▶ **Accessories for 8B Analog Modules**

▶ **Features**

- 2-, 4-, 8-, 16-Position Backpanels
- 19-Inch Mounting Rack For Backpanels
- Interface Cables

- Cable-to-Screw-Terminal Interface Board
- Power Supplies

8BP02, 8BP04, 8BP08, 8BP16

2-, 4-, 8-, and 16-Position Analog I/O Backpanels

Description

The 8BP02, 04, 08, and 16 backpanels can accept any of the 8B analog I/O modules in any mixture and can be mounted on the SCMXRK-002 19-inch metal rack. Analog I/O signal channels provide each module with it's own analog bus. All module outputs are simultaneously accessible to high-speed data acquisition (ADC) boards. A temperature sensor is mounted on each channel to provide cold junction compensation for thermocouple input modules (See Figure 5 for schematic). Field connections are terminated with four screw terminals at each module site. Use system interface cable SCMXCA006-XX for connection to the host system.

Specifications

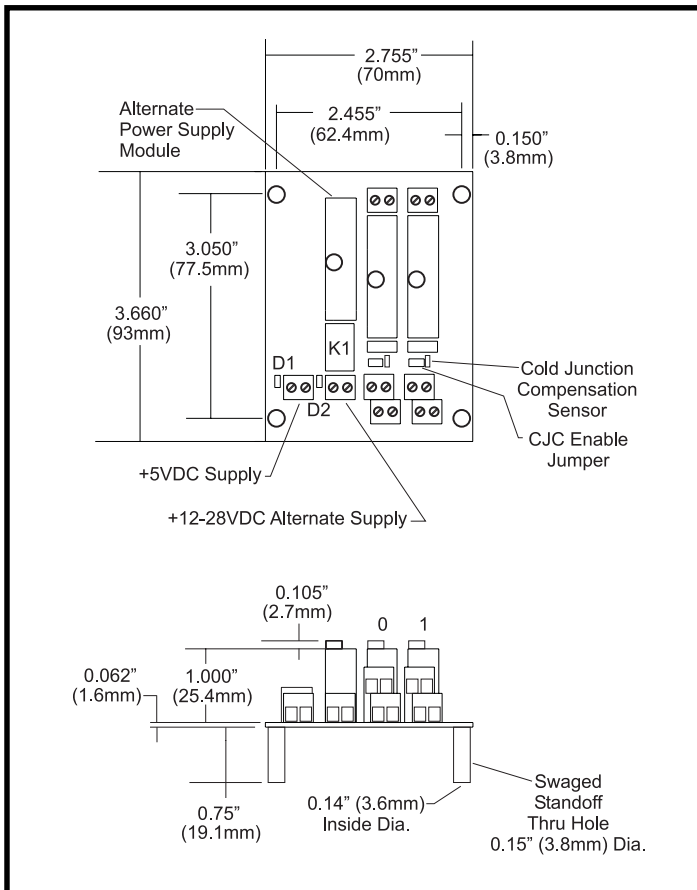|	
Operating Temperature	–40°C to +85°C
Relative Humidity	95% non-condensing
Interface Connector:	
Field	high density screw clamp, 16 AWG max
System	high density screw clamp, 16 AWG max

