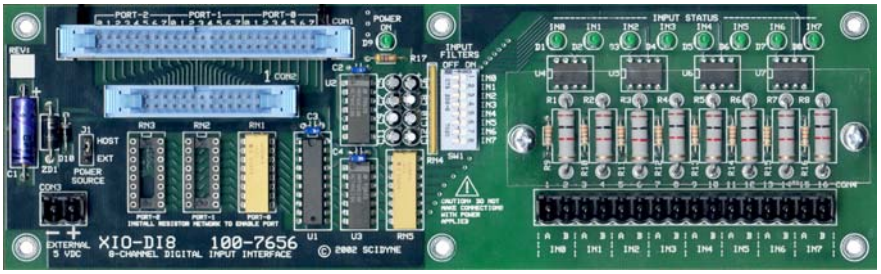
Product Bulletin

8-Bit Digital Input Interface

PB7656

XIO-DI8



Dual IDC Headers Support Two Industry Standard Pinouts

PORT.BIT	50-Pin	26-Pin
P0.7	1	1
P0.6	3	2
P0.5	5	3
P0.4	7	4
P0.3	9	5
P0.2	11	6
P0.1	13	7
P0.0	15	8
P1.7	17	9
P1.6	19	10
P1.5	21	11
P1.4	23	12
P1.3	25	13
P1.2	27	14
P1.1	29	15
P1.0	31	16
P2.7	33	17
P2.6	35	18
P2.5	37	19
P2.4	39	20
P2.3	41	21
P2.2	43	22
P2.1	45	23
P2.0	47	24
+5V	49	25
COM	2-50	26

FEATURES

- Allows any 8-bit digital port to monitor eight AC or DC voltage input signals
- 500V isolation between Host and field signals
- Hardware programmable input voltage range on each channel
- Input filters ensure reliable measurement of AC signals
- Lower cost alternative to Solid-State I/O rack style modules

APPLICATIONS

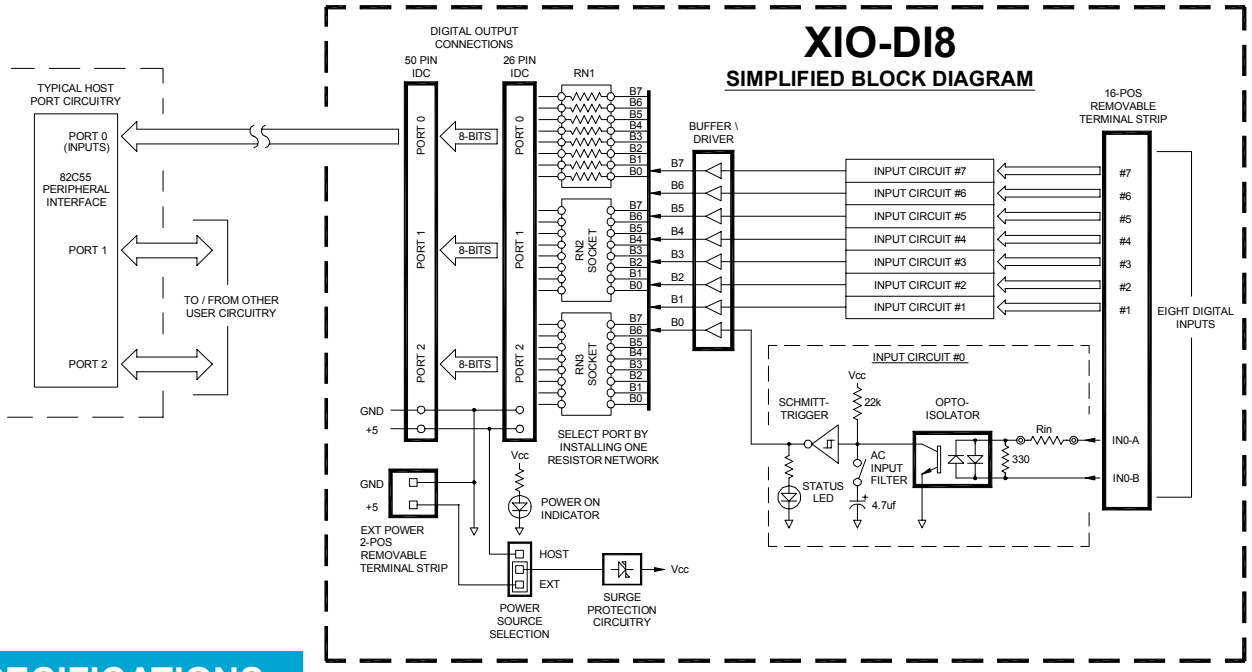
- Industrial Automation and Process Control
- Scientific Apparatus and Instrumentation
- Embedded SCADA Systems
- Automated Test Equipment
- Contact Closure Read-Back

