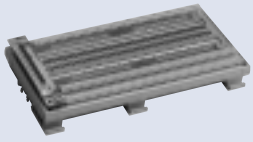
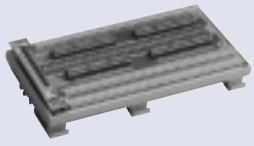
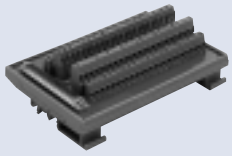
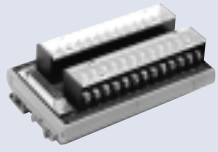
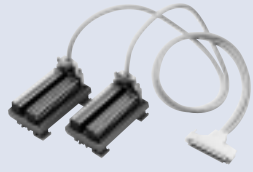
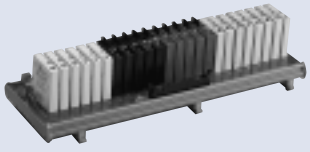
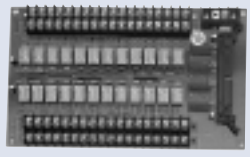
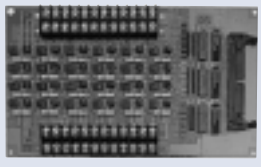
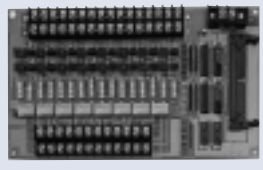
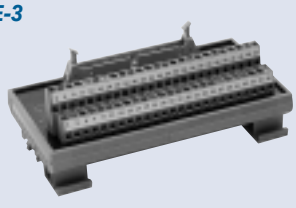
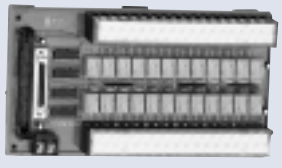
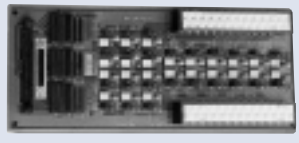
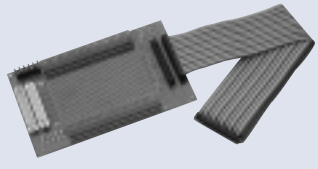
Termination Boards Selection Guide

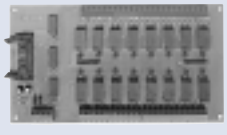
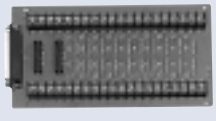
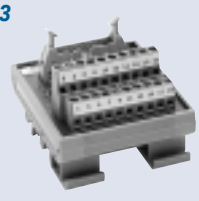
100-pin or 50-pin SCSI-type Connectors

3E-2 	3E-2 	3E-3 	3E-3 	3E-3 
DIN-96DI (Includes ACL-102100)	**DIN-96DO** (Includes ACL-102100)	**DIN-100S** (Includes ACL-102100)	**DIN-50S** (Includes ACL-10250)	**DIN-502S**

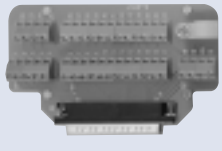
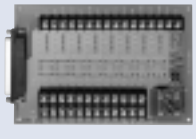
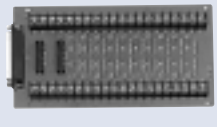
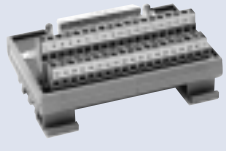
50-pin Ribbon Connectors

3E-6 	3E-4 	3E-5 	3E-6 
DIN-24G or TB-24G (for Grayhill IO modules)	**TB-24R** (Includes ACL-10150-1.5)	**TB-24P** (Includes ACL-10150-1.5)	**TB-16P8R** (Includes ACL-10150-1.5)
3E-3 	3E-4 	3E-5 	3E-6 
DIN-50P	**DIN-24R**	**DIN-24P**	**TB-24** (Includes ACL-10150-1.5)