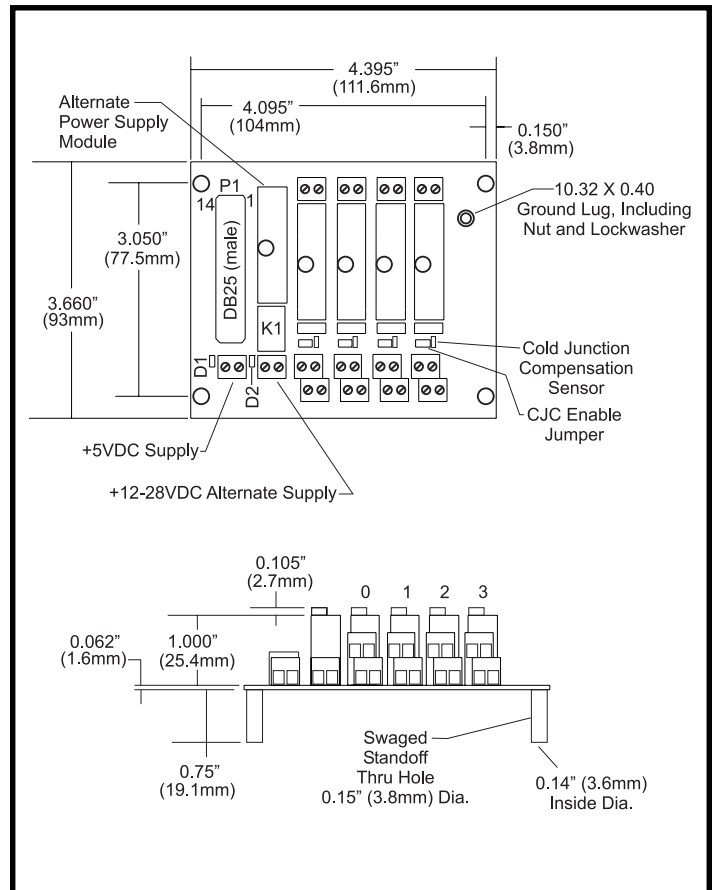Figure 1: 8BP02 Analog I/O Backpanel

Figure 2: 8BP04 Analog I/O Backpanel

Electrical

Power

The 8B backpanels have two power supply options. A +5VDC ±5% supply can be connected to the '+5V Supply' terminal block, or alternatively, a wide ranging 12-28VDC supply can be connected to the 'Alternate Supply' terminal block. In the latter case, the 8BPWR-2 module must be installed on the backpanel. The backpanel contains circuitry which automatically switches between the supplies such that only one at a time provides power to the modules. When power connections are made to both terminal blocks simultaneously, the 12-28VDC supply takes precedence over the +5VDC supply.

Fusing

Backpanel power is fuse protected through F1 and F2. Zener diodes D3 and D4 provide extra protection from overvoltage and supply reversal.

Grounding

For full protection against large electrical disturbances on the field-side of the 8B modules, a #10-32 ground stud is provided on the backpanel. An electrical connection between this ground stud and system ground should be provided with a large gauge wire of the shortest possible length.

