

**Aumictech**

Test &amp; measurement · bought, sold, repaired, calibrated

**Data Sheet**

August 13, 2026

KEITHLEY / METRABYTE

# Keithley / MetraByte 7015 40-Channel Solid State Multiplexer Card

Keithley 7015 40 Channel Solid State Multiplexer Card The Keithley 7015 is a 40-channel solid-state multiplexer for 7001/7002 mainframes. Four independent 1×10 two-pole banks (or two 1×10 four-pole banks). Adjacent banks jumper-connect; jumpers isolate banks from the backplane. Maximum 175 V peak between pins, 34 mA resistive, 0.3 VA, 1e6 V Hz. Actuation under 500 us. Scan rates over 300 channels/s with 7001/2001 or 7002/2001. MTBF over 30000 hours. 7015-C uses 96-pin DIN; 7015-S uses screw terminals. The Keithley 7015 is a 40-channel solid-state multiplexer for 7001/7002 mainframes. Four independent 1×10 two-pole banks (or two 1×10 four-pole banks). Adjacent banks jumper-connect; jumpers isolate banks from the backplane. Maximum 175 V peak between pins, 34 mA resistive, 0.3 VA, 1e6 V Hz. Actuation under 500 us. Scan rates over 300 channels/s with 7001/2001 or 7002/2001. MTBF over 30000 hours. 7015-C uses 96-pin DIN; 7015-S uses screw terminals. High-reliability continuous multiplexed test Solid-state switching where reed life is insufficient



MODEL

**Keithley /  
MetraByte 7015**

CALIBRATION

**Available on  
request**

CONDITION

**Used**

STATUS

**In stock**

RFQ / SKU

**7015**

LISTING

<https://aumictechlabs.com/products/7015-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

## This unit

The Keithley 7015 is a 40-channel solid-state multiplexer card engineered for high-speed signal routing in automated test and data acquisition systems. It delivers four independent 1×10 2-pole

multiplex banks and two independent 1×10 4-pole multiplex banks, with the flexibility to interconnect adjacent banks or isolate any bank via jumper removal. Contact resistance remains below 210  $\Omega$  per conductor, while contact potential measures <5  $\mu\text{V}$  (7015-C) or <4  $\mu\text{V}$  (7015-S) per channel pair. The card switches in under 500  $\mu\text{s}$  and achieves isolation exceeding  $10^9 \Omega$  across all configurations. MTBF exceeds 30,000 hours. Technical Specifications Electrical Performance Maximum signal level: 175 V peak (any two pins), 34 mA resistive load, 0.3 VA max,  $1 \times 10^6$  V·Hz max Common mode voltage: 175 V peak (any pin to chassis) Channel resistance: <210  $\Omega$  per conductor Contact potential: 7015-C <5  $\mu\text{V}$ ; 7015-S <4  $\mu\text{V}$  per channel pair Offset current: <1 nA Actuation time:  $10^9 \Omega$ ,  $10^9 \Omega$ , <50 pF Insertion loss: <0.1 dB below 250 kHz; 300 channels/measurements per second Multiplex Configuration Four independent 1×10 2-pole multiplex banks Two independent 1×10 4-pole multiplex banks Adjacent banks connectable; jumper-selectable bank isolation Physical Contact configuration: 2-pole Form A (Hi, Lo) Connectors: 7015-C (96-pin male DIN); 7015-S (screw terminal, #16 AWG max) Conductor capacity: 28 max (#22 AWG typical); 88 max (screw terminal configuration) Key Features Low contact potential ensures precise analog signal switching Solid-state switching eliminates mechanical wear and contact bounce Modular bank configuration supports diverse multiplex topologies Operating temperature range: 0° to 50°C Storage temperature: -25°C to 65°C Humidity: up to 35°C at 80% RH Typical Applications Data acquisition systems requiring high-speed channel selection, automated test equipment, precision measurement signal routing, multi-channel sensor scanning. Compatibility & Integration Compatible with Keithley 7001 and 7002 Analog Switch Mainframes. Conforms to EU Directive 89/336/EEC (EMC) and 73/23/EEC (Safety, EN61010-1/IEC 1010).

