## 7011-C, 7011-S, 7111-S

# 40-channel Multiplexer Cards <br> Quad $1 \times 10$ Multiplexer Configuration 



- Quad $1 \times 10$ multiplexer for 2-, 4-, or 8-pole operation
- Connects to 7001/7002 backplane for easy expandability
- $500 \mathrm{nV}, 100 \mathrm{pA}$ offsets


## Ordering Information

| 7011-C | Quad $1 \times 10$ Multiplexer <br> with $96-p i n$ <br> Mass Terminated <br> Connector Board |
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| 7011-S | Quad $1 \times 10$ Multiplexer <br> with Screw Terminal |
| Connector Board <br> Quad $1 \times 10$ Form <br> C Multiplexer with <br> Screw Terminal <br> Connector Board |  |

## ACCESSORIES AVAILABLE

## FOR 7011-C:

7011-KIT-R $\quad 96$-pin Female Connector Kit
7011-MTC-1 $\quad 96$-pin Mass Terminated Cable, Female to Female, 1m
7011-MTC-2 96 -pin Mass Terminated Cable, Female to
7011-MTR $\quad 96$-pin Male Connector Kit
FOR 7011-S AND 7111-S:
7011-ST Extra Screw Terminal Connection Board
SERVICES AVAILABLE
7011-C-3Y-EW $\quad$ 1-year factory warranty extended to 3 years from date of shipment
7011-S-3Y-EW $\quad 1$-year factory warranty extended to 3 years from date of shipment
7111-S-3Y-EW $\quad$ 1-year factory warranty extended to 3 years from date of shipment

The Model 701140 -channel multiplexer has four independent banks of $1 \times 10$ switching. Each channel is 2-pole. These four banks can be combined for a wide variety of switching configurations-for example, dual $1 \times 20$, or $1 \times 10$ and $1 \times 30$, or one large $1 \times 40$. The 7001 mainframe can automatically configure the 7011 to switch 4 -pole signals by combining channel pairs. This gives you a dual $1 \times 104$-pole multiplexer or a single $1 \times 204$-pole multiplexer.

Each of the four multiplexer outputs on this card connects to the 7001/7002 analog backplane through removable jumpers for even greater flexibility. Two 7011 cards can be used to make a single $1 \times 80$ multiplexer with all intercard connections through the backplane. The 7011 multiplexer outputs can also be connected to the rows of the 7012 via the backplane for row expansion.

The Model 7111-S is a form C version of the 7011-S. The 7111-S is a low-voltage, quad $1 \times 10$, single-pole form C multiplexer card. The 7111-S assembly consists of a screw terminal connector card and a relay card. External test circuits are wired directly to the screw terminals of the connector card.
These cards automatically configure the 7001 or 7002 mainframe. Two connection options are available, screw terminal for maximum flexibility or a single 96 -pin quick disconnect connector.

MULTIPLEX CONFIGURATION: Four independent $1 \times 102$-pole multiplex banks or two independent $1 \times 104$-pole multiplex banks.
Adjacent banks can be connected together. Jumpers can be removed to isolate any bank from the backplane.
CONTACT CONFIGURATION: 2 -pole Form A (Hi, Lo) (1-pole form C for 7111-S).
CONNECTOR TYPE:
7011-C: 96-pin male DIN connector.
7011-S and 7111-S: Screw terminal, \#16AWG maximum wire size, with 0.092 inch O.D. 28 conductors per card maximum. \#22AWG typical wire size with 0.062 inch O.D. 88 conductors per card maximum.
MAXIMUM SIGNAL LEVEL:
DC Signals: 110 V DC between any two pins, 1 A switched. 30 VA (resistive load).
AC Signals: 125 V rms and 175 V AC peak, between any two pins, 1 A switched, 60 VA (resistive load).
COMMON MODE VOLTAGE: 175 V peak, any pin to chassis.
CONTACT LIFE: Cold Switching: $10^{8}$ closures. At Maximum Signal Levels: $10^{5}$ closures.
CHANNEL RESISTANCE (per conductor): $<1 \Omega$.
CONTACT POTENTIAL: 7011-C: $<1 \mu \mathrm{~V}$ per channel contact pair 7011-S, $7111-\mathrm{S}:<2 \mu \mathrm{~V}$ per contact pair
$<3 \mu \mathrm{~V}$ typical per single contact. $<5 \mu \mathrm{~V}$ typical per single contact.
OFFSET CURRENT: <100pA.
ACTUATION TIME: 3 ms .
isolation:
Bank: $>10{ }^{9} \Omega,<25 \mathrm{pF}$.
Channel to Channel: $>10^{\circ} \Omega,<50 \mathrm{pF}$.
Differential: Configured as $1 \times 10$ : $>10^{9} \Omega,<100 \mathrm{pF}$. Configured as $1 \times 40$ : $>109$, $<200 \mathrm{pF}$.
Common Mode: Configured as $1 \times 10$ : $>10^{9} \Omega,<200 \mathrm{pF}$. Configured as $1 \times 40$ : $>10^{\circ} \Omega,<600 \mathrm{pF}$.
CROSSTALK ( $1 \mathrm{MHz}, 50 \Omega$ Load): Bank: $<-40 \mathrm{~dB}$. Channel: <-40dB.
INSERTION LOSS ( $50 \Omega$ Source, $50 \Omega$ Load): $<0.1 \mathrm{~dB}$ below $1 \mathrm{MHz},<3 \mathrm{~dB}$ below 2 MHz .
RELAY DRIVE CURRENT (per relay): 7011-C, -S: 16mA
7111-S: 28 mA

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