

C H A P T E R

3

Signal Connections and Register Format

Connector Pin Assignments

The DB-37 connector is accessible from the card bracket.

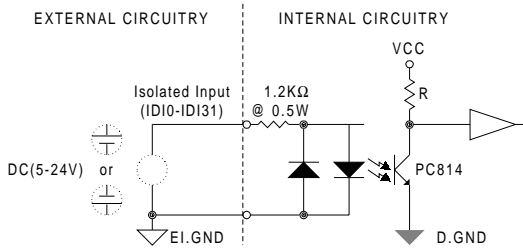
Abbreviations

IDI	Isolated digital input
EI.GND	External ground for isolated input
NC	No connection

IDI0	1	20	IDI1
IDI2	2	21	IDI3
IDI4	3	22	IDI5
IDI6	4	23	IDI7
EI.GND1	5	24	IDI8
IDI9	6	25	IDI10
IDI11	7	26	IDI12
IDI13	8	27	IDI14
IDI15	9	28	EI.GND2
IDI16	10	29	IDI17
IDI18	11	30	IDI19
IDI20	12	31	IDI21
IDI22	13	32	IDI23
EI.GND3	14	33	IDI24
IDI25	15	34	IDI26
IDI27	16	35	IDI28
IDI29	17	36	IDI30
IDI31	18	37	EI.GND4
NC	19		

Isolated Input

The PCL-733 has 32 isolated digital inputs, which accept 5–24 V and have a resistance of 1.2 k Ω . Every 8 inputs share one external ground (EI.GND). The following figure shows how to connect an external input source to the card's isolated inputs:



Register Format

Programming the PCL-733 is extremely simple. Each I/O channel corresponds to a bit in the card's registers. To read an input port, you simply read from the register.

The card requires four I/O register addresses. The address of each register is specified as an offset from the card's base address. For example, BASE+0 is the card's base address and BASE+2 is the base address + two bytes. If the card's base address is 300h, the register's address is 302h. See Chapter 2 for information on setting the card's base address.

Writing any value to BASE+0 or BASE+2 will clear the interrupt flag of DI0 or DI16, respectively, enabling the next interrupt to be generated.

Register assignments

Address	Write	Read
BASE+0	Clear DI0 INT	DI bits 0-7
BASE+1	N/A	DI bits 8-15
BASE+2	Clear DI16 INT	DI bits 16-23
BASE+3	N/A	DI bits 24-31

