Accessories for SCM7B Analog Modules

SCM7BXEV

Single-channel, Module-evaluation Backpanel

DESCRIPTION

The SCM7BXEV (Figures 1 and 2) is a single-channel backpanel that can accept any of the SCM7B analog modules. It is meant to be used primarily for module evaluation. Unlike multiple-channel backpanels, the single high-level system output (or input) signal is routed to all channel pins on the system interface DB25 connector. The backpanel contains four standoffs to allow mounting, using a #6 or smaller screw.

System Side - Power

Using the "V+" supply input, the power supply voltage can be as little as +14VDC. If +15VDC is available, it is recommended that the supply be connected between the "V+A" or "V+B" connections and "COM"; this will protect the module against accidental supply reversal. Using both these connections with two power supplies enables redundant operation. It is also recommended that a diode transient absorber be installed to reduce power supply transient events from degrading system performance. An "accessory" location, between the supply and common lines, is provided for this purpose. The backpanel is fused at 1/4 Amp for module protection.

System Side - Signal

The SCM7BXEV uses either the SCM7BXCA01 (DB25-to-26-pin adapter cable) and SCMXCA004-XX (26-pin-to-26-pin interface cable), or the SCM7BXCA02 (DB25 to DB25 interface cable), depending on system requirements.

Field Side - Signal

On the field side, a temperature sensor is mounted underneath the field side terminal block to provide cold junction compensation for thermocouple modules, and a current-to-voltage conversion resistor (P/N SCM7BXR1) socketing location is provided (supplied with SCM7B33 modules). Field connections are terminated with three screw terminals.

Specifications

Operating Temperature Relative Humidity	–40°C to +85°C 95% Noncondensing
Interface Connector: Field System	 High-density Screw Clamp, 10-24 AWG DB25 (male) with 4-40 Screw Locks and High-density Screw Clamp, 10-24 AWG

