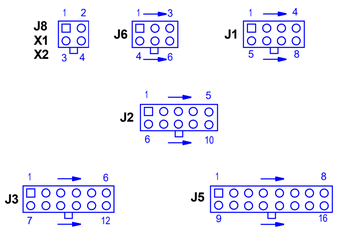
POWER MIG 260 MACHINE SCHEMATIC G4752-4 REV: A

CAVITY NUMBERING SEQUENCE
(COMPONENT SIDE OF P.C. BOARD)

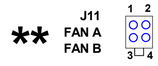


GENERAL INFORMATION

ELECTRICAL SYMBOLS PER E1537

COLOR CODE:
B - BLACK
W - WHITE
R - RED
U - BLUE
Y - YELLOW
G - GREEN

CAVITY NUMBERING SEQUENCE
(NON-LEAD SIDE OF CONNECTOR)



NOTES:

N.A. WELDING CABLE MUST BE OF PROPER CAPACITY FOR THE CURRENT AND DUTY CYCLE OF IMMEDIATE AND FUTURE APPLICATIONS.

N.B. THIS DIAGRAM SHOWS THE "ELECTRODE" POLARITY "POSITIVE". TO CHANGE POLARITY, TURN THE UNIT OFF AND REVERSE LEAD CONNECTIONS AT CABLE CONDUCTOR STRAP AND WORK STUD.

N.C. THIS MACHINE IS WIRED TO USE A MAGNUM 250 LX SPOOL GUN DIRECTLY. A K2445-1 ADAPTER IS NEEDED TO USE A MAGNUM SPOOL GUN.

OUTPUT RATING

The POWER MIG 260 is rated at 250 amps @ 26 volts, at a 40% duty cycle based on a ten minute cycle. It is capable of higher duty cycles at lower output currents and capable of up to 300 Amps at lower duty cycles.

PROCEDURES

Weld procedures are listed on the hinged flip-up of the machine, or consult Procedure Chart G3681-2.

ERRORS DISPLAYED
ERROR 36 - THERMAL
ERROR 81 - MAIN MOTOR OVERLOAD
ERROR 95 - GUN MOTOR OVERLOAD
ERROR 213 - COMMUNICATION ERROR

Mounted on UI Bracket

UI Case Front

DISPLAY

UI BOARD

UI PCB GND

PANEL GND

X2 2 3 4 X1 3 4

256 254 252 251 253

J2 3 2 4 7 8

RX TX COM +DC_BUSS 40VDC COM

DISPLAY BD

Receptacle is intended for non-complex loads (i.e. lights, drills, saws, grinders, tool battery chargers).

