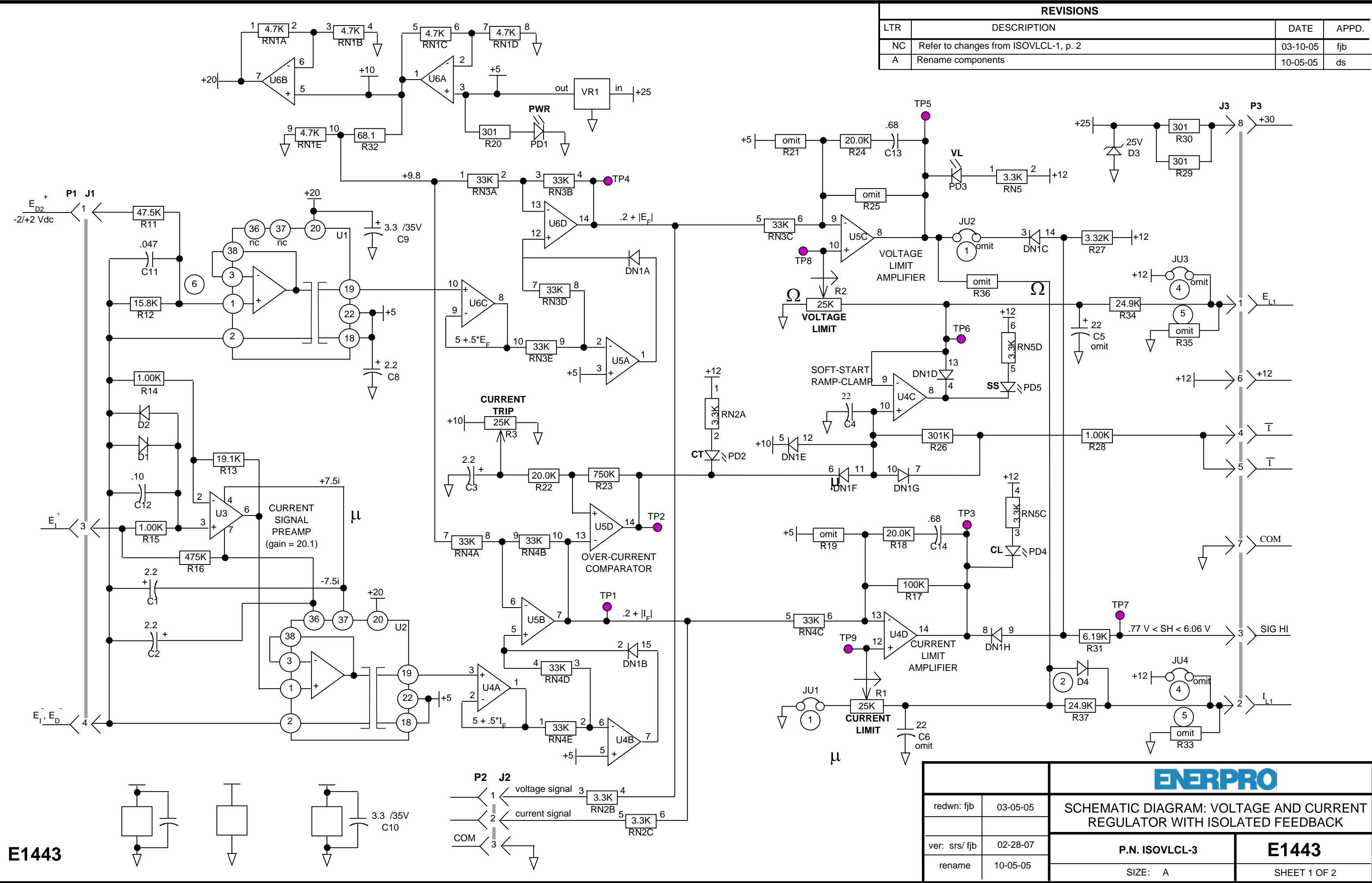


REVISIONS			
LTR	DESCRIPTION	DATE	APPD.
NC	Refer to changes from ISOVLCL-1, p. 2	03-10-05	fjb
A	Rename components	10-05-05	ds



