

DIO-3264

Digital I/O Card

User's Manual (V1.4)

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Correction record

Version	Record

Contents

1.	Forward.....	4
2.	Features.....	5
3.	Specifications.....	6
3.1	DIO-3264 Main card.....	6
3.2	DIO-3264DIN Din rail mounted wiring board.....	7
4.	Layout and dimensions.....	8
4.1	DIO-3264 Main card layout.....	8
4.2	DIO-3264 Main card dimension.....	8
4.3	DIO-3264DIN Din rail mounted wiring board layout.....	9
4.4	DIO-3264DIN Din rail mounted wiring board dimension.....	9
5.	Pin definitions.....	10
5.1	Front view of connector.....	10
5.2	Pin definitions.....	10
6.	I/O interface diagram.....	11
6.1	Input diagram.....	11
7.	External wiring diagram.....	11
8.	Hardware settings.....	12
8.1	Card ID setting.....	12
9.	Applications.....	12
10.	Application note.....	13
10.1	Tip for using NPN type proximity S/W :	13
10.2	Tip for using PNP type proximity S/W :	13
11.	Ordering information.....	14

Notes on hardware installation

Please follow step by step as you are installing the control cards.

1. Be sure your system is power off.
2. Be sure your external power supply for the wiring board is power off.
3. Plug your control card in slot, and make sure the golden fingers are put in right contacts.
4. Fasten the screw to fix the card.
5. Connect the cable between the card and wiring board.
6. Connect the external power supply for the wiring board.
7. Recheck everything is OK before system power on.
8. External power on.

Congratulation! You have it.

For more detail of step by step installation guide, please refer the file “installation.pdf “ on the CD come with the product or register as a member of our user’s club at:

<http://automation.com.tw/>

to download the complementary documents.

1. **Forward**

Thank you for your selection of JAC's product DIO-3264 64 DIGITAL INPUT card for IBM compatible industrial PC. In the field of industrial control, digital I/O is generally controlled under a microprocessor and owing to their specific consideration of industrial environment, it is quite different from the laboratory requirement.

This card is a FPGA based design and our experience in the noise immunity makes this card very stable in the noisy environment and you don't worry about computer down by external noise. We wish the card that will be helpful to your project.

Other DIO series products:

- DIO-9201 16 channel input and 16 channel output isolated digital I/O card (ISA bus)
- DIO-2232 32 channel input and 32 channel output isolated digital I/O card (ISA bus)
- DIO-2248 48 channel input and 16 channel output isolated digital I/O card (ISA bus)
- DIO-2264 64 channel input isolated digital I/O card (ISA bus)
- DIO-3206 48 channel TTL digital I/O Card (PCI bus)
- DIO-3208B 8 channel input and 8 channel relay output isolated digital I/O card (PCI bus)
- DIO-3216B 16 channel input and 16 channel output isolated digital I/O card (PCI bus)
- DIO-3217 16 channel input and 16 channel output isolated digital I/O card (PCI bus)
with multifunction timer/counter
- DIO-3232 32 channel input and 32 channel output isolated digital I/O card (PCI bus)
- DIO-3248 48 channel input and 16 channel output isolated digital I/O card (PCI bus)
- DIO-4264 64 TTL digital I/O PC-104 Module
- DIO-6208 8 channel input and 8 channel relay output isolated digital I/O PCI-104 Module
- DIO-6216 16 channel input and 16 channel relay output isolated digital I/O PCI-104 Module

Any comment is welcome,

please visit our website: www.automation.com.tw for the up to date information.

2. Features

- 2.1 PCI plug and play function with card ID for 16 identical cards
- 2.2 All of inputs with photo-coupler isolation
- 2.3 Build-in input de-bounce circuit
- 2.4 LEDs for corresponding status indication
- 2.5 8 digits per I/O group with Green LED at first digit
- 2.6 Accept external interrupt at IN0, IN1

