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Data Sheet

August 13, 2026

KEITHLEY

Keithley 7020

Keithley 7020 Digital I/O Interface Card 40 In 40 Out The 7020 provides 40 independent digital inputs and 40 independent open-collector outputs (80 bits) in a 7001/7002 slot. Factory 10 kohm pull-ups and 5.3 V internal pull-up are standard; an external pull-up to 25 V and dual-voltage jumper are supported. Per-channel sink is 65 mA (500 mA per 8-bit bank, 1 A per card) with PTC protection. The 7020 uses a 96-pin male DIN; 7020-D uses 50-pin D-sub pigtails. Handler and fixture digital control in 7001/7002; 40-bit status readback; driving relays with flyback diodes on each output; industrial 7020-D repeated mate cycles. The 7020 provides 40 independent digital inputs and 40 independent open-collector outputs (80 bits) in a 7001/7002 slot. Factory 10 kohm pull-ups and 5.3 V internal pull-up are standard; an external pull-up to 25 V and dual-voltage jumper are supported. Per-channel sink is 65 mA (500 mA per 8-bit bank, 1 A per card) with PTC protection. The 7020 uses a 96-pin male DIN; 7020-D uses 50-pin D-sub pigtails. Handler and fixture digital control in 7001/7002; 40-bit status readback; driving relays with flyback diodes on each output; industrial 7020-D repeated mate cycles.



MODEL

Keithley 7020

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

7020

LISTING

<https://aumictechlabs.com/products/7020-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Keithley 7020 and 7020-D Digital I/O Interface Cards deliver high-density digital signal management for automated test systems. Each card provides 40 independent digital inputs and 40 independent digital outputs - 80 bits total - in a compact, cost-effective form factor. The 7020

uses a 96-pin DIN connector, while the 7020-D features dual 50-pin D-sub connectors optimized for frequent industrial connections. Both variants support monitoring and control applications requiring extensive digital signal routing without additional interface logic.

Technical Specifications

Digital I/O Configuration

- 40 independent digital inputs with 10 k Ω internal pull-up resistors (removable for external pull-up devices)
- 40 independent digital outputs as open-collector drivers

Input logic: Positive True; Input Logic Low ≤ 0.8 V; Input Logic High ≥ 2 V

Input Logic Low Current: -600 μ A maximum @ 0 V

Input Logic High Current: 50 μ A maximum @ 5 V

Maximum input voltage: 42 V peak (overvoltage protected)

Output Characteristics

- Open-collector drivers with internal 5.3 V pull-up or external supply to 25 V maximum
- Per-channel sink current: 65 mA maximum
- Per-bank (8-bit) sink current: 500 mA maximum
- Per-card sink current: 1 A maximum
- Collector-Emitter saturation voltage: <0.75 V @ 1 mA, <1 V @ 65 mA

Output protection: <18 Ω series resistance, PTC circuit protector per channel, internal flyback diode per driver

Capable of driving solenoids, relays, and small motors directly

Environmental Operating: 0° to 50° C, up to 35° C and <80% RH

Storage: -25° to 65° C

Key Features

- Selectable internal or external pull-up voltage via jumper configuration
- Per-channel current limiting and overvoltage protection
- Low saturation voltage enables efficient driving of inductive loads
- DIN and D-sub connector options for different mechanical integration needs

Typical Applications

- Equipment control and device activation in production test environments
- Digital signal monitoring in multi-unit automated test systems
- Relay and solenoid switching without external driver circuits

Compatibility & Integration

The 7020 integrates into test systems requiring modular digital I/O expansion.

Connector type selection (DIN vs. D-sub) determines mechanical fit and cable management strategy.

Features & description

From manufacturer datasheet

Features

- 80-bit control density in one slot

7020 Characteristics / Specifications

PARAMETER	VALUE
Model	7020
Manufacturer	Keithley Instruments
Instrument Type	Digital I/O interface card
Alias	7020; 7020-D; 7020-DT
Host mainframes	7001 and 7002
Digital inputs	40 independent
Digital outputs	40 independent open collector
Input pull up	10 kohm internal
Input logic low	0.8 V max
Input logic high	2 V min
Input low current	-600 uA max at 0 V
Input high current	50 uA max at 5 V
Input maximum voltage	42 V peak
Input logic	positive true
Output pull up internal	5.3 V
Output pull up external	25 V max
Output sink per channel	65 mA
Output sink per bank	500 mA (8 bits)
Output sink per card	1 A
Output protection	PTC in series, less than 18 ohm
Collector emitter sat	less than 0.75 V at 1 mA; less than 1 V at 65 mA
Output logic	negative true
Flyback diode	internal on each driver
Connector 70	96-pin male DIN
Connector 7020 D	50-pin male and female D-sub on cables

PARAMETER	VALUE
Operating	0 C to 50 C, up to 35 C less than 80% RH
Storage	-25 C to 65 C
Banks	five driver ICs of 8 outputs each
Accessory kit	7011-KIT-R included class on selector literature
Related	7020-D, 7020-DT, 7020-MTC-2 Notes Specs from Keithley Model 7020 / 7020-D digital I/O interface card instruction manual and selector guide. Confirm DIN versus D-sub before buying cables. Not a 40-channel analog mux (that is 7011).

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications	
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Specifications

PARAMETER	VALUE
Output pull up external	25 V max
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Output sink per bank	500 mA (8 bits)

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Output sink per card	1 A
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Output logic	negative true
Flyback diode	internal on each driver
Connector 7020	96-pin male DIN

Specifications

PARAMETER	VALUE
Connector 7020 D	50-pin male and female D-sub on cables
Operating	0 C to 50 C, up to 35 C less than 80% RH
Storage	-25 C to 65 C

Specifications

PARAMETER	VALUE
Banks	five driver ICs of 8 outputs each
Accessory kit	7011-KIT-R included class on selector literature
Related	7020-D, 7020-DT, 7020-MTC-2

Notes

Specs from Keithley Model 7020 / 7020-D digital I/O interface card instruction manual and selector guide. Confirm DIN versus D-sub before buying cables. Not a 40-channel analog mux (that is 7011).

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

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NIST-traceable calibration · SAM registered ·
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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.