

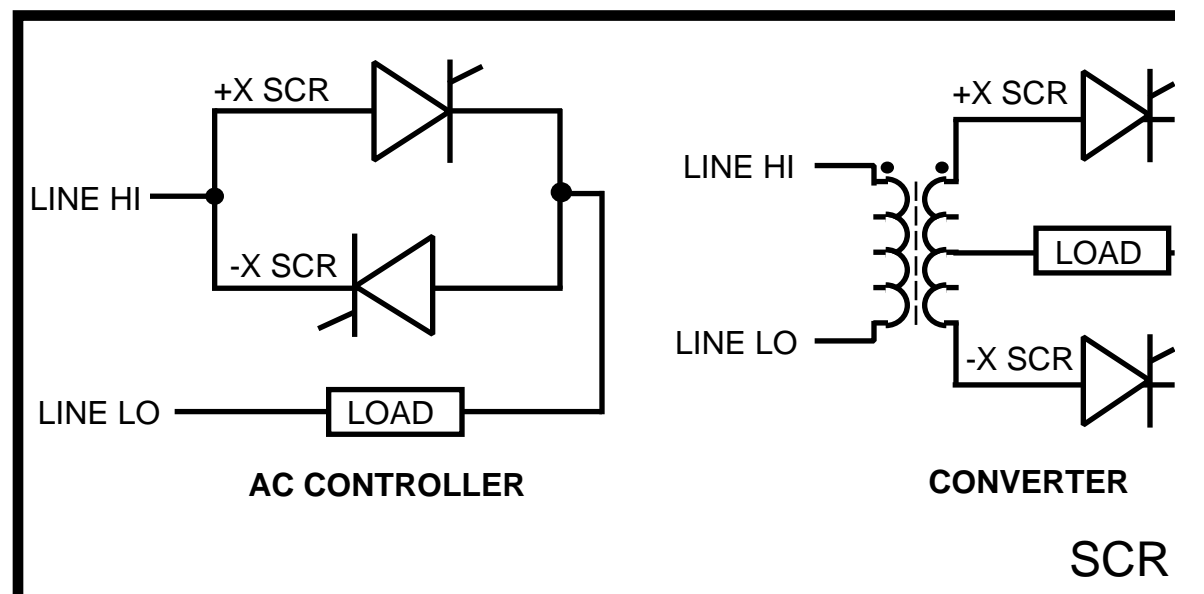
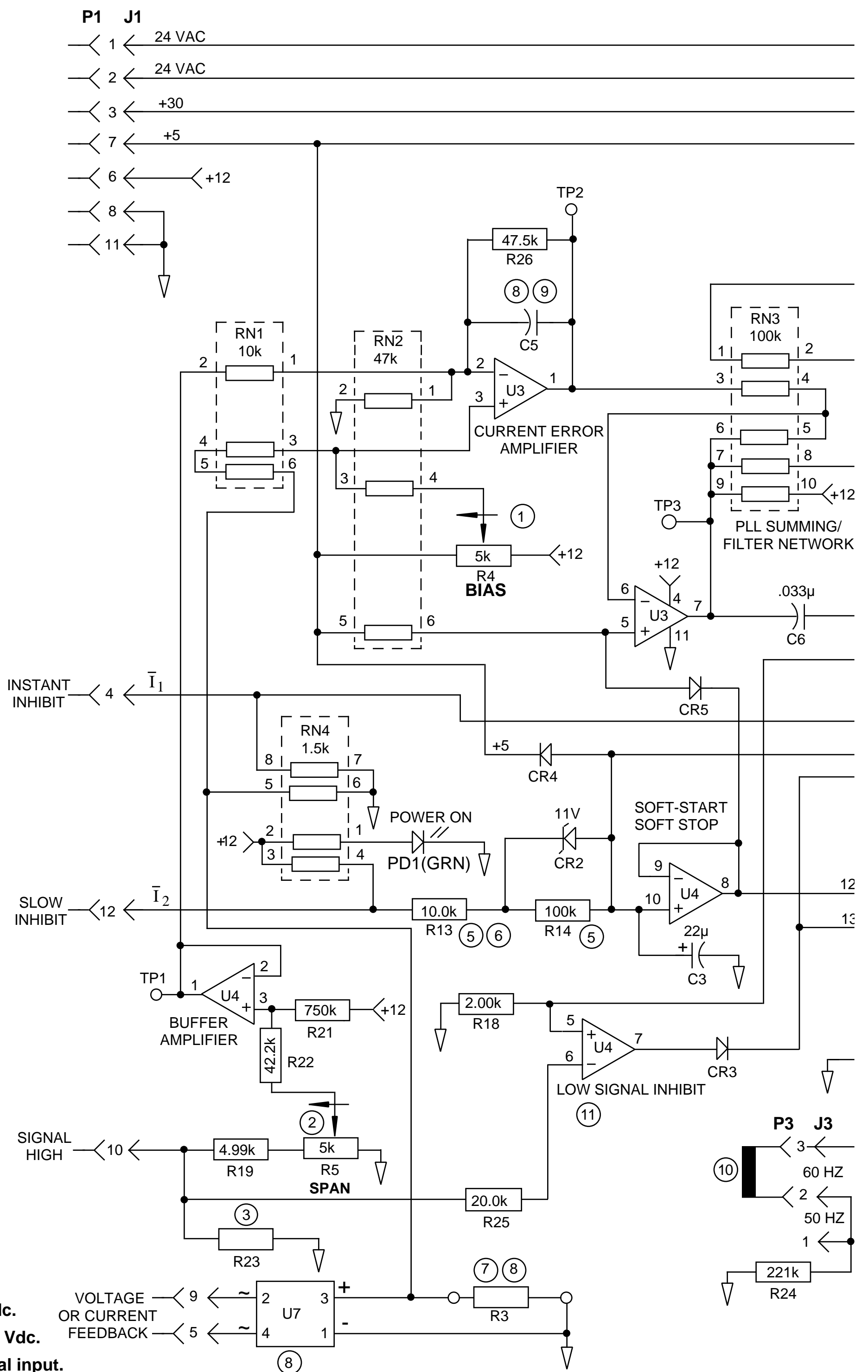
PART	DESCRIPTION
U1	ULN2004A
U2	EP1017
U3 / U4	MC34074P / LM224N
U5	LM340LAH-12
U6-U7	W02M (8)
CR1	IN4744 (15V)
CR2	IN5241B (11V)
CR3-CR5	IN4004
Q1-Q2	2N2222
PM1-PM2	EP1024-0
PD1	LN31GPH (GRN)
PD2	LN21RPH (RED)
RN1	750-63-R10K
RN2	750-63-R47K
RN3	750-103-R100K
RN4	750-83-R1.5K
RN5	750-83-R10K
RN6	750-63-R47K
RN7	750-63-R47K
C1	ECEA1HV101S
C2	ECS-F1CE225K
C3	ECS-F1CE226K
C4	MKC4 .33μF 10%
C5	MKS3 .XXXμF 10% (8)(9)
C6	MKS3 .033μF 10%
C7	FKC3 680pF 5%
C8	FKS3 2200pF 10%
R1-R2	RW69V221 220 5%
R3	CW5 XXX 5% (7)(8)
R4-R5	93P-R5K
R6	CW-2C 10
CP1 - CP2	PCB-2 (12)
R11-R25	RN60 1/4W 1%, SEE TABLE BELOW
R26	RN60 1/4W 1% (8)(9)
P1-P2 SOCKETS	350689-3 (BRZ AWG 24-18)
J1	350713-1
J2	641828-1
J3	640454
P1	1-480708-0
P2	640586-1
P3	65474-001
T1	SPW-154 (See below)
	W1JCOMM