3. Specifications

3.1 DIO-3264 Main card

- 3.1.1 Input photo-coupler isolation voltage — 2500Vac 1Min
- 3.1.2 Insulation resistance — 100M Ohm (min) at 1000Vdc
- 3.1.3 PCI bus data width — 32 bits
- 3.1.4 Card ID — 4 bits
- 3.1.5 Input channel — 64 ea of ON/OFF switching
- 3.1.6 Switching speed — 2.2KHZ max. (with on board debounce circuit)
- 3.1.7 Input “ON” state — 2.8V(max) 4.5ma(min)
- 3.1.8 Input “OFF” state — 8V(min) 3ma(max)
- 3.1.9 I/O connector — 68 pin female mini scsi connector
- 3.1.10 Wiring board — 1 with round cable hook to main card
- 3.1.11 External supply — DC 24±4V
- 3.1.12 Operation temperature — 0 to 70° C
- 3.1.13 Operation humidity — RH5~95%, non-condensed
- 3.1.14 Dimension — 175(W)*122(H)mm , 6.89(W)*4.8(H)in

3.2 DIO-3264DIN Din rail mounted wiring board

3.2.1 External supply — DC 24V±4V

3.2.2 Input status indicator — 64 LED, 8 digit per group with Green LED at first digit

3.2.3 Power indicator — Red LED

3.2.4 Terminal — Pluggable connectors , every 4 has one common terminal.
(Different “common” for different positive power terminal)

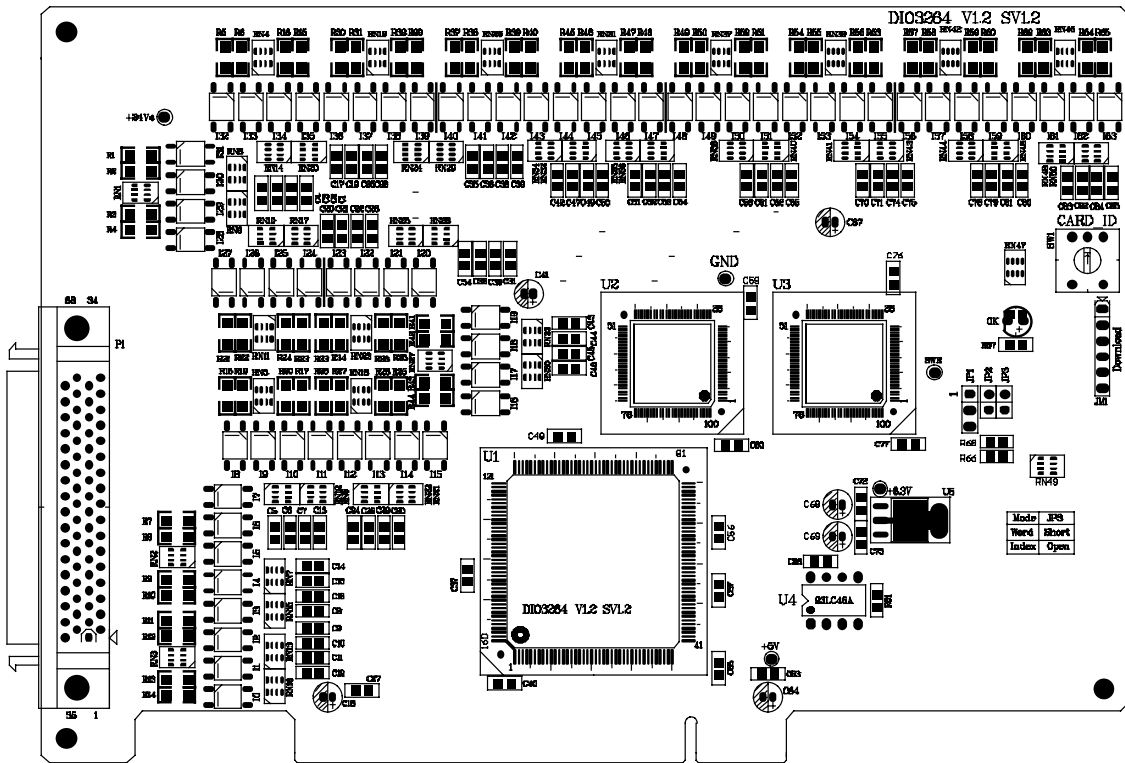
3.2.5 Operation temperature — 0 to 70° C

