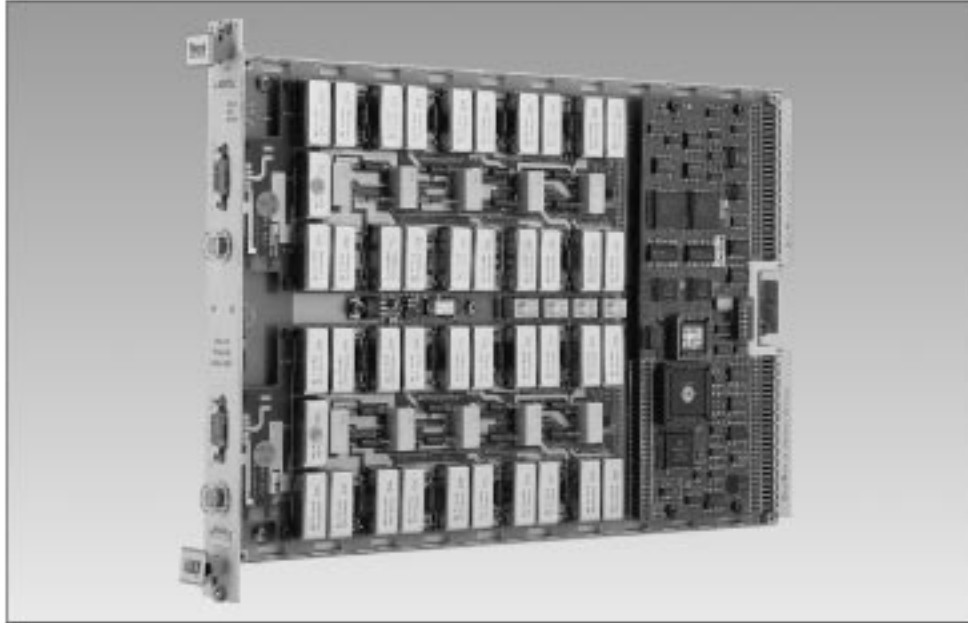




RESISTANCE MODULE

Resistance Module Model 4072/4072A/4073



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

The 4072, 4072A and 4073 are dual channel programmable resistance modules available in 0.015%, 0.05% or 0.1% accuracy configurations and with up to 3 Watts of power dissipation. Each 4 decade channel is independently programmed with maximum resistance values ranging from 1k Ω to 1M Ω .

These single-slot modules offer trigger capability from the VXIbus TTLTRG lines and are SCPI compatible for easy programming. LabWindows/CVI, LabVIEW and VXIplug&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 a potentiometer in a calibration or verification procedure. Temperature and other sensors can be simulated in cases where inputs must be tested or measured. When coupled with a digital voltmeter, current can be measured with

a high degree of accuracy by measuring the voltage across the 4072/4072A/4073's precision resistance.

Configuration

The 4072 and 4073 are available with either one or two channels, in any combination of four ranges. The 4072A is available with 1k Ω and 10k Ω ranges.

4072/3 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)

4073: ±(0.1%+800mΩ)

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

* Not available on 4072A

Max. Power Dissipation (23°C)

4072 (>1Ω): 1.1Watts

4072 (<1Ω): 0.5Watts

4072A: 3Watts

4073 (>2Ω): 3Watts

4073 (<2Ω): 1Watt

Maximum Current

1A

Maximum Voltage

200VDC/VAC (150V for 4072A)

Temperature Coefficient

4072/3: 10ppm/°C

4072A (>10Ω): 20ppm/°C

(<10Ω): 50ppm/°C

Long-Term Stability (70°C)

4072: 0.002% (½W, 2000hr)

4072A: 0.003% (1W, 2000hr)

4073: 0.005% (½W, 1000hr)

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

Channel 1, 2: 9 pin D-sub, female

Fuses

Channel 1,2: 1A (front panel serviceable)

VXIbus INTERFACE DATA

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

Drivers

LabVIEW, LabWindows/CVI, VXIplug&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 H₂O

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

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.

ORDERING INFORMATION

Model	Description	Part Number
4072-X-X	Programmable Resistance Module 0.015, 1W	33-1030-XX00
4072A-X-X	Programmable Resistance Module, 0.05% Accy, 3W	33-1031-XX00
4073-X-X	Programmable Resistance Module, 0.1% Accy, 3W	33-1040-XX00

XX indicates the ranges required (between 1X4) X=N if not fitted



<http://www.racalinst.com>

