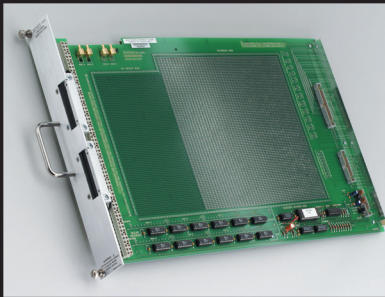


## 7070 7070-PCA

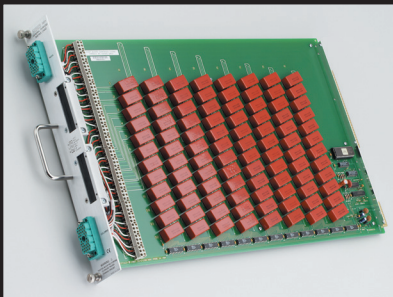


### Ordering Information

7070	Circuit prototype and breadboard with extender cable
7070-PCA	Breadboard without extender cable

Extended warranty, service, and calibration contracts are available.

## 7071



- 96 3-pole, Form A relay crosspoints
- High, Low, and Guard switched
- $<5\mu\text{V}$  contact potential per crosspoint
- Signals to 200V and 1A

### Ordering Information

7071	8x12 General Purpose Matrix Card
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Extended warranty, service, and calibration contracts are available.

# Universal Adapter Card Prototype Circuit Assembly

The Model 7070 Universal Adapter Card extends relay control and analog backplane signals through a supplied ribbon cable and connector assembly for the purpose of test and fault isolation on 707A and 708A switching cards. This adapter facilitates system maintenance by allowing for easy access to all electrical circuits on a switching card.

Approximately 117 square inches of breadboard area, with mounting holes spaced on 0.1 inch centers, is available for development of unique circuits and switching topologies. Ninety-six open collector drivers can be used to control special circuits such as microwave or high power relays. User defined circuits and components can be mounted on this assembly and used for system verification and calibration.

The Model 7070-PCA Prototype Circuit Assembly is available without the extender ribbon cable and connector assembly used for maintenance and troubleshooting of other relay cards. This model is for breadboard and circuit prototype applications only.

**DESCRIPTION:** Backplane extender card for 707A and 708A matrix cards or breadboard card, jumper selectable. Access to analog and digital backplanes, relay drivers, and power supplies.

**MAXIMUM SIGNAL LEVEL (BACKPLANE):** 200V 1A.

**COMMON MODE VOLTAGE (BACKPLANE):** 200V maximum between any two pins or chassis.

**SUPPLY SPECIFICATIONS:** 6V 2.9A\* maximum; 5V 500mA maximum, digital supply.

\*Assuming no other cards are installed. See individual card specifications for their relay drive requirements.

**RELAY DRIVE LINES:** 96 open collector sink drivers, 140mA each. Coded in 8 rowx12 column format for front panel display. User may provide external coil voltage supply up to 35V or use mainframe 6V supply.

**BREADBOARD SPACE:** Approximately 330mmx228mm (13 inx9 in).

**RIBBON CABLE:** Extends analog and digital backplanes 10 feet for benchtop servicing of cards.

**CONNECTOR TYPE:** 20 quick disconnect with 3 screw terminals. 2 strain relief clamps.

# General Purpose Matrix Card 8x12

The Model 7071 General Purpose Matrix Card is an 8x12 configuration that switches High, Low, and Guard at each of the 96 relay crosspoints. The eight rows are connected automatically to the general purpose analog backplane when the matrix card is installed into the 707A and 708A mainframe. This allows for easy expansion in 12 column increments and eliminates the requirement for wiring between cards.

The matrix card will handle voltages up to 200V and currents up to 0.5A switched or 1A unswitched. A  $5\mu\text{V}$  contact potential assures that the switch does not adversely affect low voltage sensitivity. The 3dB signal bandwidth is 5MHz. Guard inputs improve isolation between signals and assure  $<100\text{pA}$  offset currents into any electrical path.

### ACCESSORIES AVAILABLE:

7078-CIT	Contact Insertion and Extraction Tools
7078-HCT	Hand Crimping Tool
7078-KIT	Connector Kit
7078-MTC-5	Mass Terminated Cable Assembly, 1.5m (5 ft)
7078-MTC-20	Mass Terminated Cable Assembly, 6m (20 ft)
7078-MTR	Bulkhead Mount Receptacle with Contacts

**MATRIX CONFIGURATION:** 8 rows by 12 columns.

**CROSSPOINT CONFIGURATION:** 3-pole Form A (HI, LO, GUARD).

**CONNECTOR TYPE:** Quick disconnect using 38-pin connectors or screw terminals.

**MAXIMUM SIGNAL LEVEL:** 200V 1A carry/0.5A switched, 10VA peak (resistive load).

**COMMON MODE VOLTAGE:** 200V maximum between any 2 pins or chassis.

**CONTACT LIFE: Cold Switching:**  $10^8$  closures.

At Maximum Signal Level:  $10^5$  closures.

**PATH RESISTANCE (per conductor):**  $<0.6\Omega$  initial,  $<1.5\Omega$  at end of contact life.

**CONTACT POTENTIAL:**  $<5\mu\text{V}$  per crosspoint (HI to LO  $<1$  minute after actuation).

**OFFSET CURRENT:**  $<100\text{pA}$ .

**ISOLATION: Path:**  $>10^{10}\Omega$ ,  $<10\text{pF}$  Differential:  $10^9\Omega$ , 45pF nominal. Common Mode:  $10^9\Omega$ , 165pF nominal.

**CROSSTALK:**  $<-50\text{dB}$  at 1MHz, 50 $\Omega$  load.

**INSERTION LOSS (1MHz, 50 $\Omega$  source, 50 $\Omega$  load):** 0.1dB typical.

**3dB BANDWIDTH (50 $\Omega$  load):** 5MHz typical.

**RELAY DRIVE CURRENT (per crosspoint):** 15mA.

**RELAY SETTLING TIME:**  $<3\text{ms}$ .

**EMC:** Conforms to European Union Directive 89/336/EEC.

**SAFETY:** Conforms to European Union Directive 73/23/EEC (meets EN61010-1/IEC 1010).

**ENVIRONMENT: Operating:**  $0^\circ$  to  $50^\circ\text{C}$ , up to  $35^\circ\text{C}$  at 70% R.H. **Storage:**  $-25$  to  $+65^\circ\text{C}$ .

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