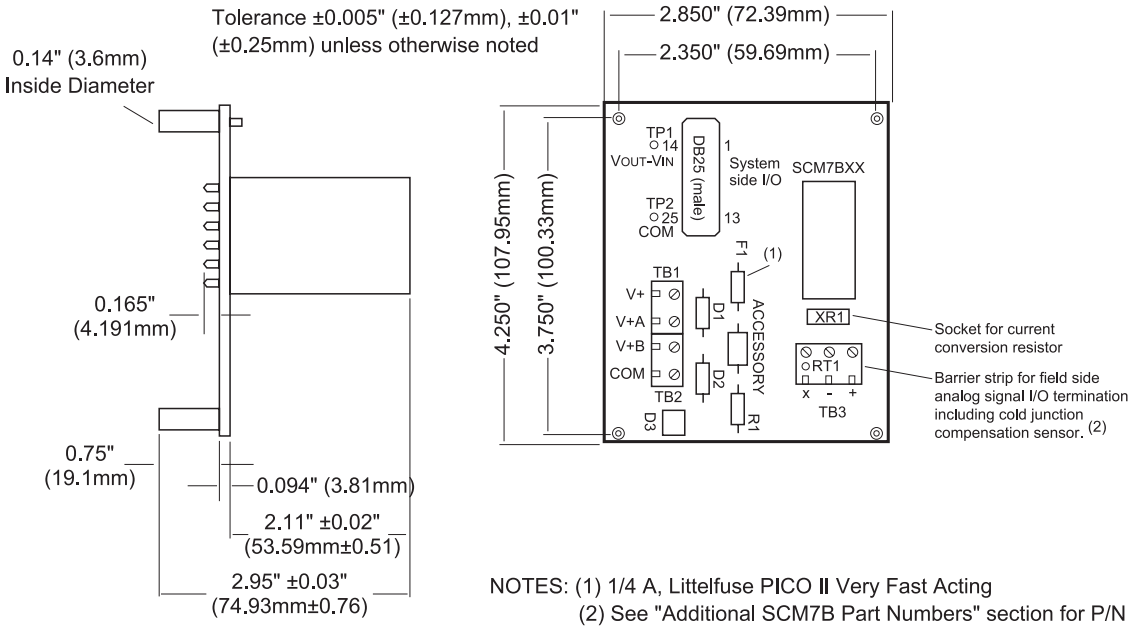


Figure 1: SCM7BXEV Dimensions

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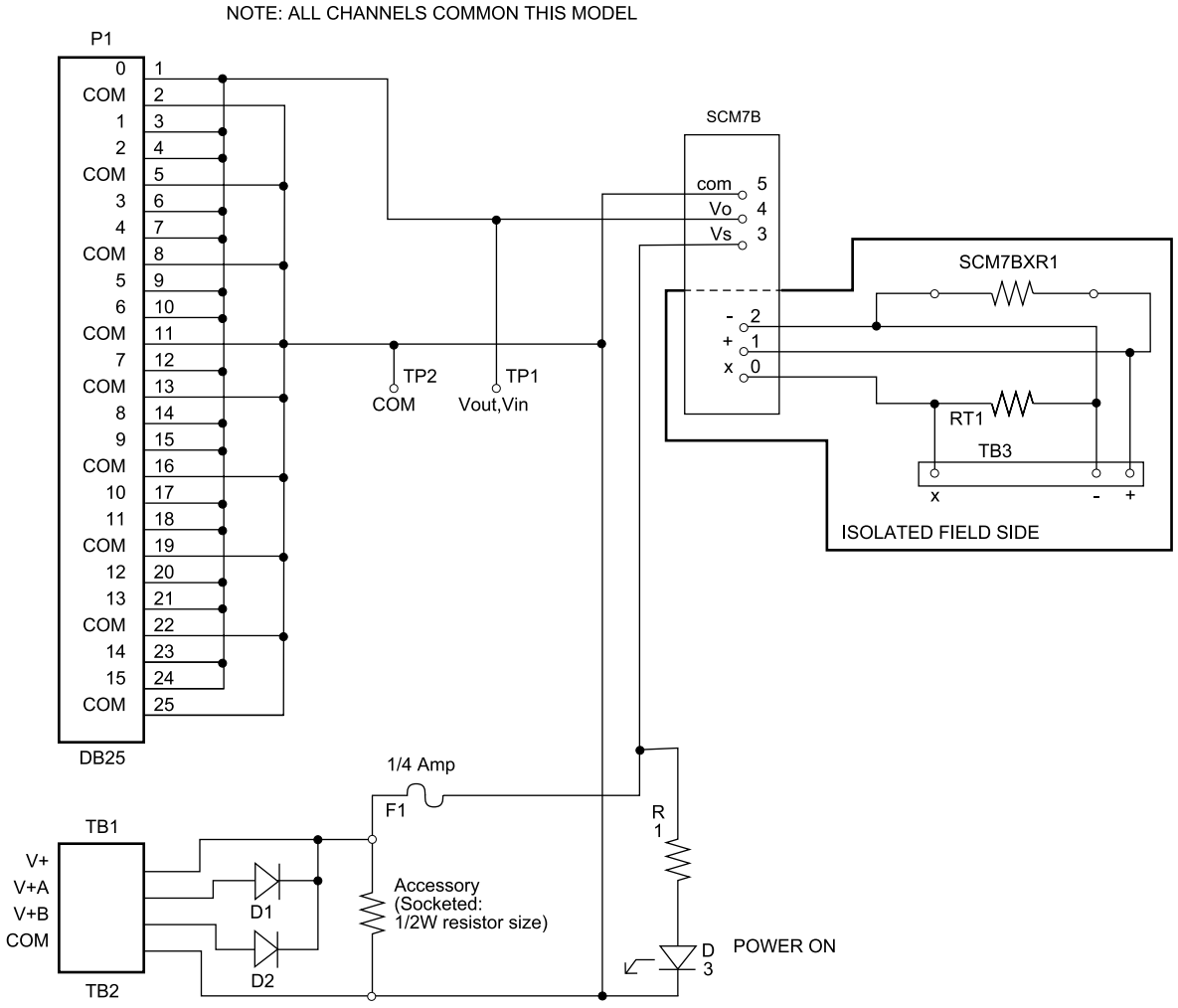


Figure 2: SCM7BXEV Schematic Diagram

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SCM7BP01/ SCM7BP02

1- and 2-channel Backpanels

DESCRIPTION

The SCM7BP01 (Figure 1) and SCM7BP02 (Figure 2) are 1- and 2-channel backpanels. Unlike other backpanels available, both the system and field side sides have screw terminal connectors able to accept discrete wire (10-24AWG). The backpanels can be ordered with standoffs to allow mounting, using a #6 or smaller screw, or with DIN-rail mounting hardware.

System Side - Power

Both backpanels accept 14-35VDC between "V+" and "COM" using a screw terminal (10-24AWG) block. No reverse supply diodes are provided with this model, but both are fused at 1/4 Amp (01) or 1/2 Amp (02) for module protection.

Field Side - Signal

On the field side, a temperature sensor is mounted underneath the field-side terminal block to provide cold junction compensation for thermocouple modules, and a current-to-voltage conversion resistor (P/N SCM7BXR1) socket location is provided (supplied with SCM7B33 modules).

FEATURES

- 1- and 2-channel Backpanels
- Panel or DIN-rail Mounting Options
- Interface Cables
- Cable-to-screw-terminal Interface Board
- Power Supplies

BENEFITS

- Easy Installation
- 1500Vrms, Continuous Isolation (max)
- Both System- and Field-side sides have Screw Terminal Connectors Able to Accept Discrete wire (10-24 AWG)

Specifications

Operating Temperature Relative Humidity	–40°C to +85°C 95% Noncondensing
Interface Connector: Field System	 High-density Screw Clamp, 10-24 AWG High-density Screw Clamp, 10-24 AWG
Isolation: Input-to-Output Channel-to-Channel	 1500Vrms, Continuous (max) 1500Vrms, Continuous (max)

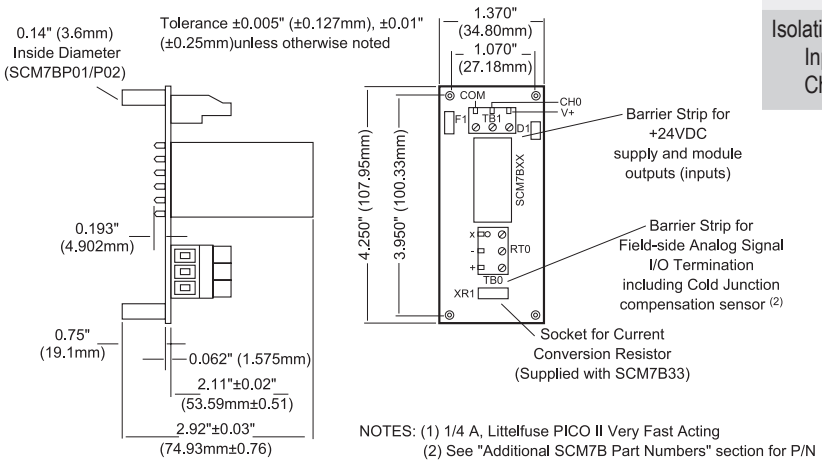
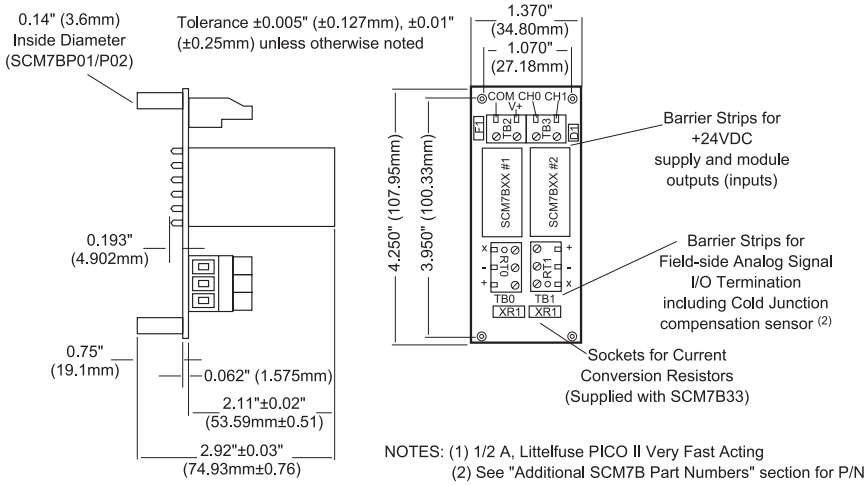