20-pin Header Connectors

3E-8 	3E-8 	3E-7 	3E-7 	3E-3 
ACLD-9182A (Includes ACL-10120-1)	**ACLD-9185** (Includes ACL-10120-1)	**ACLD-9188** (Includes 2 ACL-10120-1)	**ACLD-9178** (Includes 2 ACL-10120-1)	**DIN-20P**

37-pin D-type Connectors

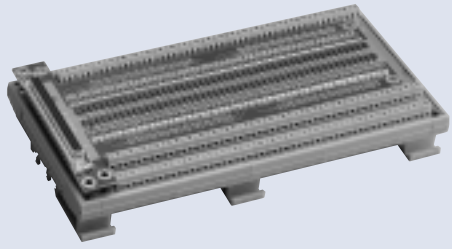
3E-7 	3E-7 	3E-9 	3E-7 	3E-3 
ACLD-9137 (male) **ACLD-9137F** (female)	**ACLD-9138** (Includes ACL-10237-1)	**ACLD-8125** (Includes ACL-10137-1)	**ACLD-9188** (Includes 2 ACL-10120-1)	**DIN-37D**

DIN-96DI

Termination Board with 96-Channel Opto-Isolated Digital Inputs

Features

- 96 Opto-Isolated digital input channels
- For use with PCI-7396
- AC or DC polarity-free DI
- Screw terminals for easy field wiring



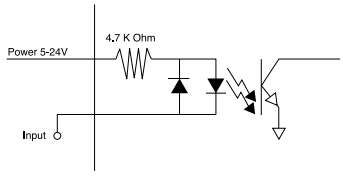
Specifications

- Numbers of channel: 96
- Opto-isolator: PC3H4
- Input impedence: 4.7K Ohms
- Input voltage range: 0~24VDC
- Input voltage threshold:
  - 20V_{DC} for external 24V input
  - 8.8V_{DC} for external 12V input
  - 1.8V_{DC} for external 5V input
- Isolation voltage: 2,500 Vdc channel-to-ground
- Connector: 100-Pin SCSI-type
- Dimension:112.7 mm x 225 mm
- Operating temp.: 0˚ ~ 60˚C
- Storage temp.: -20˚ ~ 80˚C
- Humidity: 5~95%, non-condensing
- Power consumption:
  - 5V: 48mA(max.) from SCSI cable
  - External digital input current:
    - 24V: 490mA(max.)
    - 12V: 250mA(max.)
    - 5V: 102mA(max.)

Ordering Information

DIN-96DI

96 Channel Isolated Digital Input Terminal Board
(includes 1m ACL-105100-1)

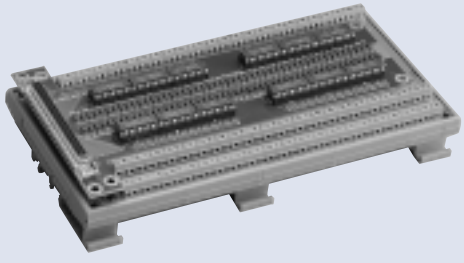


DIN-96DO

Termination Board with 96-Channel Opto-Isolated Digital Outputs

Features

- 96 Opto-Isolated digital output channels
- For use with PCI-7396
- On-board relay driver circuitry
- Screw terminals for easy field wiring



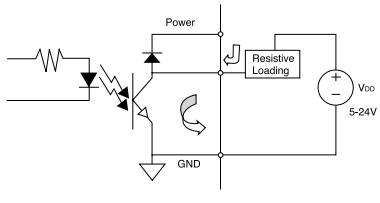
Specifications

- Numbers of channel: 96
- Opto-isolator: PC3H7
- Output type: Darlingtoin transistors, open collector up to 35Vdc
- Sink current:
  - 350mA max.@ 100% duty, one of transistors device ON
  - 370mA @ duty 10% for all transistors devices ON
  - 140mA @ duty 50% for all transistors devices ON
  - 60mA @ duty 100% for all transistors devices ON
- Isolation voltage: 2500 Vrms
- Dimensions: 112.7 mm x 225.0 mm
- Operating temp.: 0˚C ~ 60˚C
- Storage temp.: -20˚~ 80˚C
- Power consumption:
- 5V: 102mA(max.) from cable

