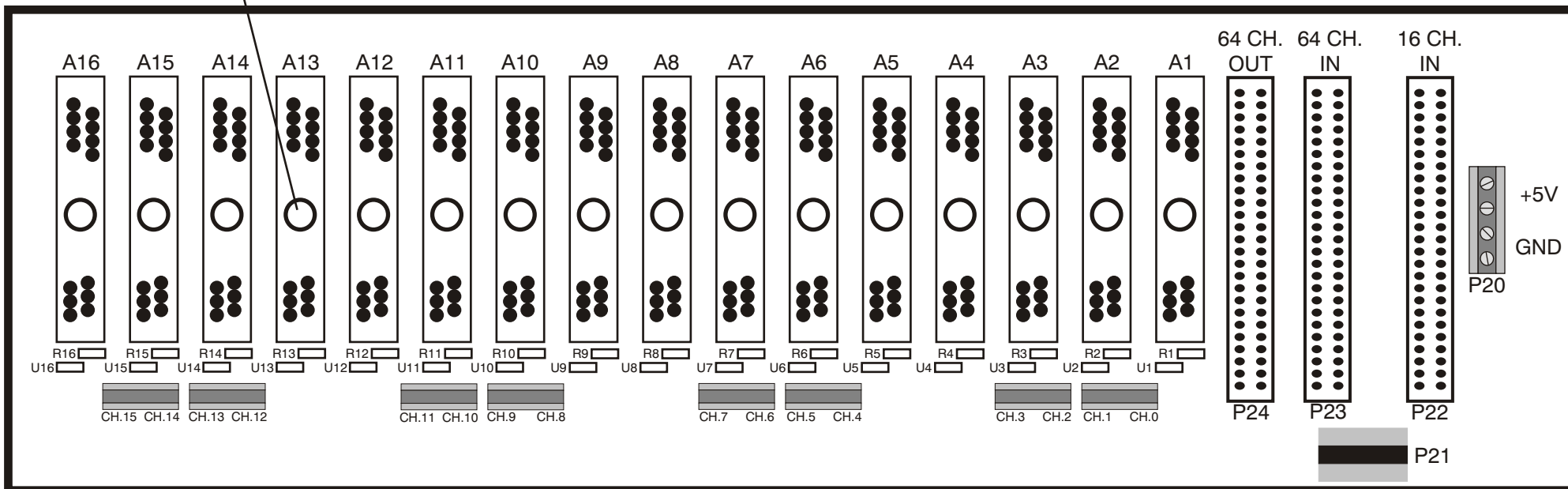# ISO-RACK16/P CONNECTION DIAGRAM

The ISO-RACK16/P series allows analog inputs for the CIO-DAS6400 and PCI-DAS6400/1600/1200/1000 series of A/D boards to be quickly and simply connected to ISO-5B series isolation and signal conditioning modules. The ISO-RACK16/P map a single analog input channel to a single ISO-5B module(A/D channel 0 is directly connected to module 1, channel 1 to module 2 etc).

Mounting Screw Threads

A16 A15 A14 A13 A12 A11 A10 A9 A8 A7 A6 A5 A4 A3 A2 A1

64 CH. OUT   64 CH. IN   16 CH. IN

+5V

GND

P20

R16 R15 R14 R13 R12 R11 R10 R9 R8 R7 R6 R5 R4 R3 R2 R1

U16 U15 U14 U13 U12 U11 U10 U9 U8 U7 U6 U5 U4 U3 U2 U1

CH.15 CH.14 CH.13 CH.12   CH.11 CH.10 CH.9 CH.8   CH.7 CH.6 CH.5 CH.4   CH.3 CH.2 CH.1 CH.0

P24   P23   P22

P21

PC +5VOLTS
PC GROUND
PC GROUND
NO CONNECT

External power can be provided to Molex connector P21 from the PC power expansion plug inside the PC. Screw terminal P20 could also be used to provide external power.
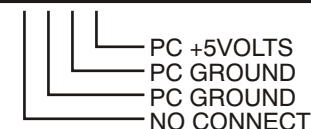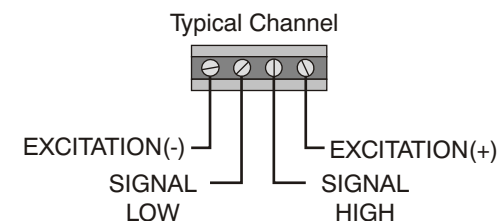
CONNECTOR PIN ASSIGNMENTS

