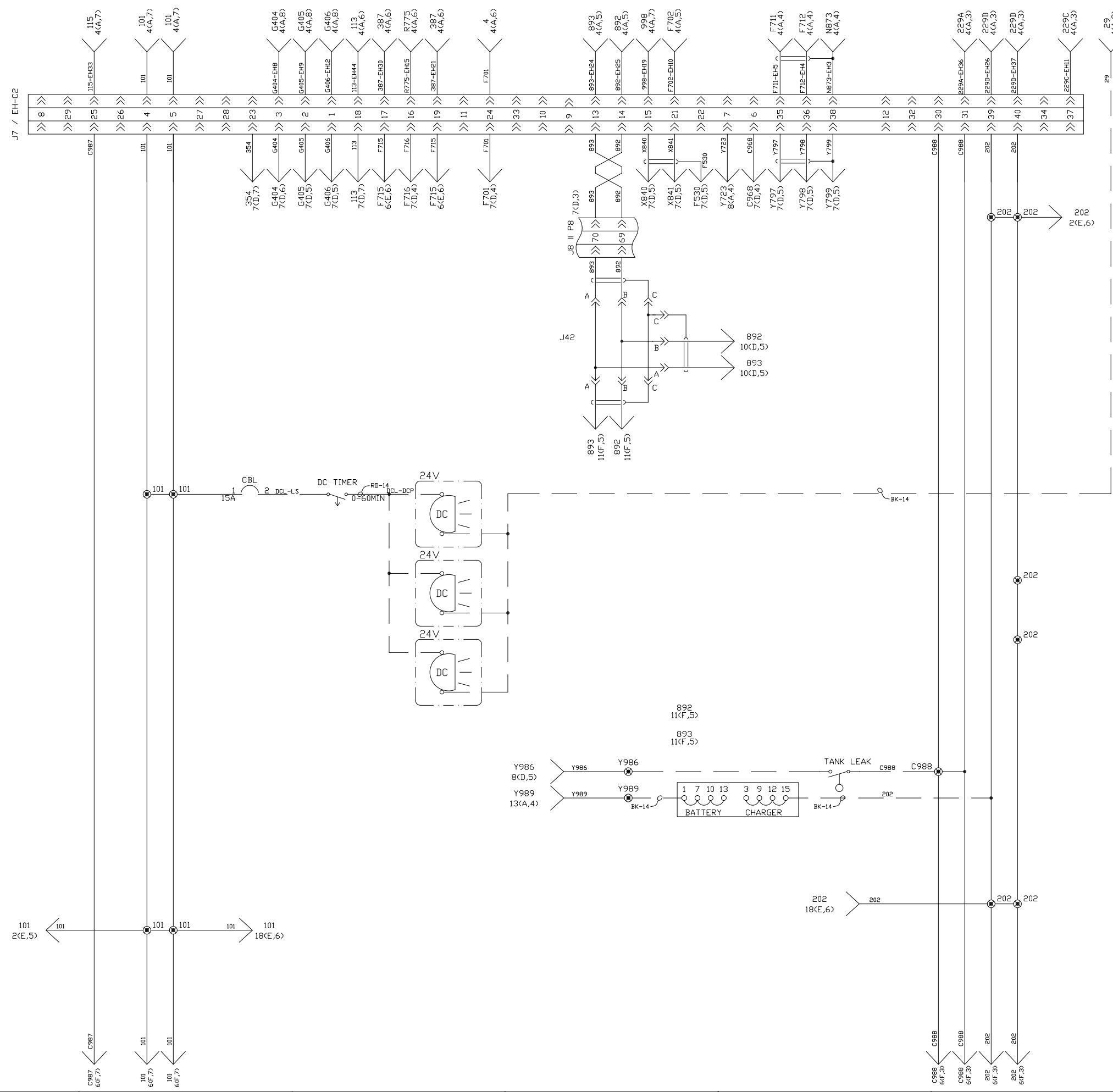
| | | | |
|-------------------------------|--------------------|--|---|
| | | ALTORFER POWER SYSTEMS 6315 W. FAUBER RD. PHONE: (309) 697-1234 BARTONVILLE, IL 61607 FAX: (309) 262-7546 | |
| 07/25/2018 REVISION BY: | DATE BY: | THIS DOCUMENT CONTAINS PROPRIETARY INFORMATION OF ALTORFER, INC. WITHOUT THE WRITTEN PERMISSION OF ALTORFER, INC., ANY COPYING OR OTHER USE EXCEPT THAT FOR WHICH IT WAS INTENDED IS PROHIBITED. | ALL DIMENSIONS IN INCHES UNLESS OTHERWISE SPECIFIED |
| AS-BUILT | CHANGE NOTICE | TOLERANCES XX ± 0.100 XXX ± 0.060 ANGULAR ± 1° | THIRD ANGLE PROJECTION |
| 1 REVISE PER 79N BUILD | 3 DF 23 | FILE DF/83E | PROJECT REFERENCE 3516B REMAN POWER MODULE |
| SCALE/SHEET SIZE 1=40/D | DRAWN BY - | QUOTE NUMBER - | WORK ORDER NUMBER - |
| SHEET 3 OF 23 | DATE 08/02/2017 | DRAWING NUMBER 83E200-02 | TITLE SCHEMATIC 3516B REMAN POWER MODULE EMCP 4.4 |



DC DISTRIBUTION 1
 FOR NOTES SEE SHEET ONE
 REF: BASIC ENGINE WIRING DIAGRAM 287-0549 CHG-03

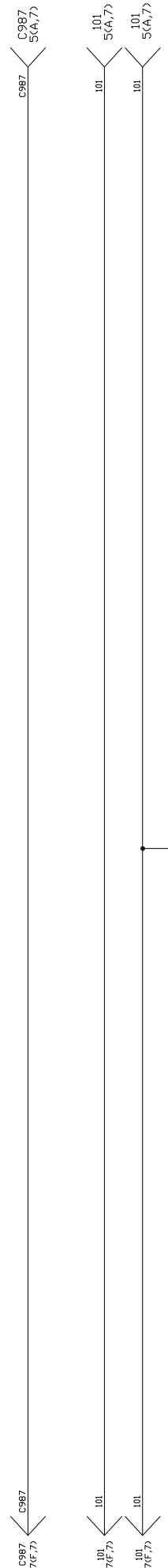
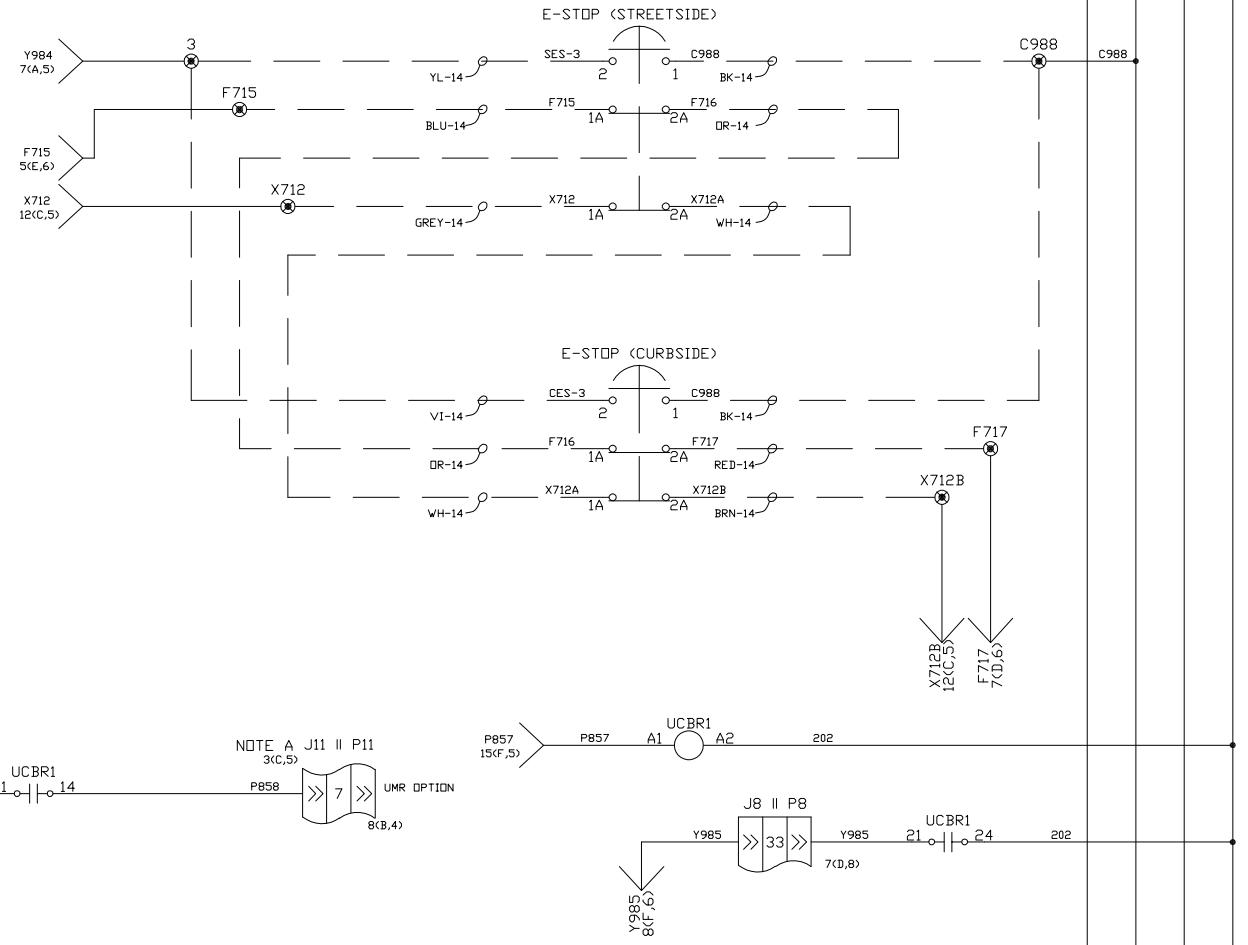
| | | | | |
|-----|----------------------|------------|-----|--------|
| NO. | REVISE | DATE | BY | REASON |
| 1 | REVISE PER TRN BUILD | 08/24/2018 | ... | ... |
| 2 | AS-BUILT | 07/20/2018 | ... | ... |

| | | |
|---|--|--|
| ALTORFER 6315 W. FAUBER RD. BARTONVILLE, IL 61607 PHONE (309) 697-1234 FAX (309) 252-7546 | | PROJECT REFERENCE 3516B REMAN POWER MODULE |
| ALL DIMENSIONS IN INCHES UNLESS OTHERWISE SPECIFIED TOLERANCES: .XX ± 0.100 .XXX ± 0.060 .XXXX ± 0.005 ANGULAR ± 1° | FILE DF/83E SCALE/SHEET SIZE 1=40/D SHEET 4 OF 23 | DRAWN BY DATE 08/02/2017 WORK ORDER NUMBER DRAWING NUMBER 83E200-02 |
| TITLE SCHEMATIC | | |