Ordering Information

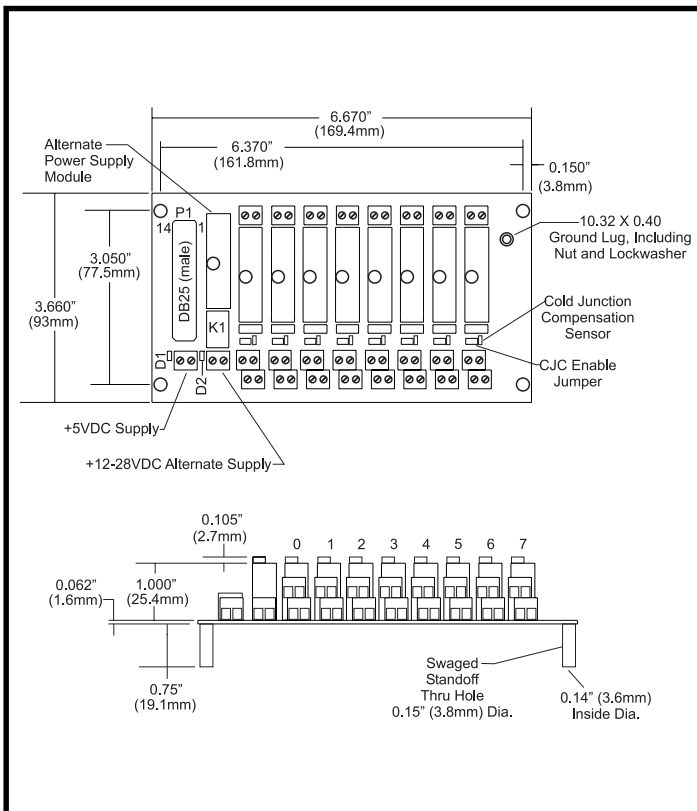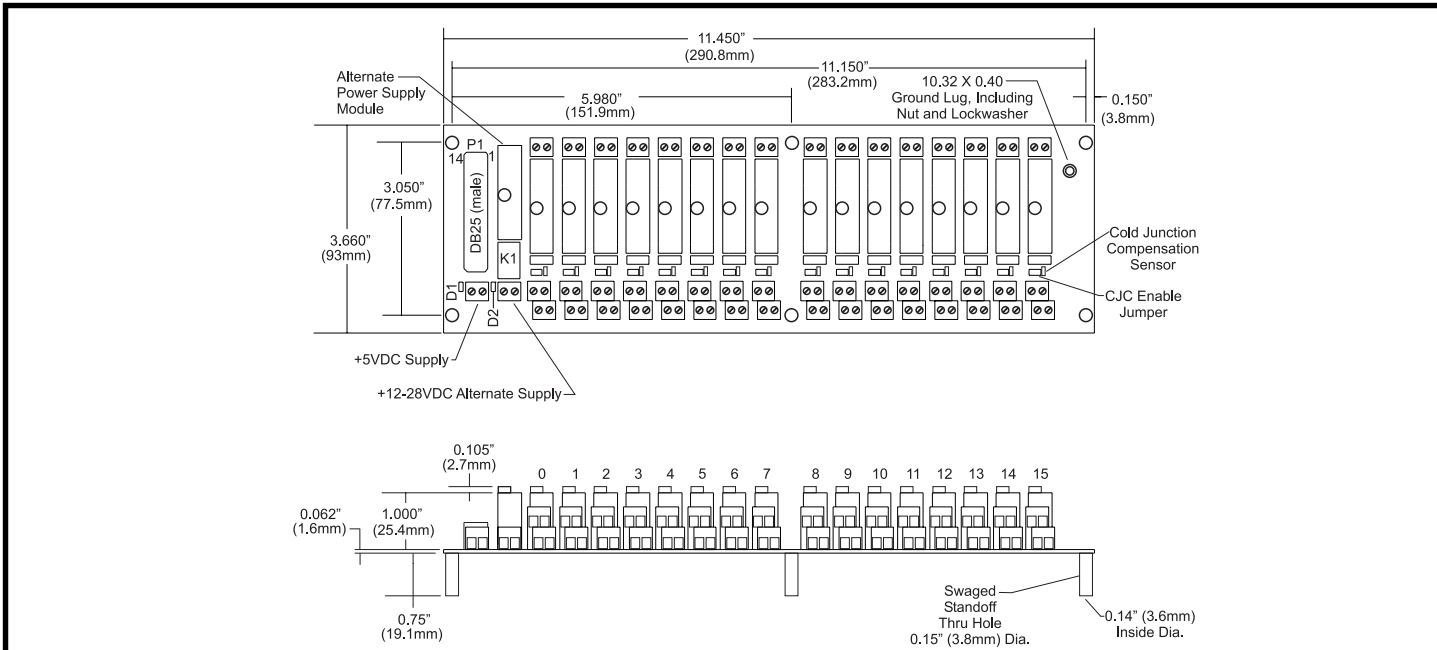| Part Number	Description
8BP02	Standard 2-channel backpanel with standoffs for mounting.
8BP02-1	8BP02 without cold junction compensation sensor. Use when cost savings is desired and thermocouple input modules 8B37 and 8B47 will not be used.
8BP02-2	8BP02 with DIN rail mounting option. The backpanel is captured by DIN rail mounting elements and is shipped fully assembled.
8BP02-3	8BP02-1 with DIN rail mounting option.
8BP04	Standard 4-channel backpanel with standoffs for mounting.
8BP04-1	8BP04 without cold junction compensation sensor. Use when cost savings is desired and thermocouple input modules 8B37 and 8B47 will not be used.
8BP04-2	8BP04 with DIN rail mounting option. The backpanel is captured by DIN rail mounting elements and is shipped fully assembled.
8BP04-3	8BP04-1 with DIN rail mounting option.
8BP08	Standard 8-channel backpanel with standoffs for mounting.
8BP08-1	8BP08 without cold junction compensation sensor. Use when cost savings is desired and thermocouple input modules 8B37 and 8B47 will not be used.
8BP08-2	8BP08 with DIN rail mounting option. The backpanel is captured by DIN rail mounting elements and is shipped fully assembled.
8BP08-3	8BP08-1 with DIN rail mounting option.
8BP16	Standard 16-channel backpanel with standoffs for mounting.
8BP16-1	8BP16 without cold junction compensation sensor. Use when cost savings is desired and thermocouple input modules 8B37 and 8B47 will not be used.
8BP16-2	8BP16 with DIN rail mounting option. The backpanel is captured by DIN rail mounting elements and is shipped fully assembled.
8BP16-3	8BP16-1 with DIN rail mounting option.

