本节列出PMAC与机床的一些有用的联接图如下所示:
1. PMAC块图
2. PMAC-PC连接
3. PMAC-PC选择隔离
4. PMAC-Lie选择隔离
5. PMAC-VME电源
6. PMAC-PC(轴1&2)
7. PMAC-PC(轴3&4)
8. PMAC-PC(轴5&6)
9. PMAC-PC(轴7&8)
10. PC RS-232口与PMAC RS-422连接
### PMAC

**JMACH1**

<table>
<thead>
<tr>
<th>AXIS #1</th>
<th>AXIS #2</th>
<th>AXIS #3</th>
<th>AXIS #4</th>
<th>AXIS #5</th>
<th>AXIS #6</th>
<th>AXIS #7</th>
<th>AXIS #8</th>
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<td>P8</td>
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**JMACH2**

SEE "E POINT" DESCRIPTION OF E85, E87, E88, E89 FOR SELECTION OF OPTO-ISOLATED OR NON-ISOLATED OPERATION.

### SERVO AMPLIFIER (Self-Commutating)

+15V, 150 MA. MIN. -15V, 150 MA. MIN. SIG. INPUT 1/2 (SIG. RET.) COM DIFFERENTIAL IN AMPLIFIER FAULT AMPLIFIER ENABLE (SIG. RET.) COM +LIMIT -LIMIT TACH TACH RET

### NOTES:
1) IF DIFFERENTIAL INPUT ON SERVO AMP. IS USED, SEE b69 FOR ADJUSTMENT OF DAC LIMIT.
2) IF SINGLE ENDED INPUT ON SERVO AMP. IS USED, DO NOT TIE DAC P8-45, P8-46, P8-31, P8-32, P7-45, P7-46,
   P7-31, P7-32, TO SERVO AMP. COMMON (AGND), LEAVE UNCONNECTED.
3) THIS SET-UP PROCEDURE APPLIES TO ANY SERVO AMPLIFIER, D.C. BRUSH, BRUSHLESS D.C. OR A.C. INDUCTION,
   PROVIDING ITS OWN ON-BOARD COMMUTATION. FOR STEPPER MOTOR DRIVE, SEE "STEPPER DRIVE" DRAWING.
4) JMACH 1/2 OR P7B = 3M 7960-5002 60 PIN HEADER. TYP. MATING CONNECTOR IS IDS-C60NPK-SR-TG30. USE ACC-BD OR
   ACC-BP TO CONNECT JMACH 1/2 TO TERMINAL BLOCKS FOR EXTERNAL WIRING.

### PMAC-PC

SERVO AMPL. SIGNALS, MOTOR, TACH & ENCODER INPUT/OUTPUT CONNECTIONS

(AMP-COM)
PMAC-PC OPTO ISOLATION

INPUT SIGNALS
16 LIMITS
+8 HOME
+8 FAULT

OPTO

12V

E90

RETURN

+-LIM, HOME FLAG, FAULT

SEE NOTE 1

LIMIT & MOVE SWITCHES

MACHINE CONNECTOR(S):

J8-59
A+15V

J7-59
A+15V
OPTO+V

SEE NOTE 1

OUTPUTS
8 SIGNALS

+5V

OPTO

OPEN COLLECTOR DRIVER

A ENA/DIR X

SEE NOTE 2

SERIAL IN
16 BIT DAC

READER

A+5V

REGULATOR

DAC1

J7-59

DAC1

J7-60

A-15V

REGULATOR

A-15V

J8-58

A-15V

J8-60

-12V

-5V

A-14V

E85

+12V

E97

+5V

E87

GND

OPTO

+12V

+5V

GND

-12V

(550mA)

(1500mA)

(550mA)

(550mA)

BUS CONNECTOR:

P1  P1  P1  P1  P1  P1  P1  P1
B09 B03 B01 B01 B29 B10 B21 B23
+12V (550mA)
+5 (1500mA)
GND
-12V (550mA)

NOTE 1: USE J7-59 (JMAC2) TO PROVIDE AN OPTO POWER SUPPLY, 24 VOLTS MAX. 
(OPTO+V) SEPARATE THAN THE +/-15 VOLTS NORMALLY USED.
REMOVE E99 WHEN DOING SO. ON A 4 AXIS PMAC, J7 (JMAC2) IS NOT 
PROVIDED, SO WIRES MAY HAVE TO BE SOLDERED.

NOTE 2: 1) EXTERNAL +/-15 VOLTS OPERATIONS REQUIRES E89, E90-1&2
ONLY TO BE JUMPERED (DEFAULT)
2) INTERNAL +/-15 VOLTS REQUIRES E90-2&3,E85,E87,E88 TO
BE JUMPERED +/-15 VOLTS MAY BE AS LOW AS +/-12 VOLTS
AND IS USUALLY PROVIDED BY AMPLIFIERS.
PMAC-LITE OPTO ISOLATION

MACHINE CONNECTOR(S):

INPUT SIGNALS
16 LIMITS
8 HOME
8 FAULT

OUTPUTS 8 SIGNALS

DIGITAL GND

ISOLATED ANALOG GROUND

BUS CONNECTOR:

NOTE 1: USE J7-9 (JEGU) TO PROVIDE AN OPTO POWER SUPPLY, 24 VOLTS MAX.
(OPTO+V) SEPARATE THAN THE +15 VOLTS NORMALLY USED.
REMOVE E89 WHEN DOING SO.

NOTE 2: 1) EXTERNAL +/-15 VOLTS OPERATIONS REQUIRE E89,E90-1&2
ONLY TO BE JUMPERED (DEFAULT)
2) INTERNAL +/-15 VOLTS REQUIRE E90-2&3,E65,E67,E88 TO
BE JUMPERED +/-15 VOLTS MAY BE AS LOW AS +/-12 VOLTS
AND IS USUALLY PROVIDED BY AMPLIFIERS.
PC RS-232 TO PMAC RS-422
CONNECTION

PC DB-25

1        2

14       15

* TXD/

2        3

15       16

* RXD/

3        4

16       17

* RTS

4        5

17       18

* CTS

5        6

18       19

** DSR,

6        7

19       20

* GND

7        8

20       21

** DTR

8        9

21       22

10       11

22       23

11       12

23       24

12       13

24       25

13       14

25       26

N.C.

1      2

3      4

PMAC J4

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* - Required for communications
** - Optional; DSR and DTR hard-wired together on PMAC

NEW IDEAS IN MOTION...