## 7015 Characteristics / Specifications

| PARAMETER               | VALUE                                                        |
|-------------------------|--------------------------------------------------------------|
| Model                   | 7015                                                         |
| Manufacturer            | Keithley Instruments                                         |
| Instrument Type         | 40 channel solid state multiplexer card                      |
| Alias                   | 7015; 7015-C; 7015-S                                         |
| Host Mainframe          | 7001 / 7002                                                  |
| Channel Count           | 40 two pole                                                  |
| Bank Configuration      | 4 independent 1×10 2-pole or 2 independent 1×10 4-pole       |
| Contact Configuration   | 2 pole Form A (Hi, Lo)                                       |
| Contact Type            | solid state switch                                           |
| Max Signal              | 175 V peak between any two pins                              |
| Max Current             | 34 mA resistive                                              |
| Max Power               | 0.3 VA                                                       |
| Volt Hertz Limit        | 1e6                                                          |
| Common Mode Voltage     | 175 V peak any pin to chassis                                |
| Actuation Time          | less than 500 us                                             |
| Contact Potential 7015C | less than 5 uV per contact pair                              |
| Contact Potential 7015S | less than 4 uV per contact pair                              |
| Offset Current          | less than 1 nA                                               |
| Isolation Bank          | greater than 1e9 ohm, less than 25 pF                        |
| Isolation Channel       | greater than 1e9 ohm, less than 50 pF                        |
| Insertion Loss          | less than 0.1 dB below 250 kHz; less than 3 dB below 500 kHz |
| Scan Rate Class         | over 300 channels/s with 7001/2001                           |
| MTBF                    | more than 30000 hours                                        |
| Connector 7015C         | 96 pin male DIN                                              |
| Connector 7015S         | screw terminal 16 AWG max, 22 AWG typical                    |

| PARAMETER        | VALUE                                                                                                                                                                                                                                                                                             |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Wire Count 7015S | 88 conductors typical 22 AWG; 28 at 16 AWG max Notes Specs from Keithley 7015 40-channel solid-state multiplexer specification. Confirm 7015-C versus 7015-S connector and bank jumpers. Do not confuse with older 8-channel thermocouple 7015 lore; this card is the 40-channel solid-state mux. |

# Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

| Specifications        |                                                        |
|-----------------------|--------------------------------------------------------|
| Specifications        |                                                        |
| PARAMETER             | VALUE                                                  |
| Model                 | 7015                                                   |
| Manufacturer          | Keithley Instruments                                   |
| Instrument Type       | 40 channel solid state multiplexer card                |
| Specifications        |                                                        |
| PARAMETER             | VALUE                                                  |
| Alias                 | 7015; 7015-C; 7015-S                                   |
| Host Mainframe        | 7001 / 7002                                            |
| Channel Count         | 40 two pole                                            |
| Specifications        |                                                        |
| PARAMETER             | VALUE                                                  |
| Bank Configuration    | 4 independent 1x10 2-pole or 2 independent 1x10 4-pole |
| Contact Configuration | 2 pole Form A (Hi, Lo)                                 |
| Contact Type          | solid state switch                                     |
| Specifications        |                                                        |
| PARAMETER             | VALUE                                                  |
| Max Signal            | 175 V peak between any two pins                        |
| Max Current           | 34 mA resistive                                        |
| Max Power             | 0.3 VA                                                 |
| Specifications        |                                                        |
| PARAMETER             | VALUE                                                  |
| Volt Hertz Limit      | 1e6                                                    |
| Common Mode Voltage   | 175 V peak any pin to chassis                          |
| Actuation Time        | less than 500 us                                       |

### Specifications

| PARAMETER               | VALUE                           |
|-------------------------|---------------------------------|
| Contact Potential 7015C | less than 5 uV per contact pair |
| Contact Potential 7015S | less than 4 uV per contact pair |
| Offset Current          | less than 1 nA                  |

### Specifications

| PARAMETER         | VALUE                                                        |
|-------------------|--------------------------------------------------------------|
| Isolation Bank    | greater than 1e9 ohm, less than 25 pF                        |
| Isolation Channel | greater than 1e9 ohm, less than 50 pF                        |
| Insertion Loss    | less than 0.1 dB below 250 kHz; less than 3 dB below 500 kHz |

### Specifications

| PARAMETER       | VALUE                              |
|-----------------|------------------------------------|
| Scan Rate Class | over 300 channels/s with 7001/2001 |
| MTBF            | more than 30000 hours              |
| Connector 7015C | 96 pin male DIN                    |

Connector 7015S: screw terminal 16 AWG max, 22 AWG typical

Wire Count 7015S: 88 conductors typical 22 AWG; 28 at 16 AWG max

#### Notes

Specs from Keithley 7015 40-channel solid-state multiplexer specification. Confirm 7015-C versus 7015-S connector and bank jumpers. Do not confuse with older 8-channel thermocouple 7015 lore; this card is the 40-channel solid-state mux.

### Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: [sales@aumictech.com](mailto:sales@aumictech.com) · +1 (484) 841-9341

#### Aumictech

788 S 500 E, Pleasant Grove, UT 84062  
[sales@aumictech.com](mailto:sales@aumictech.com) · +1 (484) 841-9341  
<https://aumictechlabs.com>

NIST-traceable calibration · SAM registered ·  
30-day returns  
NAICS 423690 · 811210 · 541380  
Generated August 13, 2026

Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.