RN60 RESISTOR SELECTION (KOHM)					
R11	3.01	R16	14.0	R21	750
R12	(4)	R17	1.50	R22	42.2
R13	(5)(6)	R18	2.00	R23	(3)
R14	(5)	R19	4.99	R24	221
R15	511	R20	7.50	R25	20.0

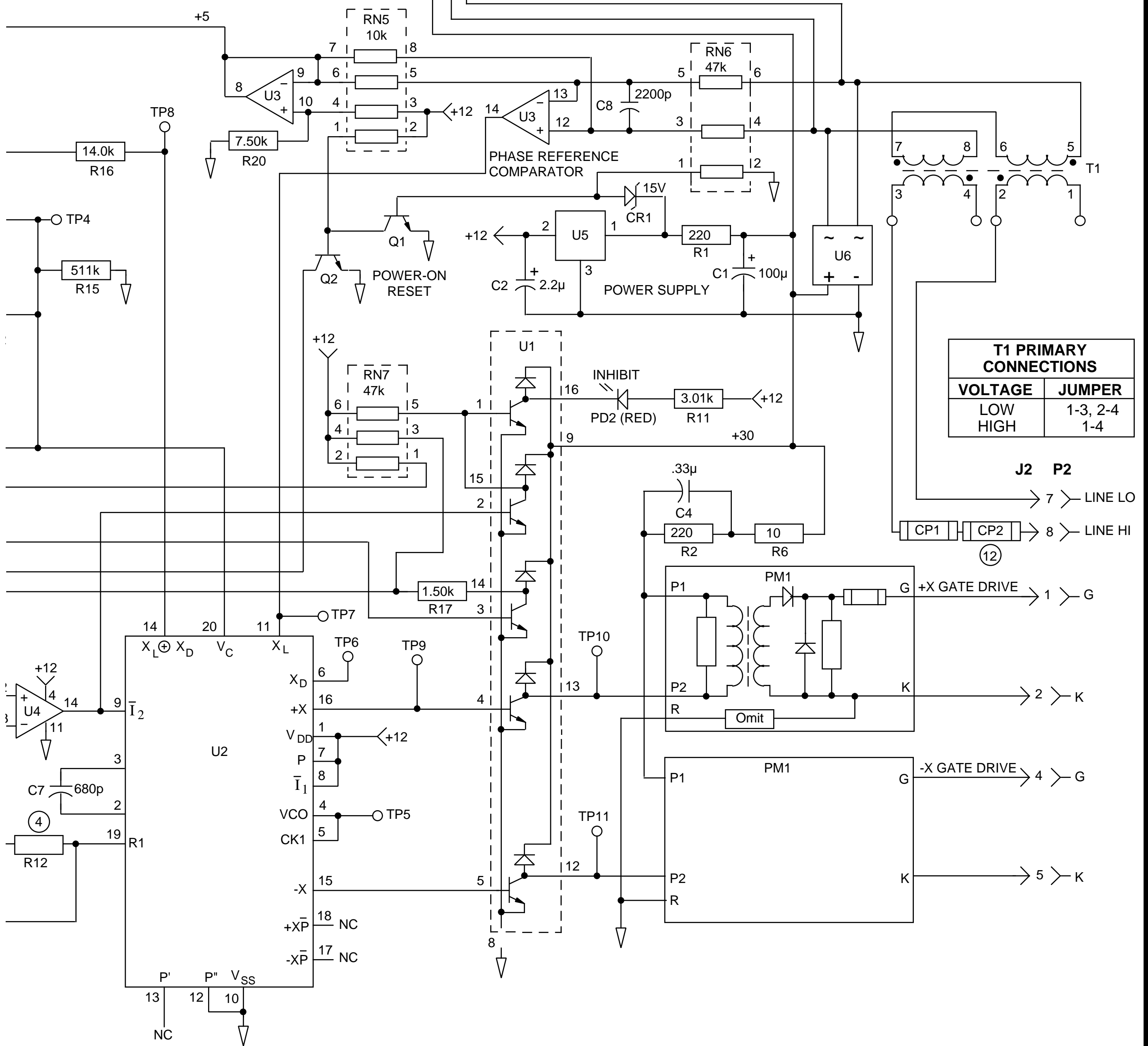
TRANSFORMER SELECTION		
Part Number	Voltage Rating	VA
SPW104	120/240	6
4-05-2024	120/240	6
SPW154	120/240	9
380/UI 24-250	190/380	6
4-05-2605	240/480	6

