

ABBREVIATIONS

A	AMMETER
AFCR	AUXILIARY FUEL CONTROL RELAY
ALM	ALARM MODULE
ALS	ALARM SILENCE PUSH BUTTON
ALT	ALTERNATOR
AR	ARMING RELAY
ASDS	AIR SHUT-OFF SOLENOID
ASR	AIR SHUT-OFF RELAY
ASSV	AIR START SOLENOID VALVE
ATB	AC TRANSFORMER BOX
AUX	AUXILIARY TERMINAL STRIP
AUXREL	AUXILIARY RELAY (CRANK TERMINATION)
AWG	AMERICAN WIRE GAUGE
BATT	BATTERY
BCF	BATTERY CHARGER FAILURE SWITCH
C	COMMON
CB	CIRCUIT BREAKER
CCM	CUSTOMER COMMUNICATION MODULE
CDM	ENGINE COOLDOWN TIMER MODULE
CT	CURRENT TRANSFORMER
CD AUX	CHANGEOVER SWITCH AUX CONTACT
COSS	CHANGEOVER SWITCH DOOR SAFETY SWITCH
CTR	CRANK TERMINATION RELAY
D	DIODE
DCV	DC VOLTMETER
ECLS	ENGINE COOLANT LOSS SENSOR
ECM	ELECTRONIC CONTROL MODULE
ECS	ENGINE CONTROL SWITCH
ECTS	ENGINE COOLANT TEMPERATURE SENSOR
EFCR	EMERGENCY FUEL CONTROL RELAY
EFL	ENGINE FAILURE LIGHT
ESPB	EMERGENCY STOP PUSH BUTTON
ESL	EMERGENCY STOP LIGHT
F	FUSE
FLG	FUEL LEVEL GAUGE
FLSU	FUEL LEVEL SENDING UNIT
FCR	FUEL CONTROL RELAY
FS	FUEL SOLENOID
FSDS	FUEL SHUT-OFF SOLENOID
FCTM	FUEL CONTROL TIMER MODULE
GFR	GENSET FAULT RELAY
GPHI	GROUND POST HI (HI CURRENT)
GPLD	GROUND POST LO (LO CURRENT)
GSC	GENERATOR SET CONTROL
GSDV	GAS SHUT-OFF VALVE
HZ	FREQUENCY METER
IC	REMOTE START/STOP INITIATE CONTACT
L	LOAD LEADS
LFL	LOW FUEL LEVEL LIGHT
LFLAS	LOW FUEL LEVEL ALARM SWITCH
LFS	LATCHING FUEL CONTROL SOLENOID
LDLAS	LOW OIL LEVEL ALARM SWITCH
LWLAS	LOW WATER LEVEL ALARM SWITCH
LWTL	LOW WATER TEMPERATURE LIGHT
MAN	MANUAL
MPU	MAGNETIC SPEED PICKUP
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
OCL	OVERCRANK LIGHT
OCT	OVERCRANK TIMER
OP	OIL PRESSURE

DPG	OIL PRESSURE GAGE
DPL	OIL PRESSURE LIGHT
DSL	OVERSPEED LIGHT
PDS	PARALLEL DOOR SWITCH
PL	PANEL ILLUMINATION LIGHT
PLS	PANEL LIGHT SWITCH
PDT	POTENTIOMETER
PP	PRELUBE PUMP
PPMS	PRELUBE PUMP MAGNETIC SWITCH
PPPS	PRELUBE PUMP OIL PRESSURE SWITCH
PS	PINION SOLENOID
PSS	PERSONNEL SAFETY SWITCH
PWM	ANALOG TO PWM CONVERTER
RAN	REMOTE ANNUNCIATOR
RPL	REVERSE POWER LIGHT
RPR	REVERSE POWER RELAY
RPSR	REVERSE POWER SLAVE RELAY
RR	RUN RELAY
SASV	START AID SOLENOID VALVE
SATS	START AID TEMPERATURE SWITCH
SAS	START AID SWITCH
SEC	SECOND
SHTC	CIRCUIT BREAKER SHUNT TRIP COIL
SIG	SIGNAL
SL	SYNCHRONIZING LIGHT
SLM	SYNCHRONIZING LIGHT MODULE
SLR	SYNCHRONIZING LIGHT RESISTOR
SM	STARTING MOTOR
SMMS	STARTING MOTOR MAGNETIC SWITCH
SMR	STARTING MOTOR RELAY
SP	SPEED ADJUST POTENTIOMETER
SR	SLAVE RELAY
SS	SYNCHRONIZING SWITCH
T	GENERATOR LINE LEADS
TD	TIME DELAY RELAY
TSC	TRANSFER SWITCH INDICATING CONTACT
USR	UMBILICAL SAFETY RELAY
V	AC VOLTMETER
VAR	VOLTAGE ADJUST RHEOSTAT
WT	WATER TEMPERATURE
WTG	WATER TEMPERATURE GAGE
WTL	WATER TEMPERATURE LIGHT
XDUCER	TRANSDUCER
Z	ZENER DIODE