Figure 1: SCM7BP01 Dimensions



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Figure 2: SCM7BP02 Dimensions

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SCM7BP01-DIN/SCM7BP02-DIN

Panels and DIN-rail Mounting Accessories

DESCRIPTION

The SCM7BP01 and SCM7BP02 are single- and dual-channel mounting panels for the SCM7B modules. Both have options for standoffs or DIN-rail mounting.

The following accessories are required for DIN-rail mounting one SCM7BP01 or SCM7BP02 panel (Figure 1):

Qty	Model	Description
1	SCMXBEFE	Base Element with Snap Foot
2	SCMXSE	Side Element

The following accessories are required for DIN-rail mounting two or more SCM7BP01-4 or SCM7BP02-4 panels:

Qty	Model	Description
2	SCMXBEFE	Base Element with Snap Foot
2	SCMXSE	Side Element
(# panels) - 2	SCMXBE	Base Element without Snap Foot
(4 x (# panels))-4	SCMXVS	Connection Pins

The following DIN-rail styles are available. Specify length in meters (-XX).

SCMXRAIL1-XX DIN EN 50022-35x7.5 (slotted steel)
SCMXRAIL2-XX DIN EN 50035-G32 (slotted steel)
SCMXRAIL3-XX DIN EN 50022-35x15 (slotted steel)

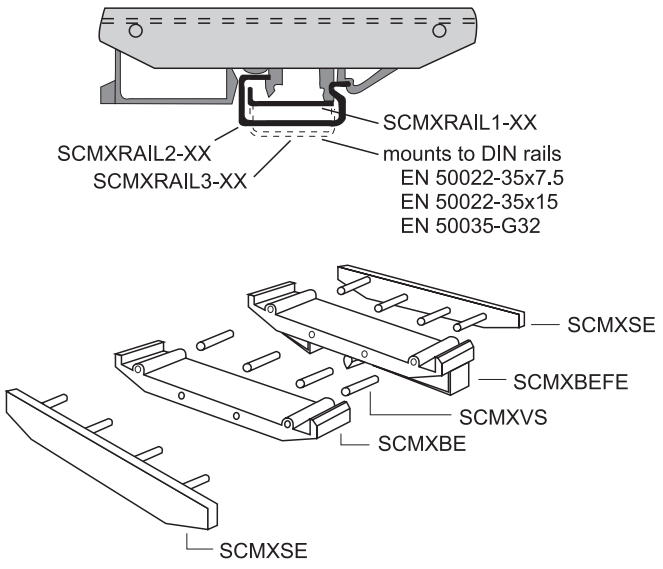


Figure 1: DIN-rail Mounting Elements

Ordering Information

Part Number	Description
SCM7BP01	Single-channel Backpanel with Standoffs for Mounting.
SCM7BP01-4	Single-channel Backpanel. No Mounting Hardware Included.
SCM7BP01-DIN	Single-channel Backpanel with Din-rail Mounting Hardware. *(Shipped Fully Assembled)*.
SCM7BP02	Dual-channel Backpanel with Standoffs for Mounting.
SCM7BP02-4	Dual-channel Backpanel. No Mounting Hardware Included.
SCM7BP02-DIN	Dual-channel Backpanel with Din-rail Mounting Hardware. *(Shipped Fully Assembled)*.