NOTES

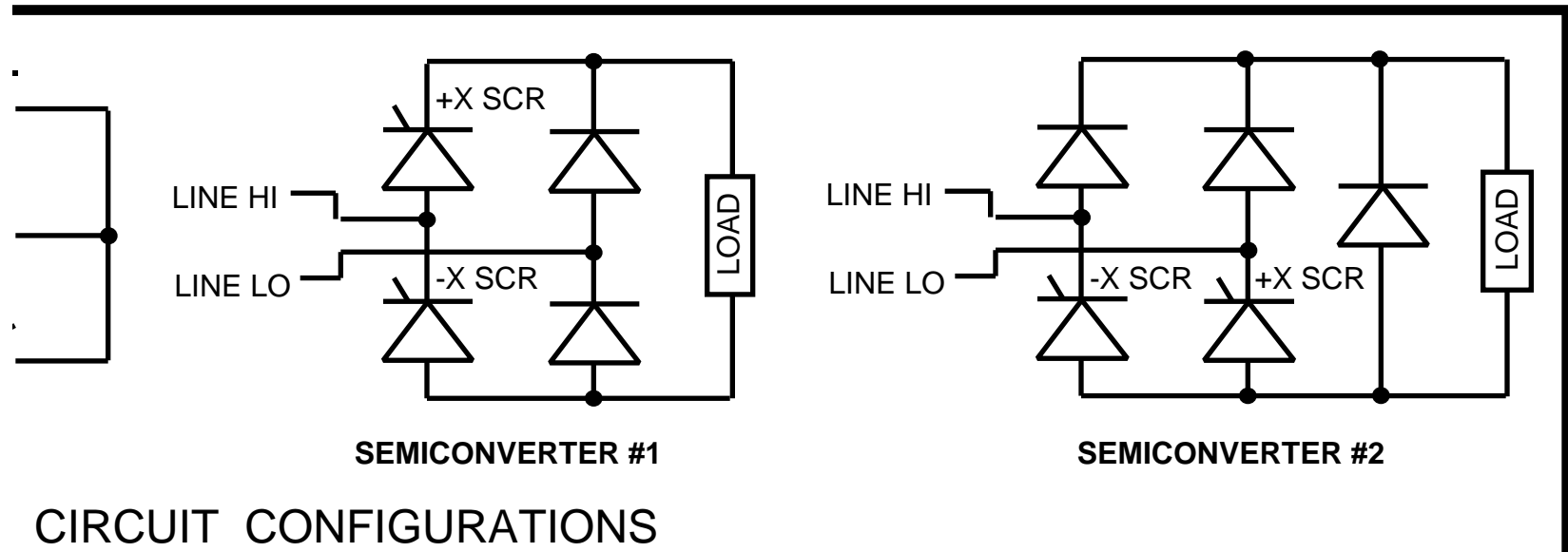
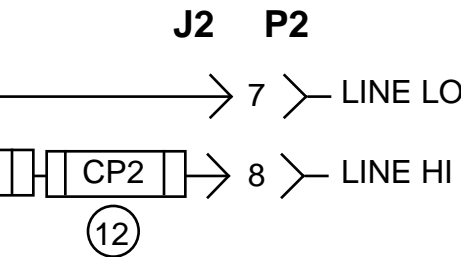
- Adjust R4 for 1% SCR output with SIG HI = 0 Vdc.
- Adjust R5 for 99% SCR output with SIG HI = 5.0 Vdc.
- Install R23 = 249 ohm for 20 mA dc current signal input.
- Factory selected resistance.
- Select R13 + R14 for desired soft-start time.
- Select R13 for desired soft-stop time.
- Select R3 for 1.0 Vdc full load current feedback signal.
- For open loop operation: omit U7, omit R3, make R26 = 47 kΩ and C5 = .68 μF.
- For current regulation only: select R26 resistance for desired regulator stiffness, select C5 capacitance for adequate regulator stability.
- For 50 Hz operation: install P3 in positions 1 and 2.
- LOW SIGNAL INHIBIT function inhibits gating when SIG HI < .49 Vdc.
Remove CR3 to defeat this function.
- Install CP2 when 480Vac is applied to T1. Jumper CP2 for all other voltages.



REVISIONS			
LTR	DESCRIPTION	DATE	APPD
D	ADD CP2, M1, and 480V Transformer capability	11-10-95	ppd
E	Corrected artwork errors	1-23-96	ppd
F	Changed ϕ_{ref} circuit.	3-22-96	ppd
G	Changed U2, PM1, & PM2. Removed M1, Add R26	11-17-98	ppd



T1 PRIMARY CONNECTIONS	
VOLTAGE	JUMPER
LOW	1-3, 2-4
HIGH	1-4



Approvals		Date	ENERPRO
drawn: fjb		1-8-86	
redrw: ppd		11-17-98	SINGLE PHASE 2-SCR FIRING CIRCUIT/REGULATOR
chkd: -		-	PWA PART NO. FCRO2100
version	3-30-99		Dwg No. E211
			Sheet 1 of 1