3.2.6 Operation humidity — RH5~95%, non-condensed

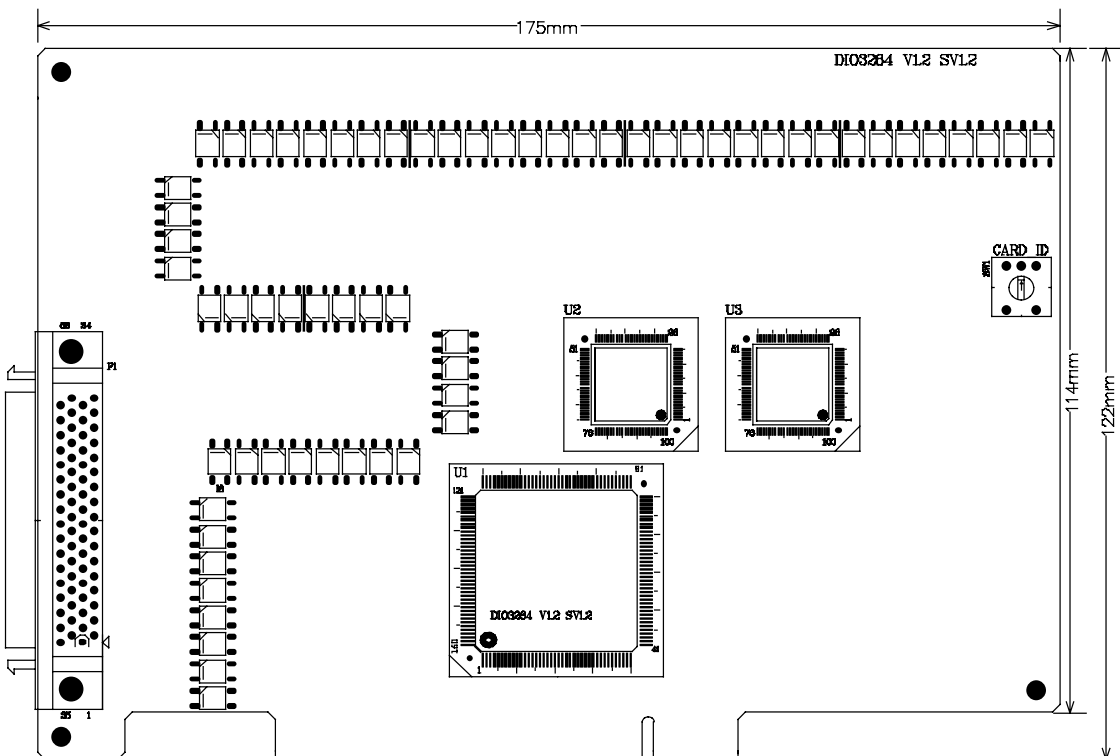
3.2.7 Dimension — 121(W) * 159(L) * 45(H)mm , 4.76(W) * 6.26(L) * 1.77(H)in

