SCMPB05

8-Position Analog I/O Backpanel, Non-Multiplexed

Description

The SCMPB05 backpanel (Figure 12) can accept up to eight SCM5B analog input and/or output modules in any combination. It can be mounted on the SCMXRK-002 19-inch metal rack. A separate analog signal path is provided for each channel and each channel's signal is accessible at redundant 26-pin connectors. The module output switch is continuously "on" when using this backpanel and all eight module outputs are simultaneously accessible to high-speed data acquistion (ADC) boards.

On-board jumpers permit paralleling two SCMPB05 boards to form a SCMPB01 equivalent. An additional set of inter-channel bridge jumpers permits connecting an input module's output to an output module's input, providing two levels of isolation (Figures 12, 13).

Jumpers on the SCMPB05 permit user selection of low (i.e. channels 0-7) or high (i.e. channels 8-15) addresses.

A temperature sensor mounted on each channel provides cold junction compensation for thermocouple input modules (see Fig. 13 for schematic). Field connections are terminated with four screw terminals at each module site. Use system interface cable SCMXCA004-XX for connection to the host system.

Specifications

Operating Temperature	−40°C to +85°C
Relative Humidity	95% Noncondensing
Interface Connector:	
Field	high density screw clamp, 14 AWG max
System	26-pin, male header connector
Isolation:	
Input-to-Output	1500Vrms continuous, max
Channel-to-Channel	1500Vrms continuous, max

Ordering Information

Part Number	Description
SCMPB05	8-channel backpanel with standoffs for mounting.
SCMPB05-1	8-channel backpanel without cold junction compensation circuits and standoffs for mounting. Use when cost savings is desired and thermocouple input modules SCM5B37 and SCM5B47 will not be used.
SCMPB05-2	8-channel backpanel with DIN rail mounting option. The backpanel is mounted on a plate which is captured by the SCMXBExx DIN rail mounting elements. Shipped fully assembled.
SCMPB05-3	8-channel backpanel without cold junction compensation circuits and with DIN rail mounting option. Shipped fully assembled.

Electrical

Address Selection

Module addresses may be selected as low (channels 0-7) or high (channels 8-15) using the sets of 3 pins labeled J5 through J12. Place a jumper over the two pins closest to the ribbon cable connectors, P1 and P2, to select a low address (factory configuration) or over the two pins furthest from the ribbon cable connectors, P1 and P2, to select a high address.

Adjacent Channel Jumper

Adjacent channels may be connected together to provide an isolated output signal from an isolated input module, providing two levels of 1500V isolation. This capability is provided with the seven jumpers labeled JP1–JP7. See page 48 for an example.

Refer to page 50 for additional notes on the P1 and P2 connectors, power requirements, fusing and grounding issues.
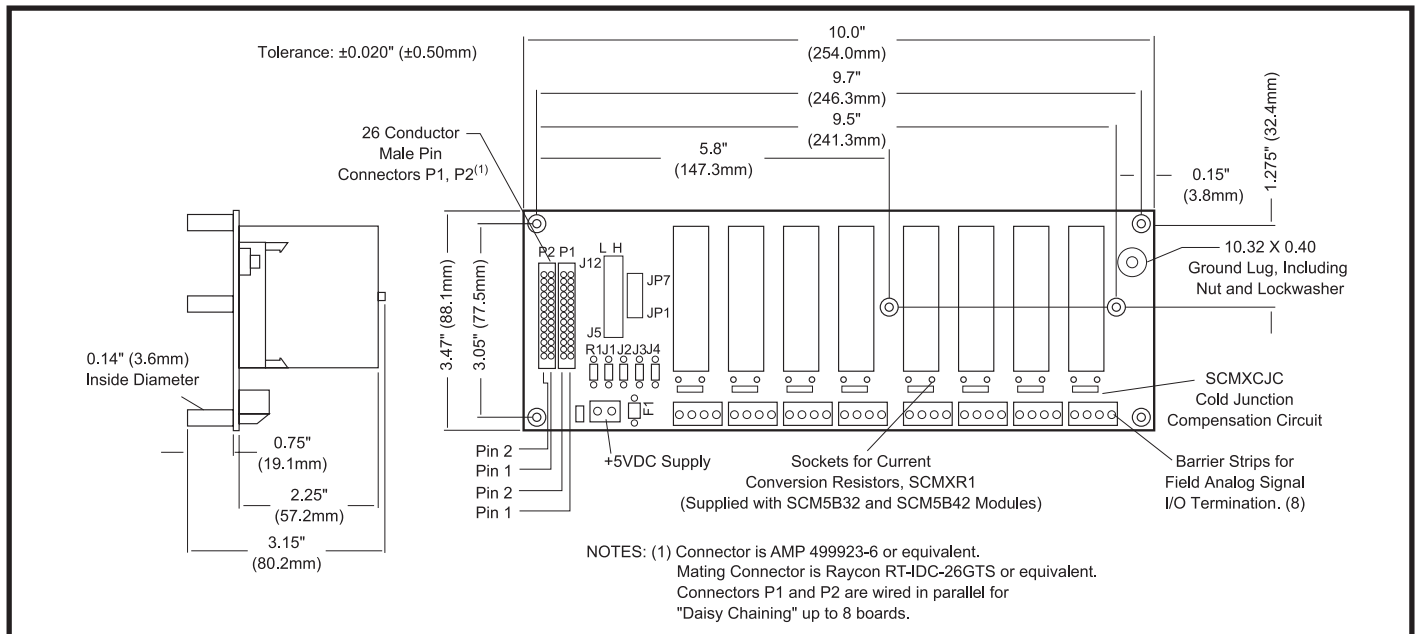