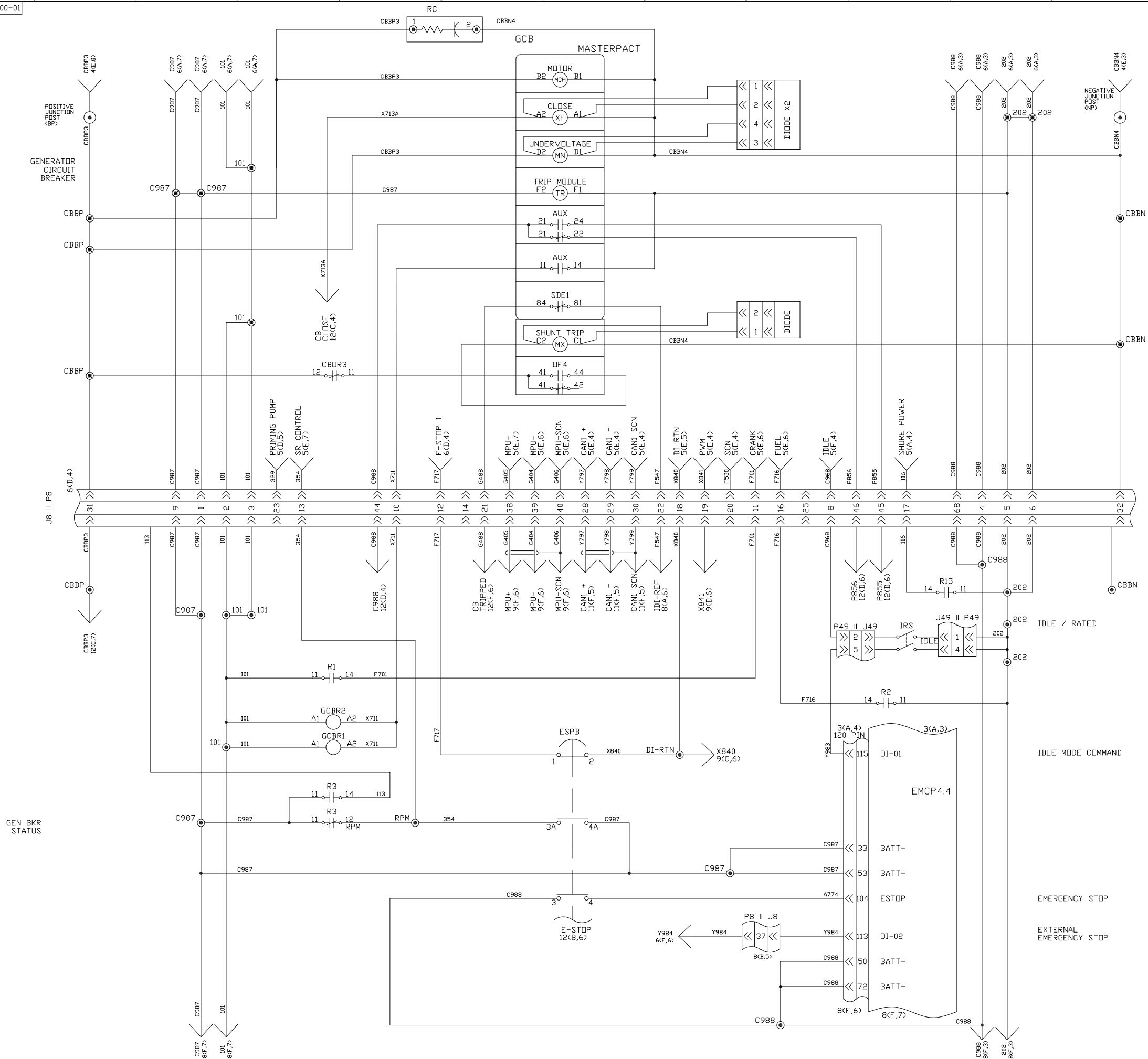
DC DISTRIBUTION 2
FOR NOTES SEE SHEET ONE

| | |
|--|---|
| ALTORFER 6315 W. FAUBER RD. BARTONVILLE, IL 61607 PHONE (309) 697-1234 FAX (309) 262-7546 | |
| THIS DOCUMENT CONTAINS PROPRIETARY INFORMATION OF ALTORFER, INC. WITHOUT THE WRITTEN PERMISSION OF ALTORFER, INC., ANY COPYING OR OTHER USE EXCEPT THAT FOR WHICH IT WAS INTENDED IS PROHIBITED. | FILE: DF/83E PROJECT REFERENCE: 3516B REMAN POWER MODULE |
| ALL DIMENSIONS IN INCHES UNLESS OTHERWISE SPECIFIED TOLERANCES: XX ± 0.100 ANGLE THIRD XXX ± 0.060 PROJECTION 1=40/D ANGULAR ± 1° | SCALE/SHEET SIZE: DRAWN BY: - SHEET: 5 OF 23 DATE: 08/02/2017 WORK ORDER NUMBER: - DRAWING NUMBER: 88E100-01 |
| AS-BUILT REVISE PER TRN BUILD CHANGE NOTICE NO. | TITLE: 3516B REMAN POWER MODULE EMCP 4.4 |



DC DISTRIBUTION 3
FOR NOTES SEE SHEET ONE

| | | | |
|--|------------------------|--|--------------------|
| | | ALTORFER POWER SYSTEMS 6315 W. FAUBER RD. BARTONVILLE, IL 61607 PHONE (309) 697-1234 FAX (309) 282-7546 | |
| THIS DOCUMENT CONTAINS PROPRIETARY INFORMATION OF ALTORFER, INC. WITHOUT THE WRITTEN PERMISSION OF ALTORFER, INC., ANY COPYING OR OTHER USE EXCEPT THAT FOR WHICH IT WAS INTENDED IS PROHIBITED. | | | |
| ALL DIMENSIONS IN INCHES UNLESS OTHERWISE SPECIFIED | FILE DF/83E | PROJECT REFERENCE 3516B REMAN POWER MODULE | |
| TOLERANCES: XX ± 0.100 X.XX ± 0.060 X.XXX ± 0.005 | THIRD ANGLE PROJECTION | SCALE/SHEET SIZE 1=40/D | DRAWN BY - |
| ANGULAR ± 1° | | SHEET 6 OF 23 | DATE 08/02/2017 |
| TITLE 3516B REMAN POWER MODULE EMCP 4.4 | | DRAWING NUMBER 88E100-01 | |



DC DISTRIBUTION 4
FOR NOTES SEE SHEET ONE

| | | | |
|--|------------------------|--|--------------------|
| | | ALTORFER POWER SYSTEMS 6315 W. FAUBER RD. PHONE (309) 697-1234 BARTONVILLE, IL 61607 FAX (309) 282-7546 | |
| THIS DOCUMENT CONTAINS PROPRIETARY INFORMATION OF ALTORFER, INC. WITHOUT THE WRITTEN PERMISSION OF ALTORFER, INC., ANY COPYING OR OTHER USE EXCEPT THAT FOR WHICH IT WAS INTENDED IS PROHIBITED. | | | |
| ALL DIMENSIONS IN INCHES UNLESS OTHERWISE SPECIFIED | | PROJECT REFERENCE DF/83E 3516B REMAN POWER MODULE | |
| TOLERANCES: .XX ± 0.100 .XXX ± 0.050 .XXXX ± 0.005 | THIRD ANGLE PROJECTION | SCALE/SHEET SIZE 1=40/D | DRAWN BY - |
| ANGLAR ± 1° | | SHEET 7 OF 23 | DATE 08/02/2017 |
| TITLE SCHEMATIC | | WORK ORDER NUMBER - | |
| 3516B REMAN POWER MODULE EMCP 4.4 | | DRAWING NUMBER 83E200-02 | |

UTILITY BREAKER AUX α
(BASELOAD MODE)

REMOTE START

TANK LEAK ALARM

AUTO
LOAD FUEL

AUTO
UNLOAD FUEL

KW SHARE INHIBIT

SMS IN CHECK

STARTER CONTROL RELAY

FUEL CONTROL RELAY

REDUCED POWER MODE (NOTE 1)

ENGINE START INITIATED

COMMON SHUTDOWN

STOP MODE

STOP MODE

COMMON ALARM

AUTO MODE

ENGINE RUNNING

VOLTS/HZ WITHIN LIMITS

AUTO LOAD FUEL

AUTO UNLOAD FUEL

FREQUENCY SELECTION IS LOW

DISABLE AUX AC

FUEL LEVEL LOW ALARM

CUSTOM EVENT
(RADIATOR DOOR CLOSED)

RADIATOR LEVEL SWITCHES

CUSTOM EVENT
(LOCK OUT
RELAY TRIPPED)

KVAR SHARE INHIBIT

ISOLATED DIGITAL
INPUT REFERENCE

EMCP 4.4

7(A,4)

