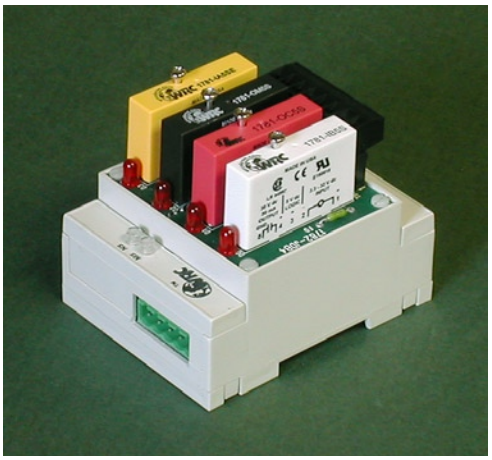


1782-JDB4

1782-JDB8

SmartMux-Lite: Specifically designed for highly distributed applications

WRC has extended its line of SmartMux remote I/O adapters to provide fully self-contained, DeviceNet compliant analog and discrete I/O blocks, called SmartMux-Lite.

SmartMux-Lite discrete I/O blocks include 1782-JDB4 and 1782-JDB8, providing 4 or 8 points of discrete I/O respectively. SmartMux-Lite is powered by DeviceNet. Simply choose any combination of inputs and outputs from the wide range of 1781 series of WRC optically isolated modules for your application. All points are individually fused and have a status indication on the mounting board. Two LEDs are provided indicating status of DeviceNet and the status of the SmartMux-Lite block. Configuration is handled through software using WRC's convenient Electronic Data Sheets.

SmartMux-Lite analog I/O blocks include the 1782-JDA4 and 1782-JDA8.

These devices have in common:

- Use of the versatile and extensive line of 1781-7B or WRC7 series of analog signal conditioning modules.
- Fully self-contained
- Powered from DeviceNet
- Status LEDs for SmartMux-Lite status and DeviceNet status

SmartMux-Lite I/O adapters provide an economical, flexible, convenient, and reliable way to add discrete and analog I/O at your machine location with DeviceNet connections back to your controller.

1782-JDA4

WRC's 1782-JDA4 SmartMux-Lite I/O adapters provide 4 user-selectable analog input points operating on DeviceNet. SmartMux-Lite I/O adapters provide an economical, flexible, convenient, and reliable way to add analog inputs at your machine location with DeviceNet connections back to your controller.

Features include:

- User selection of individually isolated 1781-7B__ series of single point analog input modules or differential, low-cost WRC-7__ series of modules. One module required per point.
- Wide range of sensors and signals are supported, including thermocouples, RTDs, process currents, strain gauge, millivoltages, and voltages
- Polled I/O, cyclic I/O, and change-of-state services
- Mix inputs of any type by proper selection of analog modules
- Excitation current is provided for RTDs, potentiometers, strain gauges using the 1781-7B series of modules or WRC7 modules
- Isolated power for two-wire process transmitters is available using 1781-7B35 modules
- Low-cost, non-isolated WRC-7_ modules for 0-10 V and 4-20 mA inputs and outputs
- 10-bit resolution
- Small, compact size
- 1782-JDA4 - 4.17 " long x 3.56 " wide
- Fully self-contained
- Power sourced by DeviceNet
- Two diagnostic LEDs provided
- Easy setup
- Address setting and date rate configured via Electronic Data Sheets or DeviceNet Parameter Object (rotary switches available 1999)
- Convenient DIN-Rail mounting
- Removable screw terminations for DeviceNet connection
- Independent screw terminations for I/ O wiring
- Integral cold junction compensation for thermocouple applications

