40-channel Solid State Multiplexer Cards
Quad 1×10 Configuration

The Model 7015 40-channel solid state multiplexer is designed for multipoint measurement applications that require high reliability and increased scanning speeds. With an MTBF of more than 30,000 hours, the 7015 can handle applications that require continuous use over longer periods of time. The solid state switch technology also provides fast switching times for scanning rates of over 300 channels/measurements per second when used with the 7002/2001 or 7001/2001 combination.

MULTIPLEX CONFIGURATION: 4 independent 1×10 2-pole multiplexer banks or 2 independent 1×10 4-pole multiplexer 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).

CONNECTOR TYPE: 7015-C: 96-pin male DIN connector.
7015-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: ±175V peak between any two pins, 54mV resistive load, 0.3VA max., 1Ω termination.
COMMON MODE VOLTAGE: ±175V peak, any pin to chassis.
CONTACT TYPE: Solid state switch.
CHANNEL RESISTANCE (per conductor): <210Ω.
CONTACT POTENTIAL: 7015-C: <5µV per channel contact pair.
7015-S: <6µV per channel contact pair.
OFFSET CURRENT: <1mA.
ACTUATION TIME: <500µs.
ISOLATION: Bank: >10Ω, <25 pF.
Channel to Channel: >10Ω, <50 pF.
Differential: Configured as 1×10: >10Ω, <100pF.
Configured as 1×10: >10Ω, <200pF.
Common Mode: Configured as 1×10: >10Ω, <375pF.
INSERTION LOSS (50Ω Source, 1Ω Load): <0.1dB below 250kHz, <3dB below 500kHz.

ACCESSORIES AVAILABLE
7015-C-3Y-EW 1-year factory warranty extended to 3 years from date of shipment
7015-S-3Y-EW 1-year factory warranty extended to 3 years from date of shipment

SERVICES AVAILABLE
7015-C-3Y-EW 1-year factory warranty extended to 3 years from date of shipment
7015-S-3Y-EW 1-year factory warranty extended to 3 years from date of shipment

2GHz RF Switch Card
Dual 1×4 Configuration, 50Ω

The Model 7016A has two independent bi-directional 1×4 multiplexers for the Models 7001 and 7002 Switch Mainframes. The characteristic impedance of the card is 50Ω. Signal connections are made to the card with SMA connectors. Off channels can be resistively terminated. SMB jack connectors, provided on the card, are designed to be used with user-supplied terminators to minimize signal reflection.

MULTIPLEXERS PER CARD: Two 1×4+ (with isolated ground).
CHARACTERISTIC IMPEDANCE: 50Ω nominal.
CHANNELS PER MULTIPLEXER: 4.
CONTACT CONFIGURATION: 1 pole form A common shield.
RELAY DRIVE CURRENT: 120mA.
CONNECTOR TYPE: SMA.
RECOMMENDED CABLE: RG-223/U.

AC PERFORMANCE:

<table>
<thead>
<tr>
<th>Frequency (GHz)</th>
<th>≤10 MHz</th>
<th>≤100 MHz</th>
<th>≤500 MHz</th>
<th>≤1 GHz</th>
<th>≤2 GHz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insertion Loss (dB)</td>
<td>&lt;0.3</td>
<td>&lt;0.6</td>
<td>&lt;1.0</td>
<td>&lt;1.3</td>
<td>&lt;3.0</td>
</tr>
<tr>
<td>Crosstalk (dB)</td>
<td>&lt;−90</td>
<td>&lt;−80</td>
<td>&lt;−65</td>
<td>&lt;−55</td>
<td>&lt;−45</td>
</tr>
<tr>
<td>Channel-channel</td>
<td>&lt;−90</td>
<td>&lt;−80</td>
<td>&lt;−70</td>
<td>&lt;−65</td>
<td>&lt;−45</td>
</tr>
<tr>
<td>Switch-switch</td>
<td>&lt;1.06</td>
<td>&lt;1.1</td>
<td>&lt;1.2</td>
<td>&lt;1.16</td>
<td>&lt;1.19</td>
</tr>
</tbody>
</table>

1 Specification assumes 50Ω termination.