Figure 3: 8BP08 Analog I/O Backpanel
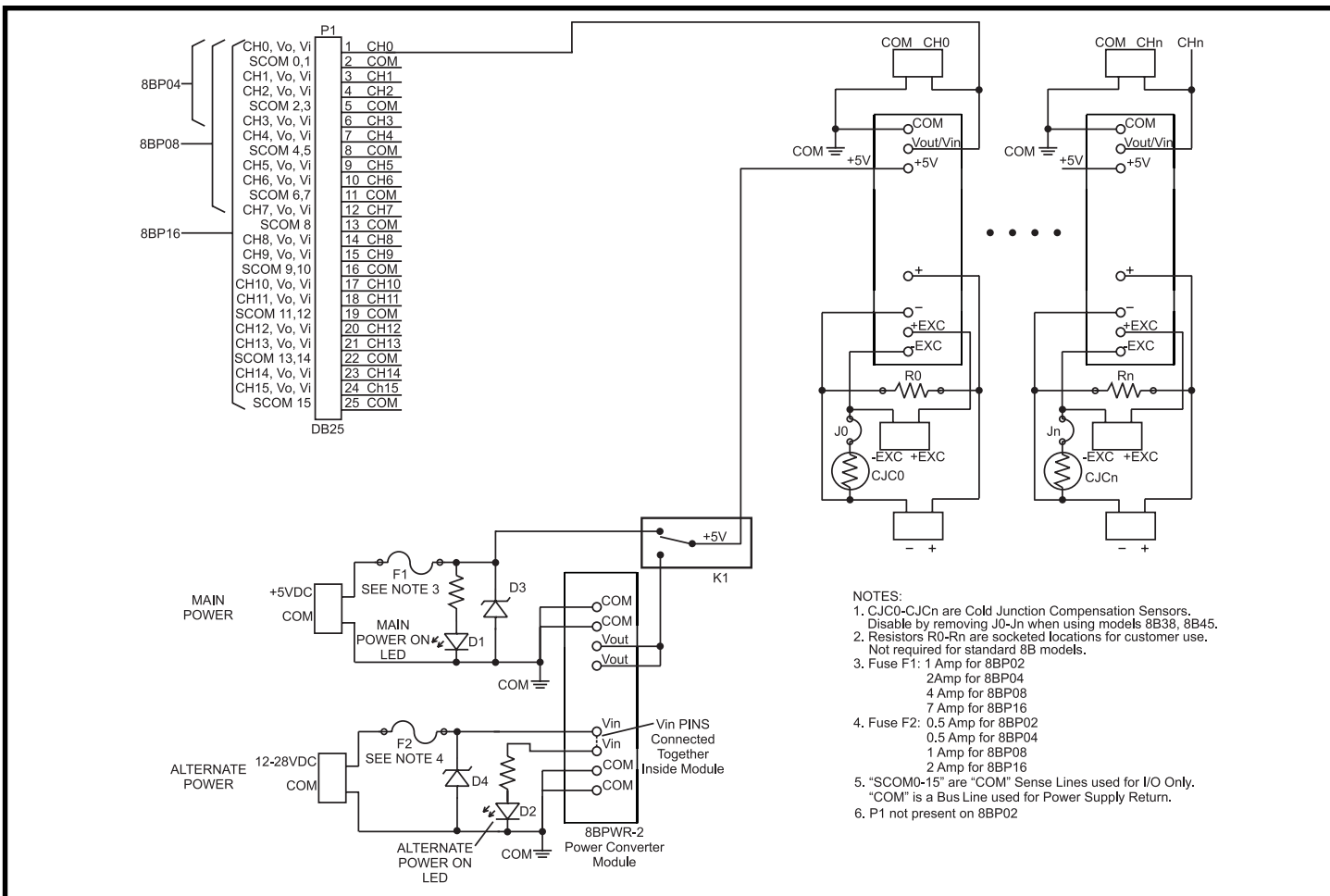
Figure 4: 8BP16 Analog I/O Backpanel

