

NOTE B: MOUNT FILMS ON CONTROL PANEL FLOOR.

NOTE C: FOR REQUIRED PRODUCT MARKING SEE.

NOTE D: IDENTIFICATION NAME PLATE SHALL BE PERMANENTLY AFFIXED TO THE INSIDE LOWER SURFACE OF THE CONTROL PANEL ENCLOSURE AND SHALL INCLUDE THE PANEL PART NUMBER, MODEL NUMBER AND DATE CODE OF MANUFACTURE.

NOTE E: MOUNT TETHER STRAPS TO METER PLATE.

NOTE F: CONTROL PANEL ENCLOSURE JOINTS & HARDWARE MOUNTING HOLES SHALL BE SEALED WITH DOW CORNING RTV732.

NOTE G: PLACE GROUND STRAP UNDERNEATH NUT OF CONTROL MODULE

NOTE H: ALL WIRE SHALL BE STRANDED 16 AWG UL & CSA, 90°C, 600VAC INSULATION UNLESS OTHERWISE NOTED BY THE FOLLOWING SYMBOLS.
 10 = 10 AWG WIRE
 18 = 18 AWG WIRE

6/7 = GREEN & YELLOW STRIPED WIRE INSULATION.

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

NOTE J: SEGREGATE AC WIRING FROM DC WIRING.

NOTE L: SEE SHEET 7 FOR WIRING DIAGRAM INFORMATION.

NOTE M: CONTROL PANEL DOOR TO TERMINAL STRIP INTERCONNECT WIRE ROUTING, SHALL AVOID SHARP EDGES THAT MAY DAMAGE WIRE INSULATION.

NOTE N: CUT JUMPER BRIDGE TO CONNECT 6 TERMINAL POINTS LABELED "2", CUT JUMPER BRIDGE TO CONNECT TERMINAL LABELED "4" AND "5", CUT JUMPER BRIDGE TO CONNECT 2 TERMINALS LABELED "6", CUT JUMPER BRIDGE TO CONNECT 5 TERMINALS LABELED "7".

NOTE Q: CONTROL PANEL GROUND WIRE SHALL BE 14 AWG WITH GREEN AND YELLOW STRIPED INSULATION RATED 90°C, 600 VAC, UL & CSA. WIRE SHALL BE LABELED "GND" & SHALL HAVE AN APPROPRIATELY SIZED RING TERMINAL FOR 1/4"-20 SCREW.

NOTE R: THE COMPLETED CONTROL PANEL SHALL BE FINISH PAINTED CATERPILLAR POWER MODULE WHITE WITH THE INSTRUMENT DOOR PAINTED FLAT BLACK.

NOTE S: A COMPLETE SET OF ALTORFER DRAWINGS INCLUDING OUTLINE DRAWING, WIRING DIAGRAMS, SCHEMATIC DIAGRAMS, AND INTERCONNECT DIAGRAMS SHALL BE PACKED WITH EACH CONTROL PANEL.

NOTE T: PROGRAMMING - THE CONTROL PANEL SHALL BE SHIPPED WITH A BLANK ECM.

NOTE V: NOTCH SIDES AS REQUIRED FOR WIRE PASSAGE.

NOTE W: ALL CAN DATA LINK WIRING TO BE 153-2707

NOTE X: PLACE WASHER BETWEEN SUBPAN AND RAIL FOR SPACING

NOTE Z: PLACE COMPONENT LABELS F1 THROUGH F8 ON PANDUIT COVER, ABOVE EACH FUSE IN LEFT TO RIGHT ORDER AS FOLLOWS, F8, F7, F1, F2, F3.

NOTE AA: PARTS TO CONNECT TO ANNUNCIATOR.