1782-JDA8

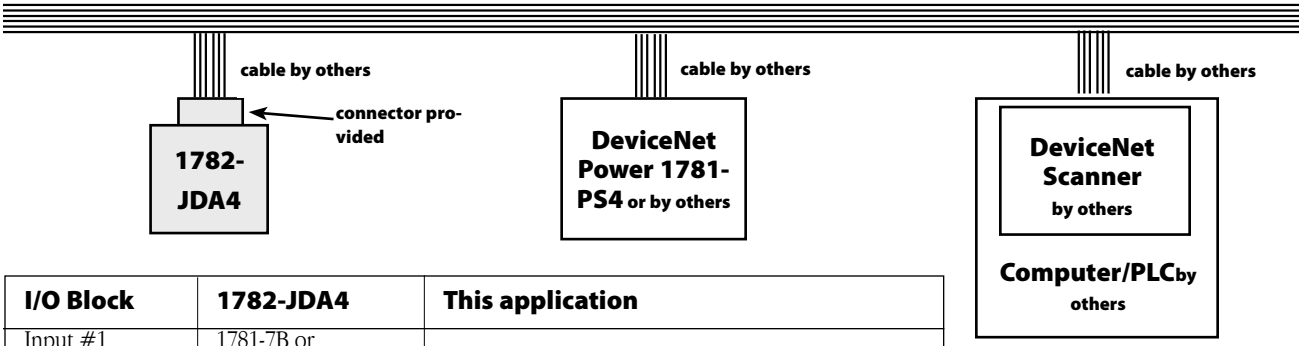
WRC's 1782-JDA8 SmartMux-Lite I/O adapters provide 8 user-selectable analog or discrete I/O points operating on DeviceNet. All points can be analog or discrete inputs. Of the 8 points, up to 4 may be chosen as analog outputs and up to 2 may be chosen as discrete outputs.

SmartMux-Lite I/O adapters provide an economical, flexible, convenient, and reliable way to add discrete and analog I/O at your machine location with DeviceNet connections back to your controller.

Features include:

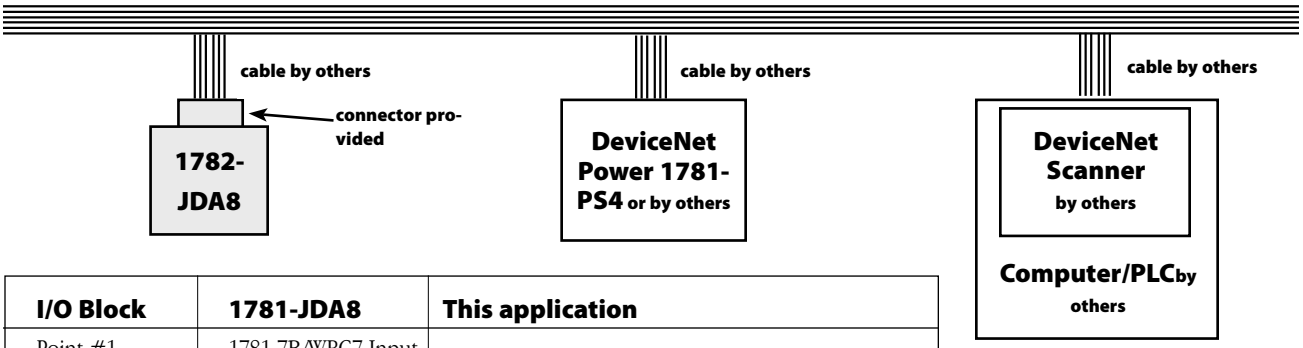
- User selection of individually isolated 1781-7B__ series of single point analog I/O modules or differential low-cost WRC-7__ series of modules. One module required per point.
- Wide selection of sensors and signals are supported, including thermocouples, RTDs, process currents, millivoltages, and voltages.
- Select your choice of 1781-__XS series of discrete I/O modules covering all ranges of ac and dc, discrete I/O applications
- 1781-7B__ modules are individually isolated
- Mix inputs of any type by proper selection of modules
- Excitation current is provided for RTDs, potentiometers, strain gauges using the 1781-7B series of modules or WRC7 modules
- Isolated power for two-wire process transmitters is available using 1781-7B35 modules
- Low-cost, non-isolated WRC-7_ modules for 0-10 V and 4-20 mA inputs and outputs
- 16-bit equivalent resolution - inputs and 12 bit resolution - outputs
- Isolated DeviceNet connection
- Fully self-contained
- Isolated power sourced from 24 Vdc supplied by DeviceNet
- 2 diagnostic LEDs provided
- Isolated DeviceNet communications interface
- 1782-JDA8 - 6.30 " long x 3.56" wide
- Easy setup
- Address setting via software (rotary switches available 1999)
- Data rate setting via software (rotary switches available 1999)
- Output selection uses a combination of a software configuration parameters selected using convenient Electronic Data Sheets, and appropriate module selection
- Convenient DIN-Rail mounting
- Removable screw terminations for DeviceNet connection
- Independent screw terminations for I/ O wiring
- Integral cold-junction compensation for thermocouple applications