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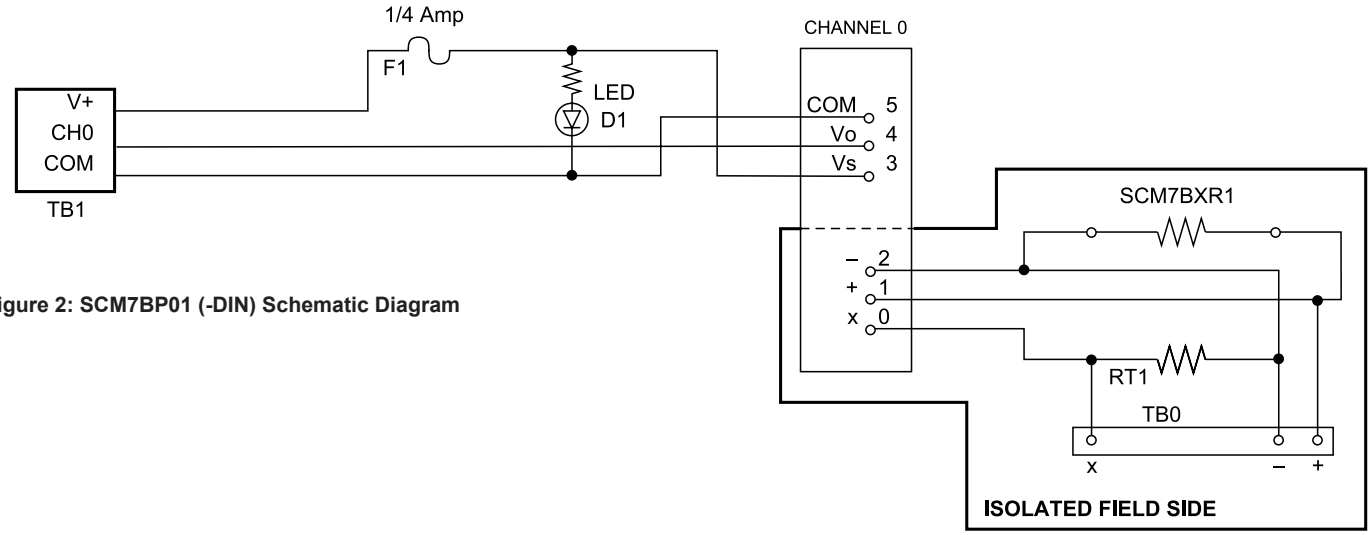


Figure 2: SCM7BP01 (-DIN) Schematic Diagram

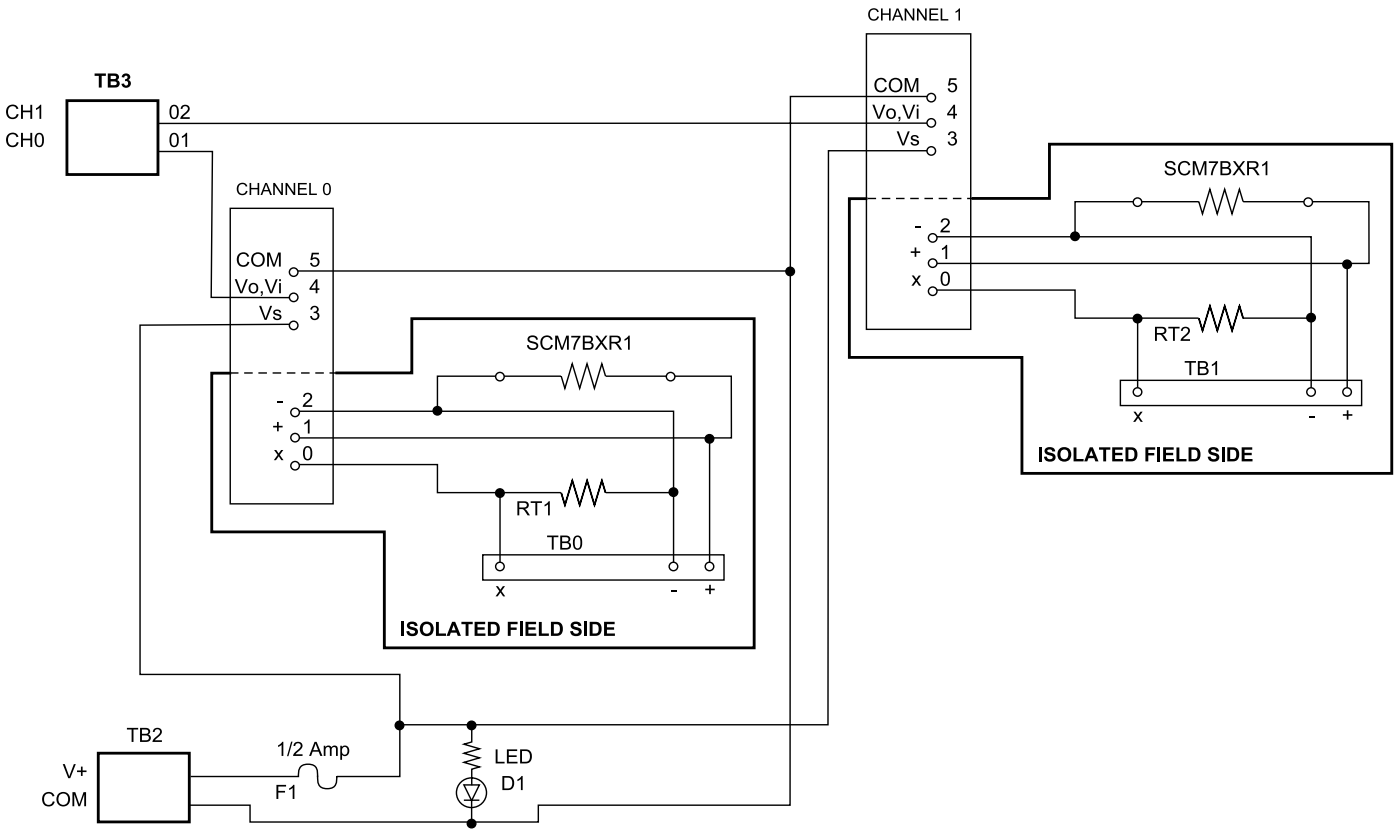


Figure 3: SCM7BP02 (-DIN) Schematic Diagram

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SCM7BP04(-DIN)/SCM7BP08(-DIN)/SCM7BP16(-DIN)

4-, 8-, and 16-channel Backpanels

DESCRIPTION

The SCM7BP04, SCM7BP08, and SCM7BP16 (see Figures 1-4) are 4, 8, & 16 channel backpanels that can accept any of the SCM7B analog modules. All three of these backpanels can either be rack mounted using Dataforth's 19-inch rack P/N SCMXRK-002 (using the provided 3mm screws), or directly mounted to a surface using #6 or smaller screws. The SCM7BP04-DIN, SCM7BP08-DIN, and SCM7BP16-DIN are identical to the SCM7BP04, SCM7BP08, and SCM7BP16, but with DIN-rail mounting clips attached instead of standoffs. These brackets allow the backpanels to be mounted on either EN 50022-35 x 7.5 (35 x 15) or EN 50035-G32 type DIN-rails.