DI-03 82

DI-04 93

DI-05 103

DI-06 81

DI-07 102

DI-08 92

R1 116

R2 83

R3 94

R4 106

R5 84

R6 95

R7 105

R8 68

R9 67

R10 66

R11 65

R12 75

R13 59

R14 58

R15 57

R16 73

IDI-01 109

IDI-02 120

IDI-03 108

IDI-04 107

IDI-REF 118

START 91

DI-03 82

DI-04 93

DI-05 103

DI-06 81

DI-07 102

DI-08 92

R1 116

R2 83

R3 94

R4 106

R5 84

R6 95

R7 105

R8 68

R9 67

R10 66

R11 65

R12 75

R13 59

R14 58

R15 57

R16 73

IDI-01 109

IDI-02 120

IDI-03 108

IDI-04 107

IDI-REF 118

START 91

DI-03 82

DI-04 93

DI-05 103

DI-06 81

DI-07 102

DI-08 92

R1 116

R2 83

R3 94

R4 106

R5 84

R6 95

R7 105

R8 68

R9 67

R10 66

R11 65

R12 75

R13 59

R14 58

R15 57

R16 73

IDI-01 109

IDI-02 120

IDI-03 108

IDI-04 107

IDI-REF 118

START 91

DI-03 82

DI-04 93

DI-05 103

DI-06 81

DI-07 102

DI-08 92

R1 116

R2 83

R3 94

R4 106

R5 84

R6 95

R7 105

R8 68

R9 67

R10 66

R11 65

R12 75

R13 59

R14 58

R15 57

R16 73

IDI-01 109

IDI-02 120

IDI-03 108

IDI-04 107

IDI-REF 118

START 91

DI-03 82

DI-04 93

DI-05 103

DI-06 81

DI-07 102

DI-08 92

R1 116

R2 83

R3 94

R4 106

R5 84

R6 95

R7 105

R8 68

R9 67

R10 66

R11 65

R12 75

R13 59

R14 58

R15 57

R16 73

IDI-01 109

IDI-02 120

IDI-03 108

IDI-04 107

IDI-REF 118

START 91

DI-03 82

DI-04 93

DI-05 103

DI-06 81

DI-07 102

DI-08 92

R1 116

R2 83

R3 94

R4 106

R5 84

R6 95

R7 105

R8 68

R9 67

R10 66

R11 65

R12 75

R13 59

R14 58

R15 57

R16 73

IDI-01 109

IDI-02 120

IDI-03 108

IDI-04 107

IDI-REF 118

START 91

DI-03 82

DI-04 93

DI-05 103

DI-06 81

DI-07 102

DI-08 92

R1 116

R2 83

R3 94

R4 106

R5 84

R6 95

R7 105

R8 68

R9 67

R10 66

R11 65

R12 75

R13 59

R14 58

R15 57

R16 73

IDI-01 109

IDI-02 120

IDI-03 108

IDI-04 107

IDI-REF 118

START 91

DI-03 82

DI-04 93

DI-05 103

DI-06 81

DI-07 102

DI-08 92

R1 116

R2 83

R3 94

R4 106

R5 84

R6 95

R7 105

R8 68

R9 67

R10 66

R11 65

R12 75

R13 59

R14 58

R15 57

R16 73

IDI-01 109

IDI-02 120

IDI-03 108

IDI-04 107

IDI-REF 118

START 91

DI-03 82

DI-04 93

DI-05 103

DI-06 81

DI-07 102

DI-08 92

R1 116

R2 83

R3 94

R4 106

R5 84

R6 95

R7 105

R8 68

R9 67

R10 66

R11 65

R12 75

R13 59

R14 58

R15 57

R16 73

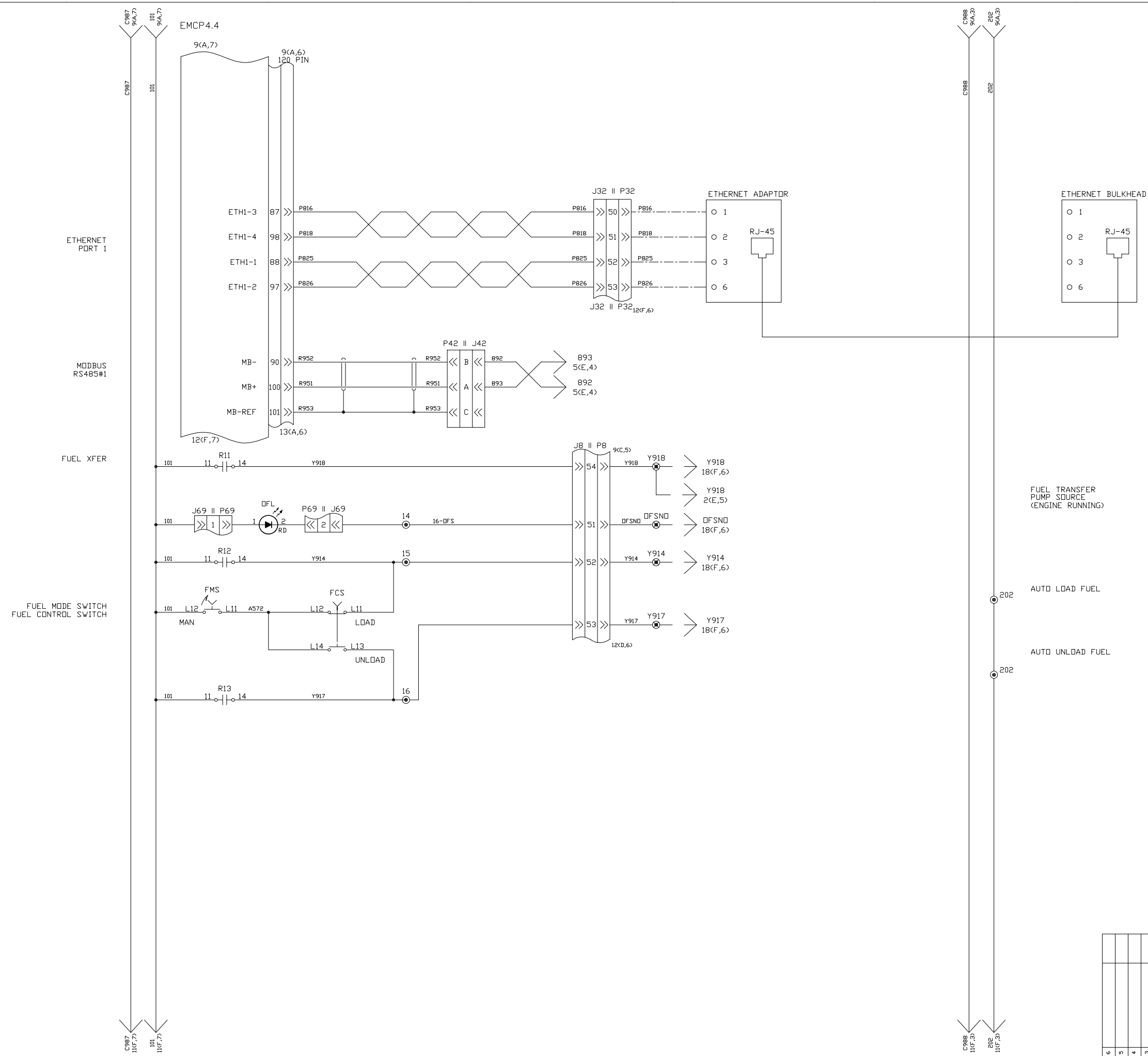
IDI-01 109

IDI-02 120

IDI-03 108

IDI-04 107

IDI-REF 118



DC DISTRIBUTION 7
FOR NOTES SEE SHEET ONE

| | | | | | | | |
|--|--|------------|--|--------------------------|--|--------------------------|--|
| 07/20/2018 06/24/2018 B. BULLING | | DATE | | FILE | | PROJECT REFERENCE | |
| AS-BUILT | | DATE | | 3516B REMAN POWER MODULE | | 3516B REMAN POWER MODULE | |
| 1 REVISE PER 789 BUILD | | DATE | | SCALE/SHEET SIZE | | DRAWN BY | |
| CHANGE NOTICE | | DATE | | 1=40/D | | - | |
| NO. | | DATE | | SHEET | | WORK ORDER NUMBER | |
| 1 | | 08/02/2017 | | 10 OF 23 | | - | |
| TITLE | | TITLE | | SHEET | | DRAWING NUMBER | |
| 3516B REMAN POWER MODULE EMCP 4.4 | | SCHEMATIC | | 10 OF 23 | | 83E200-02 | |

ALTORFER
ALTORFER POWER SYSTEMS
6315 W. FAUBER RD. PHONE (309) 697-1234
BARTONVILLE, IL 61607 FAX (309) 282-7546

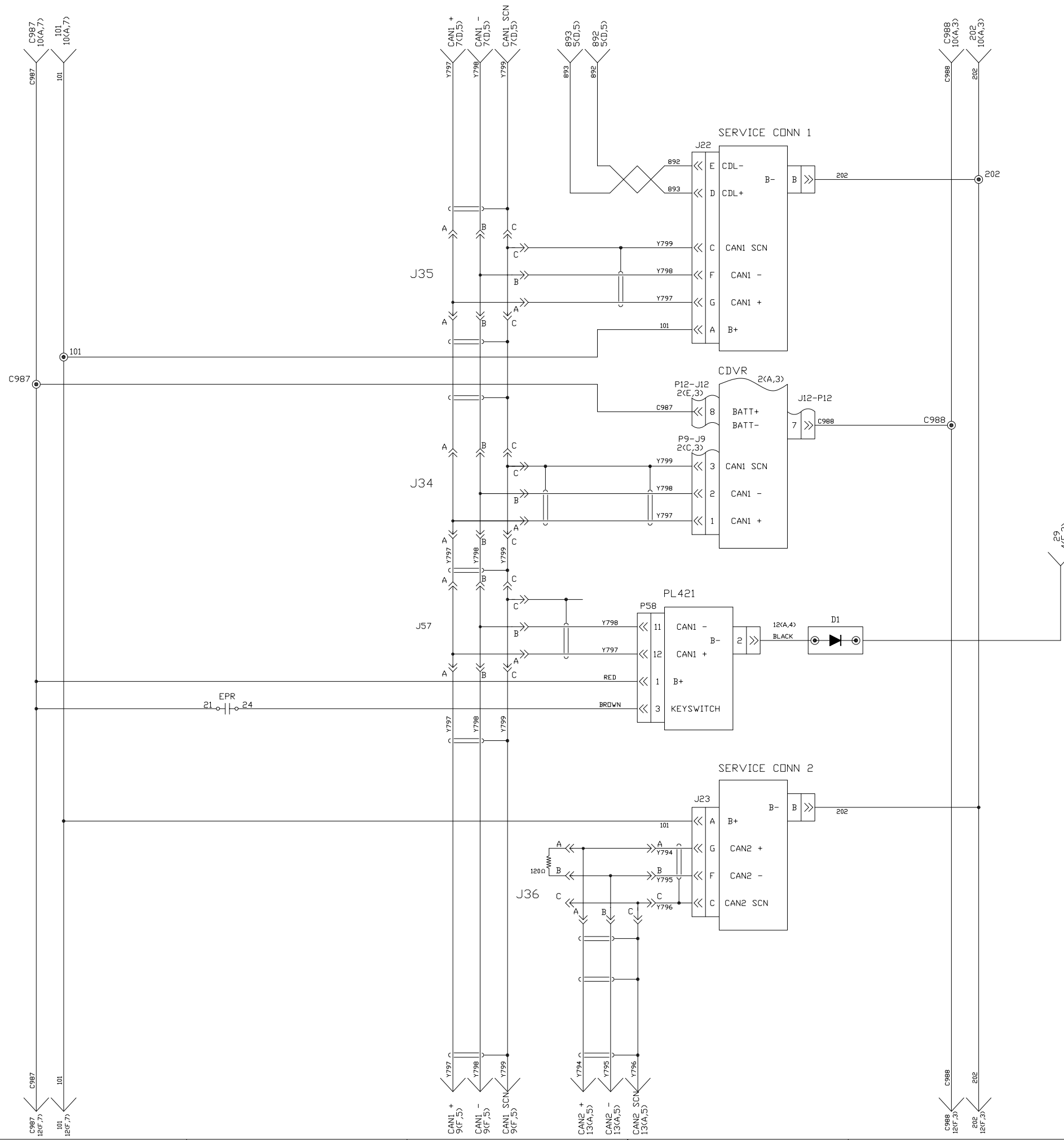
THIS DOCUMENT CONTAINS PROPRIETARY INFORMATION OF ALTORFER, INC. WITHOUT THE WRITTEN PERMISSION OF ALTORFER, INC., ANY COPYING OR OTHER USE EXCEPT THAT FOR WHICH IT WAS INTENDED IS PROHIBITED.

ALL DIMENSIONS IN INCHES UNLESS OTHERWISE SPECIFIED

TOLERANCES: THIRD ANGLE PROJECTION
XX ± 0.100 ANGLE
X.XX ± 0.060
X.XXX ± 0.005 ANGULAR ± 1°

SCALE/SHEET SIZE: 1=40/D
DATE: 08/02/2017
SHEET: 10 OF 23

TITLE: 3516B REMAN POWER MODULE EMCP 4.4
DRAWING NUMBER: 83E200-02



DC DISTRIBUTION 8
FOR NOTES SEE SHEET ONE

| | | | | | | | |
|-----------------------------------|--|-----------------------------------|--|------------------|--|--------------------------|--|
| 07/26/2018 AS-BUILT | | DATE | | FILE | | PROJECT REFERENCE | |
| 1 REVISE PER FRM BUILD | | DATE | | DF/83E | | 3516B REMAN POWER MODULE | |
| CHANGE NOTICE | | DATE | | SCALE/SHEET SIZE | | DRAWN BY | |
| 1 | | 08/02/2018 | | 1=40/D | | - | |
| TITLE | | SHEET | | DATE | | WORK ORDER NUMBER | |
| 3516B REMAN POWER MODULE EMCP 4.4 | | 11 OF 23 | | 08/02/2017 | | - | |
| DRAWING NUMBER | | TITLE | | SHEET | | DATE | |
| 83E200-02 | | 3516B REMAN POWER MODULE EMCP 4.4 | | 11 OF 23 | | 08/02/2017 | |

ALTORFER
6315 W. FAUBER RD. PHONE (309) 697-1234
BARTONVILLE, IL 61607 FAX (309) 282-7546

THIS DOCUMENT CONTAINS PROPRIETARY INFORMATION OF ALTORFER, INC. WITHOUT THE WRITTEN PERMISSION OF ALTORFER, INC., ANY COPYING OR OTHER USE EXCEPT THAT FOR WHICH IT WAS INTENDED IS PROHIBITED.