PRODUCT DESCRIPTION

The XIO-DI8 performs the interface function of isolating and conditioning input voltage signals into levels compatible with standard 8-bit TTL/CMOS digital ports, such as those found on Single-Board-Computers. Eight optically isolated and non-polarized input channels allows any combination of DC or AC signals to be monitored. The input voltage range for each channel is individually configured by means of a corresponding socketed resistor. In addition, low-pass filters can be optionally enabled for the reliable measurement of AC or noisy DC signals. The eight conditioned channels form an output byte where each bit reflects the state of an input, Bit-0 = IN0, Bit-1 = IN1 and so on. Activated inputs cause a logic “1" to appear in the corresponding bit position. Activated inputs cause a logic "1" to appear in the corresponding bit position. The byte is buffered and drives one of three possible Host digital input ports. Which Host port will be used is determined by installing a single resistor network in one of three corresponding DIP sockets. This routes the output byte to only the designated Host input port. The two remaining Host ports remain unaffected and available for other purposes. Dual IDC headers directly support the two most common Host digital port pinout arrangements. Other pinouts are easily accommodated using custom cable assemblies. Field wiring is made through a single 16-position removable screw-terminal strip which accepts wires in the range of 12-24 AWG.. Field wiring is made through a single 16-position removable screw-terminal strip which accepts wires in the range of 12-24 AWG. The XIO-DI8 operates from a single +5Vdc supply which can be provided by the Host, through either of the IDC headers, or externally by means of a two-position removable screw-terminal strip. For ease of installation, the board may be mounted in one of three ways: placed within a 3" SNAPTRACK®, by using standoffs or by attaching it to a DIN rail using optional SNAPTRACK® adapter clips.

BENEFITS

Control applications generally involve the measurement of field AC and DC signals with the necessity of electrical isolation. Solid State I/O racks or similar devices are often considered but can be too bulky and expensive in many situations. The XIO-DI8, as well as other SCIDYNE XIO series devices, are designed as a reliable and cost-effective alternative.



SPECIFICATIONS

General:

Description:	Eight channel optically-isolated digital input interface board
Power requirement:	+5Vdc ±5% @ 125mA typical. Host or Externally supplied, "Power-On" LED
Environmental:	Operating temperature: -20° C to 70° C Non-condensing relative humidity: 5% to 95%
Dimensions:	3.00" W x 9.500" L x 1.35" H
Mounting:	Mounts using Standoffs, SNAPTRACK® or DIN Rail
Isolation:	500V DC or AC Input-to-output; 250V maximum between adjacent inputs

Digital Inputs from Field:

General:	Eight independent non-polarized optically isolated inputs, Status LEDs
Connections:	16-position removable screw-terminal strip, accepts wires 12-24 AWG
Input voltage:	Each channel is programmable by means of a seperate socketed resistor
DC:	3V minimum, 250V maximum, non-polarized
AC:	$3V_{PP}$ minimum, $250V_{PP}$ maximum, 40hz to 1khz
Input current:	3.5ma minimum, 25ma maximum per input
Input power:	1.4watts maximum per input
Propagation delay	Input channel to output bit. Measured with 5Vinput signal, Rin = 1kΩ
Filter Disabled:	On: 40µs Off: 100µs
Filter Enabled:	On: 20ms Off: 85ms
AC input filter:	RC type Low-Pass. Switch selectable on a per input basis

Digital Output to Host:

General:	Drives one of three 8-bit ports, Port selected by DIP resistor network
Connections:	50-Pin and 26Pin IDC headers. Supports the two most common pinouts
Output levels:	TTL/CMOS compatible
Logic "0":	1.35Vdc maximum
Logic "1":	3.15Vdc minimum
Output impedance:	Driven port: 47Ω, primarily from output resistor network

Ordering Information:

100-7656	XIO-DI8, Digital Input Interface board
115-7623 / 2618	Ribbon cable, 26 cond., Female IDC on each end, 18" long
115-7623 / 5018	Ribbon cable, 50 cond., Female IDC on each end, 18" long
121-0003	SNAPTRACK®, 3" W
121-0004	DIN Rail mounting clip for use with SNAPTRACK®
121-0005	DIN rail, 35.0 x 7.5mm (EN50022-35)

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