System Side - Power

Using the "V+" power supply input, the power supply voltage can be as little as +14VDC. If +15VDC is available, it is recommended that the supply be connected between the "V+A" or "V+B" connections and "COM"; this will protect the modules against accidental supply reversal. Using both these connections with two power supplies enables redundant power supply operation. It is also recommended that a diode transient absorber be installed to reduce power supply transient events from degrading system performance. An "accessory" location, between the supply and common lines, is provided for this purpose. A system side grounding #10-32 stud is also provided for use if desired. All backpanels are fused according to channel count, allowing 1/4 Amp per channel.

System Side - Signal

Two system interface DB25 connectors are used, to enable using both input and output modules simultaneously, or to route the signal from an input module backplane to an output module backplane. These backpanels use either the SCM7BXCA01 (DB25-to-26-pin adapter cable) and SCMXCA004-XX (26-pin-to-26-pin interface cable), or the SCM7BXCA02 (DB25-to-DB25 interface cable), depending on system requirements.

Field Side - Signal

On the field-side, a temperature sensor is mounted underneath the field-side terminal block to provide cold junction compensation for Thermocouple-input modules. A current-to-voltage conversion resistor (P/N SCM7BXR1, supplied with SCM7B33 modules) socket is provided for each channel. Field connections are terminated with three screw terminals at each module site.

FEATURES

- 4-, 8-, 16-channel Backpanels
- Rack or DIN-rail Mounting Options
- All Backpanels Fused, Allowing 1/4 Amp per Channel
- Interface Cables
- Power Supplies

BENEFITS

- Easy Installation
- System Side Grounding Option Provided
- System Side – Power: Redundant Power Supply Operation Possible
- System Side – Signal: Two DB25 System Interface Connectors Available
- Field Side – Signal: Temp Sensor Provides CJC for Thermocouple Input Modules

Specifications

Operating Temperature Relative Humidity	–40°C to +85°C 95% Noncondensing
Interface Connector Field System	 High-density Screw Clamp, 10-24 AWG 2 DB25 (male) Connectors with 4-40 Screw Locks
Isolation Input-to-Output Channel-to-Channel	 1500Vrms, Continuous (max) 1500Vrms, Continuous (max)

Ordering Information

Part Number	Description
SCM7BP04	4-channel Backpanel with Standoffs for Mounting.
SCM7BP04-DIN	4-channel Backpanel with Din-rail Mounting Clips. *(Shipped Fully Assembled).*
SCM7BP08	8-channel Backpanel with Standoffs for Mounting.
SCM7BP08-DIN	8-channel Backpanel with Din-rail Mounting Clips. *(Shipped Fully Assembled).*
SCM7BP16	16-channel Backpanel with Standoffs for Mounting.
SCM7BP16-DIN	16-channel Backpanel with Din-rail Mounting Clips. *(Shipped Fully Assembled).*

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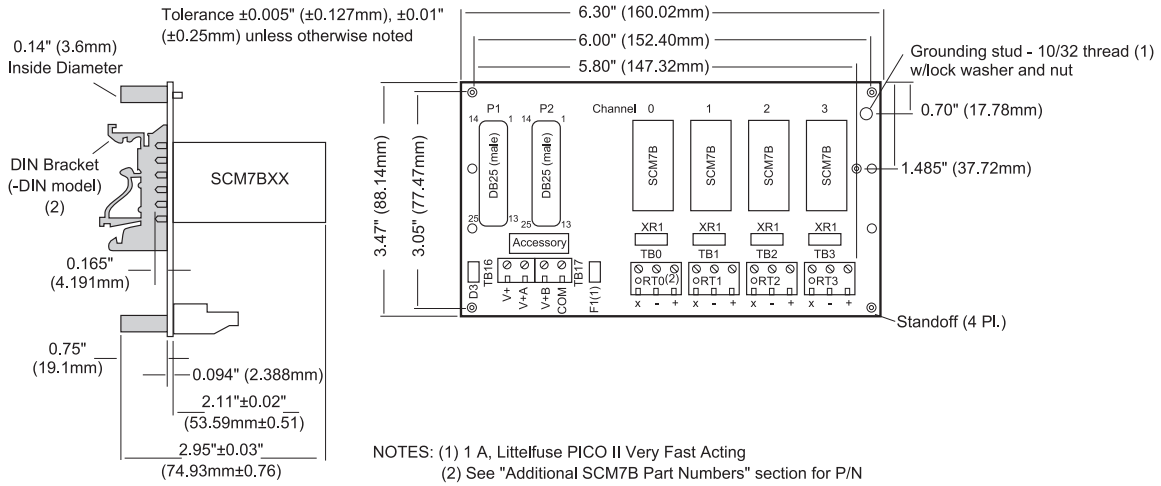