UI Case Front

115V

X9A

15A CIRCUIT BREAKER

X8A

Divider Panel Upper Right

X9

X9 115VAC X8

X7 14-15VAC X6 14-15VAC X5

SECONDARY VOLTAGES SHOWN ARE NO LOAD RMS VALUES

RECONNECT PANEL CONFIGURATIONS

208V	230V
H1/S1-H3	H1/S1-H3
H6-H7-S2	H2-H4-S2

460V	575V
H2-H3	H2-H5
H4-S2	H4-S2

H1 H6 H2 H5 H3 H7 H4

S2 H7 H6 H5 H2 H4 H3 H1/S1 S1 L2 L1

TO SINGLE PHASE SUPPLY LINE

W G B

RECONNECT PANEL

TO GROUND PER NATIONAL ELECTRICAL CODE

G

Divider Panel Lower Left

LINE SWITCH S1

Case Front Middle Left

POWER TRANSFORMER 208/230V/460V/575V

X2 28-30VAC X1

X4 28-30VAC X3

X1A X4A X3A

Bottom Front 36-40VDC FROM + TAB TO COMMON

208 208A 208B 354 354A 354B 209A 327A D2

SCR 1 SCR 2 G1 G2 D1

204 SCR HEATSINK ASSEMBLY

Mounted on Cap Bracket

209B 209A 209 211B

Mounted on Top Shelf Middle Right

GUN TRIGGER

J11 ** P11

1 2 3 4 324 325 326 327

4 3 2 1 324A 326A 325A 327A

Located inside control box

555 515 206 W B P12

1 2 3 4 5 6 8 7 R U B W B J12

TOROID TOROID

T A C H

WIRE DRIVE MOTOR/ GEARBOX

TACH RANGE 3VDC /115Hz @ 50 IPM to 27VDC /1600Hz @ 700 IPM

PHASEBACK AT 305-320 AMPS

CHOKE LEAD

POWER FACTOR ENHANCEMENT CHOKE

Bottom Right

Bottom Front

"DIAMOND CORE" OUTPUT CHOKE

212 207A 207 200 326A

.0047 3KV SUPRESSOR

VOLT SENSE- OCV 21-40VDC

TO WORK

C1 THRU C3 31,000 MFD 50V C1 C2 C3

Mounted on Cap Bracket

Mounted on SCR Bridge Bracket

R1 15 OHMS 100 W

211A

Mounted on Cap Jumper

205A

SHUNT 50mV = 300A

211B 211C 211 211D 210 205

PC BD COMMON

X7 4 X6 5 X5 6 G1 3 204 2 G2 1

J6

OCV GATE DRIVE G1&G2 20.0V @ 180Hz

GATE DRIVE CKTS

SCR GATE DRIVES

J1

353 324A 325A 515 555 206 W B

3 8 7 6 1 4 2

FAN A FEEDBACK

0V=OPEN, 9V=CLOSED

TRIGGER CKT

700 +15V

MAIN TRIGGER INPUT

TACH INPUT 115Hz (50 IPM) to 1600Hz (700 IPM)

TACH CKT

+COM

+V +DC BUS

DRIVE BRAKE

MOTOR CONTROL CKT

COM

MAIN SOLENOID DRIVE

SPOOL INPUT

SPOOL TRIGGER INPUT

MICRO CONTROLLER

J8

390 392

1 3 2 4

6VDC @ 330hz MAIN 60 ohms

GAS SOLENOID

Case Back Middle Right

DIRECT CONNECTION FOR MAGNUM 250 LX SPOOL GUN , K2445-1 ADAPTER NEEDED FOR MAGNUM SPOOL GUN

AUTO SENSING SPOOL GUN CONNECTOR (VIEWED FROM REAR)

77 76 75 4 2 320 321

A B C D E F G

J3

1 2 3 4 7 8 10 6 9 11 12

SPOOL POT CKT

SPOOL TRIGGER CKT

700 +15V

+V +DC BUS

DRIVE BRAKE

MOTOR CONTROL CKT

COM

6VDC @ 330hz SPOOL 60 ohms

311 312

GAS SOLENOID

Case Back Middle Left

P13 J13

1 2 311A 312A

J5

326B 328 207 205 210 211 209 354 208 357 352 GND

10 12 13 14 5 4 3 6 1 9 2 8 16 7 15 11

+15V ≤15=NORM 0V=FAULT

THERMAL CKT

VOLTAGE FEEDBACK CKT

327B

OUTPUT CHOKE THERMOSTAT Embedded in windings

SCR HEATSINK THERMOSTAT Center of Heatsink

50mV=300A

CURRENT FEEDBACK CKT

COM

+15V

POWER SUPPLY

SNUBBER

FAN PWM

52% SPEED IDLE

100% SPEED TRIGGER CLOSED

COM

FAN B FEEDBACK

G8761-1

P15 **

352 354B 357B 211D

3 4 2 1 W R BR B

FAN B

353 354A 357A 211C

3 4 2 1 W R BR B

FAN A

P14 **

FANS START TO FULL SPEED WHEN TRIGGER IS ENGAGED, WHEN TRIGGER IS RELEASED, FANS REDUCE SPEED

LIMITATION

The Power MIG 260 WILL NOT operate satisfactorily if powered with a portable or in-plant generating system including engine welders.

LINCOLN ELECTRIC CLEVELAND, OHIO U.S.A.

12/21