DeviceNet cable by others

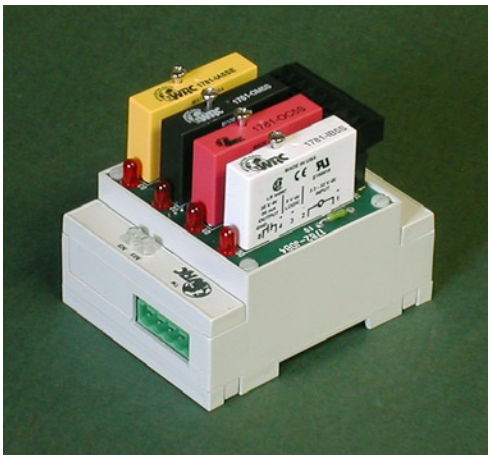


I/O Block	1782-JDA4	This application
Input #1	1781-7B or WRC7 Analog Input Modules	
Input #2	same	
Input #3	same	
Input #4	same	

DeviceNet cable by others



I/O Block	1781-JDA8	This application
Point #1	1781-7B/WRC7 Input or Output Modules or 1781-I_XS	
Point #2	same	
Point #3	same	
Point #4	same	
Point #5	1781-7B/WRC7 Input Modules or 1781-I_XS	
Point #6	same	
Point #7	1781-7B/WRC7 Input Modules or 1781-I_XS, or 1781-O_XS	
Point #8	same	



1782-JDB4

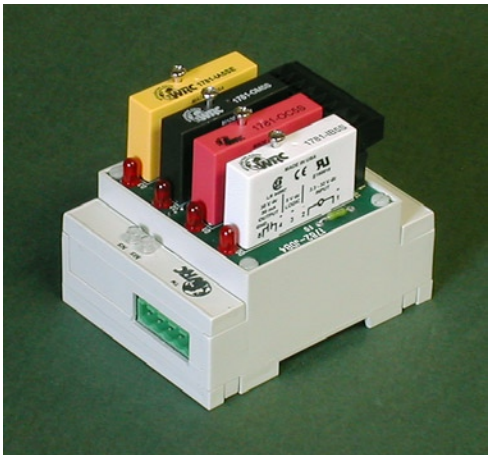
1782-JDB8

1782-JDB4 and 1782-JDB8

WRC's 1782-JDB4 and 1782-JDB8 SmartMux-Lite I/O adapters provide 4 or 8 user-selectable discrete I/O points operating on DeviceNet. SmartMux-Lite I/O adapters provide an economical, flexible, convenient, and reliable way to add discrete I/O at your machine location with DeviceNet connections back to your controller.

Features include:

- User selection of individually opto-isolated 1781-__5S series of single point discrete I/O modules. One module required per I/O point.
- Full range of ac and dc inputs and outputs selectable from 3 Vdc to 240 Vac
- Output ratings to 3 amps continuous (5 amp dc MOSFET output available)
- Individually fused
- Modules are fully isolated; 4000 V typical
- LED indication of operation
- Mix inputs and / or outputs at any voltage level
- Small, compact size
- 1782-JDB4 - 2.80 " long x 3.56 " wide
- 1782-JDB8 - 4.12 " long x 3.56" wide
- Fully self-contained
- Polled I/O, Cyclic I/O, Change-of-State services and Bit Strobe
- Powered from 24 Vdc supplied by DeviceNet
- 2.5 W power consumption
- Two diagnostic LEDs provided convenient setup
- Software configuration at host
- Default configuration is all inputs. Software selection of outputs.
- Configuration via Electronic Data sheet or DeviceNet Parameter Object (rotary switches available 1999)
- Non-volatile memory maintains configuration in the event power is lost
- Convenient DIN-Rail mounting
- Removable screw terminations for DeviceNet connection
- Independent, removable screw terminations for I/ O wiring
- Compliant to DeviceNet Specification 2.0. ODVA tested compliant to DeviceNet specification 1.3



1782-JDB4

1782-JDB8

1782-JDB4-HSC and 1782-JDB8-HSC

DeviceNet High Speed Counter Block

1782-JDB4-HSC and 1782-JDB8-HSC are special versions of WRC's 1782-JDB4 and 1782-JDB8 DeviceNet I/O Block. They are designed to accept rapid pulse inputs up to 10 KHz, for distributed industrial control applications over DeviceNet.