NOTES:
1. CJC0-CJCn are Cold Junction Compensation Sensors. Disable by removing J0-Jn when using models 8B38, 8B45.
2. Resistors R0-Rn are socketed locations for customer use. Not required for standard 8B models.
3. Fuse F1: 1 Amp for 8BP02
   2Amp for 8BP04
   4 Amp for 8BP08
   7 Amp for 8BP16
4. Fuse F2: 0.5 Amp for 8BP02
   0.5 Amp for 8BP04
   1 Amp for 8BP08
   2 Amp for 8BP16
5. "SCOM0-15" are "COM" Sense Lines used for I/O Only. "COM" is a Bus Line used for Power Supply Return.
6. P1 not present on 8BP02

Figure 5: 8BP02/8BP04/8BP08/8BP16 Schematic

SCMXCA006-01, -02, -07
Interface Cables
Description

SCMXCA006-XX

System interface cable for the 8BP04/08/16 backpanels. This is a DB25 Male/Female cable assembly. It can be ordered lengths of 1M, 2M, and 7M (Figure 6).

Male DB-25

Female DB-25

Figure 6: SCMXCA006-XX System Interface Cable

8BXIF (-DIN)
Universal Interface Board
Description

The SCMXIF is a universal interface board which converts a DB25 cable input to 25 screw terminals for discrete wire. It can be mounted on the back of the SCMXRK-002 mounting rack (8BXIF) or on a DIN rail (8BXIF-DIN). Required mounting hardware is included. Use SCMXCA006-XX cable (See Figure 7 for dimensions).
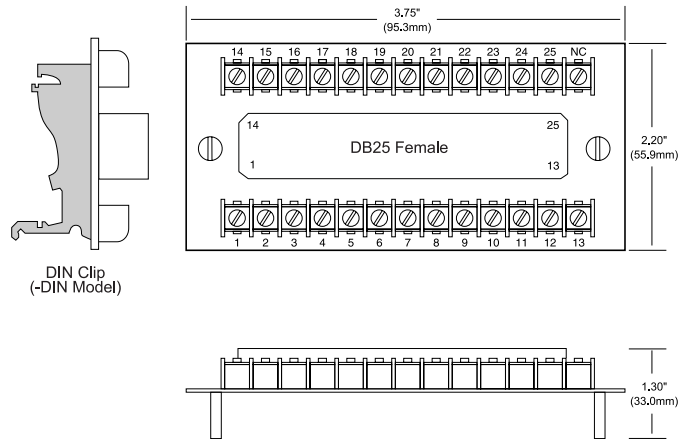
DIN Clip
(-DIN Model)