4. Layout and dimensions

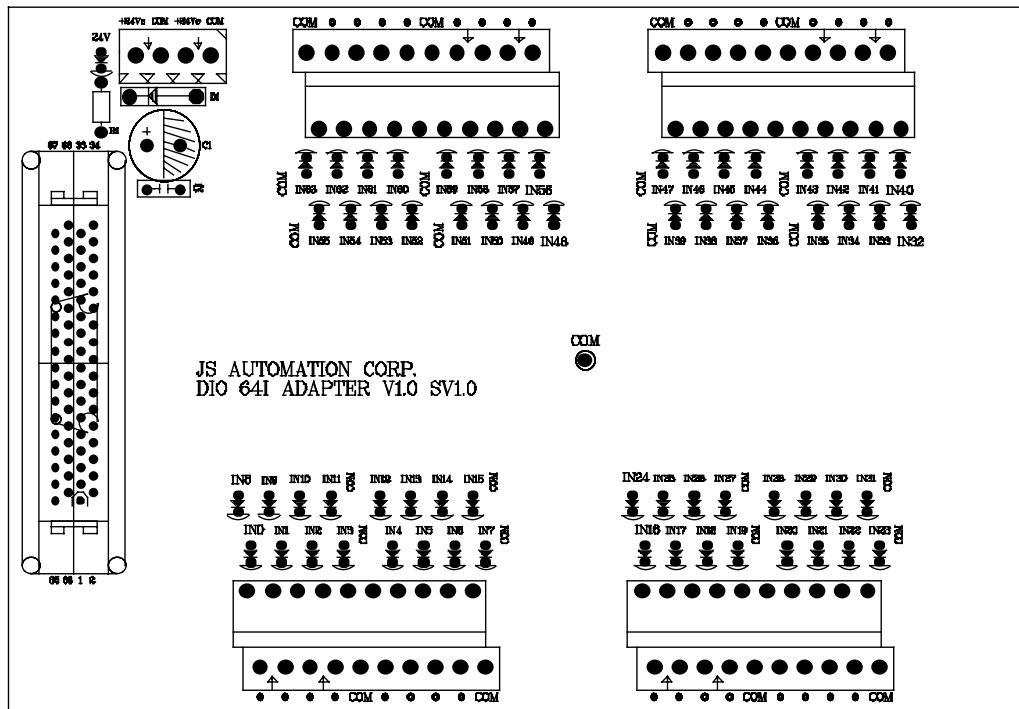
4.1 DIO-3264 Main card layout



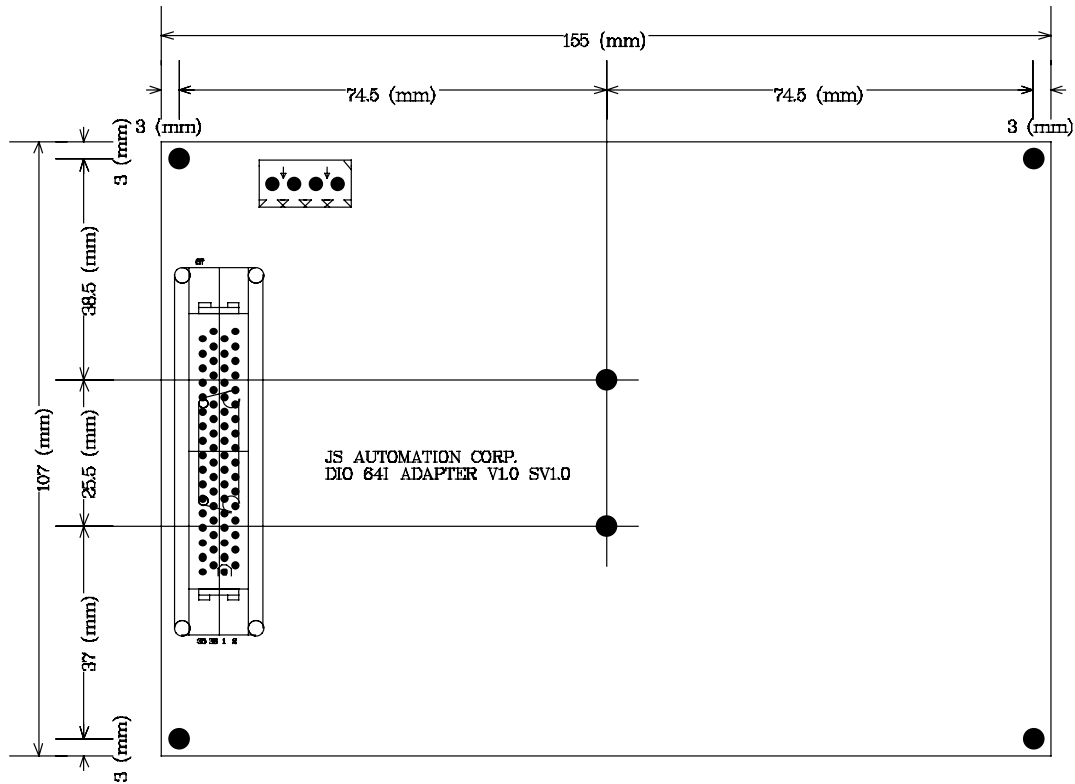
4.2 DIO-3264 Main card dimension



4.3 DIO-3264DIN Din rail mounted wiring board layout

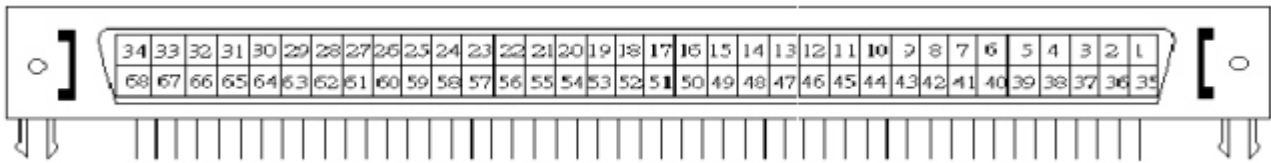


4.4 DIO-3264DIN Din rail mounted wiring board dimension



5. Pin definitions

5.1 Front view of connector

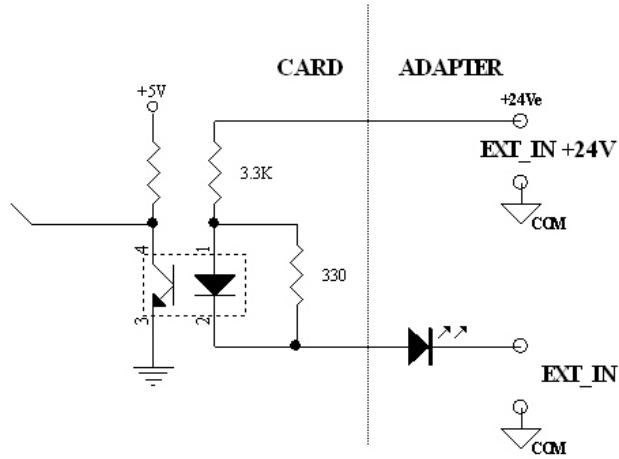


5.2 Pin definitions

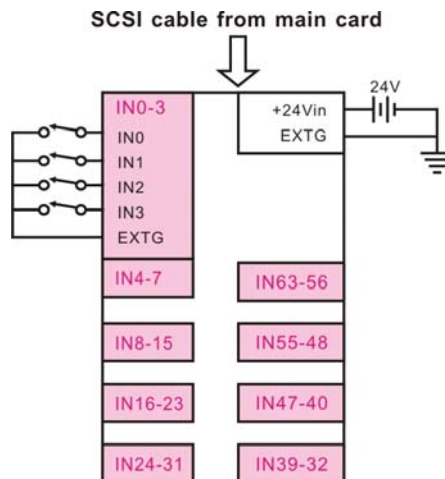
PIN	Descriptions	PIN	Descriptions
1	IN0 [External Input 0]	35	IN1 [External Input 1]
2	IN2 [External Input 2]	36	IN3 [External Input 3]
3	IN4 [External Input 4]	37	IN5 [External Input 5]
4	IN6 [External Input 6]	38	IN7 [External Input 7]
5	IN8 [External Input 8]	39	IN9 [External Input 9]
6	IN10 [External Input 10]	40	IN11 [External Input 11]
7	IN12 [External Input 12]	41	IN13 [External Input 13]
8	IN14 [External Input 14]	42	IN15 [External Input 15]
9	IN16 [External Input 16]	43	IN17 [External Input 17]
10	IN18 [External Input 18]	44	IN19 [External Input 19]
11	IN20 [External Input 20]	45	IN21 [External Input 21]
12	IN22 [External Input 22]	46	IN23 [External Input 23]
13	IN24 [External Input 24]	47	IN25 [External Input 25]
14	IN26 [External Input 26]	48	IN27 [External Input 27]
15	IN28 [External Input 28]	49	IN29 [External Input 29]
16	IN30 [External Input 30]	50	IN31 [External Input 31]