	RELAY MODULE TERMINAL POINT
	GSC CONNECTOR CONTACT
	ENGINE GENERATOR TERMINAL POINT
	CONTROL PANEL TERMINAL POINT
	VOLTAGE REGULATOR TERMINAL POINT
	CONTROL PANEL WIRING
	ENGINE HARNESS WIRING
	CUSTOMER WIRING
	UMBILICAL CORD WIRING
	ALTERNATIVE WIRING
	SHIELDED WIRE
	ENGINE MOUNTED COMPONENT
	TIME CLOSED CONTACT
	TIMED OPENED CONTACT
	TIMED CLOSED TIMED OPENED CONTACT
	RELAY CONTACT (NORMALLY OPEN)
	RELAY CONTACT (NORMALLY OPEN)
	RELAY CONTACT (NORMALLY CLOSED)
	RELAY CONTACT (NORMALLY CLOSED)
	GENERATOR FRAME (CHASSIS) GROUND
	EARTH GROUND
	PRESSURE SWITCH
	PRESSURE SWITCH
	TEMPERATURE SWITCH
	TEMPERATURE SWITCH
	LIQUID LEVEL SWITCH
	LEVEL SENDING UNIT
	LAMP
	LAMP
	MANUALLY OPERATED CONTROL
	OPERATED BY TURNING
	SPEED SWITCH CONTACT
	SPEED SWITCH CONTACT
	BREAKDOWN DIODE BIDIRECTIONAL
	BREAKDOWN DIODE BIDIRECTIONAL
	DIODE
	DIODE
	FUSE
	FUSE
	EMERGENCY SWITCH
	RELAY COIL
	RELAY COIL
	CIRCUIT BREAKER
	CIRCUIT BREAKER

SYMBOLS

	AUTOMATIC RESET
	NON-AUTO RESET
	AUTOMATIC START-STOP MODE
	SYSTEM NOT IN AUTOMATIC START-STOP MODE
	CRANK
	ADJUSTABLE LOW-HI
	AC VOLTS
	LOW OIL PRESSURE
	OVERSPEED
	EMERGENCY STOP
	FAIL TO START (OVER CRANK)
	LOW FUEL LEVEL
	LOW COOLANT TEMPERATURE
	HIGH COOLANT TEMPERATURE
	HIGH FUEL LEVEL
	HORN
	HORN SILENCE/ACKNOWLEDGE SWITCH
	RAISE
	LOWER
	ON
	OFF
	PANEL ILLUMINATION LIGHT
	SYSTEM BATTERY VOLTAGE
	SERVICE HOURS
	ENGINE-STOP
	ENGINE RPM
	LAMP/DISPLAY TEST
	GENERATOR SYNCHRONIZING INDICATOR
	AMMETER VOLTMETER PHASE SELECTOR SWITCH
	REVERSE POWER
	RUPTURE BASIN LEAK