NO	ITEM	QTY	MEAS UNIT	PART NO.	NAME	NO	ITEM	QTY	MEAS UNIT	PART NO.	NAME
PARTS LIST						PARTS LIST					
1	1			364-1221	FILM	81	1			276-7456	FILM-IDENT
2	1			3E-3389	WEDGE-RECP LOCK	82	2			171-6256	BAR-FIXED BRIDGE
3	1			7C-0974	FILM-WARNING	83	1			171-6259	MARKER-TERMINAL
4	1			195-5975	PLATE AS	AA	84	1		155-2273	PLUG AS-CONN
5	1			7C-2954	GASKET-MODULE	AA	85	1		155-2263	WEDGE-PLUG LOCK
6	2			7G-9730	LAMP AS.	86	1			134-2305	SEAL
7	2			7N-5876	LAMP-MINIATURE						
8	1			8D-2676	SWITCH AS-TOGGLE						
9	1			8T-2882	HANDLE-PULL						
10	6			9F-8125	LOCKWASHER-TOOTH						
11	2			121-4721	STRIP-DUST SEAL						
12	2			121-4722	STRIP-DUST SEAL						
13	1			103-6272	SEAL-CONTROL						
14	2			125-0171	LOCK AS	C	1			6L-4502	PROD MARKING SYS
15	2			126-7491	STRAP		1			54E302	DIAGRAM-WIRING
16	4			136-3376	MOUNT-VIBRATION						
17	8			137-1352	WASHER						
18	1			258-4940	PANEL AS.-BOX						
19	8			211-0089	NUT-HEX FLANGE						
20	1			9Y-9771	FILM-INFO						
21	10			243-5027	NUT AS						
22	1			351-2428	CONTROL GP-ELECT						
23	1			268-9278	PANEL AS						
24	1			243-4174	STRAP-GROUND						
25	1			244-9605	BRACKET						
26	1			155-5234	INDICATOR AS.						
27	1			263-7740	FILM-CONT PANEL						
28	1			109-6507	SWITCH-OPERATOR						
29	2			2D-6235	LOCKNUT						
30	2			2N-3478	SCREW-MACHINE						
31	6			2N-3479	SCREW-MACHINE						
32	2			2N-3480	SCREW-MACHINE						
33	12			3E-9865	LOCKNUT						
34	22			4B-2041	NUT						
35	4			4B-2047	NUT						
36	20			4B-4274	WASHER						
37	24			8T-4205	WASHER-HARD						
38	8			8T-9364	BOLT						
39	4			8T-9368	BOLT						
40	1			303-5893	CONTROL GP.						
41	1			244-9613	GASKET-ALARM						
42	1			195-0534	RECEPTACLE AS.						
43	1			9X-0145	RECEPTACLE AS.						
44	1			9X-7148	RECEPTACLE AS.						
45	32			9X-6259	SCREW-MACHINE						
46	2			4W-5972	KNOB						
47	2			129-0308	POTENTIOMETER						
48	2			7C-4550	SEAL-ROT SFT						
49	1			3T-0270	RESISTOR						
50	4			6V-8185	NUT-FULL						
51	1			264-1963	PANEL AS.						
52	2			111-1324	BLOCK						
53	1			111-1325	BLOCK						
54	2			3N-5977	BLOCK						
55	12			096-6166	WASHER-HARD						
56	3			7W-0482	FUSE						
57	2			6V-7802	FUSE						
58	1			166-6162	DUCT-WIRE						
59	1			166-6156	DUCT-WIRE						
60	28			3L-8187	LOCKWASHER-#6						
61	1			097-5921	RAIL-MTG						
62	2			8F-5758	SCREW-MACHINE						
63	2			7H-3937	LOCKWASHER-TOOTH						
64	7			192-2924	BLOCK-TERMINAL						
65	3			171-6260	COVER-END						
66	19			192-2922	BLOCK-TERMINAL						
67	2			162-0589	BRACKET-END						
68	42			9X-3402	SOCKET-CONNECTOR						
69	5			133-0970	RECEPTACLE AS.						
70	12			174-0502	PLUG AS.-CONN						
71	7			155-2266	WEDGE-PLUG LOCK						
72	5			155-2276	WEDGE-PLUG LOCK						
73	3			174-3016	PLUG AS.-RES						
74	1			160-7689	PLUG AS.-CONN						
75	28			8T-8730	SOCKET-CONNECTOR						
76	72			9G-3695	PLUG-SEALING						
77	2			9W-1951	RECEPTACLE AS.						
78	7			9X-3401	PIN-CONNECTOR						
79	50			8T-8729	PIN-CONNECTOR						
80	1			9W-0852	PIN-CONNECTOR						

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CHANGE NOTICE ALL DIMENSIONS IN INCHES UNLESS OTHERWISE SPECIFIED TOLERANCES: X.X ± 0.100 X.XX ± 0.060 X.XXX ± 0.005 ANGULAR ± 1°	FILE DF\54E	PROJECT REFERENCE APS300 C9 / APS400 C15	
	SCALE/SHEET SIZE 1=40/D	DRAWN BY P. PETERSON	QUOTE NUMBER 0
	SHEET 1 OF 7	DATE 5/20/2013	WORK ORDER NUMBER 0
	TITLE APS300/APS400 DUAL VOLTAGE (240/480V) PANEL AR-A6001(ELEK)	DRAWING NUMBER 54E300	

