Keithley KPCI-PIO32IOA

TECHNICAL REFERENCE / EXACT-MODEL ENGINEERING FILE

Keithley KPCI-PIO32IOA is identified as a 32-line optically isolated digital i/o board for the Keithley PCI data-acquisition platform. The complete marking and installed interface arrangement must be matched before replacement.

01 Product position and evidence boundary

Complete identity	KPCI-PIO32IOA
Product type	32-Line Optically Isolated Digital I/O Board
System position	Keithley PCI data-acquisition platform
Evidence scope	The exact-model official data sheet states the channel count, I/O electrical limits, timing, isolation, environment and connector information used here.

Decision snapshot

Identity control
Compare KPCI-PIO32IOA with the installed label and applicable Keithley documentation.

Interface control
Photograph and label carriers, terminals, cables and keying before removal.

Configuration control
Archive applicable Keithley PCI data-acquisition platform settings before replacement.

Acceptance control
Use an approved functional test and retain as-left diagnostic and acceptance evidence.

Related product references

- B&R 8V1022.001-2
- Fanuc A20B-3300-0281/04B
- General Electric IC695PNC001
- General Electric DS200TBCAG1AAB
- Hardy 1746-WS
- HMS AB5030-B
- ABB DO801 3BSE020510R1
- Bently Nevada 3300/47

Engineering record prompts

Nameplate record	Capture the complete marking, visible revision and installed position before removal.
Connector record	Photograph every used connector, cable label, keying feature and shield termination.
Host record	Identify the carrier, rack, drive, chassis or operator station that owns the installed position.

02 Verified technical data

The exact-model official data sheet states the channel count, I/O electrical limits, timing, isolation, environment and connector information used here.

Complete order code	KPCI-PIO32IOA
Product type	32-Line Optically Isolated Digital I/O Board
System context	Keithley PCI data-acquisition platform
Digital I/O	32 isolated lines: 16 inputs and 16 outputs
Voltage range	Up to 60 VDC or 30 Vrms
Input logic high	Greater than |±2.5 V|
Input logic low	Less than |±1.0 V|
Input response	0.6 ms typical; 1.0 ms maximum

Exact-model interpretation

Complete identity	Use KPCI-PIO32IOA as one complete reference in the quotation, service record and acceptance file.
Installed position	Record the exact host position and functional ownership within the Keithley PCI data-acquisition platform.
Physical execution	Compare artwork, connectors, keying, terminal hardware and orientation with the removed assembly.
Configuration boundary	Preserve the applicable project, address, firmware or hardware-setting record before removal.

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Engineering record prompts

Host record	Identify the carrier, rack, drive, chassis or operator station that owns the installed position.
Configuration record	Archive the applicable project, address, parameter, firmware or hardware-setting evidence.

03 Interfaces and installed-system relationship

Selectable input filter	175 ms time constant
Output type	Optically isolated N.O. Form A MOSFET switches
Maximum load current	350 mA
Output on-resistance	3.5 Ω typical; 4 Ω maximum
Relay on time	1.0 ms typical; 3.5 ms maximum
Relay off time	80 µs typical; 200 µs maximum
Leakage current	316 nA typical; 2 µA maximum
Isolation	60 V channel-to-channel and channel-to-chassis

Application and compatibility decisions

Installed-system replacement
Compare the exact code, host position and connected interfaces with the removed item.

Planned maintenance
Capture the as-found label, indications and configuration before disturbing the installation.

Controlled commissioning
Restore documented connections and prove the intended signal, communication or control response.

Spare qualification
Keep revision, configuration and acceptance evidence with the spare-part record.

System relationship

The complete KPCI-PIO32IOA marking identifies the offered 32-line optically isolated digital i/o board. Record the removed item, host position and connected hardware so the comparison uses the actual installed boundary rather than a shortened family name.

Within the Keithley PCI data-acquisition platform, evaluate KPCI-PIO32IOA together with its carrier, terminals, cables and applicable project or hardware settings. Preserve the as-found interface map and revision evidence; a mechanically similar item is not automatically equivalent.

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04 Configuration and diagnostic logic

Board power	500 mA maximum; an additional 1 A can be drawn from pin 1 at +5 V
Operating temperature	0 to 50 °C
Storage temperature	-20 to 70 °C
Humidity	0-80% at 35 °C, non-condensing
Board connector	3M N10236-52B2VC
Mating connectors	3M 10136-6000EC or 10136-3000VE
Input banks	IP0-IP7 and IP8-IP15
Output banks	OP0-OP7 and OP8-OP15

Product-specific diagnostic starting points

Input bank	Prove each used isolated input with the approved source and expected logic state.
Output bank	Test each used output with the load isolated or in an approved safe state.
Isolation	Inspect external commons and field wiring before connecting the PCI board.
Driver map	Confirm logical channel assignments and interrupt use in the installed application.

Engineering questions

How should KPCI-PIO32IOA be identified before replacement?	Compare the complete KPCI-PIO32IOA marking, visible revision, installed position and the documented 32-line optically isolated digital i/o board role. Do not approve a shortened family reference.
What evidence should be recorded before removing KPCI-PIO32IOA?	Photograph the complete label, connectors, cable routes, status indications and host position for KPCI-PIO32IOA; retain the current Keithley PCI data-acquisition platform record.
How should the interfaces for KPCI-PIO32IOA be checked?	Map every connector, terminal and cable used by KPCI-PIO32IOA to the as-found record, then verify keying, shielding and interface ownership before reconnection.

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05 Acceptance, lifecycle and handover

How can a suspected KPCI-PIO32IOA fault be separated from an external fault?	Check host power, mating hardware, field wiring and the applicable signal or communication path before controlled substitution of KPCI-PIO32IOA.
What should be verified after installing KPCI-PIO32IOA?	Confirm normal indications, interface continuity and the intended 32-line optically isolated digital i/o board response for KPCI-PIO32IOA in an approved test state.
Can KPCI-PIO32IOA be replaced by a similar-looking unit?	Appearance is not an equivalence criterion for KPCI-PIO32IOA; compare the complete order code, revision, connectors and installed configuration.

Lifecycle Status

KPCI-PIO32IOA status	A current lifecycle phase for this complete order code has not been confirmed.
Support and replacement	Match the complete identity, hardware execution and installed configuration when planning service.
Apter Power availability	The offered quantity and dispatch date are confirmed in the quotation.

Evidence and applicability

Evidence scope	The exact-model official data sheet states the channel count, I/O electrical limits, timing, isolation, environment and connector information used here.
Installation boundary	The exact installed carrier, terminals, cables and project configuration remain site-specific.
Technical reference	Keithley KPCI-PIO32IOA and KPCI-PDISO8A official data sheet

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Engineering record prompts

Configuration record	Archive the applicable project, address, parameter, firmware or hardware-setting evidence.
Supply-scope record	List terminal blocks, carriers, plugs, cables and accessories separately in the quotation.
Baseline result	Record initial indications, diagnostics and the controlled-system condition before work.
Identity decision	Approve only the complete order code and observed execution; do not shorten the family name.

Discuss the complete KPCI-PIO32IOA marking with Apter Power.

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Scan the WhatsApp QR to share nameplate and installed-system evidence.