

# DE140203

## PXIe Relay Board

16 CH 16 A

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# 1. Description

DE140203 PXIe Relay Board 16 CH 16 A is a high-power relay module that supports SPST relay configuration for switching loads of up to 16 A at 250 V AC or 16 A at 24 V DC. It is designed for switching high-power loads and can be configured as a 16-channel SPST. A PXIe chassis is necessary for using the module.

## 1.1. Key Features

- 16-channel SPST electromechanical relay
- 16 A rated current (at 250 V AC or 24 V DC)
- Up to 300 V DC / 440 V AC
- Hot or cold switching
- Max 100 mΩ DC path resistance
- Max 15 ms relay operate time
- Suitable for high power applications
- PXI Express Hardware Specification Revision 1.1

## 2. Hardware Overview

### 2.1. Hardware Specifications

DE140203 is compliant with PXI Express Hardware Specification Revision 1.1. DE140203 is compatible with all 3U PXI Express chassis and it can be used with hybrid slots and PXIe slots.



**Caution**

ESD can damage electronic components without adequate protection and may cause permanent damage to the device.



**Caution**

Hot-plug is not supported by the DE140203; therefore, the device must not be inserted or removed when the chassis power is on.

## 2.2. Circuitry

DE140203 relay configuration diagram is shown in Figure 1.

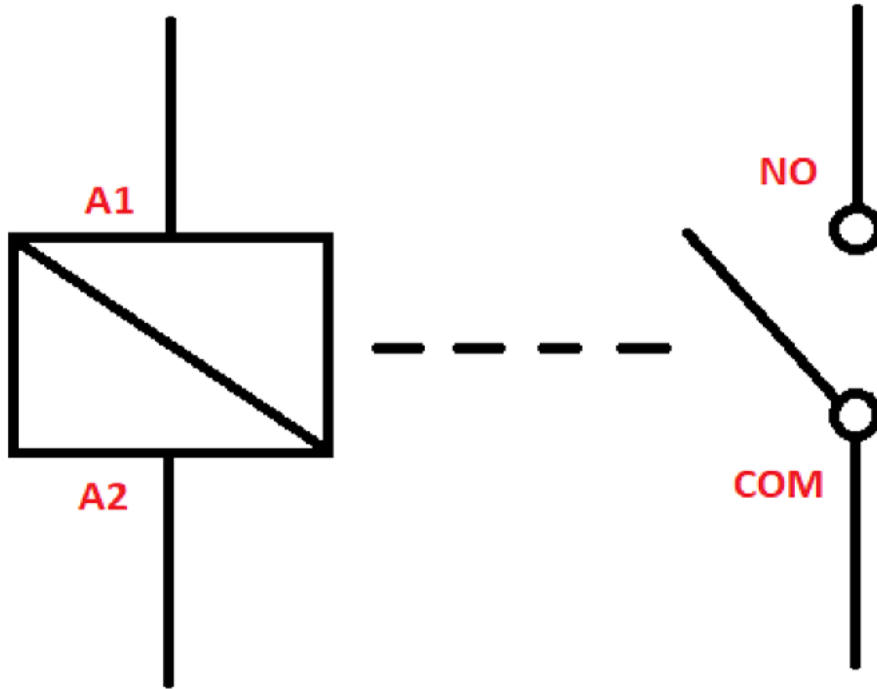


Figure 1: SPST Configuration

## 2.3. Electrical

Table 1: Electrical Specifications

Parameter	Min	Typ	Max	Units
Power Supply Requirements				
Power Supply Current of +12 V (In Full Operation)	–	0.25	1	A
Power Supply Current of +3.3 V (In Full Operation)	–	–	0.3	A
Switching Specifications				
Switch Voltage	10 <sup>-4</sup>	–	300 440	V DC V AC
Switch Current	10 <sup>-6</sup>	–	16	A
DC Path Resistance	–	–	100	mΩ
Operate Time	–	–	15	ms
Release Time	–	–	5	ms
Relay Endurance				
Mechanical Endurance	20x10 <sup>6</sup>	–	–	Operations
Pilot Duty (A300), 250 V AC	25x10 <sup>4</sup>	–	–	Operations
Pilot Duty (A300), 125 V AC	15x10 <sup>4</sup>	–	–	Operations
Resistive Load at 250 V AC, 16 A	3x10 <sup>4</sup>	–	–	Operations
Resistive Load at 24 V DC, 16 A	3x10 <sup>4</sup>	–	–	Operations

## 2.4. Physical

The module's dimensions are shown in Figure 2.