ABBREVIATIONS

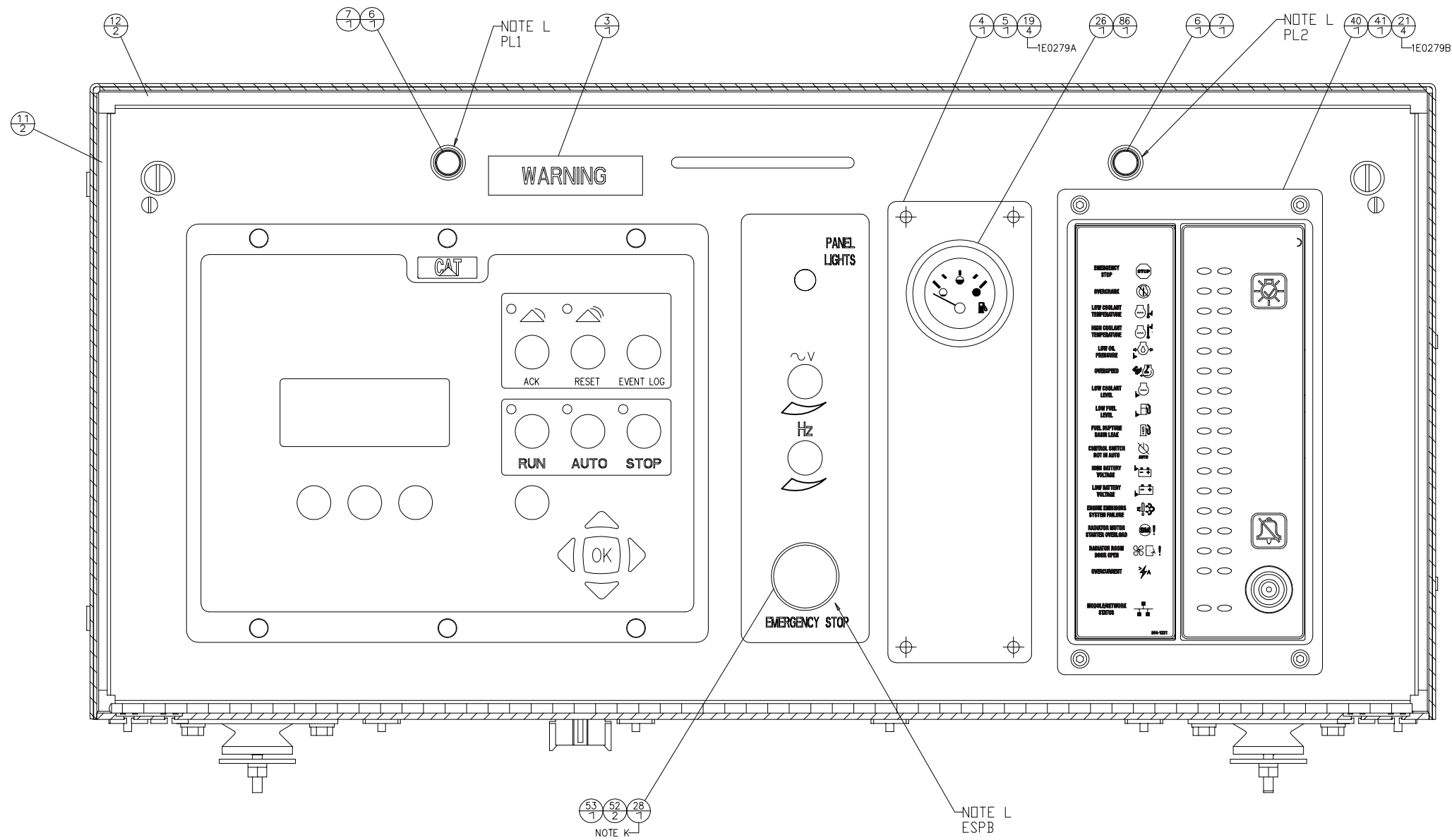
SYMBOLS

A	AMMETER	OCL	OVERCRANK LIGHT
ADS	ENGINE COMBUSTION AIR DAMPER POSITION SWITCH	OCR	OVERCURRENT RELAY
AFCR	AUXILIARY FUEL CONTROL RELAY	OCT	OVERCRANK TIMER
AL	AMBER LIGHT	OP	OIL PRESSURE
ALM	ALARM MODULE	OVR	OVERVOLTAGE RELAY
ALS	ALARM SILENCE PUSH BUTTON	OPG	OIL PRESSURE GAGE
ALT	ALTERNATOR	OPL	OIL PRESSURE LIGHT
AR	ARMING RELAY	OSL	OVERSPEED LIGHT
ASOS	AIR SHUT-OFF SOLENOID	PGSC	PRIMARY GENERATOR SERVICE CONNECTOR
ASR	AIR SHUT-OFF RELAY	PL	PANEL ILLUMINATION LIGHT
ASSV	AIR START SOLENOID VALVE	PLS	PANEL LIGHT SWITCH
ATB	AC TRANSFORMER BOX	POT	POTENTIOMETER
AUX	AUXILIARY TERMINAL STRIP	PP	PRELUBE PUMP
AUXREL	AUXILIARY RELAY (CRANK TERMINATION)	PPMS	PRELUBE PUMP MAGNETIC SWITCH
AWG	AMERICAN WIRE GAUGE	PPPS	PRELUBE PUMP OIL PRESSURE SWITCH
BATT	BATTERY	PR	PRE-REGULATOR
BCF	BATTERY CHARGER FAILURE SWITCH	PROG	PROGRAMMABLE
BVPR	BATTERY VOLTAGE PRESENT RELAY	PS	PINION SOLENOID
C	COMMON	PSS	PERSONNEL SAFETY SWITCH
CAM	CUSTOM ALARM MODULE	RAN	REMOTE ANNUNCIATOR
CAR	COMMON ALARM RELAY	RES	RESISTOR
CB	CIRCUIT BREAKER	RL	RED LIGHT
CCM	CUSTOMER COMMUNICATION MODULE	RLY	RELAY
CDM	ENGINE COOLDOWN TIMER MODULE	RPL	REVERSE POWER LIGHT
CR	CONTROL RELAY	RPR	REVERSE POWER RELAY
CT	CURRENT TRANSFORMER	RPSR	REVERSE POWER SLAVE RELAY
CTR	CRANK TERMINATION RELAY	RR	RUN RELAY
D	DIODE	SASV	START AID SOLENOID VALVE
DCV	DC VOLTMETER	SATS	START AID TEMPERATURE SWITCH
DS	DIAGNOSTIC SWITCH	SAS	START AID SWITCH
ECLS	ENGINE COOLANT LOSS SENSOR	SBCT	SERIES BOOST CURRENT TRANSFORMER
ECS	ENGINE CONTROL SWITCH	SBM	SERIES BOOST MODULE
ECTS	ENGINE COOLANT TEMPERATURE SENSOR	SEC	SECOND