Figure 1: SCM7BP04(-DIN) Dimensions

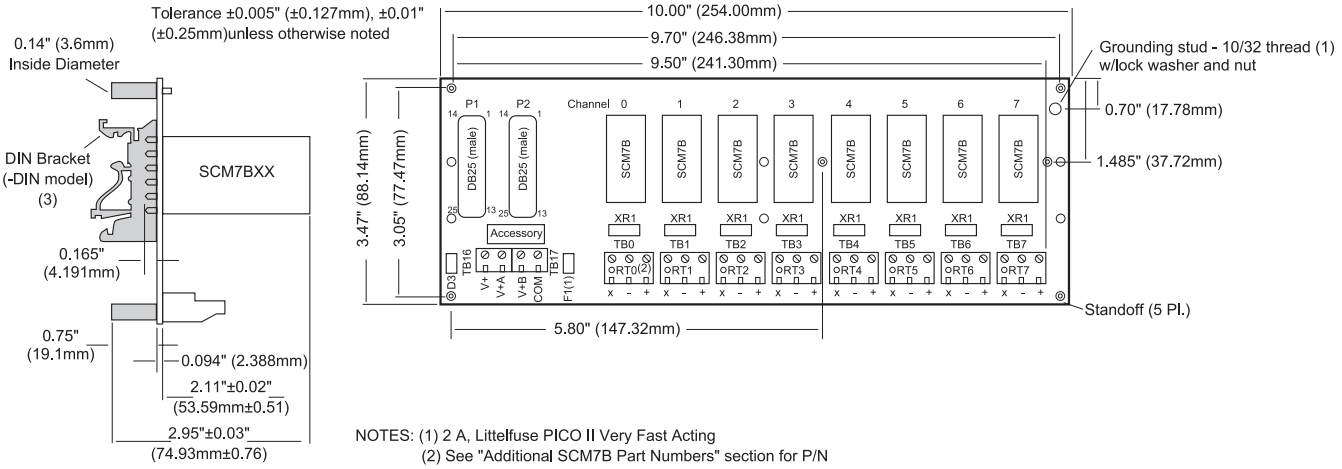


Figure 2: SCM7BP08(-DIN) Dimensions

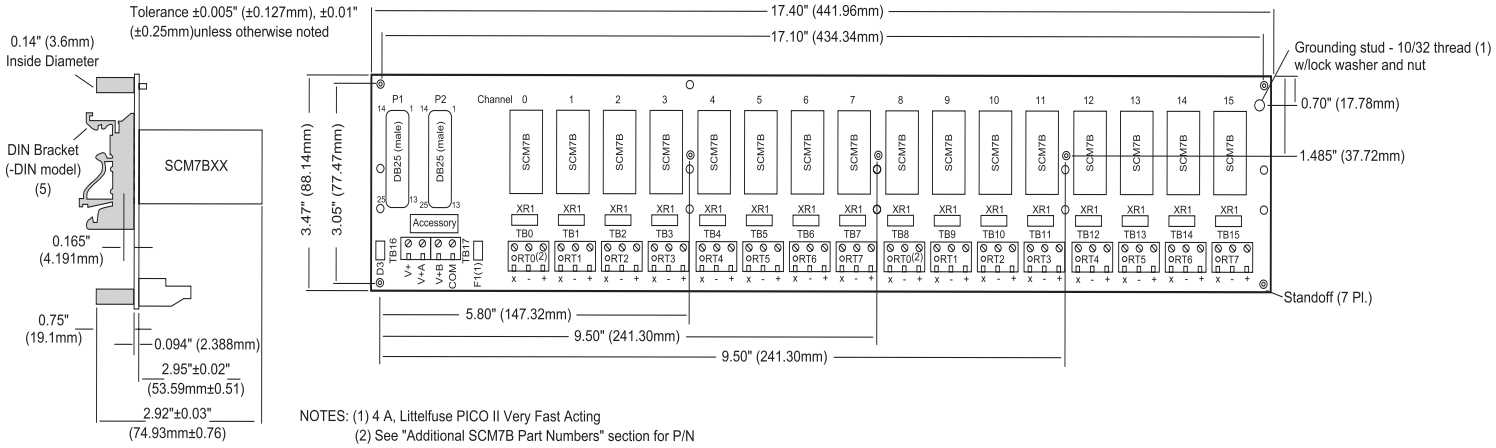


Figure 3: SCM7BP16(-DIN) Dimensions

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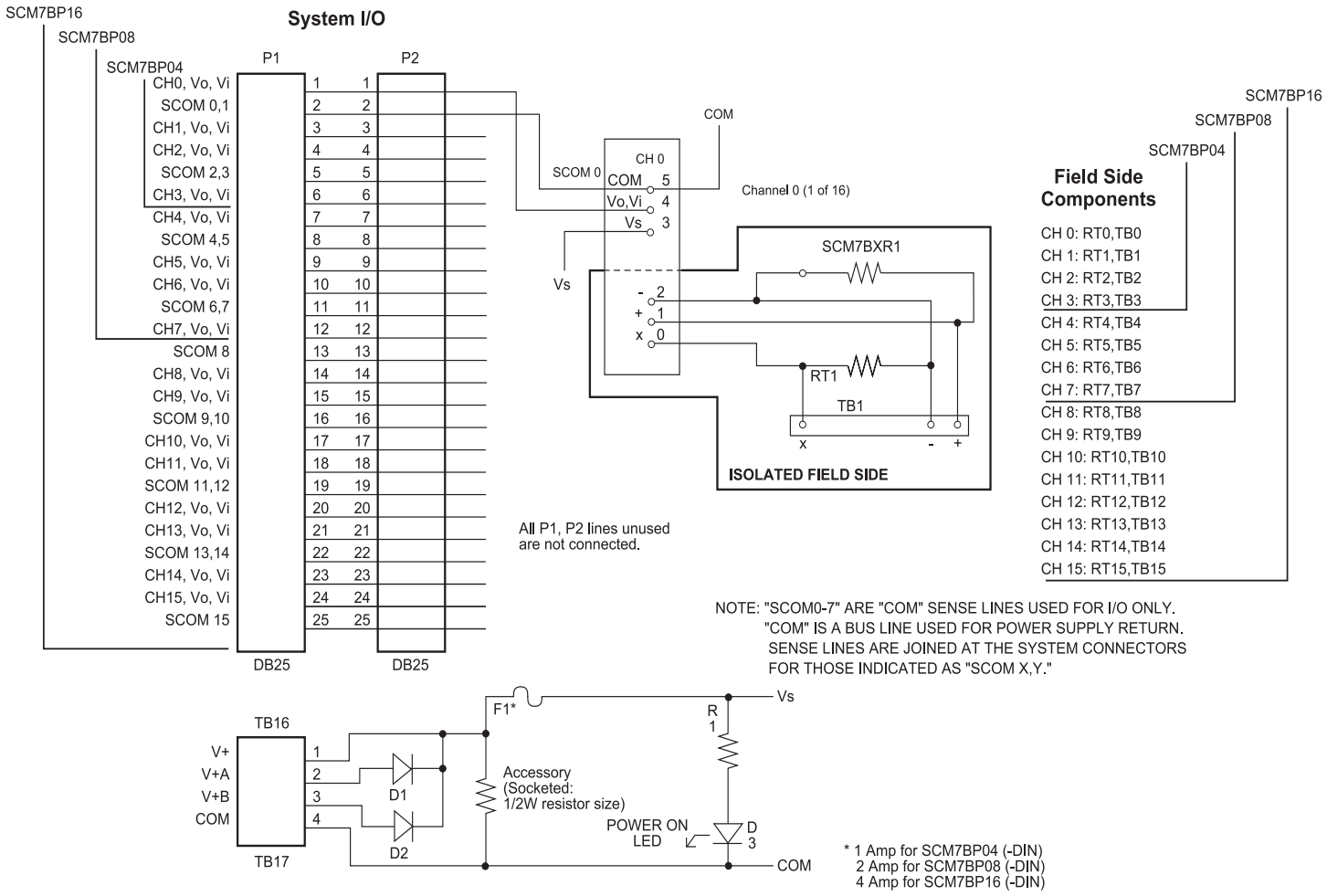


Figure 4: SCM7BP04/08/16(-DIN) Schematic Diagram

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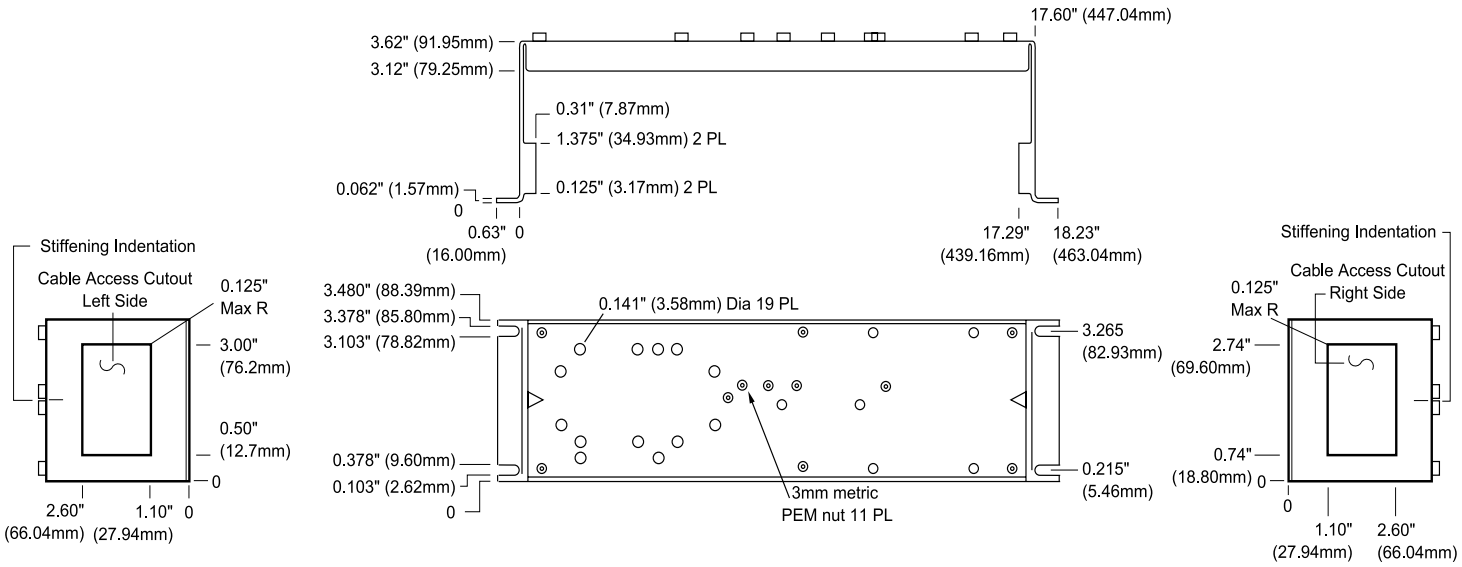
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SCMXRK-002

19-inch Metal Mounting Rack

DESCRIPTION

The SCMXRK-002 is a 19-inch metal rack for mounting the SCM7BP04/08/16, SCMPB01/02/05/06, SCMVAS-PB8/PB16, and isoLynx® SLX200-xx backpanels. It also provides capability to mount a system power supply and the universal interface board, P/N SCMXIF. (See Figure for dimensions).



SCMXRK-002 Analog Rack Dimensions

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SCMXCA006-01, -02, -07

Interface Cables

DESCRIPTION

SCMXCA006-XX

System interface cable for the SCM7BP04/08/16 backpanels. This is a DB25 Male/Female cable assembly. It can be ordered in lengths of 1m, 2m, and 7m.