INPUT/OUTPUT CONTENTS

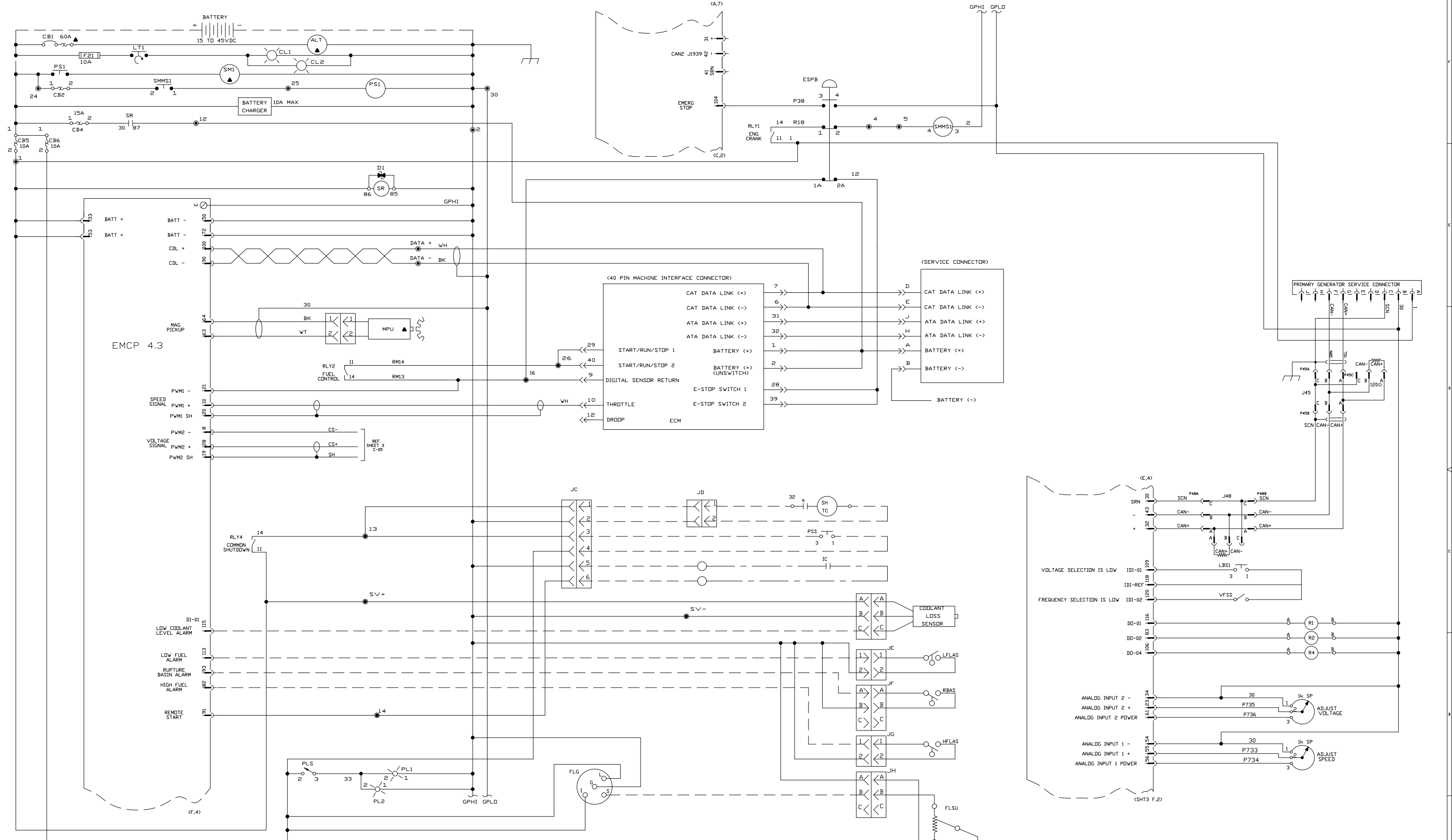
I/O#	FUNCTION
EMCP RELAYS (DIGITAL OUTPUTS)	
R01	ENGINE CRANK
R02	FUEL ENABLE
R03	AVAILABLE
R04	COMMON SHUTDOWN
R05	AVAILABLE
R06	AVAILABLE
R07	AVAILABLE
R08	AVAILABLE
R09	AVAILABLE
R10	AVAILABLE
R11	AVAILABLE
R12	AVAILABLE
R13	AVAILABLE
R14	AVAILABLE
R15	AVAILABLE
R16	AVAILABLE
EMCP INPUTS	
DDI-01	EMERGENCY STOP INPUT
DDI-02	REMOTE INITIATE COMMAND
DI-01	COOLANT LOSS
DI-02	LOW FUEL LEVEL ALARM
DI-03	HIGH FUEL LEVEL ALARM
DI-04	TANK LEAK
DI-05	AVAILABLE
DI-06	AVAILABLE
DI-07	AVAILABLE
DI-08	AVAILABLE
IDI-01	VOLTAGE SELECTION IS LOW
IDI-02	FREQUENCY SELECTION IS LOW
IDI-03	AVAILABLE
IDI-04	AVAILABLE
A11	EMCP ANALOG INPUTS
A12	DESIRED SPEED
A13	DESIRED VOLTAGE
A14	AVAILABLE
A01	EMCP ANALOG OUTPUTS
A02	AVAILABLE
A03	AVAILABLE
PW01	EMCP PWM OUTPUTS
PW02	DESIRED SPEED
	INTEGRATED VOLTAGE REGULATOR