EFCR	EMERGENCY FUEL CONTROL RELAY	SGSC	SECONDARY GENERATOR SERVICE CONNECTOR
EFL	ENGINE FAILURE LIGHT	SHTC	CIRCUIT BREAKER SHUNT TRIP COIL
EG	ELECTRONIC GOVERNOR (SPEED SENSING)	SIG	SIGNAL
EGA	ELECTRONIC GOVERNOR ACTUATOR	SL	SYNCHRONIZING LIGHT
EGR	ELECTRONIC GOVERNOR RELAY	SLM	SYNCHRONIZING LIGHT MODULE
ENFR	ENGINE FAILURE RELAY	SLR	SYNCHRONIZING LIGHT RESISTOR
ENG	ENGINE	SM	STARTING MOTOR
EOPS	ENGINE OIL PRESSURE SENSOR	SMMS	STARTING MOTOR MAGNETIC SWITCH
EOTS	ENGINE OIL TEMPERATURE SENSOR	SMR	STARTING MOTOR RELAY
ESPB	EMERGENCY STOP PUSH BUTTON	SP	SPEED ADJUST POTENTIOMETER
ESL	EMERGENCY STOP LIGHT	SR	SLAVE RELAY
F	FUSE	SS	SYNCHRONIZING SWITCH
FCR	FUEL CONTROL RELAY	T	GENERATOR LINE LEADS
FLG	FUEL LEVEL GAUGE	TD	TIME DELAY RELAY
FLSU	FUEL LEVEL SENDING UNIT	TSC	TRANSFER SWITCH POSITION INDICATING CONTACT
FS	FUEL SOLENOID	V	AC VOLTMETER
FSOS	FUEL SHUT-OFF SOLENOID	VAR	VOLTAGE ADJUST RHEOSTAT
FCTM	FUEL CONTROL TIMER MODULE	VAS	VOLTMETER / AMMETER SWITCH
GFR	GENSET FAULT RELAY	WT	WATER TEMPERATURE
GOV	GOVERNOR	WTG	WATER TEMPERATURE GAGE
GRR	GENSET RUN RELAY	WTL	WATER TEMPERATURE LIGHT
GS	GOVERNOR SWITCH	XDUCER	TRANSDUCER
GSC	GENERATOR SET CONTROL	Z	ZENER DIODE
GSM	GOVERNOR SYNCHRONIZING MOTOR		
GSOV	GAS SHUT-OFF VALVE		
HZ	FREQUENCY METER		
HFLAS	HIGH FUEL LEVEL ALARM SWITCH		
IC	REMOTE START/STOP INITIATE CONTACT		
IAHR	INTAKE AIR HEATER RELAY		
IH	INTAKE HEATER		
L	LOAD LEADS		
LFL	LOW FUEL LEVEL LIGHT		
LFLAS	LOW FUEL LEVEL ALARM SWITCH		
LFLR	LOW FUEL LEVEL RELAY		
LFS	LATCHING FUEL CONTROL SOLENOID		
LOLAS	LOW OIL LEVEL ALARM SWITCH		
LWLAS	LOW WATER LEVEL ALARM SWITCH		
MAN	MANUAL		
MPU	MAGNETIC SPEED PICKUP		
NC	NORMALLY CLOSED		
NO	NORMALLY OPEN		