ALL DIMENSIONS IN INCHES UNLESS OTHERWISE SPECIFIED

TOLERANCES: THIRD ANGLE PROJECTION
XX ± 0.100 ANG F
X.XX ± 0.060
X.XXX ± 0.005

ANGULAR ± 1°

LEAGACY MODE RELAY

LEAD UNIT SELECT

PRIMARY UNIT RELAY

PARALLEL INTERCONNECT RELAY

DEAD BUSS RELAY

COOLDOWN TIMER RELAY

LOAD DDDR SOLENOID RESISTOR BOARD

LOAD DDDR SOLENOID

PARALLELING INHIBIT RELAY

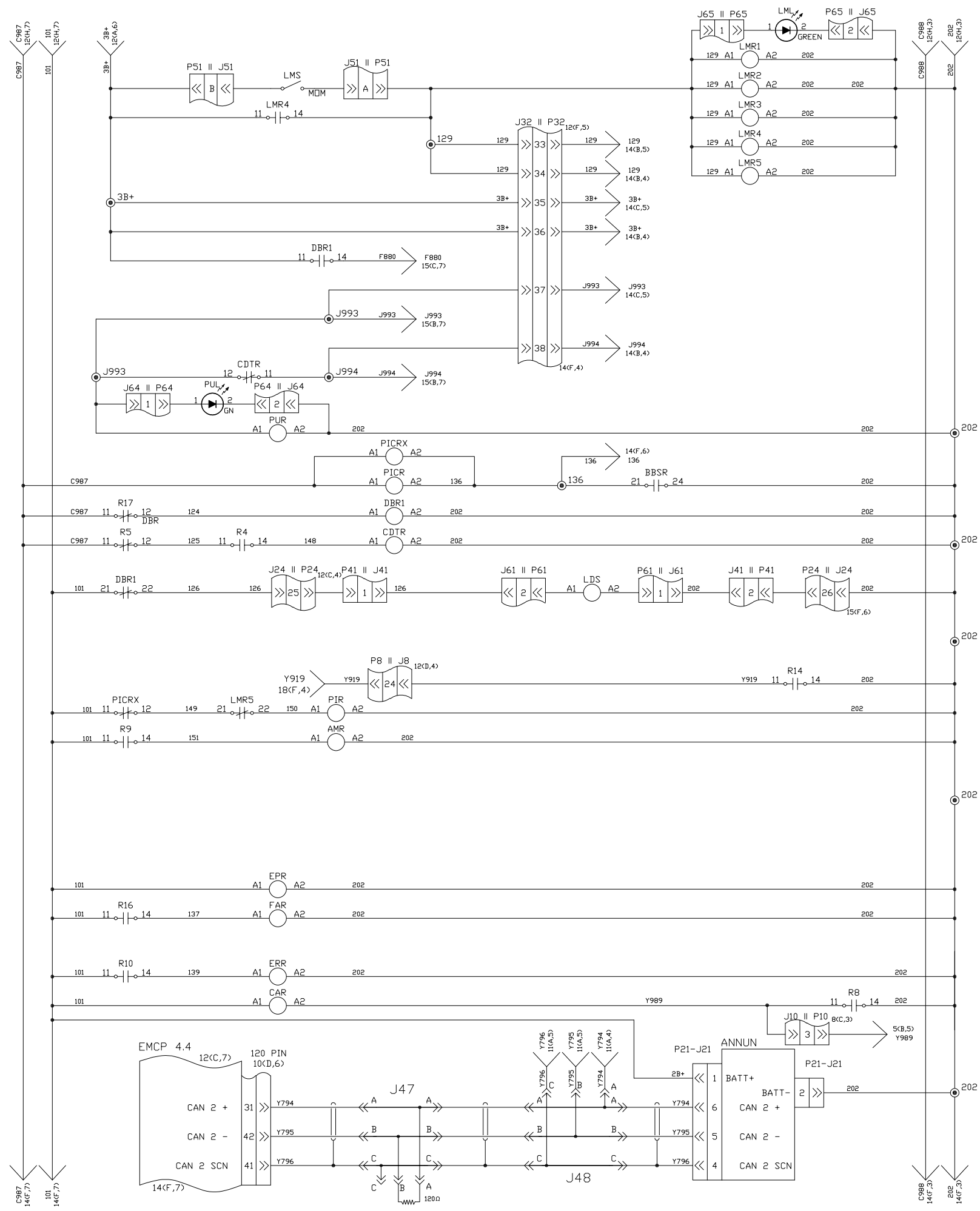
AUTO MODE RELAY

EMCP POWER RELAY

FUEL ALARM RELAY

ENGINE RUNNING RELAY

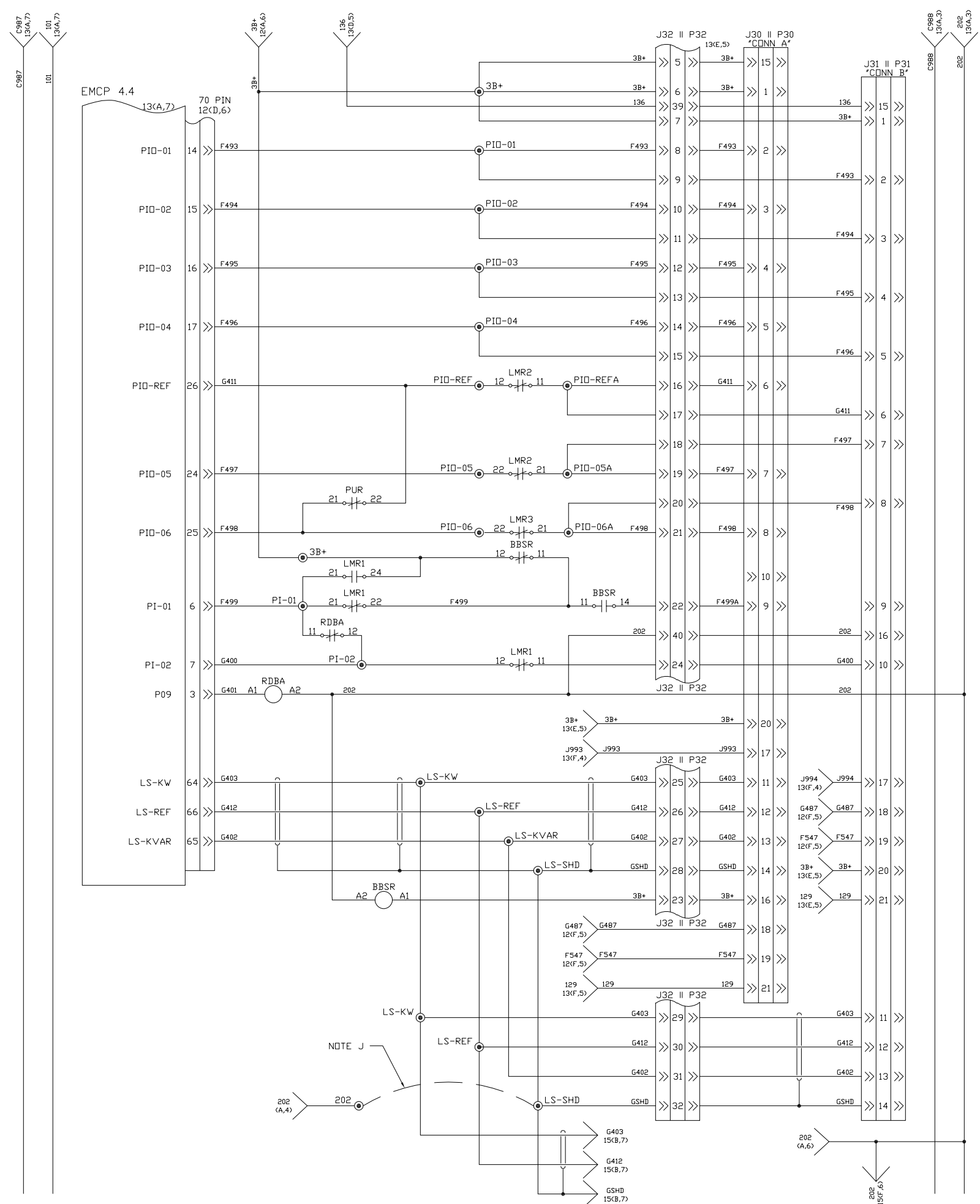
COMMON ALARM RELAY



DC DISTRIBUTION 10
FOR NOTES SEE SHEET ONE

| | | | |
|--|----------------------------|--|--------------------------------|
| | | ALTORFER POWER SYSTEMS 6315 W. FAUBER RD. BARTONVILLE, IL 61607 PHONE (309) 697-1234 FAX (309) 252-7546 | |
| THIS DOCUMENT CONTAINS PROPRIETARY INFORMATION OF ALTORFER, INC. WITHOUT THE WRITTEN PERMISSION OF ALTORFER, INC., ANY COPYING OR OTHER USE EXCEPT THAT FOR WHICH IT WAS INTENDED IS PROHIBITED. | | | |
| ALL DIMENSIONS IN INCHES UNLESS OTHERWISE SPECIFIED TOLERANCES: .XX ± 0.100 .XXX ± 0.060 .XXXX ± 0.005 ANGULAR ± 1° | FILE DF/83E | PROJECT REFERENCE 3516B REMAN POWER MODULE | |
| AS-BUILT REVISE PER TRN BUILD CHANGE NOTICE | THIRD ANGLE PROJECTION | SCALE/SHEET SIZE 1=40/D SHEET 13 OF 23 | DRAWN BY DATE 08/02/2017 |
| TITLE SCHEMATIC | | WORK ORDER NUMBER - | DRAWING NUMBER 83E200-02 |
| 3516B REMAN POWER MODULE EMCP 4.4 | | | |

- HWLSLD #1
DISABLE LSLD
- HWLSLD #2
OVERLOAD
- HWLSLD #3
EXCESS
- HWLSLD #4
RAMPING
- PARALLEL
REFERENCE
- HWDBA #1
REQUESTING
- HWDBA #2
CAPTURING
- HWDBA #3
ARBITRATION
- HWDBA #4
ARBITRATION
- HWDBA #5
RELAY
- LOAD SHARE
REAL KW
- LOAD SHARE
REFERENCE
- LOAD SHARE
REAL KVAR



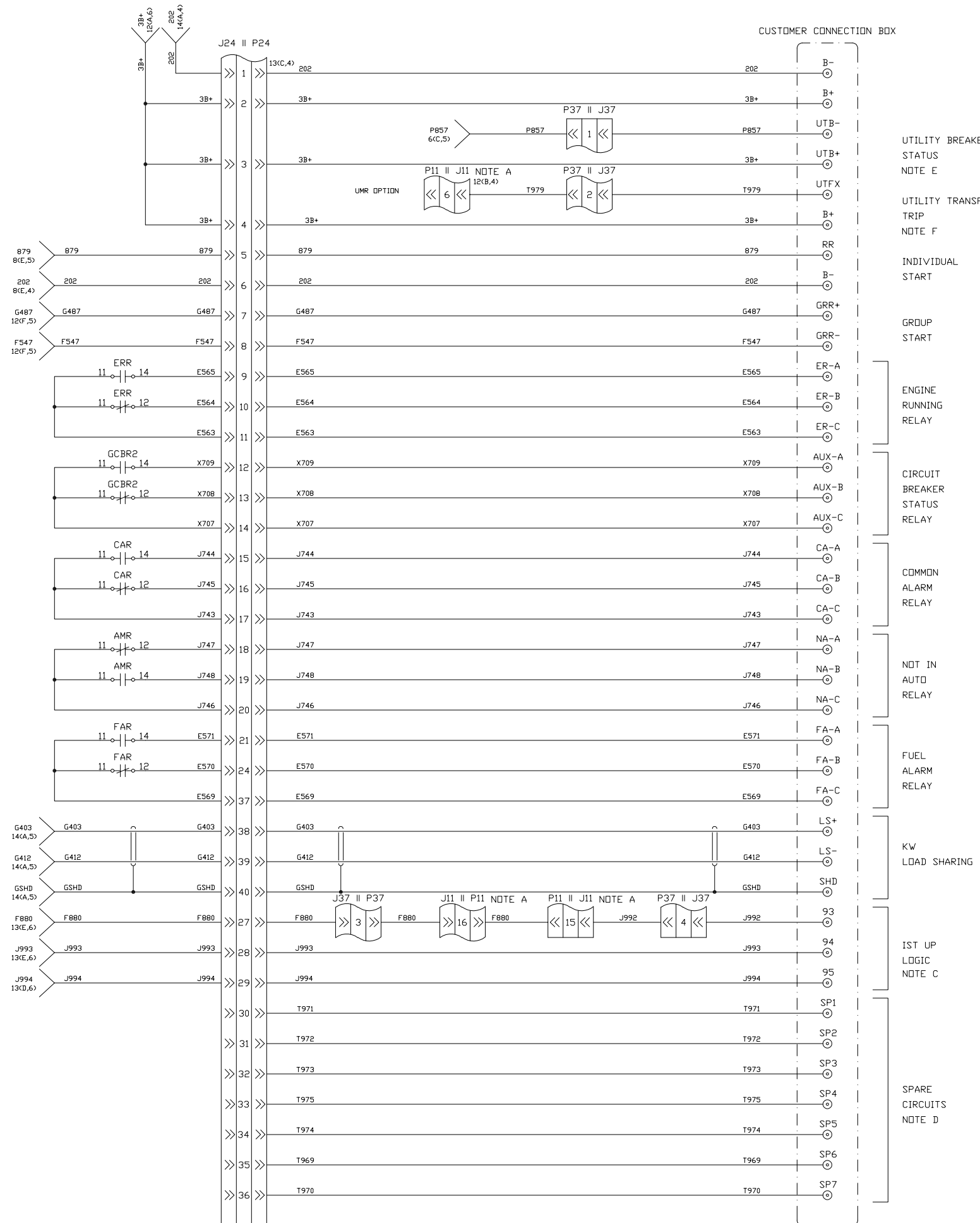
NOTE J

DC DISTRIBUTION 11
FOR NOTES SEE SHEET ONE

| | | | | | |
|-----|------------|----|------|-------|----------------------|
| REV | DATE | BY | CHKD | APP'D | DESCRIPTION |
| 1 | 08/02/2017 | DF | DF | DF | AS-BUILT |
| 2 | 08/24/2018 | DF | DF | DF | REVISE PER TRN BUILD |
| 3 | 08/24/2018 | DF | DF | DF | CHANGE NOTICE |
| 4 | | | | | |
| 5 | | | | | |
| 6 | | | | | |
| 7 | | | | | |
| 8 | | | | | |
| 9 | | | | | |
| 10 | | | | | |

| | | | |
|--|------------------------|--|--------------------|
| | | ALTORFER POWER SYSTEMS 6315 W. FAUBER RD. BARTONVILLE, IL 61607 PHONE (309) 697-1234 FAX (309) 292-7546 | |
| THIS DOCUMENT CONTAINS PROPRIETARY INFORMATION OF ALTORFER, INC. WITHOUT THE WRITTEN PERMISSION OF ALTORFER, INC., ANY COPYING OR OTHER USE EXCEPT THAT FOR WHICH IT WAS INTENDED IS PROHIBITED. | | | |
| ALL DIMENSIONS IN INCHES UNLESS OTHERWISE SPECIFIED | | PROJECT REFERENCE 3516B REMAN POWER MODULE | |
| TOLERANCES: .XX ± 0.100 .XXX ± 0.060 .XXXX ± 0.005 | THIRD ANGLE PROJECTION | SCALE/SHEET SIZE 1=40/D | DRAWN BY - |
| ANGULAR ± 1° | | SHEET 14 OF 23 | DATE 08/02/2017 |
| TITLE SCHEMATIC | | WORK ORDER NUMBER - | |
| 3516B REMAN POWER MODULE EMCP 4.4 | | DRAWING NUMBER 83E200-02 | |

