# 40-channel Isolated Switch Card 30-channel Digital I/O Card 



The Model 7036 and 7037-D single-pole relay switching cards are well-suited for configuring automated test systems for portable devices. The Model 7036 offers 40 independent channels of 1-pole Form A switching, while the Model 7037-D provides 30 channels, plus ten independent digital inputs and ten independent digital outputs for control applications. The 7036 provides a 96 -pin mass terminated connector. The 7037-D has two heavy duty 50 -pin D-sub connectors at the ends of short cables. The D-sub connector version is designed for industrial/production applications where repeated connects/ disconnects with external cables are required. The 7037-DT is an extra connector board for the 7037-D card that can be used to upgrade a standard 7037-D to a mass terminated connector.

- Mass terminated connection
- 1A switch rating
- <100pA offset current
- $<4 \mu \mathrm{~V}$ contact potential

Ordering Information
7036 Single-Pole Relay Card
7037-D Single-Pole Relay Digital I/0 Card with D-Sub Connectors

Relay switch configuration for Models 7036 and 7037-D

Each Channel


Digital I/O configuration for Model 7037-D


## MODEL 7036 SPECIFICATIONS

## RELAY SWITCH SPECIFICATIONS

RELAY SWITCH CONFIGURATION: 40 independent channels of 1-pole switching.
CONTACT CONFIGURATION: 1 pole Form A.
CONNECTOR TYPE: 96 -pin male DIN card connector.
MAXIMUM SIGNAL LEVEL: $60 \mathrm{~V} \mathrm{DC}, 30 \mathrm{~V}$ rms, 42 V peak betwen any two inputs or chassis, 1 A switched. 30 VA (resistive load). CONTACT LIFE: Cold Switching: $10^{8}$ closures.
At Maximum Signal Levels: $10^{5}$ closures.
CHANNEL RESISTANCE (per conductor): $<1 \Omega$.
CONTACT POTENTIAL: $<4 \mu$ V per contact.
OFFSET CURRENT: <100pA.
ACTUATION TIME: 3 ms .
ISOLATION: Channel to Channel: $>10^{\circ} \Omega,<25 \mathrm{pF}$.
Common Mode: $>10^{\circ} \Omega,<100 \mathrm{pF}$.
CROSSTALK ( $1 \mathrm{MHz}, 50 \Omega$ Load) <-40dB.
INSERTION LOSS ( $50 \Omega$ Source, $50 \Omega$ Load): $<0.3 \mathrm{~dB}$ below $1 \mathrm{MHz},<3 \mathrm{~dB}$ below 10 MHz .
RELAY DRIVE CURRENT (per relay): 16 mA .

## 7036/7037-D GENERAL

EMC: Conforms to European Union Directive 89/336/EEC.
SAFETY: Conforms to European Union Directive 73/23/EEC (meets EN61010-1/IEC 1010).
ENVIRONMENT: Operating: $0^{\circ}$ to $50^{\circ} \mathrm{C}$, up to $35^{\circ} \mathrm{C}$ $<80 \%$ RH. Storage: $-25^{\circ}$ to $65^{\circ} \mathrm{C}$.

ACCESSORIES AVAILABLE
7011-KIT-R $\quad 96$-pin Female Connector Kit (included)
7011-MTR $\quad 96$-pin Male Bulkhead Mount Connector
7036-MTC-2 Mass Terminated Cable Assembly
7037-DT Extra Connector Board for the 7037-D Card

## SERVICES AVAILABLE

7036-3Y-EW $\quad$ 1-year factory warranty extended to 3 years from date of shipment
7037-D-3Y-EW 1-year factory warranty extended to 3 years from date of shipment

## MODEL 7037-D SPECIFICATIONS

## RELAY SWITCH SPECIFICATIONS

RELAY SWITCH CONFIGURATION: 30 independent channels of 1-pole switching.
CONTACT CONFIGURATION: 1 pole Form A.
CONNECTOR TYPE: Cables with 50 -pin male and female D-sub connectors.
MAXIMUM SIGNAL: 110 V DC, 110 V rms, 155 V peak between any two inputs or chassis, 1 A switched, 30 VA (resistive load).
CONTACT LIFE: Cold Switching: $10^{8}$ closures.
At Maximum Signal Levels: $10^{5}$ closures.
CHANNEL RESISTANCE (per conductor): $<1.25 \Omega$.
CONTACT POTENTIAL: $<4 \mu \mathrm{~V}$ per contact.
OFFSET CURRENT: < 100 pA .
ACTUATION TIME: 3 ms .
ISOLATION: Channel to Channel: $>10^{\circ} \Omega,<25 \mathrm{pF}$.
Common Mode: $>109 \Omega,<100 \mathrm{pF}$.
CROSSTALK ( $1 \mathrm{MHz}, 50 \Omega$ Load): <-40dB.
INSERTION LOSS ( $50 \Omega$ Source, $50 \Omega$ Load): $<0.25 \mathrm{~dB}$ below $1 \mathrm{MHz},<3 \mathrm{~dB}$ below 10 MHz .
RELAY DRIVE CURRENT (per relay): 16 mA .

## DIGITAL I/O SPECIFICATIONS

DIGITAL I/O CAPABILITY: 10 independent inputs. 10 independent outputs.
OUTPUT:
Configuration: 10 open-collector drivers with factory installed $10 \mathrm{k} \Omega$ pull-up resistors. Each driver has an internal flyback diode.
Pull-Up Voltage: 5 V internally supplied, external connection provided for user-supplied voltage up to 42 V max. Outputs short circuit protected up to 25 V .
Maximum Sink Current:
Per Channel: 250 mA . Per Card: 1A.
Logic: Hardware user configurable for negative or positive true logic levels.
INPUT:
Configuration: 10 inputs with internal $10 \mathrm{k} \Omega$ pull-up resistors provided. Input resistors can be set for pull-up or pull-down configuration.
MAXIMUM VOLTAGE LEVEL: 42V peak.
LOGIC: Positive true.
1.888.KEITHLEY (u.s. only) www.keithley.com

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