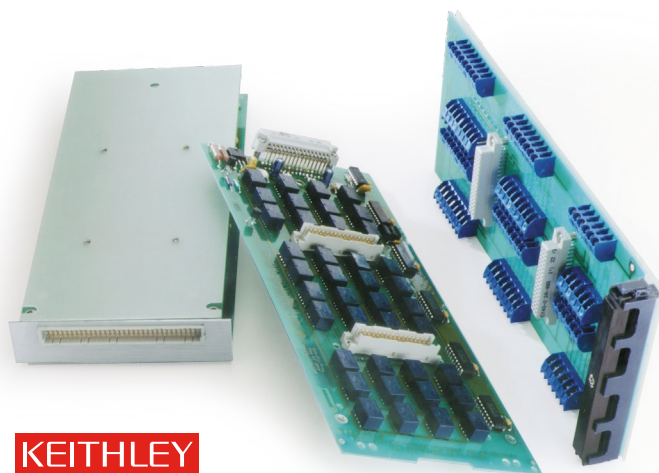


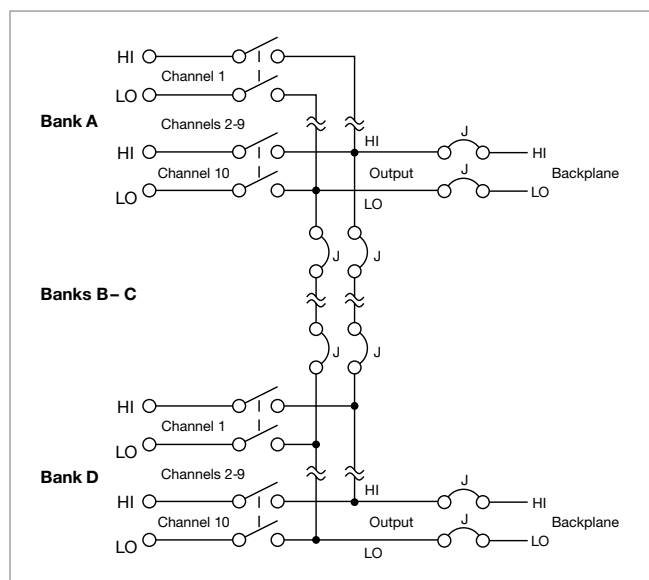
# 7011-C, 7011-S 40-channel Multiplexer Cards Quad 1x10 Multiplexer Configuration

## Datasheet



**KEITHLEY**  
A Tektronix Company

The 7011 40-channel multiplexer has four independent banks of 1x10 switching. Each channel is 2-pole. These four banks can be combined for a wide variety of switching configurations—for example, dual 1x20, or 1x10 and 1x30, or one large 1x40. The 7001 mainframe can automatically configure the 7011 to switch 4-pole signals by combining channel pairs. This gives you a dual 1x10 4-pole multiplexer or a single 1x20 4-pole multiplexer.



### Key Features

- Quad 1x10 multiplexer for
- 2-, 4-, or 8-pole operation
- Connects to 7001/7002 backplane for easy expandability
- 500 nV, 100 pA offsets

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 1x80 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.

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.

### Notice to EU Customers

This product is not updated to comply with the RoHS 2 Directive 2011/65/EU and will not be shipped to the EU. Customers may be able to purchase products from inventory that were placed on the EU market prior to July 22, 2017 until supplies are depleted. Tektronix is committed to helping you with your solution needs. Please contact your local sales representative for further assistance or to determine if alternative product(s) are available. Tektronix will continue service to the end of worldwide support life.

