DBK65 $\,\text{CE}$

8-Channel Transducer Interface Module

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Features

- 8 channels of 2-, 3-, 4-, or 6-wire transducer inputs
- Attaches to P1 connector, or directly to WaveBook voltage input channels (via optional cables)
- Provides excitation voltage of 5V, 10V, 15V, and 24V, jumper selectable per channel
- Custom excitation voltage of 5 to 20V with user-supplied resistor
- Accommodates internal current-shunt resistor, selectable per channel
- Convenient 6-terminal removable screw-terminal connectors
- 2-terminal switch-closure provided per channel for transducer calibration

The DBK65 provides 8 channels of transducer interface capability, making it easy to connect 2-, 3-, 4-, and 6-wire transducers. Convenient removable screw-terminal connectors, one per channel, make attaching and removing transducers quick and easy.

The DBK65 supplies transducer power and easy connectivity to the acquisition system

Usage Examples
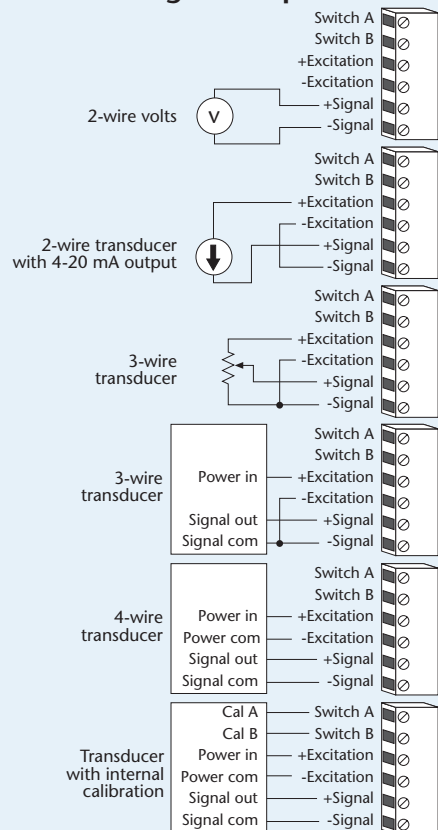
Input Configurations for any Channel
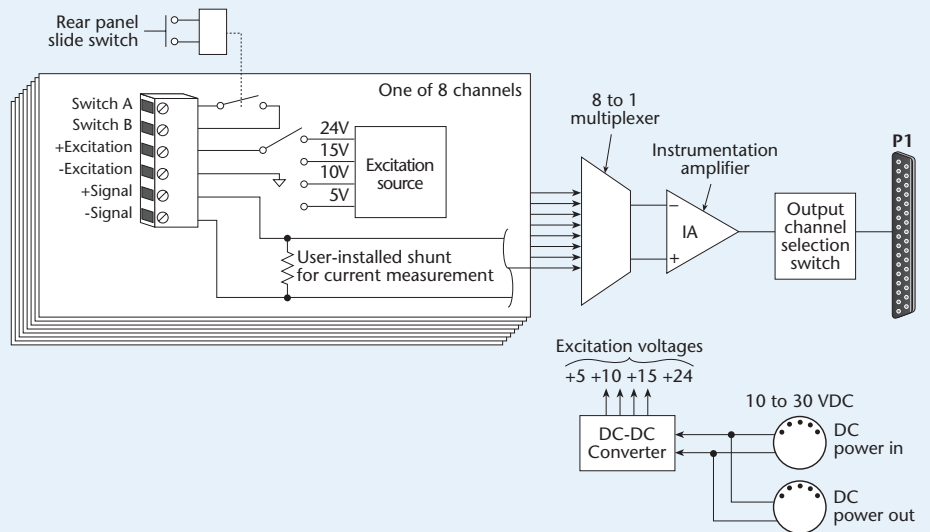
The DBK65 is a unity gain universal signal conditioning module that is ideally suited for 4 to 20 mA transducer outputs, 3-wire string pots, and other high-voltage output transducers. It can also be used with 4- and 6-wire bridge-based transducers with internal shunt calibration where additional gain is provided by the data acquisition system*.

Each channel can be setup for a different excitation voltage, with 5, 10, 15, and 24V provided by the DBK65's internal power supply. A custom voltage source between 5 and 20V can be set with a user-supplied resistor. Two terminals on each channel provide a relay closure that can be used to switch in an internal calibration resistor for 6-wire transducers. The 8 relays can be enabled via a rear-panel switch which activates 8 internal relays. The relay closures on all 8 channels are enabled simultaneously.