440V 60Hz	480V 60Hz		
208V 60Hz	240V 60Hz		
POSITION1	POSITION2		
ON			
OFF			
GROUP SELECTION			
SELECTION	VOLTS	LINKBOARD	GROUP#
480V 60Hz	OFF	HV	1
240V 60Hz	OFF	LV	2
440V 60Hz	ON	HV	3
208V 60Hz	ON	LV	4

XQ400(3456)RM ONLY

ABBREVIATIONS AND SYMBOLS

5/30/2008	09/26/16	DATE	ALTORFER POWER SYSTEMS		
PER ECP-1098	CORRECT SVC. CRANK WIRING	DATE BY	6315 W. FAUBER RD. PHONE (309) 697-1234		
2	1	DATE BY	BARTONVILLE, IL 61807 FAX (309) 282-7546		
3	1	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		FILE	PROJECT REFERENCE		
TOLERANCES: XX ± 0.100 THIRD ANGLE PROJECTION		DF/S4E	XQ400RM (3456) RENTAL UNIT		
XXX ± 0.060		SCALE/SHEET SIZE	DRAWN BY	QUOTE NUMBER	
XXXX ± 0.005		1=1/D	D. ROLLING	-	
ANGULAR ± 1°		SHEET	DATE	WORK ORDER NUMBER	
		1 OF 4	12/01/2015	-	
TITLE		DRAWING NUMBER			
EMCP4.3 CONTROL PANEL GROUP		54E425-03			



XQ400(3456)RM ONLY

DC SCHEMATIC (JIC)

DATE	BY	FILE	PROJECT REFERENCE
09/26/16	JIC	DF/S4E	XQ400 (3456) RENTAL UNIT
DATE	BY	SCALE/SHEET SIZE	DRAWN BY
12/08/2015	D. ROLLING	1=1/D	
DATE	BY	DATE	WORK ORDER NUMBER
12/08/2015	D. ROLLING	12/08/2015	
TITLE	DRAWING NUMBER		
EMCP4.3 DC SCHEMATIC	54E425-03		

