

ProDAQ Signal Conditioning Units

ProDAQ 5010 Signal Conditioning Unit



OVERVIEW

The ProDAQ 5010 signal conditioning unit is a 16-slot, 3U, 19-inch mainframe designed to house various types of input/output signal conditioning cards, upgrading and enhancing the VXIbus range of the ProDAQ modules. The ProDAQ 5010 signal conditioning unit is supplied either as a passive mainframe consisting of the 19-inch chassis and a power plane or as an active one equipped with a plug-in power supply unit (PSU).

ProDAQ 5110, ProDAQ 5111, ProDAQ 5210, ProDAQ 5211 Power Supply Unit

The power supply units provide the necessary power for active signal conditioning cards.

ProDAQ 5310, ProDAQ 5311 24-Channel Isothermal Termination Panel

The isothermal termination panels provide a screw terminal connection to the front-panel, high-density, female, 50-pin SCSI-type connector, as well as a cold junction compensation signal. Two versions are available: the ProDAQ 5310 with an accuracy within 0.4° C, and the ProDAQ 5311 with an accuracy within 0.2° C.

ProDAQ 5410 24-Channel, 4-Wire Connector Card

The ProDAQ 5410 4-wire connector card is a double-wide card designed to provide a screw-terminal connection for connecting 4-wire RTD sensors to the ProDAQ function cards.

ProDAQ 5421 24-Channel Terminal Card

The ProDAQ 5421 24-channel terminal card is a general-purpose I/O card that provides a direct connection between screw terminals and the front-panel, high-density, female, 50-pin SCSI-type connector.

ProDAQ 5422 24-Channel Current Input Card

The ProDAQ 5422 24-channel current input card provides a direct DC connection between screw terminals and the front-panel SCSI connector. A 100 Ω shunt resistor with 0.1% tolerance is placed between the non-inverting and inverting input of each channel.

ProDAQ 5423 24-Channel Attenuator Card, 10:1

The ProDAQ 5423 24-channel attenuator card provides a DC connection between screw terminals and the front-panel SCSI connector through a 10:1 attenuator.

ProDAQ 5424 24-Channel Filter Card

The ProDAQ 5424 24-channel filter card provides a DC connection between screw terminals and the front-panel SCSI connector through a one-pole RC filter. Both the non-inverting and inverting inputs of each channel are equipped with the filter.

Features & Benefits

- ▶ **General-purpose 19 in.** signal conditioning unit
- ▶ **Easy connection of transducers or field cabling** to ProDAQ function cards
- ▶ **Expansion to signal conditioning** for ProDAQ function cards

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Learn more about the
ProDAQ 5010 on our website
by scanning the code below.



SPECIFICATIONS

5010 SIGNAL CONDITIONING UNIT

Number of Card Slots	16
Card Slot Width	4 HP
Power Supply Unit Width	18 HP
Power Plane Rails	±24V, ±15V, ±12V, ±5V, ±V *) *) ±V are uncommitted power rails
Card Power Dissipation	10 W maximum
Signal Conditioning Unit Height	3U

5310, 5311 ISOTHERMAL TERMINATION PANEL

Number of Signal Terminals	46 (23 x 2)
Number of Shield Terminals	13
Number of Trigger Terminals	2
Accuracy	ProDAQ 5310: 0.4°, ProDAQ 5311: 0.2°
Warm-up time	30 minutes
Power Supply	+12 V @ 5 mA typical -12 V @ 5 mA typical
Power Consumption	120 mW typical, 200 mW maximum
Height/Width	3U/4HP

5410 24-CH., 4-WIRE CONNECTOR CARD

Number of Terminals	126 (2 x 63)
Precision Resistor	100 Ω, ±0.005%, ±2 ppm
Power Consumption	none
Height/Width	3U/8HP

5421 24-CHANNEL TERMINAL CARD

Number of Terminals	75 (25 x 3)
Power Consumption	none
Height/Width	3U/4HP

5422 24-CHANNEL CURRENT INPUT CARD

Number of Terminals	75 (25 x 3)
Terminal Current	30 mA
Shunt Resistor	100 W, ±0.1%, 0.1 W
Power Consumption	none
Height/Width	3U/4HP

5423 24-CH. ATTENUATOR CARD, 10:1

Number of Terminals	75 (25 x 3)
Attenuation	10 : 1, ±1%, (900k + 100k)
Power Consumption	none
Height/Width	3U/4HP

5424 24-CHANNEL FILTER CARD

Number of Terminals	75 (25 x 3)
Bandwidth (-3 dB)	1kHz, ±10%, (16k + 10 nF)
Power Consumption	none
Height/Width	3U/4HP

PHYSICAL CHARACTERISTICS - COMMON TO ABOVE PANEL/ CARDS

Dimensions	20 x 128 x 210 mm (W x H x D)
Weight	115 g
Wire Strip Length	4 - 5 mm

WARRANTY PERIOD

12 months (extended periods available at additional cost)

Ordering Information

- ▶ **5010-AA** Signal conditioning unit
- ▶ **5110-AA** Power supply unit, +/-12V, 5V, 115V input
- ▶ **5111-AA** Power supply unit, +/-15V, 5V, 115V input
- ▶ **5210-AA** Power supply unit, +/-12V, 5V, 230V input
- ▶ **5211-AA** Power supply unit, +/-12V, 5V, 230V input
- ▶ **5310-AA** Isothermal termination panel, 0.4° Accuracy, 24 ch.
- ▶ **5311-AA** Isothermal termination panel, 0.2° Accuracy, 24 ch., A board
- ▶ **5311-AB** Isothermal termination panel, 0.2° Accuracy, 24 ch., B board
- ▶ **5311-AC** Isothermal termination panel, 0.2° Accuracy, 24 ch., C board
- ▶ **5410-AA** 24 ch., 4-wire connector card
- ▶ **5410-AB** 4-wire connector card, 23 ch. plus reference channel
- ▶ **5421-AA** 24 ch. terminal card
- ▶ **5422-AA** 24 ch. current input card
- ▶ **5423-AA** 24 ch. attenuator card, 10:1
- ▶ **5424-AA** 24 ch. filter card

Related Products

- ▶ **6100-xx** LXI function card carrier
- ▶ **3180-AA** Ultra-performance motherboard module
- ▶ **3410-Ax** Input-protected ADC function card
- ▶ **3510-xx** 16 ch. DAC function card
- ▶ **3511-xx** 8 ch. 200 kS/s, 16-bit DAC function card
- ▶ **3610-Ax** 48 ch. DIO function card
- ▶ **8010-AA** SCSI connector cable, 0.5m