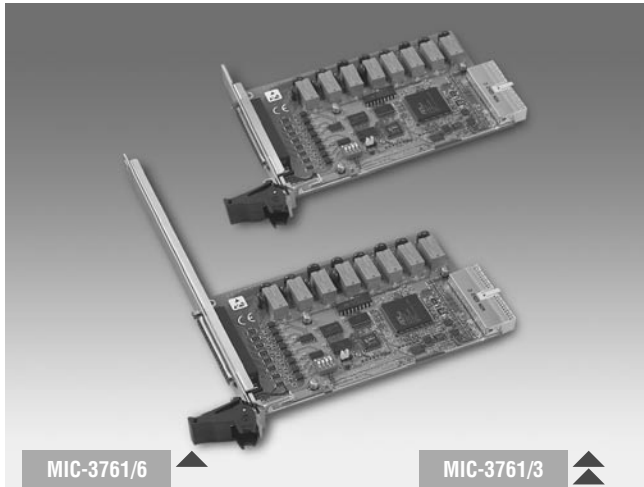


MIC-3761

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



CE FCC

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_{DC})
- High ESD protection (2,000 V_{DC})
- High over-voltage protection (70 V_{DC})
- Wide input range (10 ~ 50 V_{DC})
- Interrupt handling capability
- BoardID™ switch

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 on-board jumper setting. This function protects the system from unwanted operations during unexpected system resets.

Specifications

Isolated Digital Input

- **Channels** 8
- **Optical Isolation** 3,750 V_{DC}
- **Opto-Isolator Response Time** 25 μs
- **Over-Voltage Protection** 70 V_{DC}
- **Input Voltage** 10 ~ 50 V_{DC}
- **Input Current** 1.6 mA @ 10 V_{DC}
8.9 mA @ 50 V_{DC}

Relay Output

- **Channels** 8
- **Relay Type** SPDT (4 Form C and 4 Form A)
- **Rating (resistive)** 3 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 MΩ min. (at 500 V_{DC})
- **Operate Time** 15 ms max.
- **Release Time** 5 ms max.

General

- **Connector** One 37-pin D-type female connector
- **Dimensions (L x H)** 175 x 100 mm (6.9" x 3.9")
- **Power Consumption** +5 V @ 220 mA (typical)
+5 V @ 750 mA (max.)
- **Operating Temperature** 0 ~ 60° C (32 ~ 140° F) (refer to IEC 68-2-1, 2)
- **Storage Temperature** -20 ~ 70° C (-4 ~ 158° F)
- **Operating Humidity** 5 ~ 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 Response Time** 25 μs
- **Over-voltage Protection** 70 V_{DC}
- **Input Voltage** VIH (max.) 50 V_{DC}
VIH (min.) 10 V_{DC}
VIL (max.) 3 V_{DC}
- **Input Current** 10 V_{DC} 1.6 mA (typical)
12 V_{DC} 1.9 mA (typical)
24 V_{DC} 4.1 mA (typical)
48 V_{DC} 8.5 mA (typical)
50 V_{DC} 8.9 mA (typical)

Relay Output

- **Output Channels** 8
- **Relay Type** SPDT (4 Form C and 4 Form A)
- **Rating (resistive)** 3 A @ 250 V_{AC} or 3 A @ 24 V_{DC}
- **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_{DC}
- **Breakdown Voltage** 5,000 V_{AC} for 1 min. (Between coil and contacts)
- **Operate time** 15 ms max.
- **Release time** 5 ms max.
- **Insulation Resistance** 1,000 MΩ min. (at 500 V_{DC})
- **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 Card, user's manual and driver CD-ROM. (cable not included)
- **MIC-3761/6** 6U 8-ch Relay Actuator and 8-ch Isolated D/I Card, 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:

IDInA* (n=0 ~ 7):	R0_NO	1	20	R3_NO
Isolated digital input A	R0_COM	2	21	R3_COM
	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
	R1_NC	6	25	R5_NO
Rn_NO(n=0 ~ 7):	R2_NO	7	26	R5_COM
Normally Open pin of relay output	R2_COM	8	27	R6_NO
	R2_NC	9	28	R6_COM
Rn_NC(n=0 ~ 7):	R7_NO	10	29	N/A
Normally Close pin of relay output	R7_COM	11	30	IDI 0B
	R7_NC	12	31	IDI 1B
Rn_COM(n=0 ~ 7):	IDI 0A	13	32	IDI 2B
Common pin of relay output	IDI 1A	14	33	IDI 3B
	IDI 2A	15	34	IDI 4B
	IDI 3A	16	35	IDI 5B
	IDI 4A	17	36	IDI 6B
	IDI 5A	18	37	IDI 7B
	IDI 6A	19		
	IDI 7A			

Block Diagram