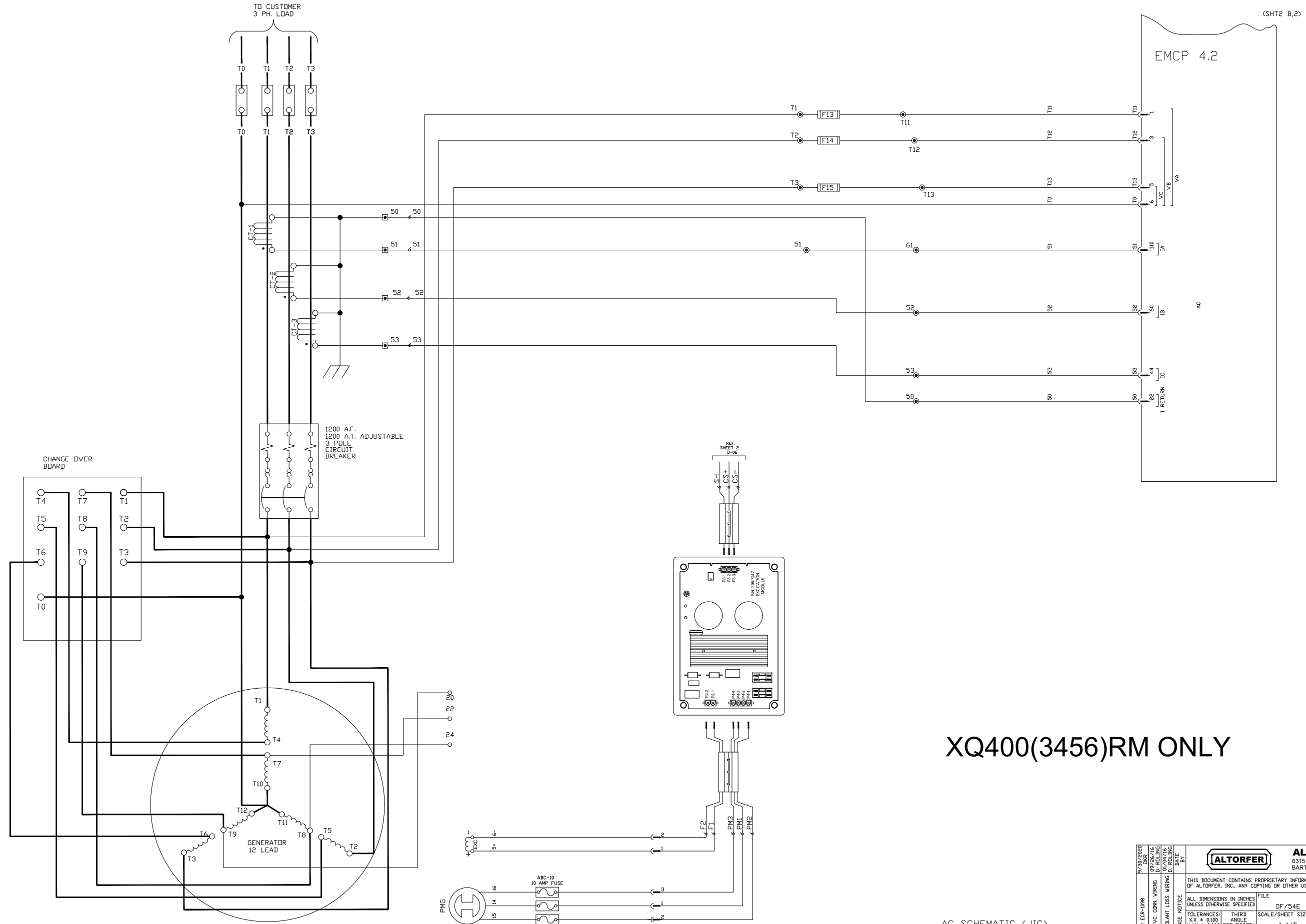
ALTORFER POWER SYSTEMS
 6315 W. FAUBER RD. PHONE (309) 697-1234
 BARTONVILLE, IL 61807 FAX (309) 282-7546