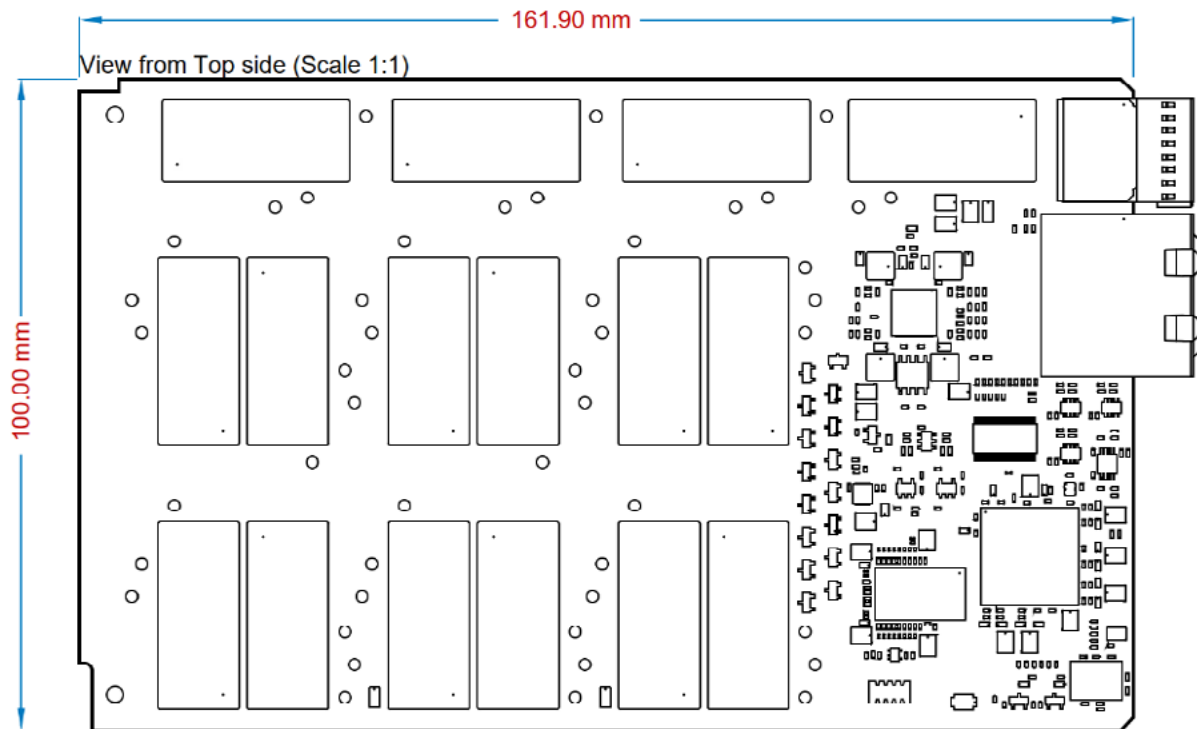


Figure 2: The DE140203 Dimensions

## 2.5. Environmental

Table 2: Environmental Specifications

Parameter	Condition	Value
Operating Humidity	Relative, non-condensing	10%- 90%
Storage Humidity	Relative, non-condensing	5%- 95%
Operating Temperature	Forced-air cooling from chassis	0 °C - +40 °C
Storage Temperature	–	-40 °C - +85 °C