	A.C. CONNECTOR (JC)		AUTOMATIC RESET
	CONTROL PANEL TERMINAL POINT		NON-AUTO RESET
	VOLTAGE REGULATOR TERMINAL POINT		AUTOMATIC START-STOP MODE
	DC CONNECTOR #1 (JA)		SYSTEM NOT IN AUTOMATIC START-STOP MODE
	DC CONNECTOR #2 (JB)		CRANK
	DC POWER BOX CONNECTOR		ADJUSTABLE LOW-HI
	DC POWER BOX TERMINAL POINT		AC VOLTS
	STANDARD WIRING		LOW OIL PRESSURE
	ENGINE WIRING		OVERSPEED
	CUSTOMER WIRING		EMERGENCY STOP
	ALTERNATIVE WIRING		FAIL TO START (OVER CRANK)
	SHIELDED WIRE		LOW FUEL LEVEL
	ENGINE MOUNTED COMPONENT		LOW COOLANT TEMPERATURE
	TIME CLOSED CONTACT		HIGH COOLANT TEMPERATURE
	TIMED OPENED CONTACT		STARTING AID-ETHER
	TIMED CLOSED TIMED OPENED CONTACT		HORN
	RELAY CONTACT (NORMALLY OPEN)		HORN SILENCE/ACKNOWLEDGE SWITCH
	RELAY CONTACT (NORMALLY OPEN)		RAISE
	RELAY CONTACT (NORMALLY CLOSED)		LOWER
	RELAY CONTACT (NORMALLY CLOSED)		ON
	GENERATOR FRAME (CHASSIS) GROUND		OFF
	EARTH GROUND		LIQUID LEVEL SWITCH
	PRESSURE SWITCH		LAMP
	PRESSURE SWITCH		LAMP
	TEMPERATURE SWITCH		PANEL ILLUMINATION LIGHT
	TEMPERATURE SWITCH		ENGINE INTAKE AIR DAMPER CLOSED
	MANUALLY OPERATED CONTROL		SYSTEM BATTERY VOLTAGE
	OPERATED BY TURNING		SERVICE HOURS
	SPEED SWITCH CONTACT		ENGINE-STOP
	SPEED SWITCH CONTACT		ENGINE RPM
	BREAKDOWN DIODE BIDIRECTIONAL		LAMP/DISPLAY TEST
	BREAKDOWN DIODE BIDIRECTIONAL		GENERATOR SYNCHRONIZING INDICATOR
	DIODE		AMMETER VOLTMETER PHASE SELECTOR SWITCH
	DIODE		REVERSE POWER
	FUSE		BATTERY CHARGER MALFUNCTION
	FUSE		
	EMERGENCY SWITCH		
	RELAY COIL		
	RELAY COIL		
	CIRCUIT BREAKER		
	CIRCUIT BREAKER		