Pins 35-50 of connectors P22, P23, and P24 have been wired 1:1 to provide access to some of the host A/D's boards signals (see CONNECTOR MAP diagram for details). These signals are labeled "PASS" signals and the user should consult their DAS manual's I/O connector pin assignment section to verify the actual signals which are available.
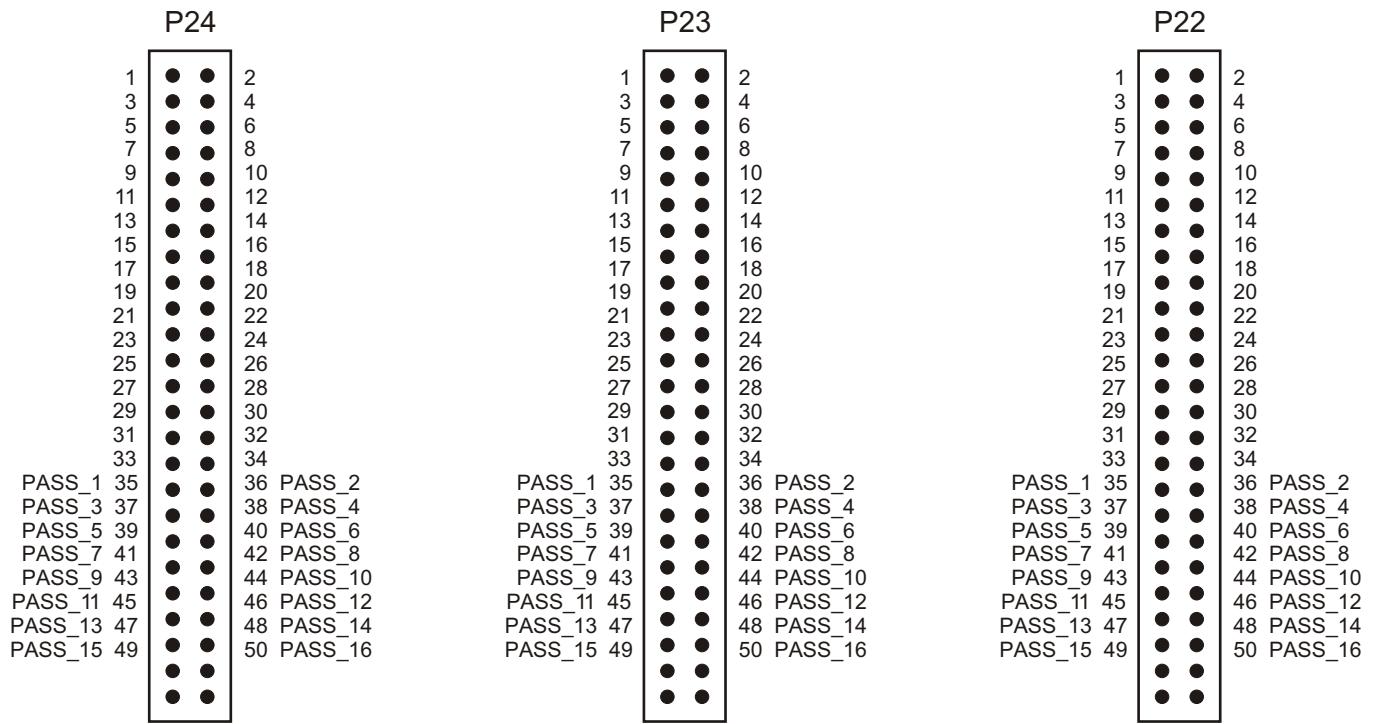
NOTES:

1.) The board provides locations to install jumpers that allow the analog inputs from the controlling board to be directly connected to the output screw terminals. This allows hybrid systems in which analog inputs requiring isolation and/or signal conditioning to use the ISO-5B modules while other analog inputs can be connected directly to the host A/D board. A series of plated through jumper holes labeled Rx+ and Rx- jumper the analog inputs of the host A/D board directly to the screw terminals.

2.) A CJC reference sensor is provided with ISO-5B thermocouple modules and must be installed in the appropriate U1-U16 position.

3.) Shunt resistor positions R1-R16 allow each analog input channel to convert a current to a voltage.

4.) Connector P22 "16 CHANNEL IN" allows the ISO-RACK16/P to interface directly to 16 channel A/D boards utilizing 100 pin I/O connectors (see Connection Diagram for details). Connector P23 and P24 "64 CHANNEL IN/OUT" allows multiple ISO-RACK16/P boards to be daisy chained providing a direct connection to 64 channel A/D boards utilizing 100 pin I/O connectors (see Connection Diagram for details).