CUSTOMER CONNECTIONS

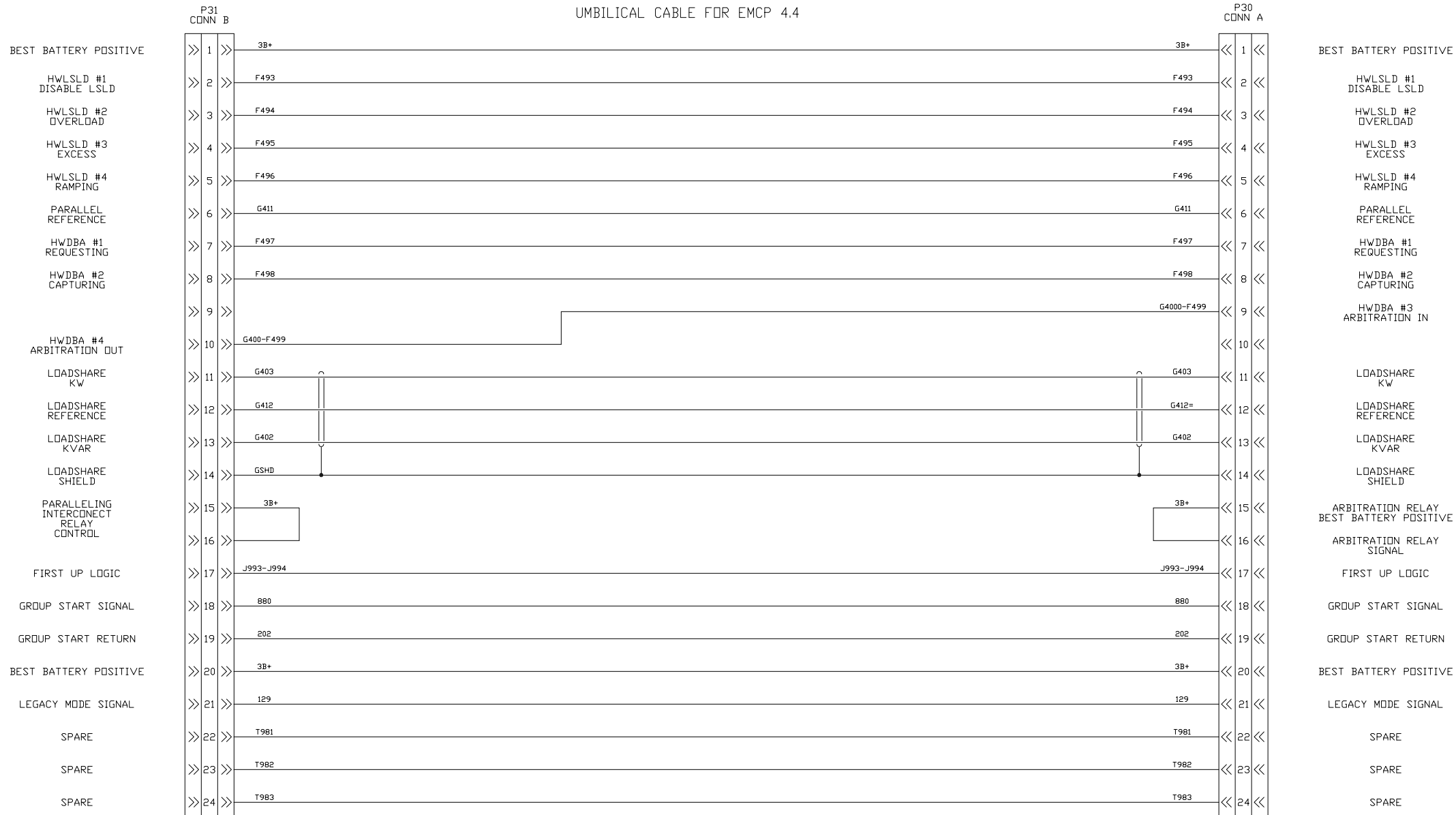


- UTILITY BREAKER STATUS NOTE E
- UTILITY TRANSFER TRIP NOTE F
- INDIVIDUAL START
- GROUP START
- ENGINE RUNNING RELAY
- CIRCUIT BREAKER STATUS RELAY
- COMMON ALARM RELAY
- NOT IN AUTO RELAY
- FUEL ALARM RELAY
- KW LOAD SHARING
- IST UP LOGIC NOTE C
- SPARE CIRCUITS NOTE D

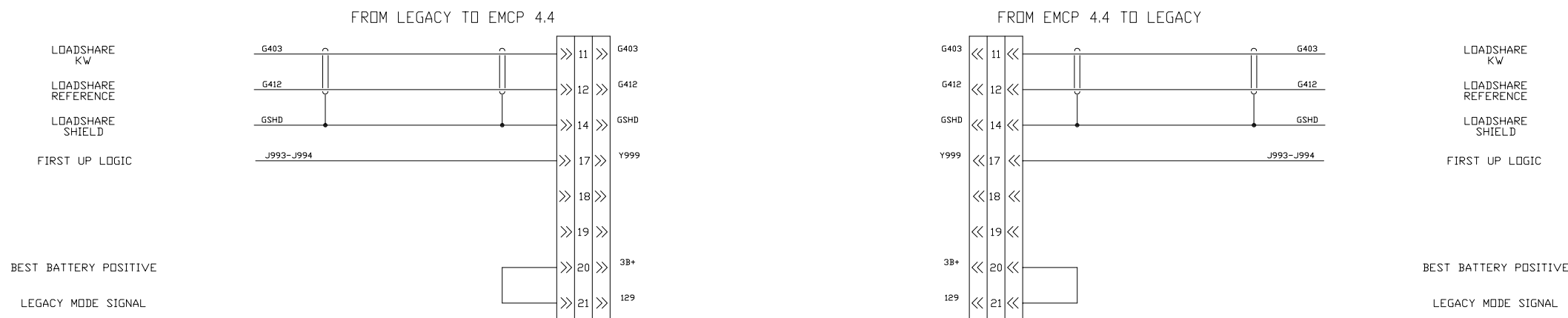
DC DISTRIBUTION 12
FOR NOTES SEE SHEET ONE

| | | | |
|--|------------------------|-----------------------------|--------------------------|
| REVISED PER FROM BUILD | DATE | BY | REVISION |
| AS-BUILT | 06/24/2018 | 1 | REVISION |
| CHANGE NOTICE | | | |
| | | | |
| ALTORFER POWER SYSTEMS 6315 W. FAUBER RD. BARTONVILLE, IL 61607 PHONE (309) 697-1234 FAX (309) 252-7546 | | | |
| THIS DOCUMENT CONTAINS PROPRIETARY INFORMATION OF ALTORFER, INC. WITHOUT THE WRITTEN PERMISSION OF ALTORFER, INC., ANY COPYING OR OTHER USE EXCEPT THAT FOR WHICH IT WAS INTENDED IS PROHIBITED. | | | |
| ALL DIMENSIONS IN INCHES UNLESS OTHERWISE SPECIFIED | FILE | PROJECT REFERENCE | |
| TOLERANCES: XX ± 0.100 XXX ± 0.060 XXXX ± 0.005 | THIRD ANGLE PROJECTION | SCALE/SHEET SIZE 1=40/D | 3516B REMAN POWER MODULE |
| ANGULAR ± 1' | | SHEET 15 OF 23 | DATE 08/02/2017 |
| TITLE SCHEMATIC | | DRAWING NUMBER 83E200-02 | WORK ORDER NUMBER |
| 3516B REMAN POWER MODULE EMCP 4.4 | | DRAWING NUMBER | |

UMBILICAL CABLE FOR EMCP 4.4



ADAPTOR CABLE ASSEMBLIES FOR LEGACY POWER MODULES



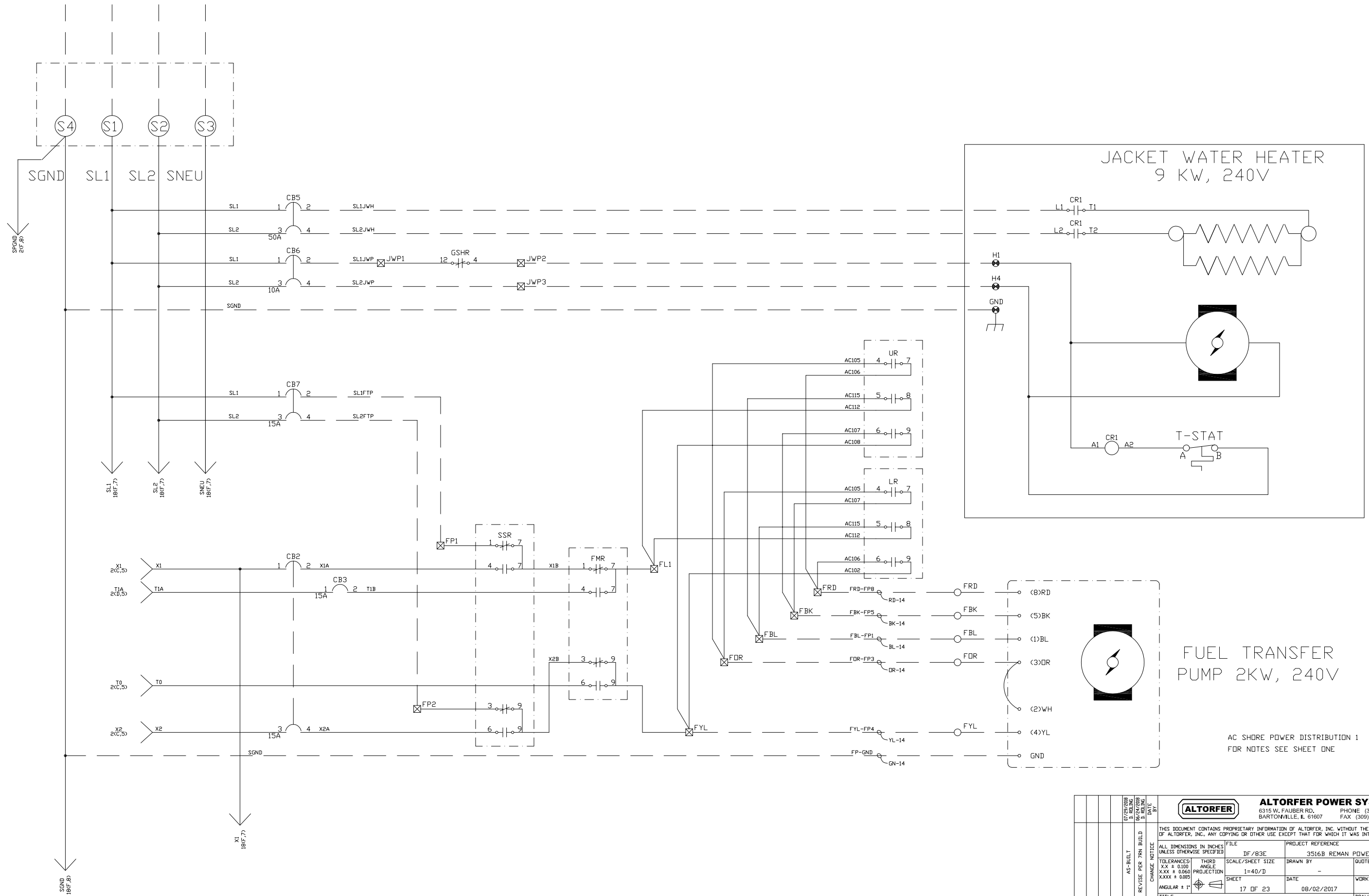
PARALLELING INTERCONNECT CABLE
FOR NOTES SEE SHEET ONE

| | | | | | |
|---------------|----------------------|-----------------------------------|----|------------------|--------------------------|
| 07/25/2018 | AS-BUILT | DATE | BY | FILE | PROJECT REFERENCE |
| 1 | REVISE PER 79N BUILD | | | DF/83E | 3516B REMAN POWER MODULE |
| CHANGE NOTICE | | TOLERANCES | | SCALE/SHEET SIZE | DRAWN BY |
| NO | | XXX ± 0.100 | | 1=40/D | QUOTE NUMBER |
| | | XXX ± 0.060 | | SHEET | DATE |
| | | ANGULAR ± 1° | | 16 OF 23 | 08/02/2017 |
| | | TITLE | | SCHEMATIC | |
| | | 3516B REMAN POWER MODULE EMCP 4.4 | | DRAWING NUMBER | |
| | | | | 83E200-02 | |

ALTORFER POWER SYSTEMS
6315 W. FAUBER RD. PHONE (309) 697-1234
BARTONVILLE, IL 61607 FAX (309) 282-7546

THIS DOCUMENT CONTAINS PROPRIETARY INFORMATION OF ALTORFER, INC. WITHOUT THE WRITTEN PERMISSION OF ALTORFER, INC., ANY COPYING OR OTHER USE EXCEPT THAT FOR WHICH IT WAS INTENDED IS PROHIBITED.