ABBREVIATIONS AND SYMBOLS
FOR NOTES SEE SHEET 1

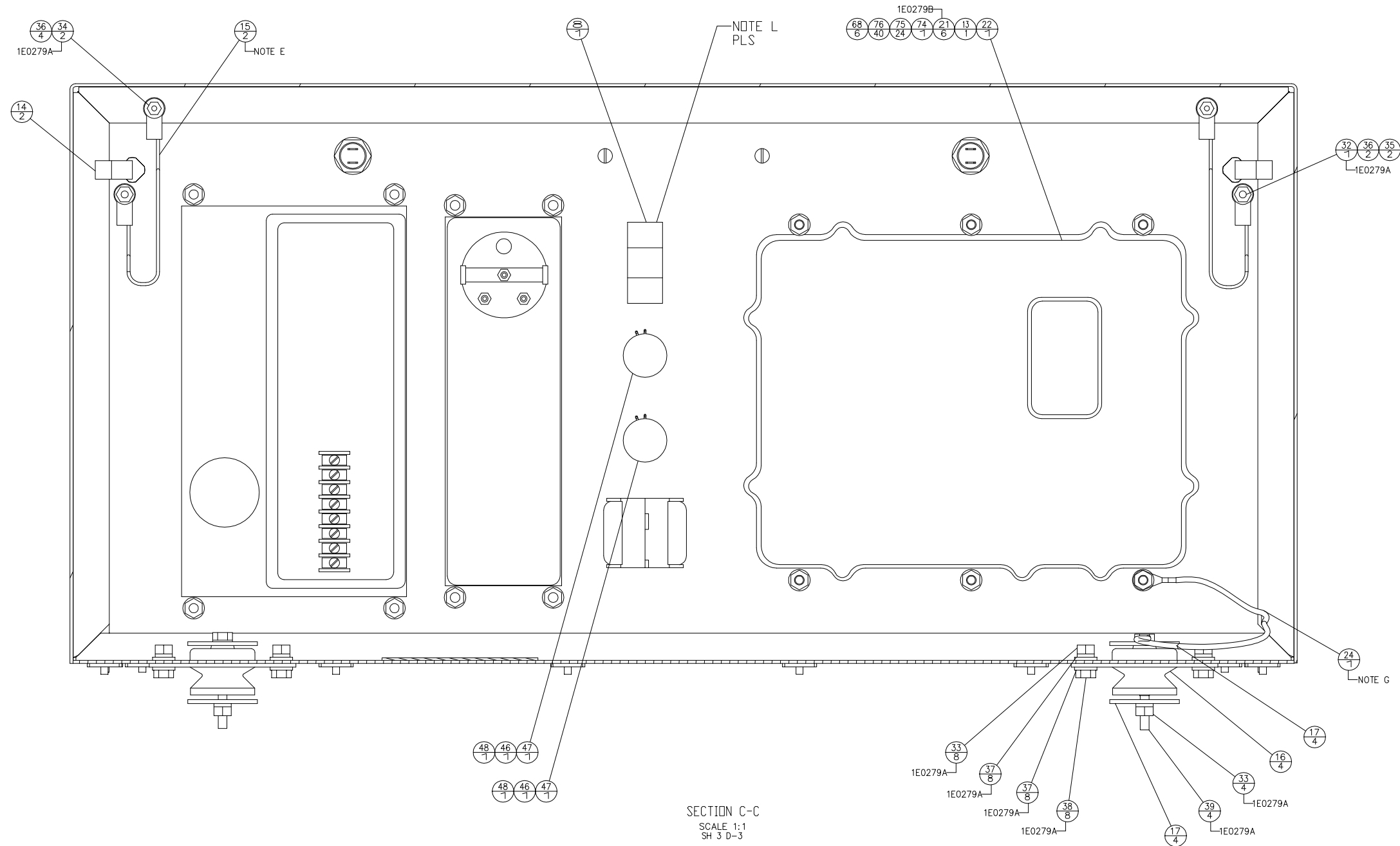
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	TOLERANCES: X.X ± 0.100 X.XX ± 0.060 X.XXX ± 0.005	THIRD ANGLE PROJECTION SHEET 2 OF 7	SCALE/SHEET SIZE 1=40/D DATE 5/20/2013	DRAWN BY P. PETERSON WORK ORDER NUMBER 0
	ANGULAR ± 1°	TITLE APS300/APS400 DUAL VOLTAGE (240/480V) PANEL AR-A6001(ELEK)	DRAWING NUMBER 54E300	



