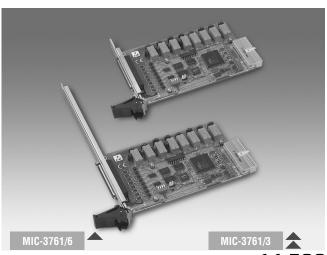
MIC-3761

8-ch Relay Actuator and 8-ch Isolated Digital Input Module



Features

- 8 relay output channels and 8 isolated digital input channels
- LED indicators to show activated relays
- 4 Form C and 4 Form A type relay output channels
- Output status read-back
- · Retained relay output values when hot system reset
- High-voltage isolation on input channels (3,750 V_{pc})
- High ESD protection (2,000 V_{pc})
- High over-voltage protection (70 V_{pc})
- Wide input range (10 ~ 50 V_{nc})
- Interrupt handling capability
- Board ID

Introduction

The MIC-3761 relay actuator and isolated D/I card is an add-on card for the PCI bus. It provides 8 opto-isolated digital inputs with isolation protection of 3,750 V_{DC} for collecting digital inputs in noisy environments, and 8 relay actuators for serving as ON/OFF control devices or small power switches. For easy monitoring, each relay is equipped with one red LED to show its ON/OFF status. The MIC-3761's eight optically-isolated digital input channels are ideal for digital input in noisy environments or with floating potentials.

Rugged Protection

The MIC-3761 digital input channels feature rugged protection for industrial, lab and machinery automation applications. It durably withstands voltage up to 3,750 V_{DC} , protecting your host system from any incidental harms. If connected to an external input source with surge-protection, the MIC-3761 can offer up to a maximum of 2,000 V_{DC} ESD (Electrostatic Discharge) protection. Even with an input voltage rising up to 70 V_{DC} , the MIC-3761 can still manage to work properly for a short period of time.

Reset Protection Fulfills Requirement for Industrial Applications

When the system has undergone a hot reset (i.e. without turning off the system power), the MIC-3761 can either retain output values of each channel, or return to its default configuration as open status, depending on its onboard jumper setting. This function protects the system from unwanted operations during unexp

Specifications

Isolated Digital Input

Channels 8
Optical Isolation 3,750 V_{DC}
Opto-isolator 25 μs
Response Time

Relay Output

Channels

Relay Type
Rating (resistive)
SPDT (4 Form C and 4 Form A)
A @ 250 V_{AC} or 3 A @ 24 V_{DC}

Max. Switching Power 750 AV, 72 W
Max. Switching Load 10 mA @ 5 V_{DC}

• Insulation Resistance 1,000 M Ω min. (at 500 V $_{DC}$)

Operate TimeRelease Time5 ms max.

General

Connector
Dimensions
One 37-pin D-type female connector
175 mm (L) x 100 mm (H) (6.9" x 3.9")

Power Consumption +5 V @ 220 mA (typical) +5 V @ 750 mA (max.)

• Operating Temperature $0 \sim 60^{\circ}$ C (32 $\sim 140^{\circ}$ F) (refer to IEC 68-2-1, 2)

■ **Storage Temperature** -20 ~ 70° C (-4 ~ 158° F)

• Operating Humidity $5\% \sim 95\%$ RH non-condensing (refer to IEC 68-2-3)

• Certifications CE Class A certified

Isolated Digital Input

Input Channels 8
Optical Isolation 3750 V_{DC}
Opto-isolator 25 μs response time

Over-voltage Protection 70 V_{DC}

• Input Voltage VIH (max.) 50 V_{DC}

 $\begin{array}{ccc} \text{VIH (min.)} & & 10 \text{ V}_{DC} \\ \text{VIL (max.)} & & 3 \text{ V}_{DC} \end{array}$

■ Input Current 10 V_{DC} 1.6 mA (typical)

 $\begin{array}{lll} 12\,V_{\mathrm{DC}}^{\mathrm{DC}} & & 1.9\,\mathrm{mA}~\mathrm{(typical)} \\ 24\,V_{\mathrm{DC}} & & 4.1\,\mathrm{mA}~\mathrm{(typical)} \\ 48\,V_{\mathrm{DC}} & & 8.5\,\mathrm{mA}~\mathrm{(typical)} \\ 50\,V_{\mathrm{nc}} & & 8.9\,\mathrm{mA}~\mathrm{(typical)} \end{array}$

MIC-3761

Relay Output

Output Channels

 Relay Type SPDT (4 Form C and 4 Form A) 3 A @ 250 $\rm V_{AC}$ or 3 A @ 24 $\rm V_{DC}$ - Rating (resistive)

• Max. Switching Power 750 AV, 72 W Max. Switching Voltage 250 V_{AC}, 24 V_{DC}

• Max. Switching Current 3 A

• Min. Switching Load 10 mA @ 5 $V_{\rm DC}$

 Breakdown Voltage 5,000 V_{AC} for 1 min. (Between coil and contacts)

 Operate time 15 ms max. Release time 5 ms max.

1,000 M Ω min. (at 500 V_{DC}) Insulation Resistance Life Expectancy Mechanical 2 x 107 ops. min.

> Electrical 2x105 ops. min. (contact rating)

Note:

The current specifications are limited by the cable and wiring terminal board.

Ordering Information

■ MIC-3761/3 3U 8-ch Relay Actuator and 8-ch Isolated D/I Module,

user's manual and driver CD-ROM. (cable not

included)

6U 8-ch Relay Actuator and 8-ch Isolated D/I Module, MIC-3761/6

user's manual and driver CD-ROM. (cable not

included)

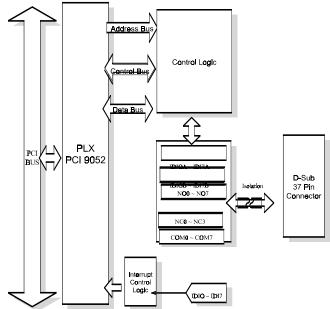
- PCL-10137-1/2/3 DB-37 cable assembly, 1,2 and 3 m - ADAM-3937 DB-37 Wiring Terminal for Din-rail Mounting

 PCLD-780 Universal Screw Terminal Board

Pin Assignments

Description of pin use:			_	
	R0_NO	1	20	R3_NO
IDInA* (n=0 ~ 7):	R0_COM	2	21	R3_COM
Isolated digital input A	R0_NC	3	22	R3_NC
IDInB* (n=0 ~ 7):	R1_NO	4	23	R4 NO
Isolated digital input B	R1_COM	5	24	R4_COM
Rn_NO(n=0 ~ 7):	R1_NC	6	25	R5 NO
Normally Open pin of relay output	R2_NO	7	25	_
Do NO(- 0 7)	R2_COM		26	R5_COM
Rn_NC(n=0 ~ 7):	H2_COM	8	27	R6_NO
Normally Close pin of relay output	R2_NC	9	28	R6_COM
Rn_COM(n=0 ~ 7):	R7_NO	10	29	N/A
Common pin of relay output	R7_COM	11	30	IDI 0B
	IDI 0A	12	31	IDI 1B
	IDI 1A	13	32	IDI 2B
	IDI 2A	14	33	IDI 3B
	IDI 3A	15	34	IDI 4B
	IDI 4A	16	35	IDI 5B
	IDI 5A	17	36	IDI 6B
	IDI 6A	18	37	IDI 7B
	IDI 7A	19	")	וטו / ם

Block Diagram



IPPC & AWS

eConnectivity