100A 240V



FUEL TRANSFER PUMP 2KW, 240V

AC SHORE POWER DISTRIBUTION 1
FOR NOTES SEE SHEET ONE

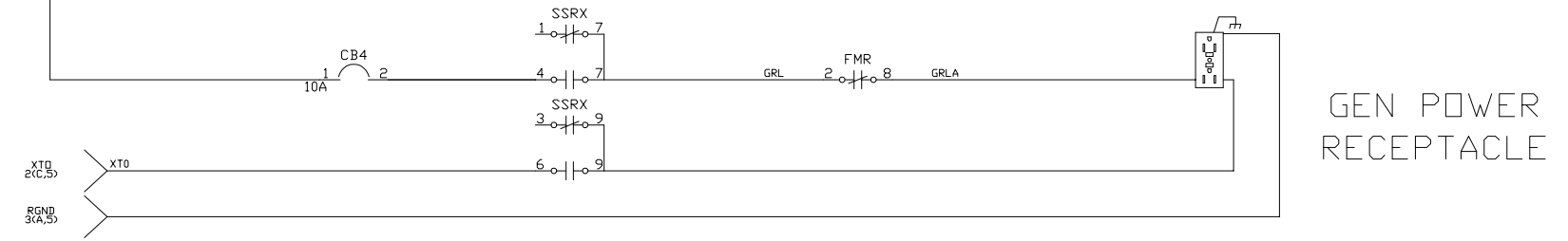
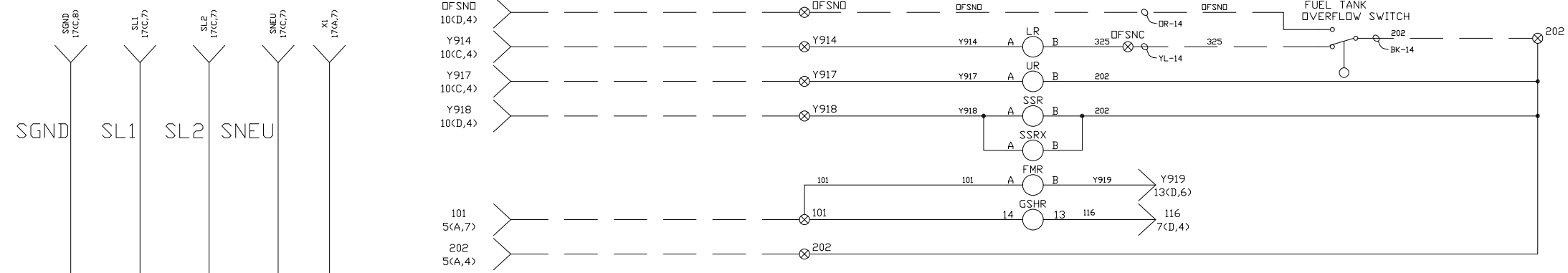
| | | | |
|----------|------------|-------------|----------------------|
| DATE | 07/24/2018 | BY | DF |
| REVISED | 06/24/2018 | BY | DF |
| REVISION | 1 | DESCRIPTION | AS-BUILT |
| REVISION | 2 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 3 | DESCRIPTION | CHANGE NOTICE |
| REVISION | 4 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 5 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 6 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 7 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 8 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 9 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 10 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 11 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 12 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 13 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 14 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 15 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 16 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 17 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 18 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 19 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 20 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 21 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 22 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 23 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 24 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 25 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 26 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 27 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 28 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 29 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 30 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 31 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 32 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 33 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 34 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 35 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 36 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 37 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 38 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 39 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 40 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 41 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 42 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 43 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 44 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 45 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 46 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 47 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 48 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 49 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 50 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 51 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 52 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 53 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 54 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 55 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 56 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 57 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 58 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 59 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 60 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 61 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 62 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 63 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 64 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 65 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 66 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 67 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 68 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 69 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 70 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 71 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 72 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 73 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 74 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 75 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 76 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 77 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 78 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 79 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 80 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 81 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 82 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 83 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 84 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 85 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 86 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 87 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 88 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 89 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 90 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 91 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 92 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 93 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 94 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 95 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 96 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 97 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 98 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 99 | DESCRIPTION | REVISE PER TRN BUILD |
| REVISION | 100 | DESCRIPTION | REVISE PER TRN BUILD |

ALTORFER POWER SYSTEMS
 6315 W. FAUBER RD. PHONE (309) 697-1234
 BARTONVILLE, IL 61607 FAX (309) 292-7546

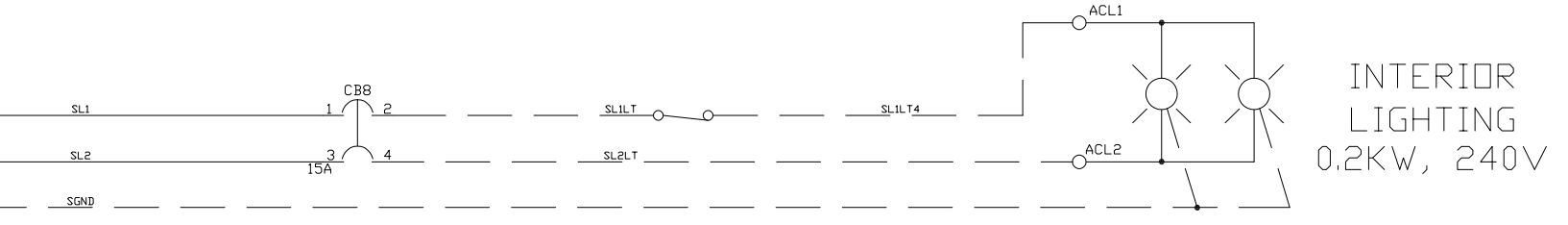
THIS DOCUMENT CONTAINS PROPRIETARY INFORMATION OF ALTORFER, INC. WITHOUT THE WRITTEN PERMISSION OF ALTORFER, INC., ANY COPYING OR OTHER USE EXCEPT THAT FOR WHICH IT WAS INTENDED IS PROHIBITED.

ALL DIMENSIONS IN INCHES UNLESS OTHERWISE SPECIFIED

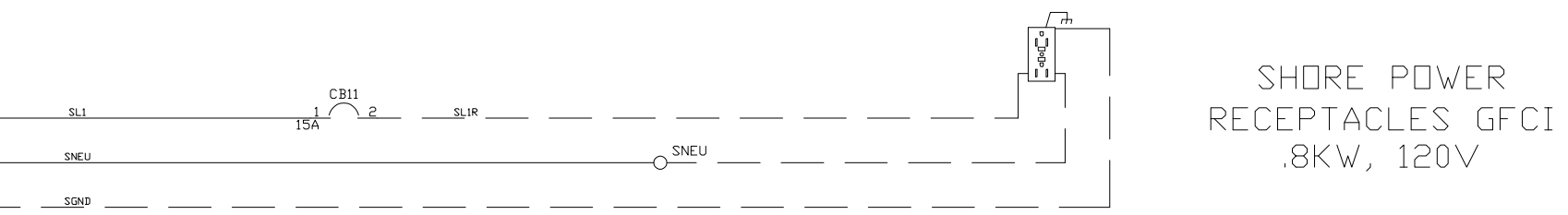
| | | | |
|-----------------------------------|------------|-------------------|--------------------------|
| FILE | DF/83E | PROJECT REFERENCE | 3516B REMAN POWER MODULE |
| SCALE/SHEET SIZE | 1=40/D | DRAWN BY | - |
| DATE | 08/02/2017 | WORK ORDER NUMBER | - |
| SHEET | 17 OF 23 | DRAWING NUMBER | 83E200-02 |
| TITLE | SCHEMATIC | | |
| 3516B REMAN POWER MODULE EMCP 4.4 | | | |