## Specifications

<b>Multiplex Configuration</b>	Four independent 1×10 2-pole multiplex banks or two independent 1×10 4-pole multiplex banks. Adjacent banks can be connected together. Jumpers can be removed to isolate any bank from the backplane.
<b>Contact Configuration</b>	2-pole Form A (HI, LO).
<b>Connector Type</b>	<b>7011-C:</b> 96-pin male DIN connector.  <b>7011-S:</b> Screw terminal, #16 AWG maximum wire size, with 0.092 inch O.D. 28 conductors per card maximum. #22 AWG typical wire size with 0.062 inch O.D. 88 conductors per card maximum.
<b>Maximum Signal Level</b>	<b>DC Signals:</b> 110 V DC between any two pins, 1 A switched. 30 VA (resistive load).  <b>AC Signals:</b> 125 V rms and 175 V AC peak, between any two pins, 1 A switched, 60 VA (resistive load).
<b>Common Mode Voltage</b>	175 V peak, any pin to chassis.
<b>Contact Life</b>	<b>Cold Switching:</b> 10 <sup>8</sup> closures. <b>At Maximum Signal Levels:</b> 10 <sup>5</sup> closures.
<b>Channel Resistance (per conductor)</b>	<1 Ω.
<b>Contact Potential</b>	<b>7011-C:</b> <1 μV per channel contact pair. <3 μV typical per single contact.  <b>7011-S:</b> <2 μV per contact pair. <5 μV typical per single contact.
<b>Offset Current</b>	<100 pA.
<b>Actuation Time</b>	3 ms.
<b>ISOLATION</b>	<b>Bank:</b> >10 <sup>9</sup> Ω, <25 pF.  <b>Channel to Channel:</b> >10 <sup>9</sup> Ω, <50 pF.  <b>Differential:</b> Configured as 1×10: >10 <sup>9</sup> Ω, <100 pF. Configured as 1×40: >10 <sup>9</sup> Ω, <200 pF.  <b>Common Mode:</b> Configured as 1×10: >10 <sup>9</sup> Ω, <200 pF. Configured as 1×40: >10 <sup>9</sup> Ω, <600 pF.
<b>Crosstalk (1 MHz, 50 Ω Load)</b>	<b>Bank:</b> <-40 dB. <b>Channel:</b> <-40 dB.
<b>Insertion Loss (50 Ω Source, 50 Ω Load)</b>	<0.1 dB below 1 MHz, <3 dB below 2 MHz.
<b>Relay Drive Current (per relay)</b>	16 mA.

## Available Accessories

### For 7011-C

<b>7011-KIT-R</b>	96-pin Female Connector Kit
<b>7011-MTC-1</b>	96-pin Mass Terminated Cable, Female to Female, 1 m
<b>7011-MTC-2</b>	96-pin Mass Terminated Cable, Female to Female, 2 m

## Available Services

<b>7011-C-3Y-EW</b>	1-year factory warranty extended to 3 years from date of shipment
<b>7011-S-3Y-EW</b>	1-year factory warranty extended to 3 years from date of shipment

## Ordering Information

<b>7011-C</b>	Quad 1×10 Multiplexer with 96-pin Mass Terminated Connector Board
<b>7011-S</b>	Quad 1×10 Multiplexer with Screw Terminal Connector Board

## Warranty Information

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<b>Warranty Summary</b>	This section summarizes the warranties of the 7011. For complete warranty information, refer to the 7011 Reference Manual. Any portion of the product that is not manufactured by Keithley is not covered by this warranty and Keithley will have no duty to enforce any other manufacturer's warranties.
<b>Hardware Warranty</b>	Keithley Instruments, Inc. warrants the Keithley manufactured portion of the hardware for a period of one year from defects in materials or workmanship; provided that such defect has not been caused by use of the Keithley hardware which is not in accordance with the hardware instructions. The warranty does not apply upon any modification of Keithley hardware made by the customer or operation of the hardware outside the environmental specifications.
<b>Software Warranty</b>	Keithley warrants for the Keithley produced portion of the software or firmware will conform in all material respects with the published specifications for a period of ninety (90) days; provided the software is used on the product for which it is intended in accordance with the software instructions. Keithley does not warrant that operation of the software will be uninterrupted or error-free, or that the software will be adequate for the customer's intended application. The warranty does not apply upon any modification of the software made by the customer.

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