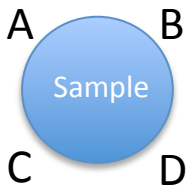
Resistivity/Hall Effect Matrix Card – Keithley 7709

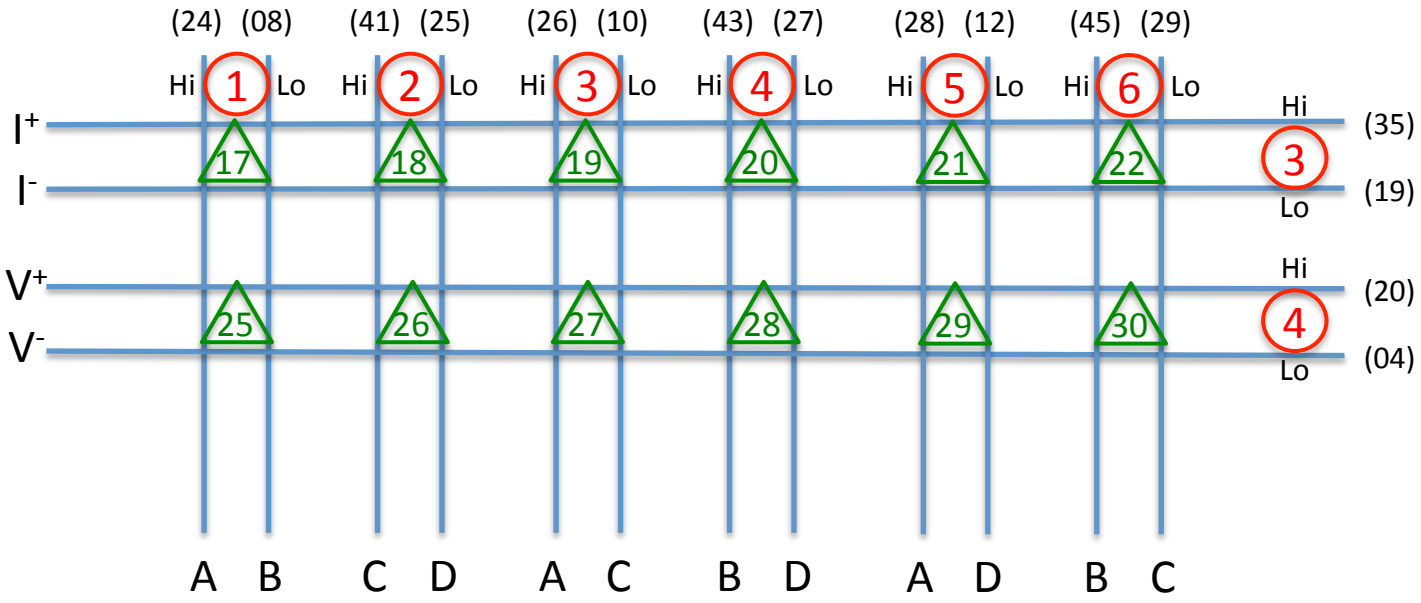
Wiring Color Code
A – Red
B – Black
C – Blue
D – Green
I – White
V – Yellow

(#) - Row/Column

(#) - Channel

(#) - Wiring Pin





Resistivity Measurement Sequence – $R_{AB, CD}$

1. Current Off
2. Short Card – Close 17, 25, 26, 27, 28, 29, 30
3. Prepare Measurement - Open 25, 27, 28, 29, 30
4. Current On, Delay, Measure Voltage
5. Current Reverse, Delay, Measure Voltage
6. Current Off
7. Short Card – Close 25, 27, 28, 29, 30

Resistivity Measurement Sequence – $R_{CD, AB}$

1. Current Off
2. Short Card – Close 17, 25, 26, 27, 28, 29, 30
3. Prepare Measurement – Close 18
4. Prepare Measurement – Open 17, 26, 27, 28, 29, 30
5. Current On, Delay, Measure Voltage
6. Current Reverse, Delay, Measure Voltage
7. Current Off
8. Short Card – Close 17, 26, 27, 28, 29, 30
9. Finish – Open 18

Resistivity Measurement Sequence – $R_{AC,BD}$

1. Current Off
2. Short Card – Close 17, 25, 26, 27, 28, 29, 30
3. Prepare Measurement – Close 19
4. Prepare Measurement – Open 17, 25, 26, 27, 29, 30
5. Current On, Delay, Measure Voltage
6. Current Reverse, Delay, Measure Voltage
7. Current Off
8. Short Card – Close 17, 25, 26, 27, 29, 30
9. Finish – Open 19

Resistivity Measurement Sequence – $R_{BD,AC}$

1. Current Off
2. Short Card – Close 17, 25, 26, 27, 28, 29, 30
3. Prepare Measurement – Close 20
4. Prepare Measurement – Open 17, 25, 26, 28, 29, 30
5. Current On, Delay, Measure Voltage
6. Current Reverse, Delay, Measure Voltage
7. Current Off
8. Short Card – Close 17, 25, 26, 28, 29, 30
9. Finish – Open 20

Hall Effect Measurement Sequence – $R^{\pm}_{AD,BC}$

1. Current Off, B-Field Off
2. Short Card – Close 17, 25, 26, 27, 28, 29, 30
3. Prepare Measurement – Close 21
4. Prepare Measurement – Open 17, 25, 26, 27, 28, 29
5. Current On, B-Field On, Delay, Measure Voltage
6. Current Reverse, Delay, Measure Voltage
7. B-Field Reverse, Delay, Measure Voltage,
8. Current Reverse, Delay, Measure Voltage
9. Current Off, B-Field Off
10. Short Card – Close 17, 25, 26, 27, 28, 29
11. Finish – Open 21

Hall Effect Measurement Sequence – $R^{\pm}_{BC,AD}$

1. Current Off, B-Field Off
2. Short Card – Close 17, 25, 26, 27, 28, 29, 30
3. Prepare Measurement – Close 22
4. Prepare Measurement – Open 17, 25, 26, 27, 28, 30
5. Current On, B-Field On, Delay, Measure Voltage
6. Current Reverse, Delay, Measure Voltage
7. B-Field Reverse, Delay, Measure Voltage,
8. Current Reverse, Delay, Measure Voltage
9. Current Off, B-Field Off
10. Short Card – Close 17, 25, 26, 27, 28, 30
11. Finish – Open 22