SECTION B-B
SCALE 1:1
SH 3 C-5

FOR NOTES SEE SHEET 1

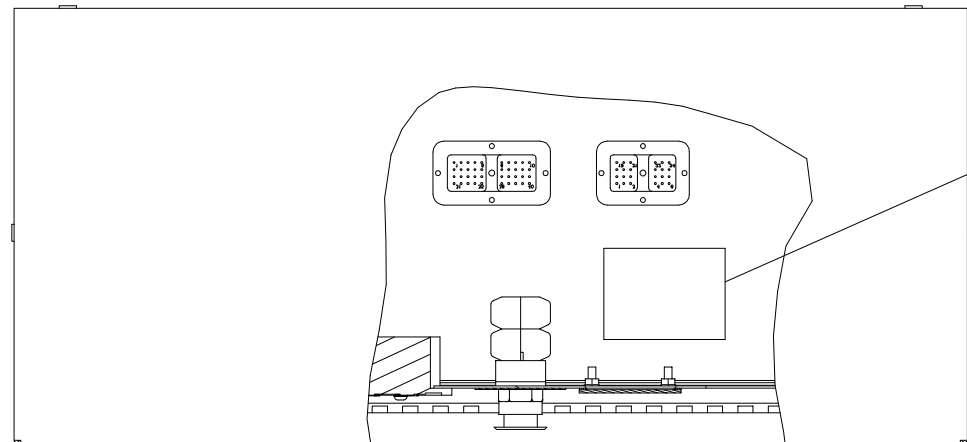
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	ANGULAR ± 1'		SCALE/SHEET SIZE 1=40/D	DRAWN BY P. PETERSON	0
			SHEET 4 OF 7	DATE 5/20/2013	WORK ORDER NUMBER 0
1	IND.	TITLE APS300/APS400 DUAL VOLTAGE (240/480V) PANEL, AR-A6001(ELEK)			DRAWING NUMBER 54E300



SECTION C-C
SCALE 1:1
SH 3 D-3

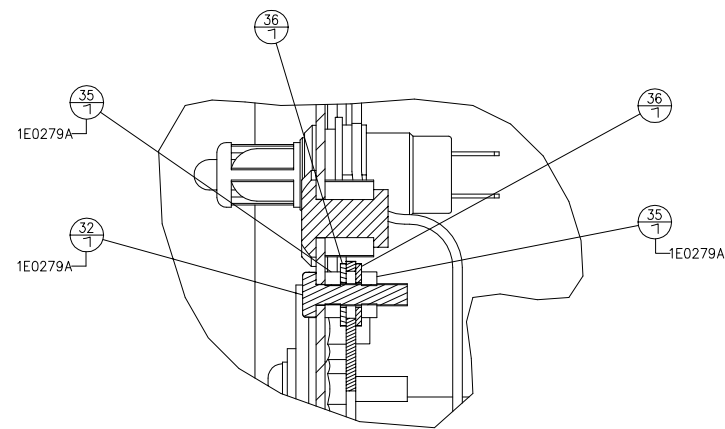
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CHANGE NOTICE	NO.	DATE	BY	FILE	PROJECT REFERENCE
	1			DF\54E	APS300 C9 / APS400 C15
	2				
	3				
ALL DIMENSIONS IN INCHES UNLESS OTHERWISE SPECIFIED		TOLERANCES:		SCALE/SHEET SIZE	
X.X ± 0.100		THIRD ANGLE PROJECTION		1=40/D	
X.XX ± 0.060		SHEET		DRAWN BY	
ANGULAR ± 1'		5 OF 7		P. PETERSON	
				DATE	
				5/20/2013	
				WORK ORDER NUMBER	
				0	
				DRAWING NUMBER	
				54E300	