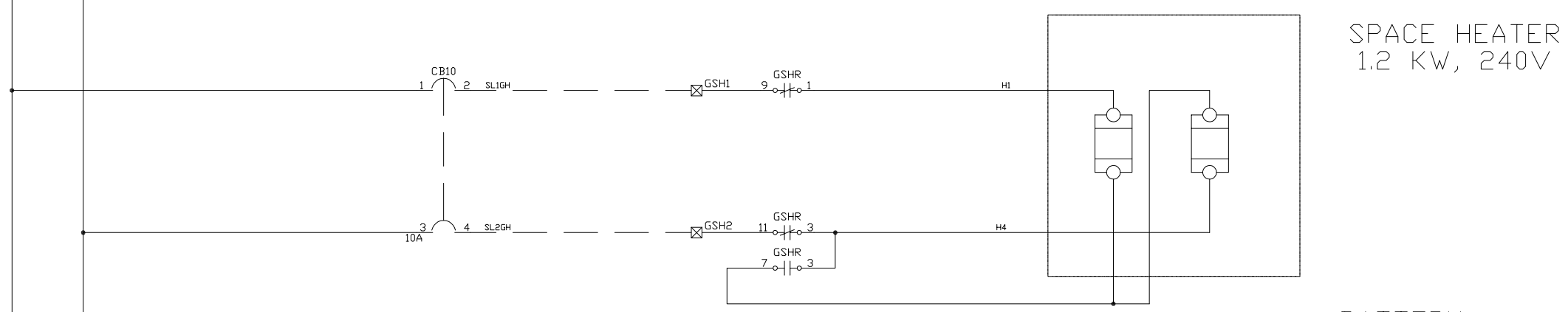
GEN POWER RECEPTACLE



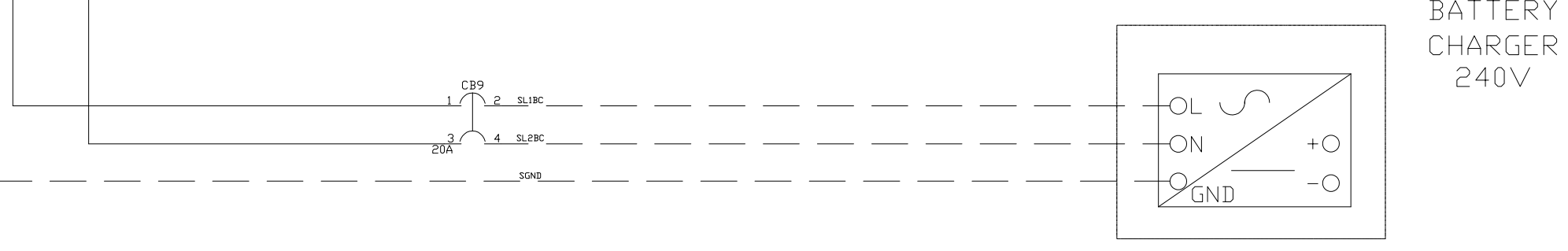
INTERIOR LIGHTING
0.2KW, 240V



SHORE POWER RECEPTACLES GFCI
.8KW, 120V



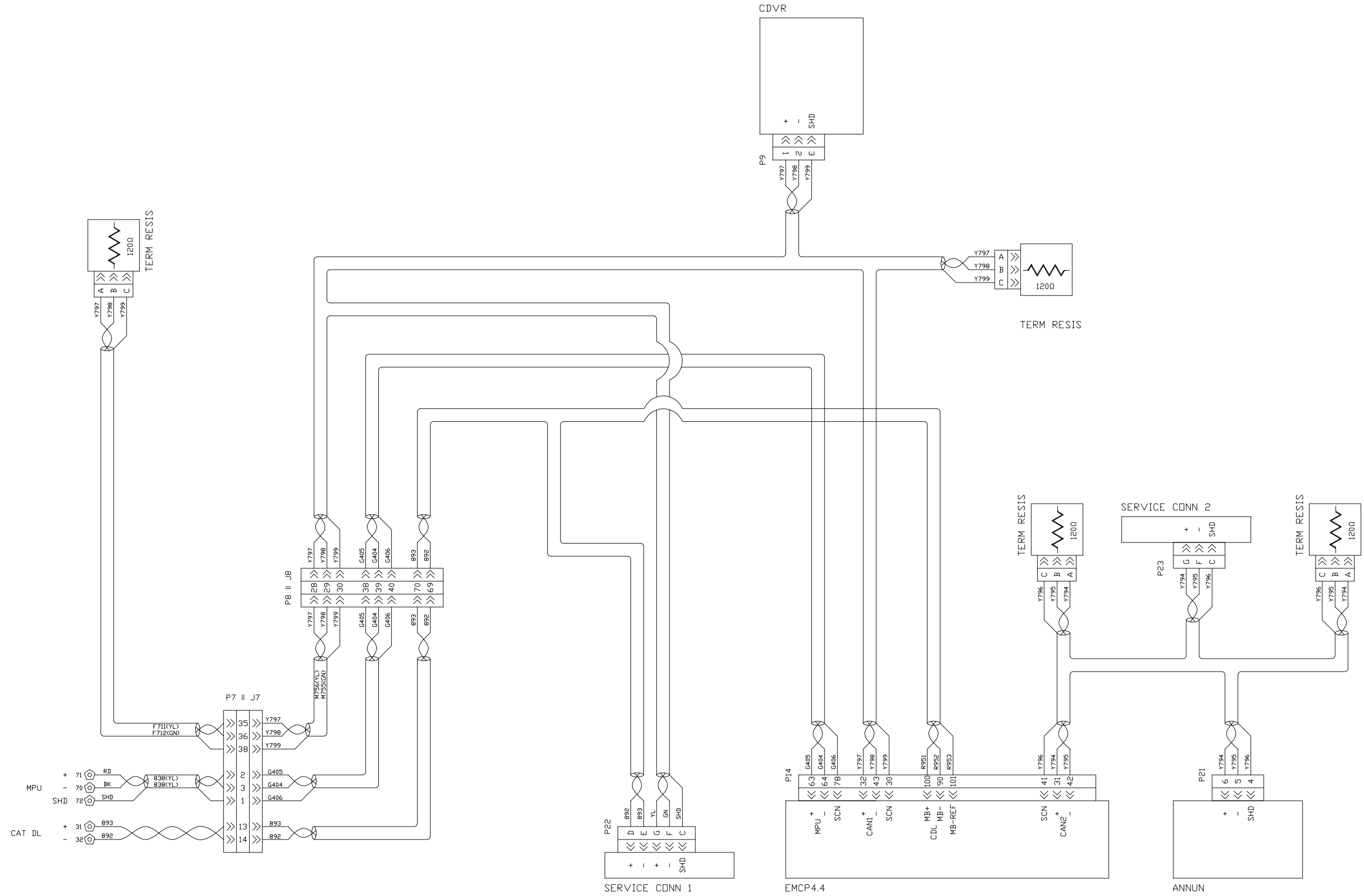
SPACE HEATER
1.2 KW, 240V



BATTERY CHARGER
240V

AC SHORE POWER DISTRIBUTION 2
FOR NOTES SEE SHEET ONE

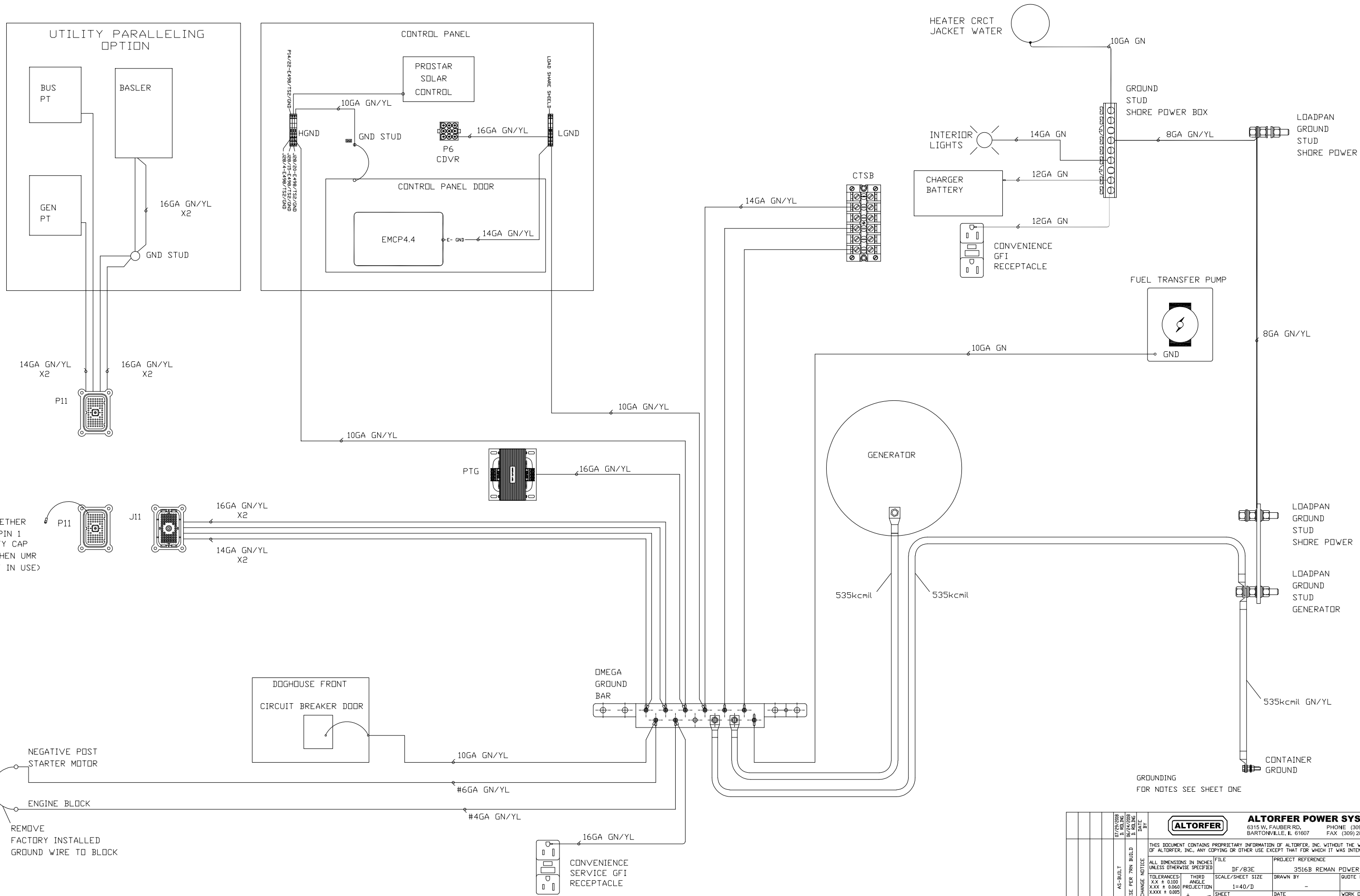
| | | | |
|--|---|--|---|
| ALTORFER 8315 W. FAUBER RD. PHONE (309) 697-1234 BARTONVILLE, IL 61807 FAX (309) 282-7546 | | ALTORFER POWER SYSTEMS PROJECT REFERENCE 3516B REMAN POWER MODULE | |
| THIS DOCUMENT CONTAINS PROPRIETARY INFORMATION OF ALTORFER, INC. WITHOUT THE WRITTEN PERMISSION OF ALTORFER, INC., ANY COPYING OR OTHER USE EXCEPT THAT FOR WHICH IT WAS INTENDED IS PROHIBITED. | ALL DIMENSIONS IN INCHES UNLESS OTHERWISE SPECIFIED | TOLERANCES X.X ± 0.100 X.XX ± 0.050 X.XXX ± 0.005 ANGULAR ± 1° | THRD ANGLE PROJECTION SHEET 18 OF 23 |
| FILE DF/83E | SCALE/SHEET SIZE 1=40/D | DRAWN BY - | DATE 08/02/2017 |
| QUOTE NUMBER - | WORK ORDER NUMBER - | DRAWING NUMBER 83E200-02 | TITLE SCHEMATIC 3516B REMAN POWER MODULE EMCP 4.4 |



COMMUNICATIONS
FOR NOTES SEE SHEET ONE

| | | | |
|--|--|--|--|
| | | ALTORFER POWER SYSTEMS 6315 W. FAUBER RD. BARTONVILLE, IL 61607 PHONE (309) 697-1234 FAX (309) 262-7546 | |
| THIS DOCUMENT CONTAINS PROPRIETARY INFORMATION OF ALTORFER, INC. WITHOUT THE WRITTEN PERMISSION OF ALTORFER, INC., ANY COPYING OR OTHER USE EXCEPT THAT FOR WHICH IT WAS INTENDED IS PROHIBITED. | | FILE: DF/83E PROJECT REFERENCE: 3516B REMAN POWER MODULE | |
| ALL DIMENSIONS IN INCHES UNLESS OTHERWISE SPECIFIED TOLERANCES: XX ± 0.100 ANGLE XXX ± 0.060 PROJECTION XXXX ± 0.005 ANGULAR ± 1° | | SCALE/SHEET SIZE: 1=40/D DRAWN BY: - QUOTE NUMBER: - DATE: 08/02/2017 WORK ORDER NUMBER: - | |
| TITLE: SCHEMATIC 3516B REMAN POWER MODULE EMCP 4.4 | | DRAWING NUMBER: 83E200-02 | |

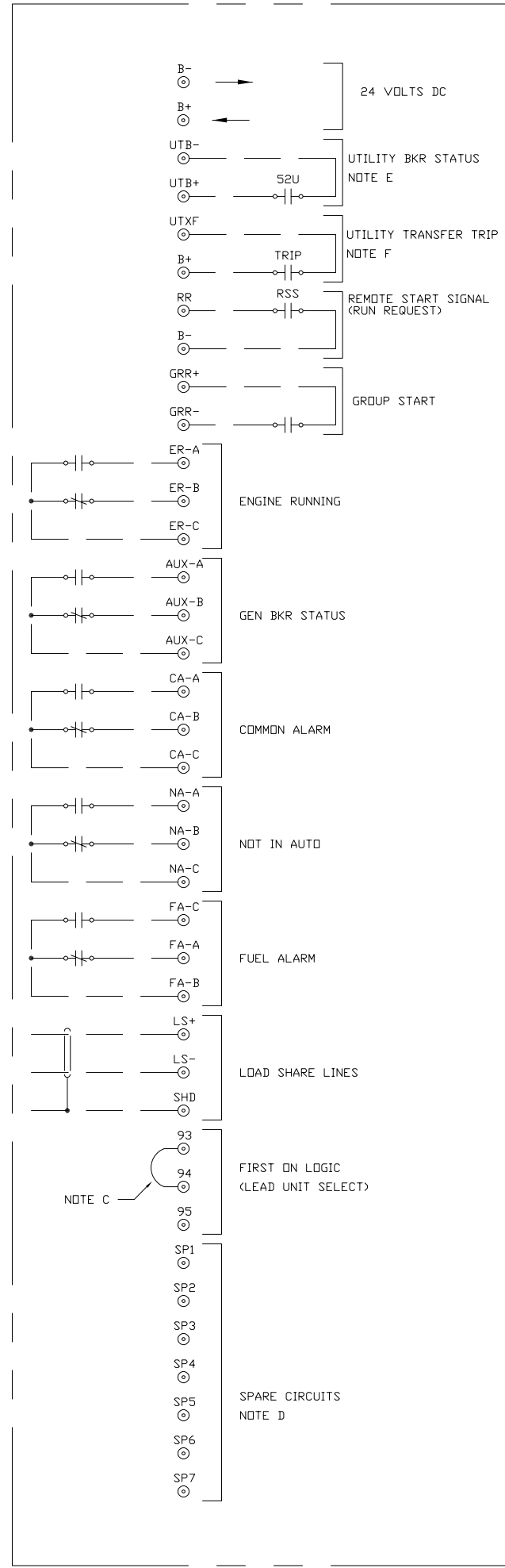
| | | | |
|-----|------------|----------|----------------------|
| NO. | DATE | BY | DESCRIPTION |
| 1 | 08/24/2018 | AS-BUILT | REVISE PER TRN BUILD |
| 2 | 07/20/2018 | 3 | REWORK |