Figure 7: 8BXIF Universal Interface Board Dimensions

SCMXRK-002
19 Inch Metal Mounting Rack
Description

The SCMXRK-002 is a 19-inch metal rack for mounting the 8BP04/08/16 backpanels and the 8BXIF interface board (See Figure 8 for dimensions).
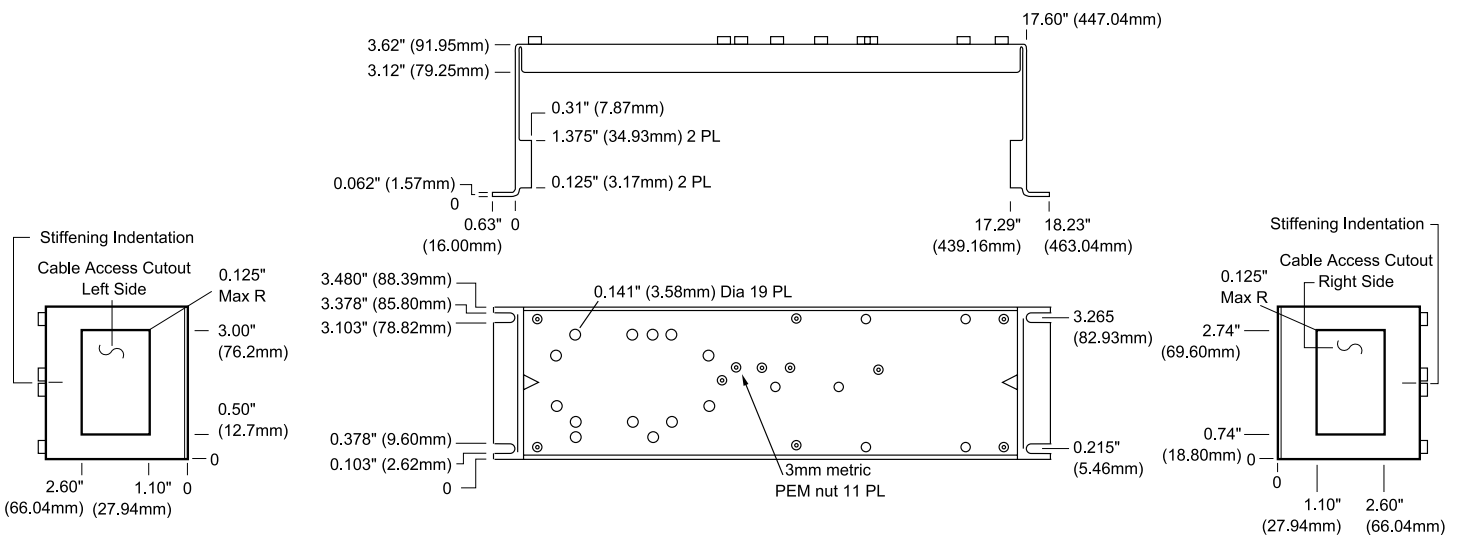
Figure 8: SCMXRK-002 Analog Rack Dimensions

SCMXRAIL1-XX, SCMXRAIL2-XX, SCMXRAIL3-XX

DIN Rail

Description

Three styles of DIN RAIL are available, specify length (-xx) in meters when ordering, -01 for 1 meter or -02 for 2 meter.
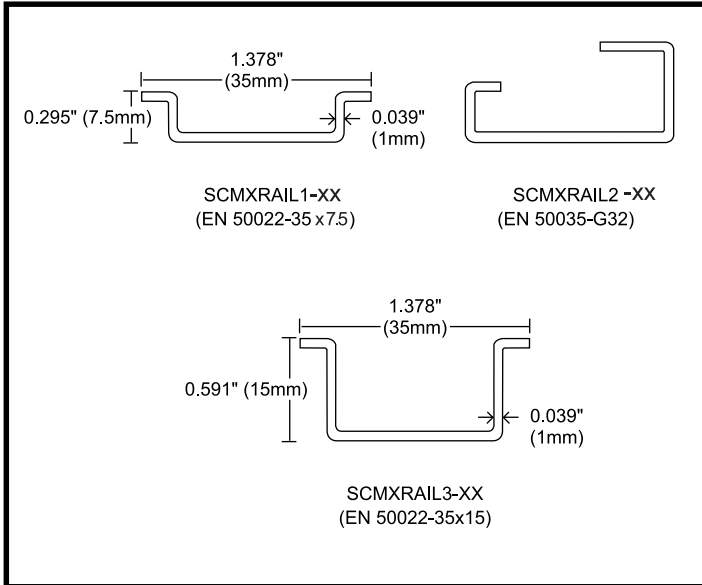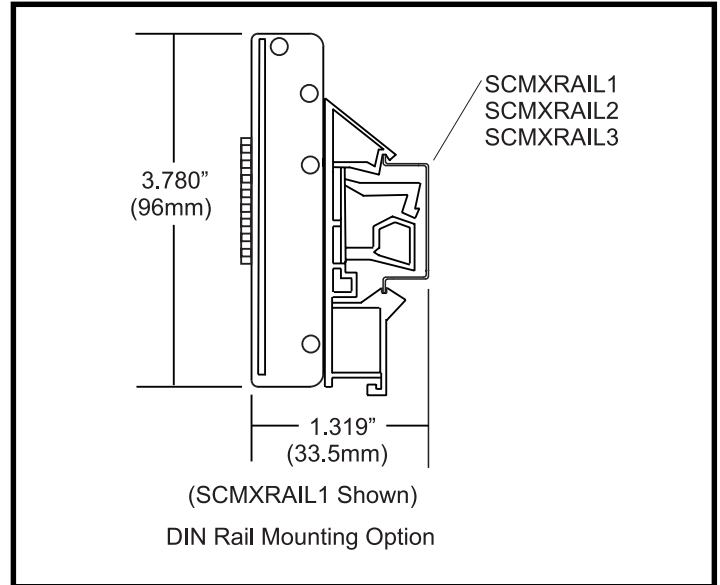
Figure 9: DIN Rail Styles