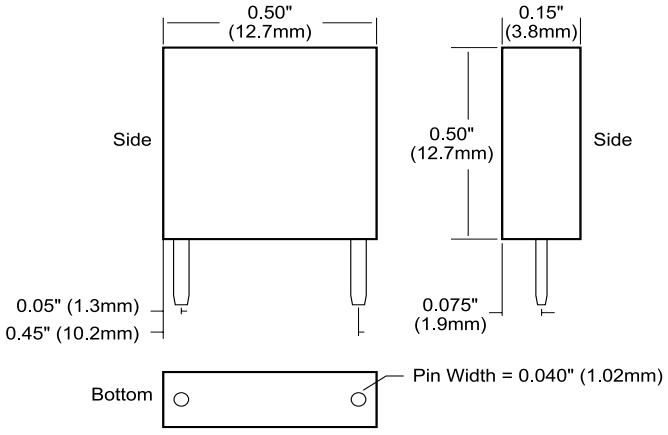
SCMXCA006-XX System Interface Cable

SCM7BXR1

Current-to-Voltage Conversion Resistor

DESCRIPTION

The SCM7BXR1 current-to-voltage conversion resistor (250Ω, 0.1%, 10ppm) is used with the SCM7B33 voltage input modules. Sockets are provided on all backpanels to allow installation of this resistor. Other values are available; consult the factory for ordering details and specifications.



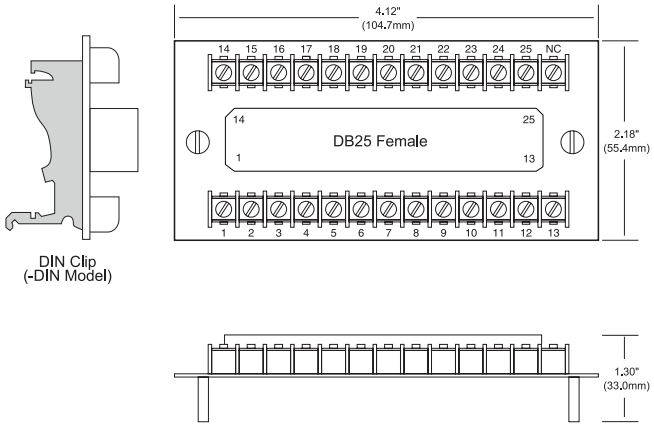
SCM7BXR1 Dimensions

8BXIF (-DIN)

Universal Interface Board

DESCRIPTION

The 8BXIF 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 for dimensions).



8BXIF Universal Interface Board Dimensions

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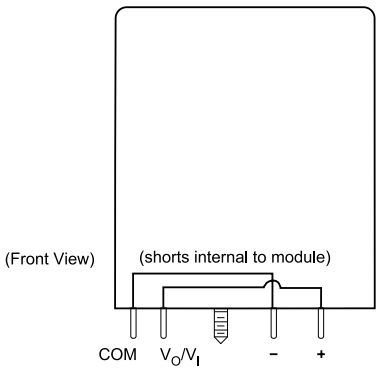
SCM7BPT

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Non-isolated Pass Thru Module

DESCRIPTION

The SCM7BPT is a non-isolated signal pass-through module which shorts together the signal inputs-to-outputs.



SCM7BPT Module

SCM7B-PROTO

Breadboard Kit

DESCRIPTION

The SCM7B-PROTO breadboard kit was designed to allow users to incorporate their own module functions using an SCM7B format. The kit includes a pc board designed for breadboard circuits, a module case, header and mounting screw. Contact the factory for additional information.

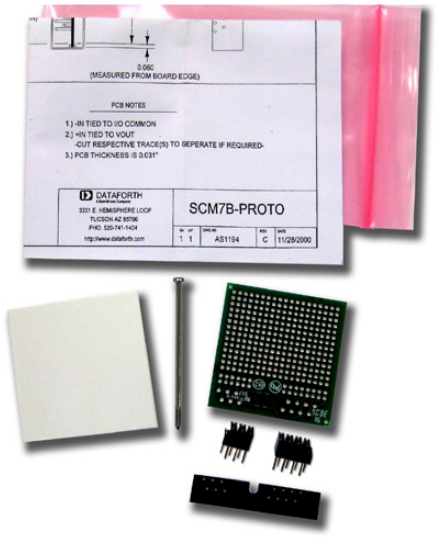


Figure 2: SCM7B-PROTO Breadboard Kit.

Additional Part Numbers of Interest

The following is a list of parts that are available for use with your SCM7B system, or for fabrication of your own backpanel, along with manufacturer's part number. Dataforth makes no claim as to availability and/or quality of parts purchased from vendors other than Dataforth.

Part Description	Part Number	Manufacturer
CJC Thermistor	100K6A1 DC95G104W	Betatherm Corp. Thermometrics
Diode Transient Absorber	SA series	General Semiconductor
Sockets for SCM7B pins	50865-5	Amp Incorporated
Module Retaining Screw Captive Nut, 4-40 Thread	KFS2-440	PEM Engineering
Grounding Stud, 0.625", 10-32 Thread	KFH 10-32-10	PEM Engineering
Axial Fuse	PICO II series	Littelfuse
2-position Termination Block	MKDS5/2-6,35	Phoenix Contact, Inc.
3-position Termination Block	MKDS5/3-6,35	Phoenix Contact, Inc.
DB25 (male) PCB Connector	745078-3	AMP Incorporated
DB25 (female) Ribbon Connector (for Custom Cables)	745078-5	AMP Incorporated
0.062" PCB Standoff	647A-5015-19	Concord
0.094" PCB Standoff	647A-5023-19	Concord

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