Typical applications could include:

- Turbine flowmeter
- Velocity measurement
- Material handling
- Motion control
- Process control

1782-JDB4-HSC Specifications

Inputs: 3 Outputs: 1
UP/Down Counter: 1 x 16 bit consisting of:

- Preload value: 16 bit
- Accumulator: 16 bit
- Accumulator adjust: 8 bit
- Time Base Counter: 16 bit
- Strobe Register: 16 bit
- On/Off Presets: 16 bit

1782-JDB8-HSC Specifications

Inputs: 6 Outputs: 2 *Choice of either:*
UP/Down Counter: 2 x 16 bit, each consisting of:

- Preload value: 16 bit
- Accumulator: 16 bit
- Accumulator adjust: 8 bit
- Time Base Counter: 16 bit
- Strobe Register: 16 bit
- On/Off Presets: 16 bit **or:**

Bi-directional Counter: 1 x 32 bit consisting of:

- Preload value: 32 bit
- Accumulator: 32 bit
- Accumulator adjust: 8 bit
- Time Base Counter: 16 bit
- Strobe Register: 2 x 32 bit
- On/Off Presets: 2 x 32 bit

1782-JDB4-HSC and 1782-JDB8-HSC

Common Specifications:

- Frequency Response: 10 KHz
- Input Circuit: via 1781-IT5S, 3.3Vdc to 24 Vdc 100μs response time or 1781-IB5S, 3.3Vdc to 24 Vdc 1000μs response time
- Output Circuit: via user selection of 1781-O_5S or R_5S modules to meet the application
- Termination: via removable plug-in terminal strips
- Configuration: via DeviceNet from host
- Powered off of DeviceNet

1782-JDB-HSC operation:

1782-JDB-HSC modules reside on DeviceNet as intelligent, "Group 2 Only" Server on the DeviceNet system and its I/O and registers are read by and written from a DeviceNet Master. 1782-JDB-HSC supports the Predefined Master/Slave Explicit Message Connection, Polled I/O, Cyclic I/O and Bit Strobe.

The device address, data rate, operating modes, selection of counter types, presets, accumulator adjusts, and On/Off presets are changed via software configuration from the host system. Each 1782-JDB-HSC has two green/red LEDs, one for module status and one for network status. Each I/O point is equipped with a status LED and is individually fused.

Up/Down Counters can be programmed to count either up or down. Each has three inputs: A Preload Input and a Strobe input. In addition, each counter has one output, with a Programmable on and off Output Preset.

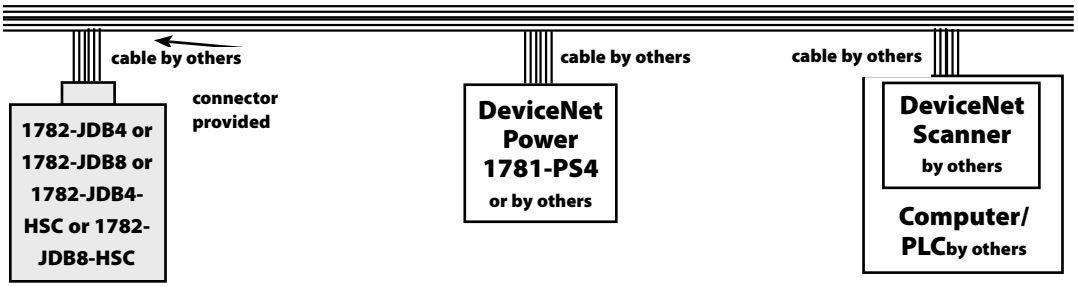
Bi-directional Counters have six inputs and two outputs, and may be separately configured for Up/Down, Pulse/Direction, or A Quad B operation. The Counter has two independent sets of Strobe Inputs and Strobe Registers. Each counter also has two outputs, with each output having programmable on/off Presets. A Disable input can be used to suspend counting.

Dimensions:

1782-JDB4-HSC: 2.75" x 3.5" x 2.5" tall (including modules) mounted on DIN rail

1782-JDB8-HSC: 4.25" x 3.5" x 2.5" tall (including modules) mounted on DIN rail

DeviceNet cable by others



I/O Block	1782-JDB4/8	This application:
Point #1	1781-I_5S, 1781-O_5S, 1781-W _5S or 1781-R_5S in any combination	
Point #2	same	
Point #3	same	
Point #4	same	
Point #5 JDB8 only	same	
Point #6 JDB8 only	same	
Point #7 JDB8 only	same	
Point #8 JDB8 only	same	

I/O Block	1782-JDB4-HSC	This application:
Point #1	1781-IB5S or 1781-IT5S	
Point #2	same	
Point #3	same	
Point #4	1781-0_5S or 1781-R_5S	

I/O Block	1782-JDB8-HSC	This application:
Point #1	1781-IB5S OR 1781-IT5S	
Point #2	same	
Point #3	same	
Point #4	same	
Point #5	same	
Point #6	same	
Point #7	1781-O_5S or 1781-R_5S	
Point #8	same	