Figure 10: 8BPxx-2, 8BPxx-3 Backpanel DIN Rail Mounting Option

8BPWR-2

Power Supply Module

Description

The 8BPWR-2 encapsulated power supply has a wide ranging 12-28VDC input voltage range and provides 5VDC output suitable for all 8B modules. It is designed to mount on the 8B backpanels. The compact size and low weight are ideal for high-density applications (see Figure 11).

Specifications

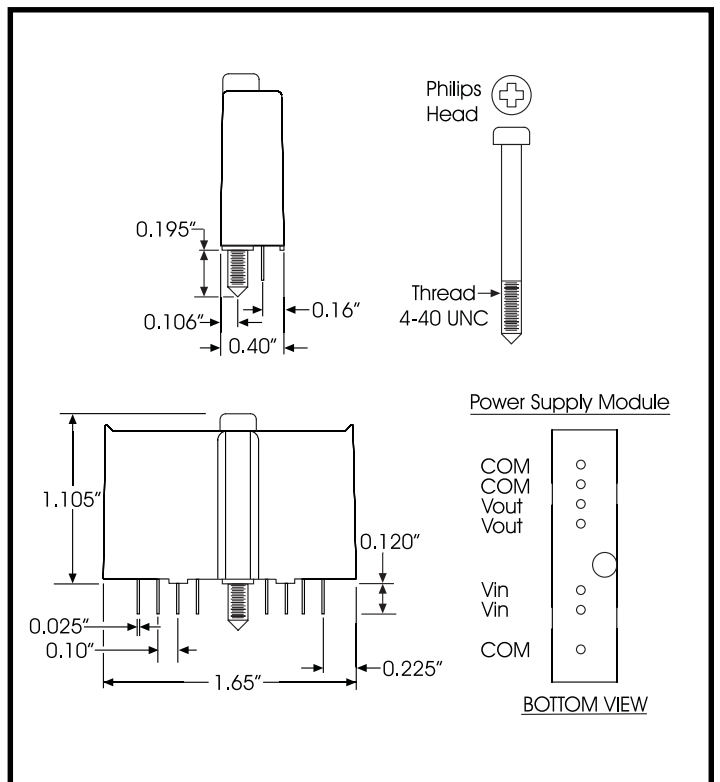| Module	8BPWR-2
Input Voltage Range	12-28VDC
Overvoltage Protection	None (provided on backpanel)
Reverse Voltage Protection	None (provided on backpanel)
Output Voltage	5VDC ±1%
Output Voltage Temp. Coeff.	±200ppm/°C
Output Current, +85°C	2A
Output Current Limit	3A, Auto Recovery
Line Regulation	±0.30%
Load Regulation	±0.10%
Efficiency	85%
Output Ripple	0.5%p-p
Mechanical Dimensions (h)(w)(d)	1.11" x 1.65" x 0.40" (28.1mm x 41.9mm x 10.2mm)

Figure 11: 8BPWR-2 Power Supply Module