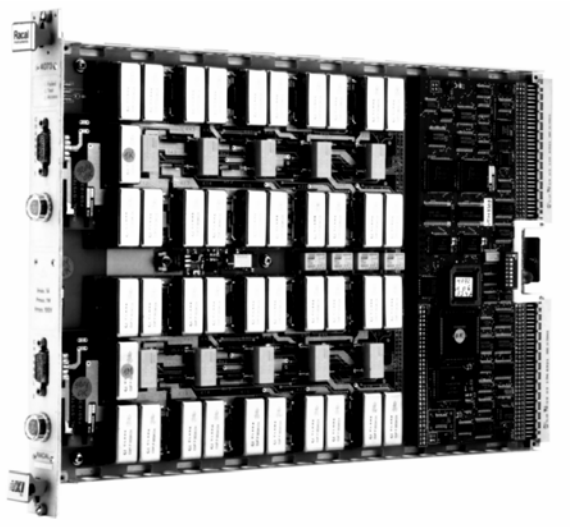
Racal Instruments
http://www.racalinstruments.com

PRODUCT INFORMATION

Programmable Resistance Module Model 4072/4072A



- **Fully Programmable Dual Channels**
- **4 Decades per Channel**
- **Resistances Available from 0.1Ω to 999.9kΩ**
- **0.01% Resolution**
- **Built-in Self Test**
- **Up to 3 Watts of Power Dissipation**

The 4072 and 4072A are dual channel programmable resistance modules available in 0.015% or 0.05% accuracy configurations and with up to 3 Watts of power dissipation. Each 4 decade channel is independently programmed with maximum resistance values ranging from 1kΩ to 1MΩ.

These single-slot modules offer trigger capability from the VXIbus TTLTRG lines and are SCPI compatible for easy programming. LabWindows/CVI, LabVIEW and VXI*plug&play* drivers are also available with soft front panels to ease program development and instrument set-up.

Applications for these modules include process control and industrial measurement. For example, the precision output can be used to digitally control resistance in a calibration or verification procedure.

Temperature sensing and other types of sensors can be simulated in cases where measurement instrumentation is being tested. When coupled with a digital voltmeter, current can be measured with a high degree of accuracy by measuring the voltage across the 4072 or 4072A.

Configuration
The 4072 and 4072A are available with either one or two channels, in any combination of four ranges.

4072/4072A SPECIFICATIONS

OUTPUT CHARACTERISTICS

Number of Channels
1 or 2

Resolution
4 digits (0.01% of range)

Input Impedance (23°C)
100MΩ

Accuracy (23°C ± 3°C)
4072: ±(0.015%+200mΩ)
4072A: ±(0.05%+200mΩ) ranges 1&2
4072A: ±(0.1%+800mΩ) ranges 2&3

Resistance Ranges

Range	Resistance Range	Resolution
1	0-999.9Ω	0.1Ω
2	0-9999Ω	1Ω
3	0-99.99kΩ	10Ω
4	0-999.9kΩ	100Ω

Max. Power Dissipation (23°C)
4072 (>1Ω): 1.1Watts
4072 (<1Ω): 0.5Watts
4072A: 3Watts

Maximum Current
1A

Maximum Voltage
200VDC/VAC (150V for 4072A)

Temperature Coefficient
4072: 10ppm/°C
4072A for ranges 1 & 2
(>10Ω): 20ppm/°C
(<100Ω): 50ppm/°C
4072A for ranges 3 & 4:
10ppm/°C

Long-Term Stability (70°C)
4072: 0.002% (½W, 2000hr)
4072A: 0.003% (1W, 2000hr, ranges 1 & 2)

TRIGGERING CHARACTERISTICS

Source
TTLTrg0-7, *TRG (Word Serial)

Modes
IMMediate: Trigger immediately.
ECOunt: Number of trigger events to be counted before a trigger occurs.
COUNt: Number of triggers to occur per trigger event.

FRONT PANEL I/O

Outputs
Channels 1, 2: 9 pin D-sub, female

Fuses
Channels 1, 2: 1A (front panel serviceable)

VXIbus INTERFACE DATA

(Single-slot, C-sized, VXIbus Rev. 1.4)

Drivers
LabVIEW, LabWindows/CVI, VXI*plug&play* (WIN, WIN95, WIN NT Frameworks)

Native Language
SCPI

Backplane Signal Support
TTLTrg0-7, Trigger Event Input, Sync Output

Self-test
99.8% coverage @ 25°C

Status Lights
Red: Failed
Green: Running Self-test
Green: Access

Cooling
4.0l/s @ 0.5mm H_2O

Peak Current & Power Consumption

	+24	+12	+5	-12
I_{Pm} (A)	1.05	0.15	1.43	0.15
I_{Dm} (A)	0.13	0.05	0.25	0.05

ENVIRONMENTAL

Temperature
Operating: 0°C-50°C

Weight
5.5lb. (2.5kg)

EMC (Council Directive 89/336/EEC)
EN55022-B, EN50082-1

Safety (Low Voltage Directive 73/23/EEC)
EN6010-1, IEC1010-1, UL3111-1, CSA 22.2#1010

ORDERING INFORMATION		
Model	**Description**	**Part Number**
4072-X-X	Programmable Resistance Module	33-1030-XX00
4072A-X-X	3W Power Resistance Module	33-1031-XX00
XX indicates the ranges required (between 1 and 4) X=N if not fitted		

CE The CE Mark indicates that the product has completed and passed rigorous testing in the area of RF Emissions, Immunity to Electromagnetic Disturbances and complies with European electrical safety standards.

Racal Instruments Inc., 4 Goodyear St., Irvine, CA 92618-2002. Tel: (800) 722 2528, (949) 859 8999; FAX: (949) 859 7139
Racal Instruments Group Ltd., 29-31 Cobham Road, Wimborne, Dorset, BH21 7PF, United Kingdom. Tel: +44 (0) 1202872800; FAX: +44 (0) 1202870810
Racal Instruments France , 18 Avenue Dutarte, 78150 LeChesnay, France. Tel: +33 (1) 3923 2222; FAX: +33 (1) 3923 2225
Racal Instruments Srl, Via Milazzo 25, 20092 Cinisello Balsamo, Milan, Italy. Tel 00-3902-612 3901, Fax 00-3902-612 93606
Racal Instruments GmbH, Technologiepark Bergisch Gladbach, Friedrich-Ebert-Strasse, D-51429 Bergisch Gladbach, Germany. Tel: +49 2204 8442 00, FAX: +49 2204 8442 19

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