Typical Channel

EXCITATION(-)   EXCITATION(+)
SIGNAL LOW   SIGNAL HIGH

P24

1	● ●	2
3	● ●	4
5	● ●	6
7	● ●	8
9	● ●	10
11	● ●	12
13	● ●	14
15	● ●	16
17	● ●	18
19	● ●	20
21	● ●	22
23	● ●	24
25	● ●	26
27	● ●	28
29	● ●	30
31	● ●	32
33	● ●	34
PASS_1 35	● ●	36 PASS_2
PASS_3 37	● ●	38 PASS_4
PASS_5 39	● ●	40 PASS_6
PASS_7 41	● ●	42 PASS_8
PASS_9 43	● ●	44 PASS_10
PASS_11 45	● ●	46 PASS_12
PASS_13 47	● ●	48 PASS_14
PASS_15 49	● ●	50 PASS_16

P23

1	● ●	2
3	● ●	4
5	● ●	6
7	● ●	8
9	● ●	10
11	● ●	12
13	● ●	14
15	● ●	16
17	● ●	18
19	● ●	20
21	● ●	22
23	● ●	24
25	● ●	26
27	● ●	28
29	● ●	30
31	● ●	32
33	● ●	34
PASS_1 35	● ●	36 PASS_2
PASS_3 37	● ●	38 PASS_4
PASS_5 39	● ●	40 PASS_6
PASS_7 41	● ●	42 PASS_8
PASS_9 43	● ●	44 PASS_10
PASS_11 45	● ●	46 PASS_12
PASS_13 47	● ●	48 PASS_14
PASS_15 49	● ●	50 PASS_16

P22

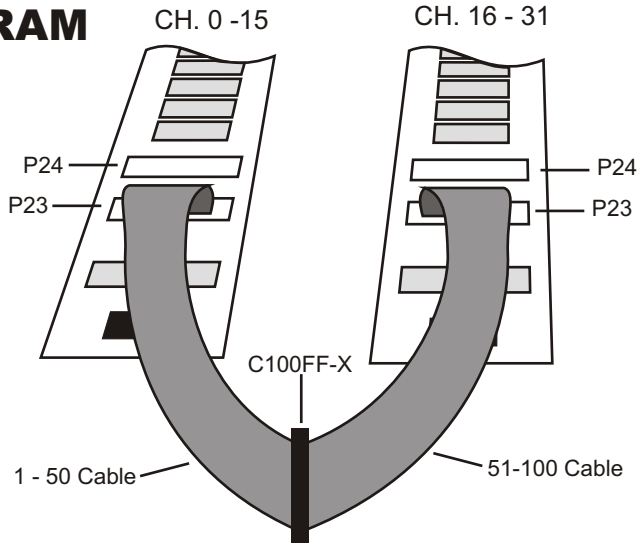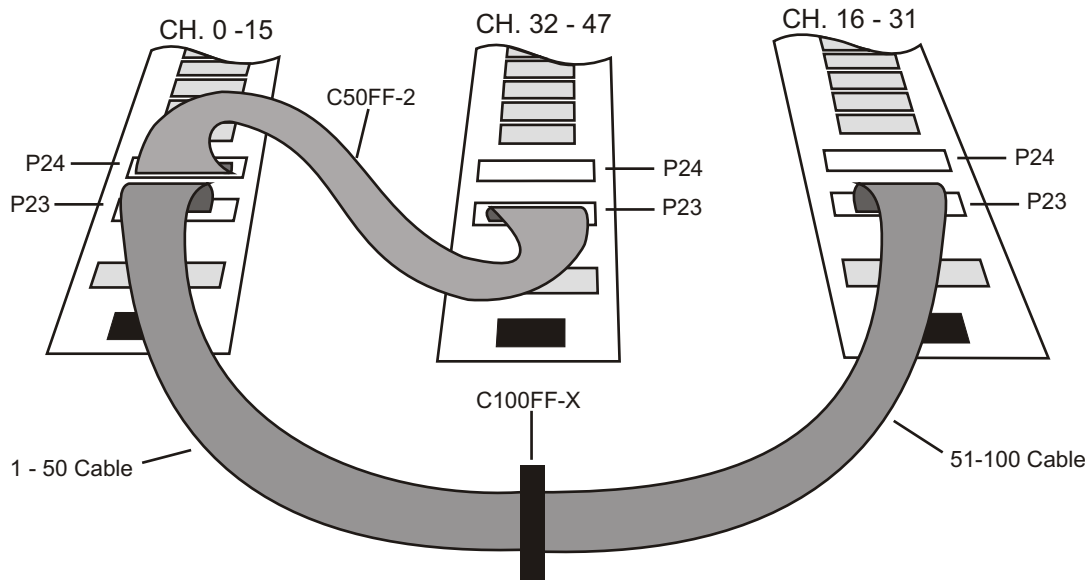| 1 | ● ● | 2 |
3	● ●	4
5	● ●	6
7	● ●	8
9	● ●	10
11	● ●	12
13	● ●	14
15	● ●	16
17	● ●	18
19	● ●	20
21	● ●	22
23	● ●	24
25	● ●	26
27	● ●	28
29	● ●	30
31	● ●	32
33	● ●	34
PASS_1 35	● ●	36 PASS_2
PASS_3 37	● ●	38 PASS_4
PASS_5 39	● ●	40 PASS_6
PASS_7 41	● ●	42 PASS_8
PASS_9 43	● ●	44 PASS_10
PASS_11 45	● ●	46 PASS_12
PASS_13 47	● ●	48 PASS_14
PASS_15 49	● ●	50 PASS_16