17	IN32 [External Input 32]	51	IN33 [External Input 33]
18	IN34 [External Input 34]	52	IN35 [External Input 35]
19	IN36 [External Input 36]	53	IN37 [External Input 37]
20	IN38 [External Input 38]	54	IN39 [External Input 39]
21	IN40 [External Input 40]	55	IN41 [External Input 41]
22	IN42 [External Input 42]	56	IN43 [External Input 43]
23	IN44 [External Input 44]	57	IN45 [External Input 45]
24	IN46 [External Input 46]	58	IN47 [External Input 47]
25	IN48 [External Input 48]	59	IN49 [External Input 49]
26	IN50 [External Input 50]	60	IN51 [External Input 51]
27	IN52 [External Input 52]	61	IN53 [External Input 53]
28	IN54 [External Input 54]	62	IN55 [External Input 55]
29	IN56 [External Input 56]	63	IN57 [External Input 57]
30	IN58 [External Input 58]	64	IN59 [External Input 59]
31	IN60 [External Input 60]	65	IN61 [External Input 61]
32	IN62 [External Input 62]	66	IN63 [External Input 63]
33	+24V [External DC24V power]	67	+24V [External DC24V power]
34	+24V [External DC24V power]	68	+24V [External DC24V power]

6. I/O interface diagram

6.1 Input diagram



7. External wiring diagram



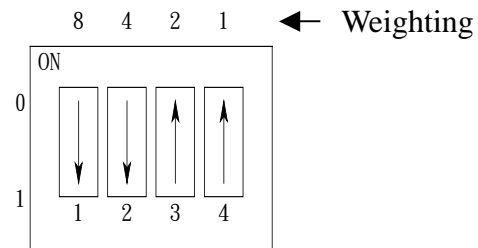
8. Hardware settings

8.1 Card ID setting

Since PCI cards have plug and play function, the card ID is required for programmer to identify which card he/she will control without knowing the physical address assigned by the Windows. A 4 bits DIP switch for distinguishing the 16 identical card.