E1443



SCHEMATIC DIAGRAM: VOLTAGE AND CURRENT REGULATOR WITH ISOLATED FEEDBACK

redwn: fjb	03-05-05
ver: srs/ fjb	02-28-07
rename	10-05-05

P.N. ISOVLCL-3	E1443
SIZE: A	SHEET 1 OF 2

PART	DESCRIPTION	STOCK NUMBER
U1-U2	AD202KN	
U3	OP20GZ	
U4-U6	LM34074P	
VR1	UA78L05CZ	
DN1	MAD1109P	
D1-D2	1N914B	
D3	1N5360A(25V)	
D4	1N914B	
PD1	555-2204(grn)	DIL5502204R
PD2,PD5	550-2404(red)	DIL5502404R
PD3-PD4	5381H3IDI(amb)	DIL5381H3
RN1	10R-2-472	R1S10I472
RN2	8R-2-332	R1S08I332
RN3	10R-2-473	R1S10I333
RN4	10R-2-473	R1S10I333
RN5	6R-2-332	R1S06I332
R1-R3	93P-25K	
R11	RN60 - 47.5K	
R12	RN60 - 15.8K	
R13	RN60 - 19.1K	
R14	RN60 - 1.00K	
R15	RN60 - 1.00K	
R16	RN60 - 475K	
R17	RN60 - 100K	
R18	RN60 - 20.0K	
R19	RN60 - omit	
R20	RN60 - 301	
R21	RN60 - omit	
R22	RN60 - 20.0K	
R23	RN60 -750K	
R24	RN60 -20.0K	
R25	RN60 - omit	
R26	RN60 - 301K	
R27	RN60 - 3.32K	
R28	RN60 - 1.00K	
R29	RN60 - 301	
R30	RN60 - 301	
R31	RN60 - 6.19K	
R32	RN60 - 68.1	
R33	RN60-OMIT	
R34	RN60-24.9K	
R35	RN60 - OMIT	
R36	RN60 - omit	
R37	RN60 - 24.9K	
C1-C3	ECSF16E2R2	
C4	ECSF16E22	
C5-C6	ECSF16E22	(omit)
C7-C8	ECSF16E2R2	
C9-C10	ECSF35E3R3	

PART	DESCRIPTION	STOCK NUMBER
C11	MKS3-.047	
C12	MKS3-.10	
C13	MKS3-.68	
C14	MKS3-.68	
JU1-JU4	W1J02	J.200x.250
J1	1-350944-0	
P1	350779-0	
J2	2-350943-0	
P2	350766-1	
J3	640584-2	
P3	640582-1	

NOTES

- For parallel voltage and current regulation loops, install JU2 and R32, omit R35 and DN4. Apply voltage command to J3-1 and current command to J3-2.
- For outer voltage regulation loop and inner current regulation loop, omit JU2 and R32, install R35 and D4. Apply voltage command to J3-1 and apply current limit reference To J3-2. The current reference source must be current sinking with impedance of less than 5 kohm.
- To use the ISOVLCL-3 board as a slave current regulator with its current command taken from the current signal at J2-1 of the master current regulator ISOVLCL-3 board:
 - On the slave regulator board:
 - Remove R32, JU1 and C6.
 - Remove CLA proportional gain resistor R17.
 - Set the voltage command pot to 100%.
 - on the master regulator board:
 - Configure parallel voltage and current regulation loops by installing JU2 and R34 and removing R33 and D4.
 - Set the voltage command pot to the desired voltage (with the current command pot set to 100%).
 - or set the current command pot to the desired current(with the voltage command pot set to the desired voltage).
- Install JU3 and JU4 for on-board voltage and current commands.
- Install 249 ohm burden resistors R23 and R33 when applying 4-20 mA voltage or current command signals.
- Select R12 and the external attenuator resistor to get 1.5 Vdc voltage feedback signal at the junction of R11 and R12.

μ
μ
μ
μ

		ENERPRO	
redwn: fjb	03-05-05	SCHEMATIC DIAGRAM: VOLTAGE AND CURRENT REGULATOR WITH ISOLATED FEEDBACK	
ver: srs/ fjb	02-28-07	P.N. ISOVLCL-3	E1443
rename	10-05-05	SIZE: A	SHEET 2 OF 2