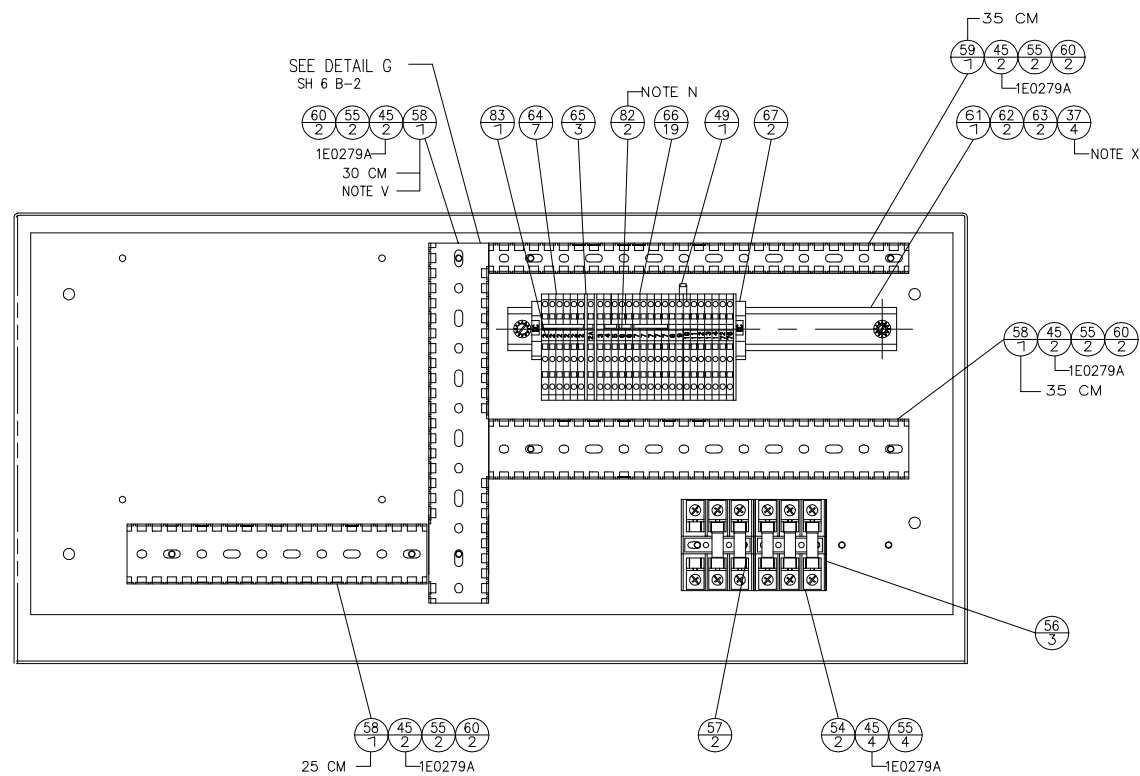


SECTION F-F
SCALE 1:2
SH 3 E-5

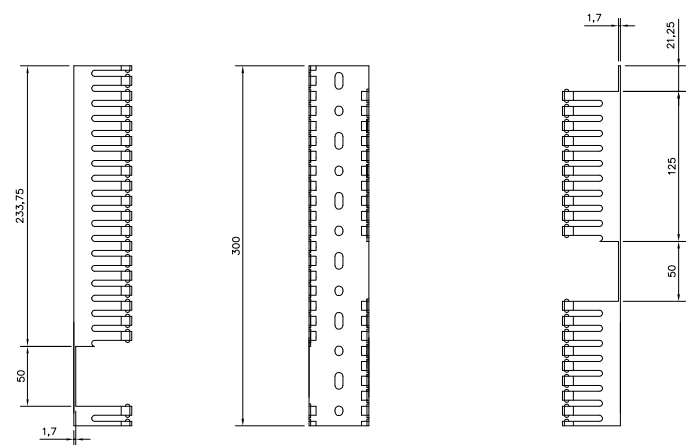
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NOTE B



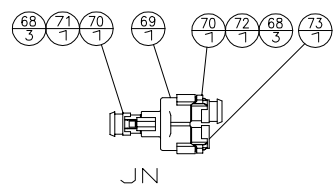
DETAIL E
SCALE 2:1
SH 3 F-4



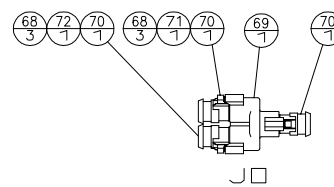
SECTION D-D
SCALE 1:2
SH 3 B-5



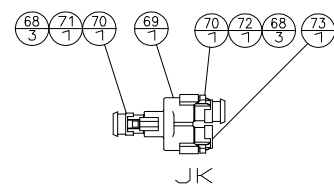
DETAIL G
SCALE-N.T.S.
SH 6 C-6



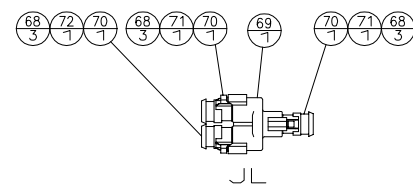
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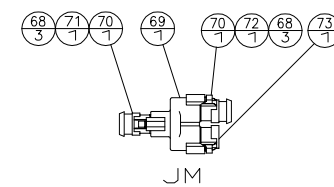
JO



JK



JL



JM

FOR NOTES SEE SHEET 1

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	TITLE APS300/APS400 DUAL VOLTAGE (240/480V) PANEL AR-A6001(ELEK)		
	DATE BY		
	INCH		

