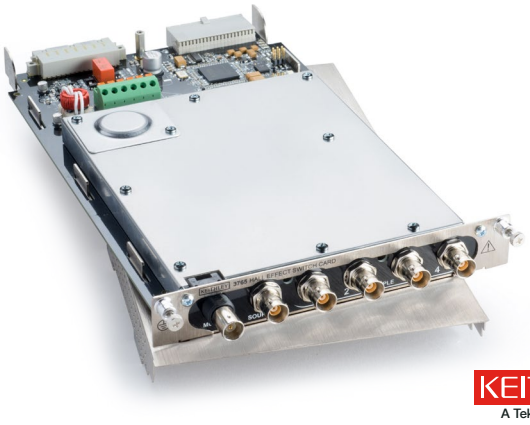
# 3765 Hall Effect Card

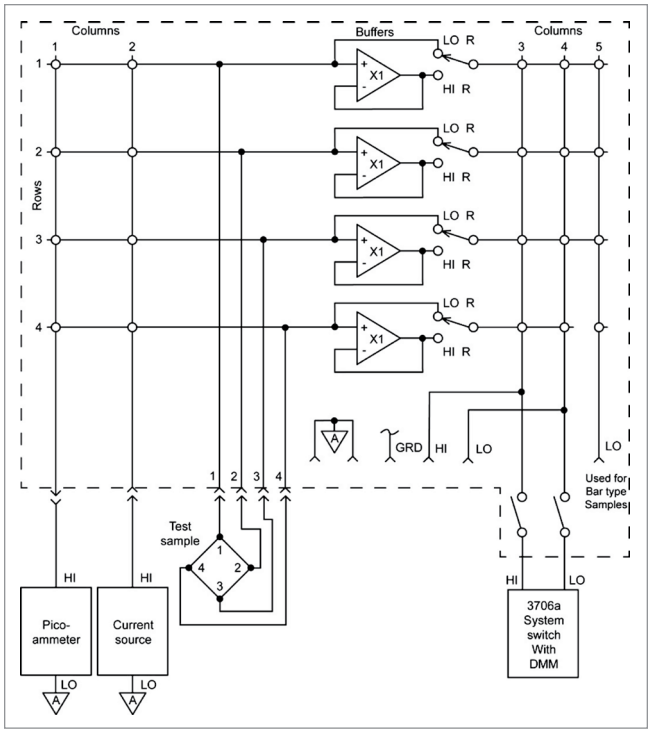



The 3765 Hall Effect Card is intended for those who want to assemble their own economical Hall test systems. It can also form the foundation of a full Hall Effect system. Used along with the free software, the Keithley Hall Effect Test Suite (KHETS), the 3765 is easily paired with Keithley DMMs, current sources, and ammeters. The card and KHETS software take advantage of the built-in DMM in the 3706A so that an external voltmeter is not required for measurements.

The 3765 is a signal conditioning card designed to buffer test signals from the Hall sample to the measurement instrumentation and to switch current from a source to the Hall sample. When used with Keithley's 3706A mainframe, the 3765 provides the switching capability to measure Hall voltages as low as 50 nV and sample resistances in excess of $10^{12}$ Ω.

All accessories needed to connect the sample holder, scanner, instruments, and controller are included, greatly simplifying connections and reducing setup time. The 3765 is connected directly to the sample, and all instruments are connected via GPIB to the controller. The KHETS software for making resistivity and Hall measurements is available on our website (tek.com/keithley).

The 3765 can be operated in either low resistivity or high resistivity mode. In the high resistivity mode, input impedance is greater than 100 TΩ, input bias current is less than 50 fA, and output resistance is 10 kΩ. Input voltage ranges in both operating modes is –8 V to +8 V. If higher voltage is desired, Keithley recommends using a 6221/6517B system. Cabling and sample connections must be carefully designed to make full use of the capabilities of the 3765. Refer to Keithley's *Low Level Measurements* handbook for guidance in designing these connections.