### 3. Signal Connections

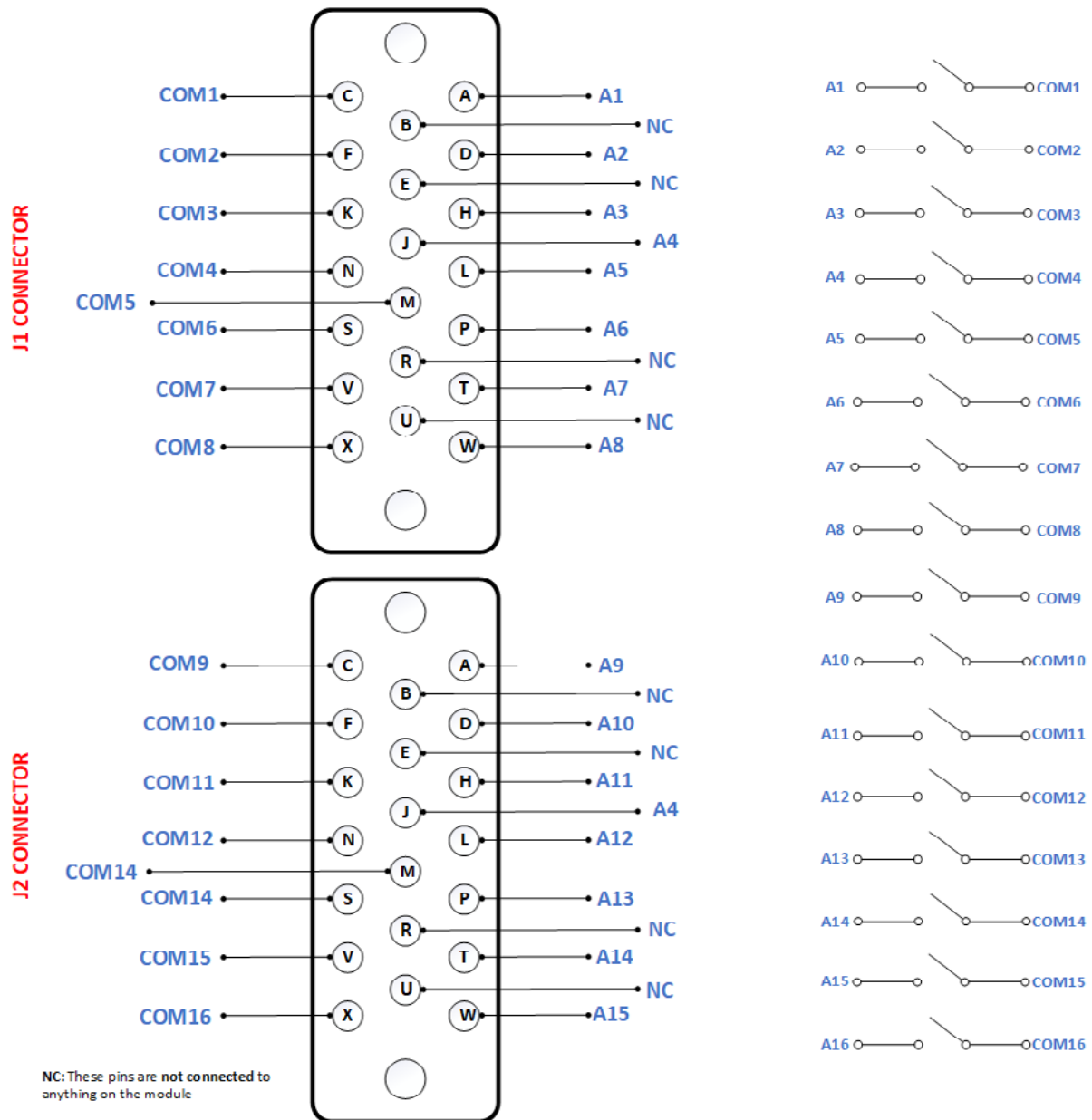


Figure 3: x16 SPST Configurations Pinout (20-pin male connectors viewed from the front side of the module)