Ordering Information

DIN-96DO

96 Channel Isolated Digital Input Terminal Board(includes 1m ACL-105100-1)



DIN Rail Screw Terminal Boards

Features

General

- Universal screw terminal boards for easily wiring
- DIN socket for easily mounting on DIN-rail

DIN-100S

- General purpose termination board for 100-pin SCSI-II cable
- On-board connector type is female 100-pin
- Shipped with 1 meter ACL-102100 cable
- Dimensions: 157 x 112 x 51 mm3 (WxLxH)

DIN-50S

- General purpose termination board for 50-pin SCSI -II cable
- On-board connector type is female 50-pin
- Plastic cover for protection of wiring
- Shipped with 1 meter ACL-102100 cable
- Dimension: 124 x 77 x 50 mm3 (WxLxH)

DIN-502S

- Split 100 signals of 100-pin SCSI-II connector to two DIN-50S sockets
- Shipped with 1 meter ACL-10252 cable

DIN-50P

- General purpose termination board for 50-pin ribbon flex cable
- Shipped with 1.5 meters ACL-10150-1.5 cable
- Dimension: 145 x 77 x 52 mm3 (WxLxH)

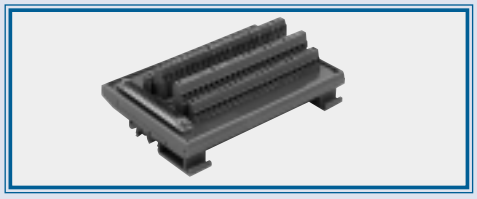
DIN-37D

- General purpose termination board for D-type 37-pin cable
- On-board connector type is female 37-pin
- Shipped with 1 meter ACL-10137-1 cable
- Dimension: 112 x 77 x 52 mm3 (WxLxH)

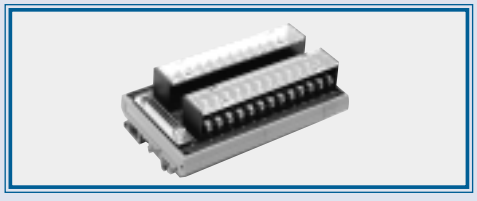
DIN-20P

- General purpose termination board for 20-pin ribbon flex cable
- Shipped with 1 meters ACL-10120-1 cable
- Dimension: 67 x 77 x 51 mm3 (WxLxH)