ES France - Département Tests & Mesures - 127 rue de Buzenval BP 26 - 92380 Garches
Tél. 01 47 95 99 45 - Fax. 01 47 01 16 22 - e-mail: tem@es-france.com - Site Web: www.es-france.com

# Specifications

## High Resistivity Mode

| | |
|---|---|
| **Input Voltage Operating Range** | –8 V to +8 V |
| **Input Impedance** | >100 TΩ in parallel with less than 3 pF |
| **Input Bias Current** | <50 fA at 23°C. Doubles approximately every 10°C rise in ambient room temperature. |
| **Input Voltage Noise** | <10 µV p-p, 0.1 to 10 Hz bandwidth. |
| **Output Resistance** | 10 kΩ |

## Low Resistivity Mode

| | |
|---|---|
| **Input Voltage Operating Range** | –8 V to +8 V |
| **Input Impedance** | >10 GΩ in parallel with less than 420 pF |
| **Input Bias Current** | <100 pA |
| **Input Voltage Noise** | <50 nV p-p, 0.1 to 10 Hz bandwidth |
| **Input To Output Resistance** | <30 Ω |

# General

| | |
|---|---|
| **Maximum Common Mode Voltage (analog ground to earth ground)** | 30 V peak, DC to 60 Hz bandwidth |
| **Isolation (analog ground to earth ground)** | >1 GΩ in parallel with 150 pF |
| **Warm-Up Time** | 1 hour for rated specifications |
| **Operating Environment** | 0° to 50° C, 70% relative humidity up to 35° C. |
| **Storage Environment** | –25° to 65° C |

## Contact Information:

**Australia*** 1 800 709 465
**Austria** 00800 2255 4835
**Balkans, Israel, South Africa and other ISE Countries** +41 52 675 3777
**Belgium*** 00800 2255 4835
**Brazil** +55 (11) 3759 7627
**Canada** 1 800 833 9200
**Central East Europe / Baltics** +41 52 675 3777
**Central Europe / Greece** +41 52 675 3777
**Denmark** +45 80 88 1401
**Finland** +41 52 675 3777
**France*** 00800 2255 4835
**Germany*** 00800 2255 4835
**Hong Kong** 400 820 5835
**India** 000 800 650 1835
**Indonesia** 007 803 601 5249
**Italy** 00800 2255 4835
**Japan** 81 (3) 6714 3010
**Luxembourg** +41 52 675 3777
**Malaysia** 1 800 22 55835
**Mexico, Central/South America and Caribbean** 52 (55) 56 04 50 90
**Middle East, Asia, and North Africa** +41 52 675 3777
**The Netherlands*** 00800 2255 4835
**New Zealand** 0800 800 238
**Norway** 800 16098
**People's Republic of China** 400 820 5835
**Philippines** 1 800 1601 0077
**Poland** +41 52 675 3777
**Portugal** 80 08 12370
**Republic of Korea** +82 2 6917 5000
**Russia / CIS** +7 (495) 6647564
**Singapore** 800 6011 473
**South Africa** +41 52 675 3777
**Spain*** 00800 2255 4835
**Sweden*** 00800 2255 4835
**Switzerland*** 00800 2255 4835
**Taiwan** 886 (2) 2656 6688
**Thailand** 1 800 011 931
**United Kingdom / Ireland*** 00800 2255 4835
**USA** 1 800 833 9200
**Vietnam** 12060128

*** European toll-free number. If not accessible, call:** +41 52 675 3777

KEITHLEY
A Tektronix Company

Find more valuable resources at TEK.COM


080217.SBG 1KW-61242-0

ES France - Département Tests & Mesures - 127 rue de Buzenval BP 26 - 92380 Garches
Tél. 01 47 95 99 45 - Fax. 01 47 01 16 22 - e-mail: tem@es-france.com - Site Web: www.es-france.com