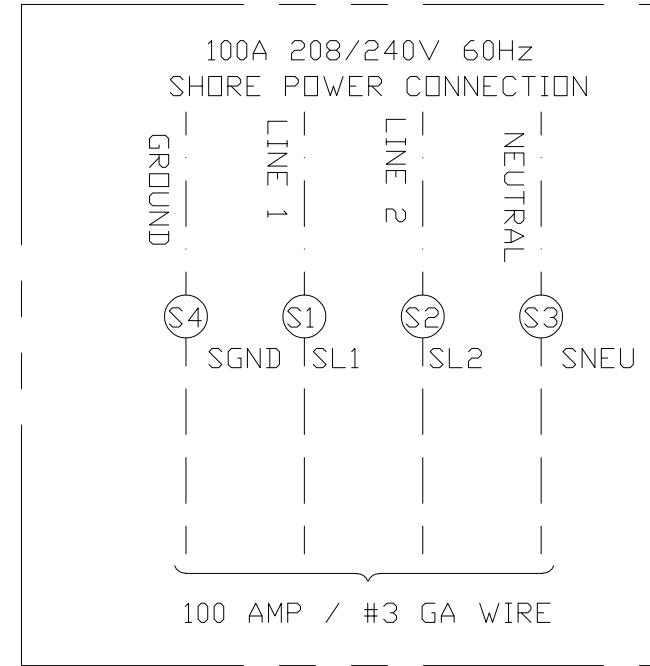
GROUNDING FOR NOTES SEE SHEET ONE

| | | | |
|---|---|--|---------------------------|
| ALTORFER 6315 W. FAUBER RD. PHONE (309) 697-1234 BARTONVILLE, IL 61807 FAX (309) 262-7546 | | ALTORFER POWER SYSTEMS PROJECT REFERENCE: 3516B REMAN POWER MODULE | |
| THIS DOCUMENT CONTAINS PROPRIETARY INFORMATION OF ALTORFER, INC. WITHOUT THE WRITTEN PERMISSION OF ALTORFER, INC. ANY COPYING OR OTHER USE EXCEPT THAT FOR WHICH IT WAS INTENDED IS PROHIBITED. | ALL DIMENSIONS IN INCHES UNLESS OTHERWISE SPECIFIED | FILE: DF/B3E | QUOTE NUMBER: - |
| TOLERANCES: .XX ± 0.100 .XXX ± 0.060 .XXXX ± 0.005 | THIRD ANGLE PROJECTION | SCALE/SHEET SIZE: 1=40/D | DRAWN BY: - |
| SHEET: 20 OF 23 | DATE: 08/02/2017 | WORK ORDER NUMBER: - | DRAWING NUMBER: 83E200-02 |
| TITLE: SCHEMATIC | | DRAWING NUMBER: 3516B REMAN POWER MODULE EMCP 4.4 | |

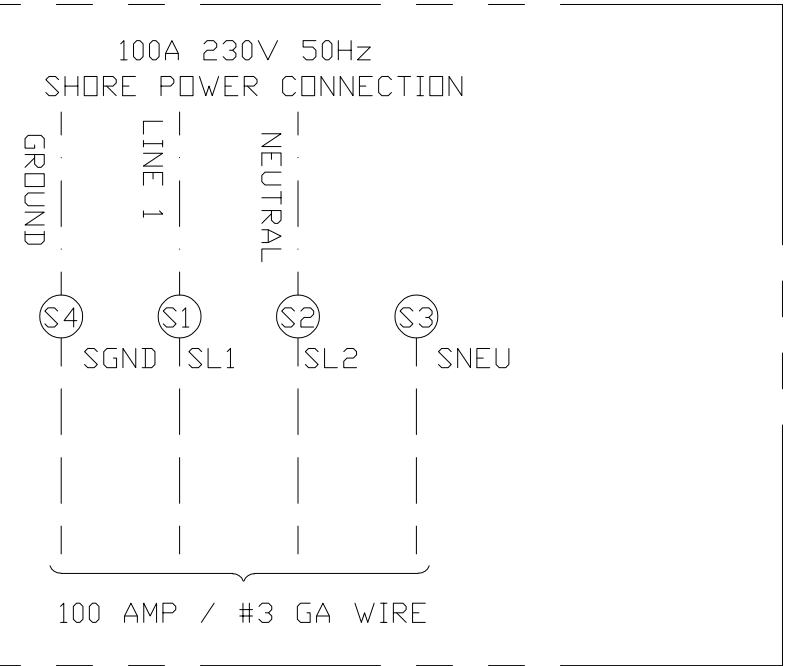
POWER MODULE INTERCONNECT BOX- DC TERMINALS



SHORE POWER CONNECTION



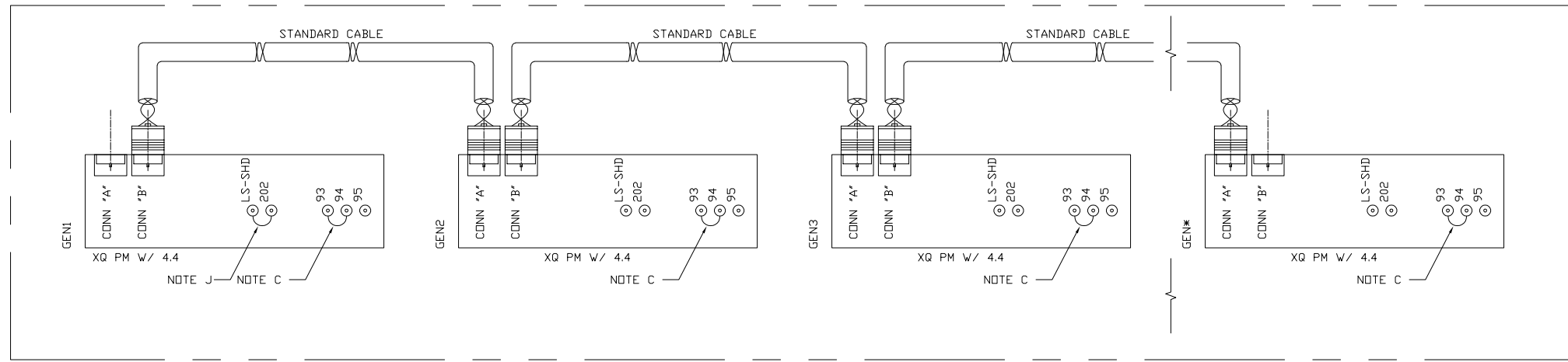
POWER MODULE INTERCONNECT BOX - AC TERMINALS



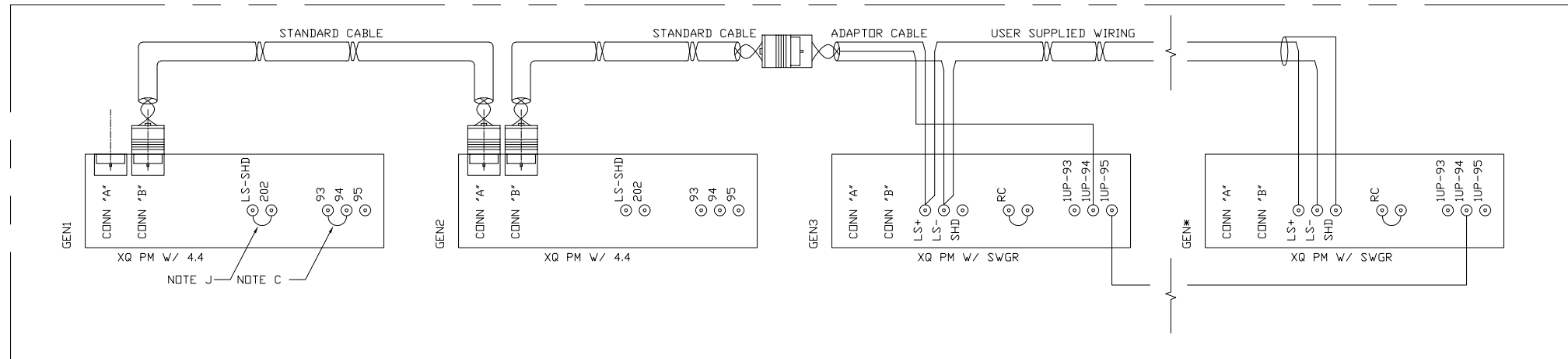
CUSTOMER CONNECTIONS
FOR NOTES SEE SHEET ONE

| | | | |
|--|------------|--|-----------------------|
| REVISED | DATE | BY | REASON |
| 1 | 08/02/2017 | DF | REVISED PER TRN BUILD |
| <p>ALTORFER ALTORFER POWER SYSTEMS 6315 W. FAUBER RD. BARTONVILLE, IL 61607 PHONE (309) 697-1234 FAX (309) 252-7546</p> | | | |
| <p>THIS DOCUMENT CONTAINS PROPRIETARY INFORMATION OF ALTORFER, INC. WITHOUT THE WRITTEN PERMISSION OF ALTORFER, INC., ANY COPYING OR OTHER USE EXCEPT THAT FOR WHICH IT WAS INTENDED IS PROHIBITED</p> | | | |
| <p>ALL DIMENSIONS IN INCHES UNLESS OTHERWISE SPECIFIED</p> | | <p>FILE PROJECT REFERENCE</p> | |
| <p>TOLERANCES: XX ± 0.100 X.XX ± 0.060 X.XXX ± 0.005</p> | | <p>SCALE/SHEET SIZE 1=40/D</p> | |
| <p>THIRD ANGLE PROJECTION</p> | | <p>DRAWN BY DATE</p> | |
| <p>ANGULAR ± 1°</p> | | <p>SHEET DATE</p> | |
| <p>TITLE</p> | | <p>WORK ORDER NUMBER</p> | |
| <p>3516B REMAN POWER MODULE EMCP 4.4</p> | | <p>DRAWING NUMBER</p> | |
| <p>AS-BUILT</p> | | <p>3516B REMAN POWER MODULE EMCP 4.4</p> | |
| <p>REVISIONS</p> | | <p>83E200-02</p> | |

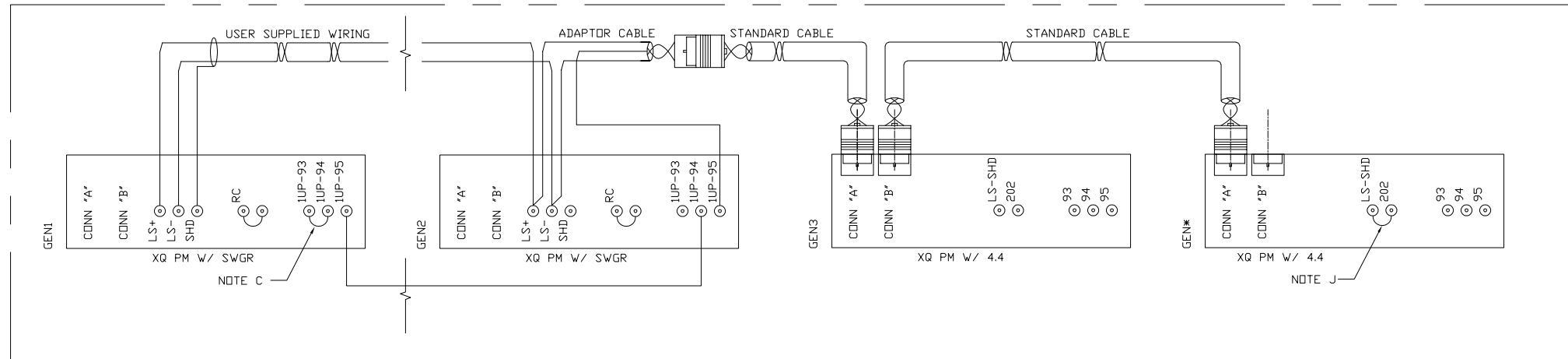
LOAD SHARE CONNECTIONS-(ALL EMCP 4.4 UNITS)



LOAD SHARE CONNECTIONS-(EMCP 4.4 AND LEGACY UNITS) (EMCP 4.4 LEAD UNIT SELECT)



LOAD SHARE CONNECTIONS-(EMCP 4.4 AND LEGACY UNITS) (LEGACY LEAD UNIT SELECT)



CUSTOMER PARALLELING CONNECTIONS
FOR NOTES SEE SHEET ONE

| | | | |
|---------|------------|----|----------------------|
| REVISED | DATE | BY | REASON |
| 1 | 08/02/2017 | DF | AS-BUILT |
| 2 | 06/24/2018 | DF | REVISE PER FRM BUILD |
| 3 | | | CHANGE NOTICE |

| | | | |
|--|---|--|--|
| | | ALTORFER POWER SYSTEMS 6315 W. FAUBER RD. PHONE (309) 697-1234 BARTONVILLE, IL 61607 FAX (309) 262-7546 | |
| THIS DOCUMENT CONTAINS PROPRIETARY INFORMATION OF ALTORFER, INC. WITHOUT THE WRITTEN PERMISSION OF ALTORFER, INC., ANY COPYING OR OTHER USE EXCEPT THAT FOR WHICH IT WAS INTENDED IS PROHIBITED. | | | |
| ALL DIMENSIONS IN INCHES UNLESS OTHERWISE SPECIFIED TOLERANCES: XX ± 0.100 XXX ± 0.060 XXXX ± 0.005 ANGULAR ± 1° | FILE DF/83E SCALE/SHEET SIZE 1=40/D SHEET 22 OF 23 TITLE SCHEMATIC | PROJECT REFERENCE 3516B REMAN POWER MODULE DRAWN BY DATE 08/02/2017 | QUOTE NUMBER WORK ORDER NUMBER DRAWING NUMBER 83E200-02 |