The following example sets the card ID at 12.

DIP SW SETTING : (ID=12)



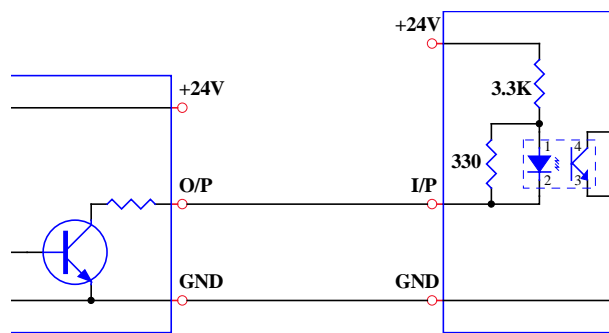
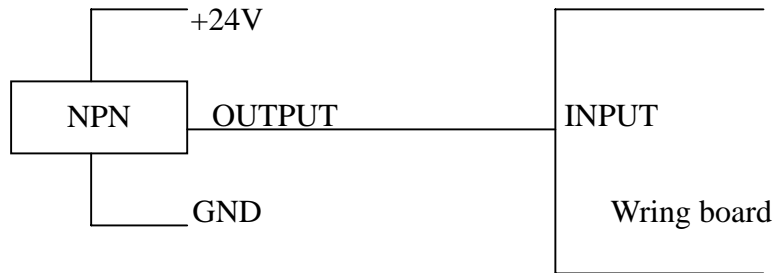
9. Applications

- Accept : - P.B./M.S./EMG./Contact- Start/Stop/Limit switch/sensor
Interlock/selective Sw.- Proximity switch
- Aux. contact of transducer/detector
- As I/O of S/W PLC Controller

10. Application note

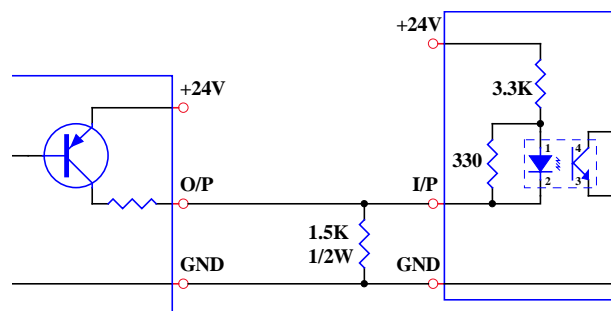
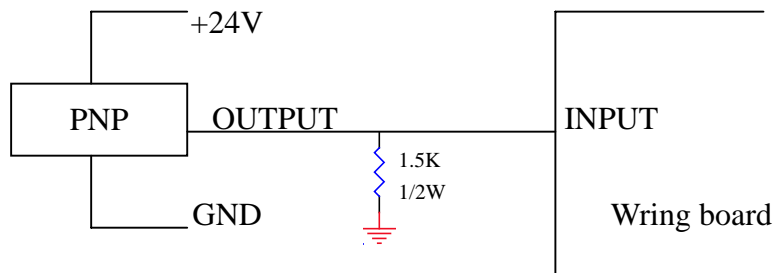
10.1 Tip for using NPN type proximity S/W :

The NPN type proximity sensor can directly connect to input of wring board.



10.2 Tip for using PNP type proximity S/W :

The PNP type proximity sensor need extra pull down resister connect to input of wring board.



11. Ordering information

<u>PRODUCT</u>	<u>DESCRIPTIONS</u>
DIO-3264	64-channel Digital Input Card for 64 Photo-coupler isolated DI
DIO-3264 DIN	DIN rail mounted wiring board for 64 input
M266868150	68 pin SCSI II cable 1.5M
M266868300	68 pin SCSI II cable 3.0M