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ALL DIMENSIONS IN INCHES UNLESS OTHERWISE SPECIFIED

TOLERANCES: XX ± 0.100 THIRD ANGLE PROJECTION
 XXX ± 0.060
 XXXX ± 0.005

ANGULAR ± 1°

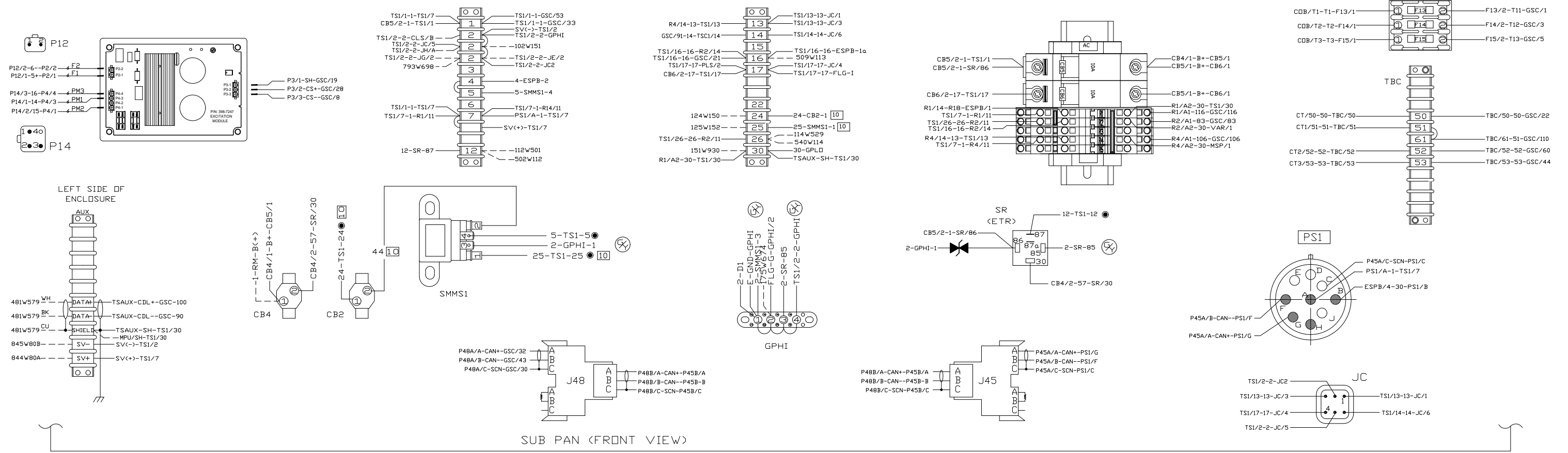


XQ400(3456)RM ONLY

AC SCHEMATIC (JIC)

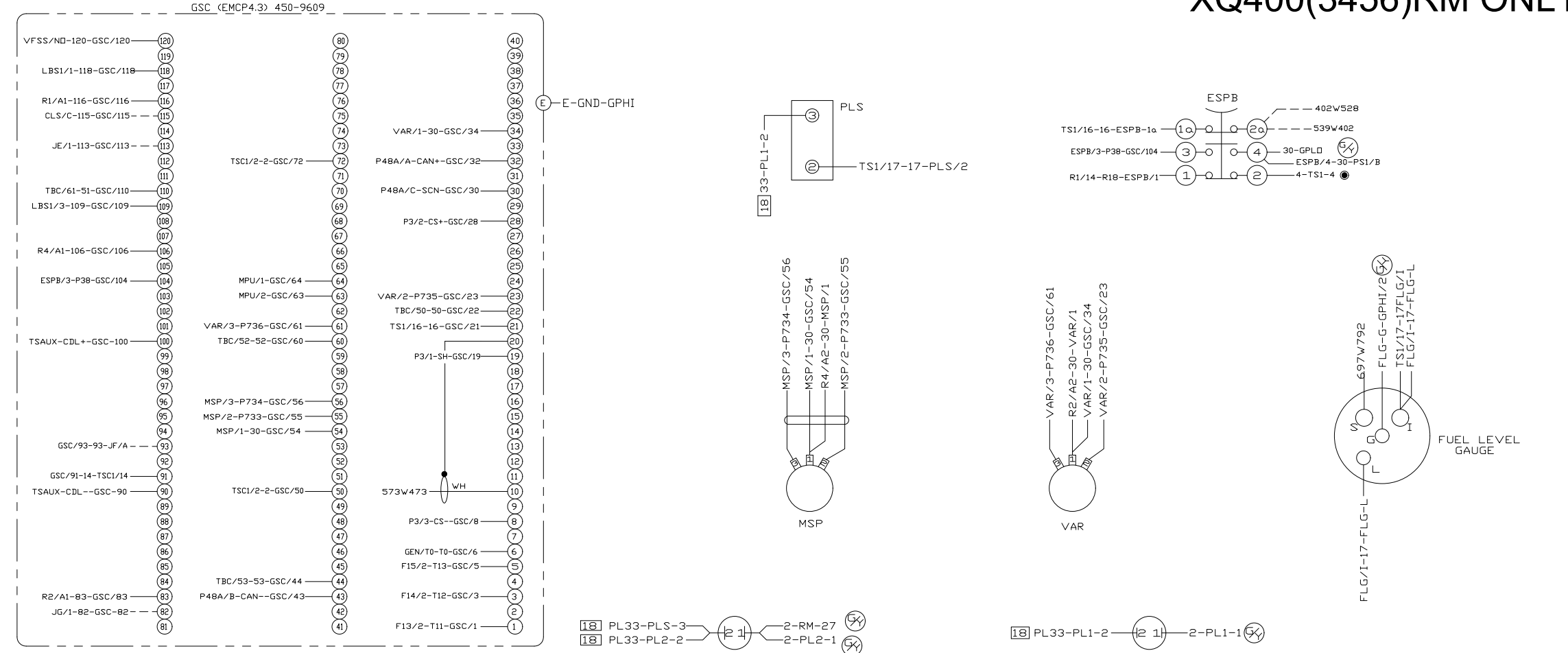
9/27/2008 DMR 09/26/16 D. ROLLING D. ROLLING D. ROLLING		DATE BY		ALTORFER ALTORFER POWER SYSTEMS 6315 W. FAUBER RD. PHONE (309) 697-1234 BARTONVILLE, IL 61807 FAX (309) 282-7546	
PER ECP-1098 CORRECT SVC. CONN. WIRING CORRECT COILANT LOSS WIRING		CHANGE NOTICE 1 2 3		FILE DF/S4E PROJECT REFERENCE XQ400 (3456) RENTAL UNIT	
ALL DIMENSIONS IN INCHES UNLESS OTHERWISE SPECIFIED TOLERANCES: .XX ± 0.100 .XXX ± 0.060 .XXXX ± 0.005 ANGULAR ± 1°		SCALE/SHEET SIZE 1=1/D SHEET 3 DF 4		DRAWN BY D. ROLLING DATE 12/07/2015 QUOTE NUMBER - WORK ORDER NUMBER - DRAWING NUMBER 54E425-03	
TITLE EMCP4.3 GENERATOR AC SCHEMATIC				DRAWING NUMBER 54E425-03	