CONNECTOR MAP

Pins 35-50 of connectors P22, P23, and P24 have been wired 1:1 to provide access to some of the host A/D's boards signals. These signals are labeled "PASS" signals and the user should consult their DAS manual's I/O connector pin assignment section to verify the actual signals which are available.
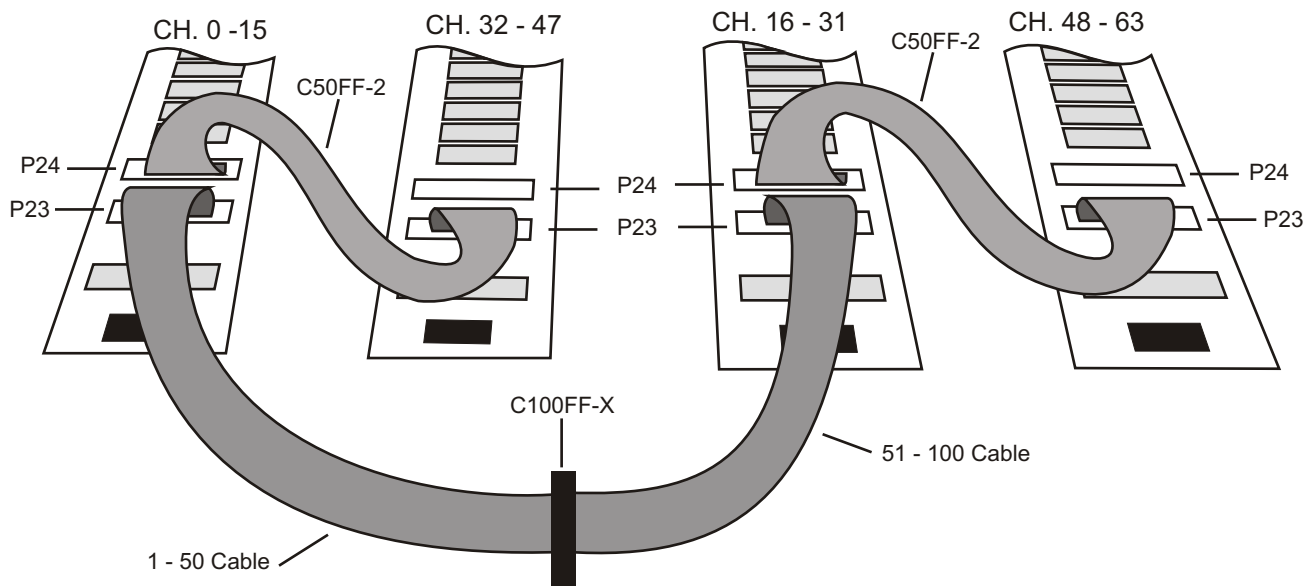
CONNECTOR DIAGRAM

CH. 0 -15

CH. 16 - 31

P24

P24

P23

P23

C100FF-X

1 - 50 Cable

51-100 Cable

ISO-RACK16/P 32 Channels

CH. 0 -15

CH. 32 - 47

CH. 16 - 31

C50FF-2

P24

P24

P23

P23

C100FF-X

1 - 50 Cable

51-100 Cable

ISO-RACK16/P 48 Channels

CH. 0 -15

CH. 32 - 47

CH. 16 - 31

C50FF-2

CH. 48 - 63

C50FF-2

P24

P24

P23

P23

P24

P23

C100FF-X

51 - 100 Cable

1 - 50 Cable

ISO-RACK16/P 64 Channels