

PART	DESCRIPTION
BR1	W02M
VR1	LM340LAH-12
U1-U2	SN75469P
U3	EP1014
U4	EP1016
U5	LM224N
U6	LM239N
DN1	MAD1109P
PD1-PD2	550-2404 (RED)
PD3	550-2204(GRN)
Q1	BS170
RN1	CTS 760-3-R15K
RN2	CTS 750-103-R2.2K
RN3	CTS 750-83-R33K
RN4	CTS 750-63-R100K
RN5	CTS 750-103-R1.5K
RN6	CTS 750-63-R120K Note 8
CR1-CR2	1N4746A(18V)
CR3	1N5241B(11V)
CR4-CR5	1N914B
R1	CW2C 5% Note 19
R2	CW2C 5% Note 18
R3	CW2C 300 5%
R5, R7, R9	HLW-6 25 5%
R4, R6, R8	HLW-6 50 5%
R11-R33	1/4 W 1% RN60
C1-C2	470µF 50V ECEA1HV471S
C4, C7	22µF 16V ECSF16E22
C3,5,6,8	2.2µF 16V ECSF16E2R2
C11-C13	MKC4 10% 63V
C21-C34	MKS3 5% 63V/100V
C35	Note 16
PM1-PM3	EP1025(converters) -0, -1, -2 & -3
PM1-PM3	EP1026-2-1-2 (controllers)
PP1	435704-6 6 pos Shunt
JU1-JU2	923345-01-C
TP1-TP7	TP-104-01-02
J1-J3/P1-P3	641831-1/640581-1
J4/P4	350714-1/1-350736-1
J5/P5	350789/350766-1(optional)
P1-2-3-4-7-9 Skt	Pins 350689-3 (24-18AWG)
J6/P6	103311-5/499568-4
J7/P7	640454-3/640440-3
J8/P8	640456-8/640440-8
J9/P9	640454-3/65474-001
COM jumper	W1JCOMM

**NOTES**

- For current signal input select R31 to give SIG HI = +5.0 Vdc with maximum signal current. Otherwise, R31 = 10.0k.
- Select R20 for desired gate delay span. (consult factory for recommended (delay angle bias and span for a specific application)
- Select R15 for desired gate delay bias. (specific application)
- Select R11 for desired soft-start time.
- Select R13 for desired soft-stop time.
- Factory selected R17.
- For SIG HI offset = 0V: R24 = 150k.  
For SIG HI offset = 0.85V: R12 = 249k, omit R14.  
For SIG HI offset > 1.0V: install R14 and omit R24.
- For 50 Hz power, install P5 in positions 2 and 3 and change RN6 to 150k.
- Select zero deg. or 30 deg. phase references with PP1 shunts as shown in dwg. E1024, sheet 1.
- For phase references from external attenuator resistors:
  - install J9.
  - cut pin "R2" of PM1-PM3.
- J8 provided for test reference inputs.
- For gating paralleled SCRs connect FCOA60HV auxiliary board via cable to J4.
- Connect J3-4[NOT(I1)] to +12V for active high instant SCR enable. Connect J3-4 to open circuit for instant SCR inhibit.
- Connect J3-12[NOT(I2)] to COM for active low soft SCR inhibit. Connect J3-12 to open circuit for soft SCR enable.
- To change to active high soft SCR enable, install RN5 in pads 1-8.
- Optional capacitor C35 to reduce the bandwidth of the firing circuit.
- Install JU1 for 2-30 deg. burst gating.
- Select R1 resistance for +24V supply voltage to phase loss status relay or lamp.
- Select R2 resistance for +24V supply voltage to enable status relay or lamp.
- Omit JU2 when the RSB-1 board is installed.

RN60 RESISTORS (k )				MK/FK CAPACITORS(µF)			
R11	Note 4	R23	61.9	C11	.33	C29	.15
R12	100	R24	Note 7	C12	.33	C30	.033
R13	Note 5	R25	30.1	C13	.33	C31	.033
R14	Note 8	R26	2.67	C21	.15	C32	.033
R15	Note 3	R27	61.9	C22	.15	C33	.033
R16	20.0	R28	100	C23	.15	C34	.15
R17	Note 6	R29	47.5	C24	.15	C35	Note16
R18	115	R30	2.00	C25	.33		
R19	32.4	R31	10.0(Note 1)	C26	.00068		
R20	Note 2	R32	47.5	C27	.022		
R21	14.0	R33	42.2	C28	.15		
R22	100						

		<b>ENERPRO</b>	
Approvals	Date	HIGH VOLTAGE SIX-PULSE FIRING BOARD	
dwg: fjb	8-11-97	PWB PN FCOG61HV	Dwg. No. <b>E1024</b>
appd:			
ver:	11-11-98		
			Sheet 2 of 2