TS1



INSTRUMENT DOOR (TOP VIEW WITH DOOR OPEN)

XQ400(3456)RM ONLY



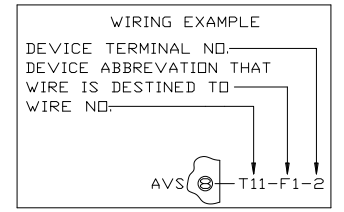
NOTE A: WIRES TO BE CAPPED & SECURED WHEN NOT USED. PROVIDE WIRE ROUTING & HARDWARE TO PREVENT WIRE CHAFFING.

NOTE B: ALL WIRE SHALL BE STRANDED 16 AWG UL & CSA, 90 C, 600 VAC INSULATION UNLESS OTHERWISE NOTED BY THE FOLLOWING SYMBOLS.

- 10 = 10 AWG WIRE
- 18 = 18 AWG WIRE
- ⊗ = GREEN & YELLOW STRIPED WIRE INSULATION.

NOTE C: WIRES ARE TO BE END CODED WITH WIRE NUMBERS.

- = LOCATED ON TS1 TERMINAL STRIP.
- ⊗ = LOCATED ON VOLTAGE REGULATOR TERMINAL STRIP.



MAIN CHASSIS WIRING DIAGRAM (WITH OPTIONS)

9/20/2020	09/26/16	09/26/16	09/26/16	DATE	ALTORFER			
PER ECP-098	CORRECT SWG CONN. WIRING	CORRECT COILANT LOSS WIRING	CHANGE NOTICE	DATE BY	ALTORFER POWER SYSTEMS			
2	1	1	1		8315 W. FAUBER RD. BARTONVILLE, IL 61807			
					PHONE (309) 897-1234 FAX (309) 282-7546			
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ALL DIMENSIONS IN INCHES UNLESS OTHERWISE SPECIFIED					XQ400 (3456) RENTAL UNIT			
TOLERANCES: XX ± 0.100 THIRD ANGLE PROJECTION XXX ± 0.000 ANGULAR ± 1°					SCALE/SHEET SIZE 1=1/D			
FILE DF/S4E					DRAWN BY			
SHEET 4 OF 4					DATE 12/08/2015			
TITLE EMCP4.3 CONTROL PANEL MAIN CHASSIS WIRING DIAGRAM					WORK ORDER NUMBER			
					DRAWING NUMBER 54E425-03			