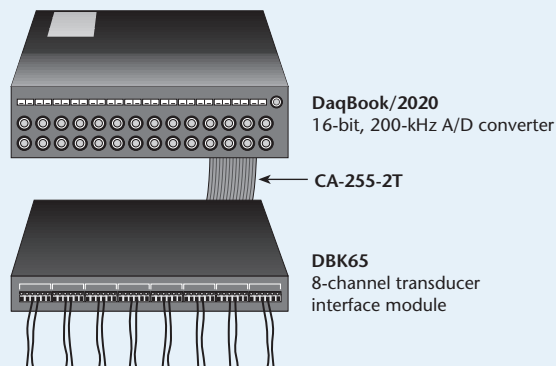* See DBK43 and DBK16 for use with low-level strain gage and load cell based transducers

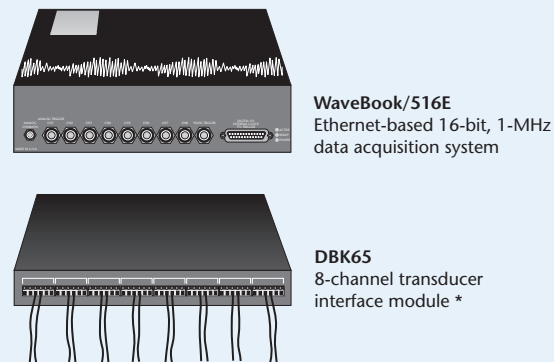PLCs   Adquisición   Instrumentos   Registradores   Potencia   HMIs   Switches   Movimiento   Sensores   Convertidores   Teclados   SCADA   Telemetría

DBK65
Specifications & Ordering Information

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When used with an IOtech Daq system, a multiplexer in the DBK65 is controlled like any other expansion input channel via the P1 expansion port. When used with WaveBook systems, the user is required to wire the transducer signal to a BNC cable and attach to a WaveBook or WBK10A voltage input channel.

DaqBook and DBK65 System Example

DaqBook/2020
16-bit, 200-kHz A/D converter

CA-255-2T

DBK65
8-channel transducer interface module

WaveBook and DBK65 Excitation Example

WaveBook/516E
Ethernet-based 16-bit, 1-MHz data acquisition system

DBK65
8-channel transducer interface module *

* DBK65 provides transducer excitation

Removable terminal blocks for each channel make wiring to your sensor easy

Specifications

Dimensions: 285 mm W x 220 mm D x 45 mm H (11" x 8.5" x 1.75")
Weight: 1.13 kg (2.5 lbs)
Operating Temperature: -30 to +70 ˚C
System Connector: DB37 male, mates with P1*
Transducer Connector: 6-pin removable screw-terminal block
Power Connector: 5-pin DINS that allow daisy-chaining
DC Power Input: 10 to 30 VDC
DC Power Required: 15V @ 833 mA, 20V @ 625 mA, assuming max load, 755 mW required from P1 when used with a DaqBook
Gain Ranges: x1
Inputs: 8 differential voltage inputs
Maximum Input Voltage Range: ±10V
Input Impedance: 20M Ohm
Accuracy: ±[0.025% +150 μV] (typ); ±[0.1% +250 μV] (max)
Noise: 65 μV RMS
Temperature Coefficient: 10 ppm for every degree outside the range of 0 to 50 ˚C
Maximum Input Voltage (without damage): ±35V
3 dB Bandwidth: 2.6 MHz
CMRR: 80 dB typ
Output Voltage: Each channel, jumper-selectable to +5V, +10V, +15V, and +24V
  Voltage Accuracy: ±2% typical
  Current Limit: 100 mA per channel
  Load Regulation: 5% typ
  Total Output: 240 mA max for all 8 channels

Ordering Information

Description	Part No.
8-channel transducer interface module	DBK65

Accessories & Cables

Rack mount kit	RackDBK3
Molded T expansion cable; 2 in.	CA-255-2T
Molded T expansion cable; 4 in.	CA-255-4T
Ribbon cable, where x is the number of DBK devices attached	CA-37-x

Note: The CA-37-x ribbon cable can also be used in lieu of the CA-255-x molded T cables.

Product Compatibility

✔ WaveBook
✔ ZonicBook
✔ DaqBook
✔ DaqLab
✔ DaqScan
✔ DaqBoard/2000 Series

* Attachment to the DaqBoard/2000 Series requires a DBK200, DBK202, DBK203A, DBK209, DBK213, or DBK214

PLCs   Adquisición   Instrumentos   Registradores   Potencia   HMIs   Switches   Movimiento   Sensores   Convertidores   Teclados   SCADA   Telemetría

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