Figure 12: SCMPB05 Analog I/O Backpanel

NOTES: (1) Connector is AMP 499923-6 or equivalent.
Mating Connector is Raycon RT-IDC-26GTS or equivalent.
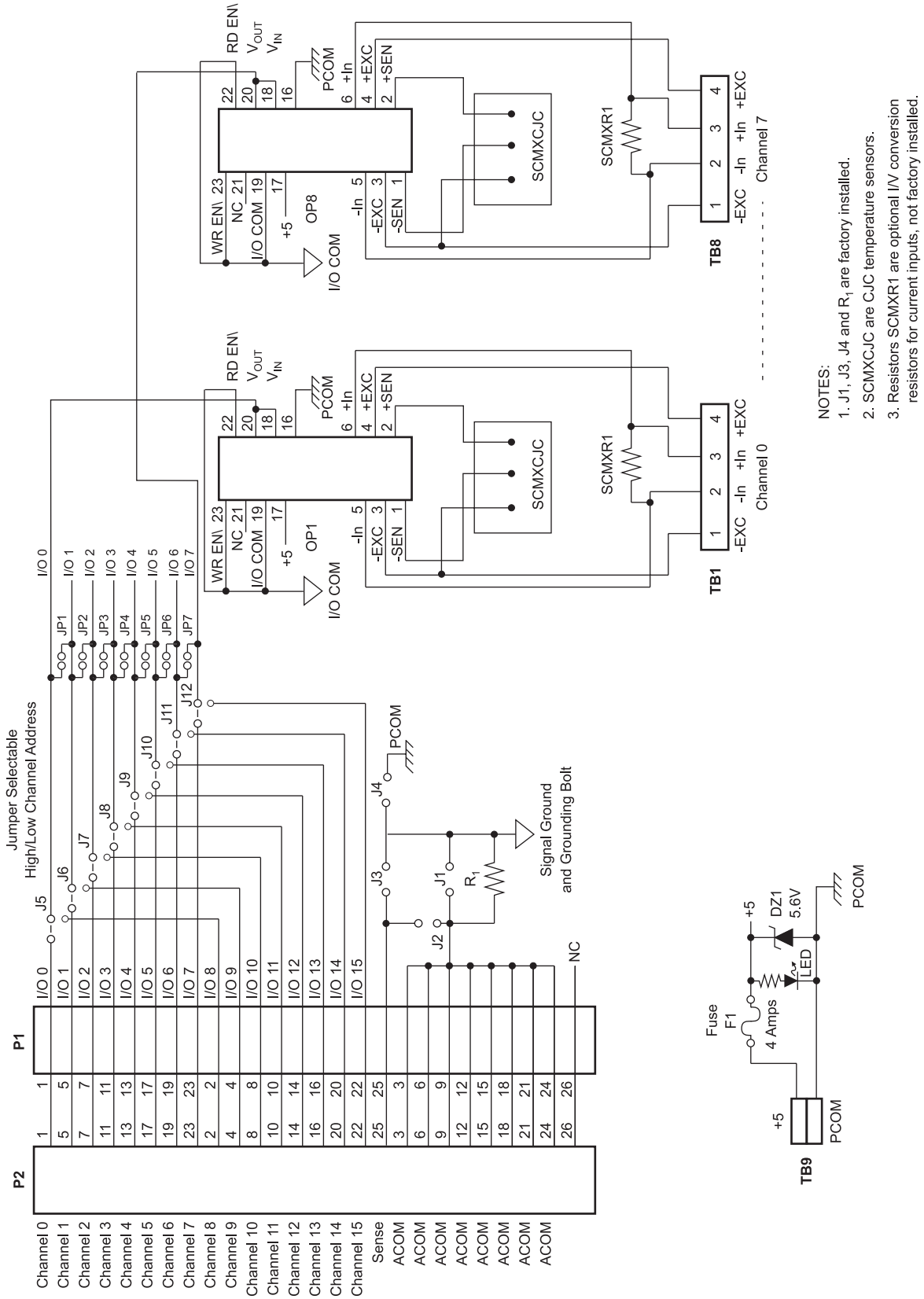Connectors P1 and P2 are wired in parallel for
"Daisy Chaining" up to 8 boards.

Figure 13: SCMPB05 Schematic

NOTES:
1. J1, J3, J4 and R₁ are factory installed.
2. SCMXCJC are CJC temperature sensors.
3. Resistors SCMXR1 are optional I/V conversion resistors for current inputs, not factory installed.