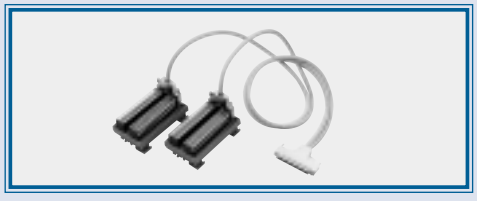
DIN-100S



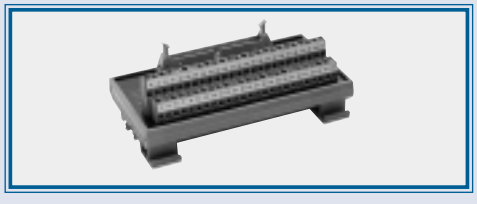
DIN-50S



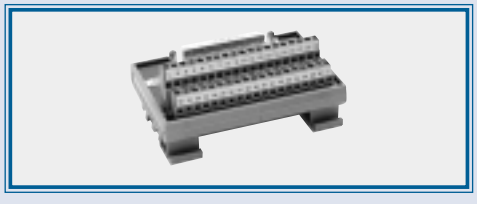
DIN-502S



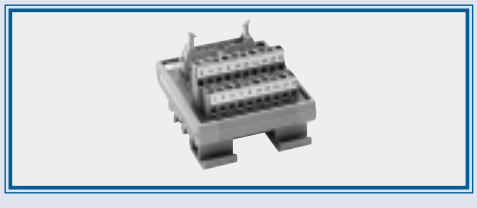
DIN-50P



DIN-37D



DIN-20P



Ordering Information

DIN-100S
Termination board with 100-pin SCSI-II con-nector with DIN socket

DIN-50S
Termination board with 50-pin SCSI-II con-nector with DIN socket

DIN-502S
Two pieces of termination board DIN-50S with cable

DIN-50P
Termination board with 50-pin ribbon connector with DIN socket

DIN-37D
Termination board with 37-pin D-type connector with DIN socket

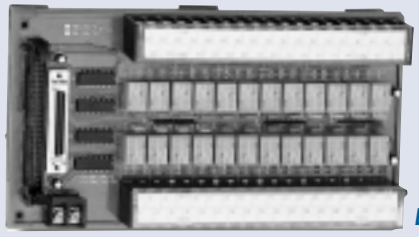
DIN-20P
Termination board with 20-pin ribbon connector with DIN socket

DIN-24R/TB-24R

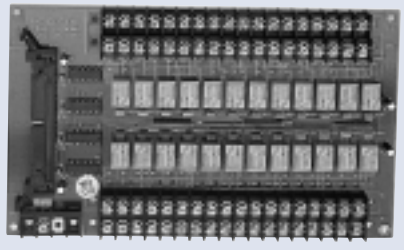
Termination Board With 24 Relay Outputs

Features

- 24 single-pole, double-throw (SPDT form C) relays
- 50-pin Opto-22TM compatible connector
- 220VDC/250VAC maximum switching voltage
- 2A DC, AC maximum switching current
- On-board relay driver circuitry
- LEDs indicate relay status
- Screw terminals for easy field wiring
- DIN-24R with DIN socket is available for easily mounting
- 50-pin SCSI-type connector is available for interface with ND-6058



DIN-24R



TB-24R

Introduction

The DIN-24R and TB-24R relay output boards are designed for industrial control applications. It contains 24 electro-mechanical SPDT relays that can be driven by the 24-bit digital output ports of the PCI-7248, PCI-7296,ACL-7122, ACL-7124 and PET-48DIO, ND-6058.

Each relay's switching capacity is 60W/120V. The normally open, normally closed, and common contacts for each relay are made available for maximum flexibility.

Specifications

- 24 Matsushita DS-Relays
- Indication display: 24 LEDs
- Indication mode:
  - logic "1": LED on, relay set
  - logic "0": LED off, relay reset
- Relay form: Single Pole, Double Throw (SPDT)
- Input terms: Normally open or normally closed
- Relay coil:

	12V Version	24V Version
Relay model	DS1E-S-DC12V	DS1E-S-DC24V
Nominal voltage	12VDC	24VDC
Min. set and reset voltage	9.6VDC	19.2VDC
Max. allowable voltage	19.2VDC	38.4VDC
Coil resistance	1600Ω	6400Ω

- Power consumption:
  - TB-24R: +5V @ 40mA for each relay is ON
  - DIN-24R:
    - +5V @ 200mA max.
    - +12V @ 33mA for each relay
    - 530 mA for all relays on.
- Operating temperature: 0˚~ 60˚C
- Storage temperature: -20˚~ 80˚C
- Operating humidity: 5 ~ 95%, non-condensing
- Dimensions:
  - TB-24R: 220 mm x 132 mm
  - DIN-24R: 205 mm x 114 mm

Matsushita DS-Relay

- High sensitivity, high switching power
- UL/CSA recognized
- Contact material: Gold-clad silver
- Rating (resistive):
  - Max. switching power: 60W, 125VA
  - Max. switching voltage: 220VDC, 250VAC
  - Max. switching current: 2A DC, AC
  - Max. carrying current: 3A DC, AC
- UL/CSA rating:
  - 6A 125V AC
  - 6A 10V DC
  - 2A 30V DC
- Expected life (min. operations):
  - Mechanical: 10^8
  - Electrical 2A 30V DC resistive: 5×10^5
  - Electrical 1A 30V DC resistive: 2×10^6
- Coil (polarized):
  - Min. set and reset power: 45mW
  - Normal set and reset power: Approx. 90mW
- Max. operating speed: 20cpm at rated load
- Operating time (at nominal voltage): 3 ms typical. 10ms max..
- Release time (at nominal voltage): 2 ms typical. 5ms max..
- Set time (latching): Approx. 3msec.
- Initial breakdown voltage:
  - Between open contacts: 500 Vrms
  - Between contact and coil: 1,000 Vrms
- Initial insulation resistance:

  Min. 1,000MΩ

Ordering Information

TB-24R/12

Termination Board with 24 Relay Outputs and 12 Volt Coil
(includes one 1.5meters, 50-pin flat cable)

TB-24R/24

Termination Board with 24 Relay Outputs and 24 Volt Coil
(includes one 1.5meters, 50-pin flat cable)

DIN-24R/24, DIN-24R/12

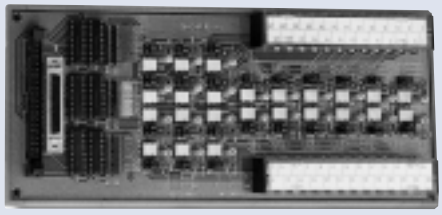
Termination Board of 24 Relay Outputs and 24 or 12 Volt Coil with DIN Socket

DIN-24P/TB-24P

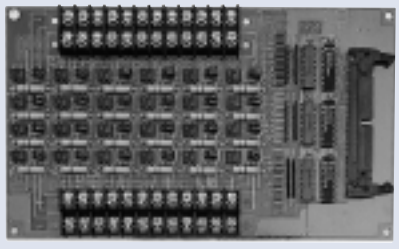
Termination Board with 24 Opto-isolated Digital Inputs

Features

- 24 opto-isolated digital input channels
- 50-pin Opto-22TM compatible connector
- 50-pin SCSI-type connector available on DIN-24R to interface with ND-6058
- AC or DC polarity-free input, isolated or dry-contact (without isolation) by jumper selection
- Thresholds from 3VDC to 24VDC, adjustable by changing current-limiting resistors
- 2500Vrms optical isolation
- LEDs indicate input channel status
- Jumper selectable for voltage input mode or dry contact input mode
- Screw terminal for easy field wiring



DIN-24P



TB-24P

Introduction

The DIN-24P and TB-24P digital input termination boards feature high-voltage opto-isolation on all input channels. They provides 24 channels that are accessed through a single 50-pin connector, standard on the NuDAQ digital I/O boards, such as ACL-7122, ACL-7124, PET-48DIO, and PCI-7248, PCI-7296 and ND-6058.

Each opto-isolated digital input accepts from 3VDC to 24VDC or 6.3mA to 50mA by changing a current limiting resistor for logic high. In addition, opto-isolated inputs provide isolation between separate channels and between each input channel of your PC system. Isolation prevents floating potential and ground loop problems from damaging the PC.

Specifications

General Information

- Numbers of channel: 24
- Opto-isolator: 4N35
- Input impedance: 1.2K Ohms or 4.7K Ohms for 24V input version
- Isolation voltage: 2500VDC or Peak AC
- Input mode: Isolation or dry contact (non-isolation)
- Input electrical characteristics:
  - Logic "Low": 0.8V max.
  - Logic "High": 3VDC to +24VDC
  - Logic input high current: 6.3mA to 50mA
- Response time:
  - 20 ms without AC filter
  - 2.2 ms with AC filter
- Dry contact input:
  - Internal pull-up voltage supply : +5VDC
  - Logic "1": Input Closed
  - Logic "0": Input Open
- Indication display: 24 LEDs
  - Logic "1": LED on
  - Logic "0": LED off
- Power requirement: +5V@40mA (max.)
- Operating temperature: 0˚~ 60˚C
- Storage temperature: -20˚~ 80˚C
- Operating humidity: 5 ~ 95%, non-condensing
- Dimension:
  - TB-24P: 220 mm x 132 mm
  - DIN-24P: 205 mm x 114 mm

Ordering Information

TB-24P

24-CH Isolation/Dry contact termination board (includes one 1.5 meter 50-pin flat cable)

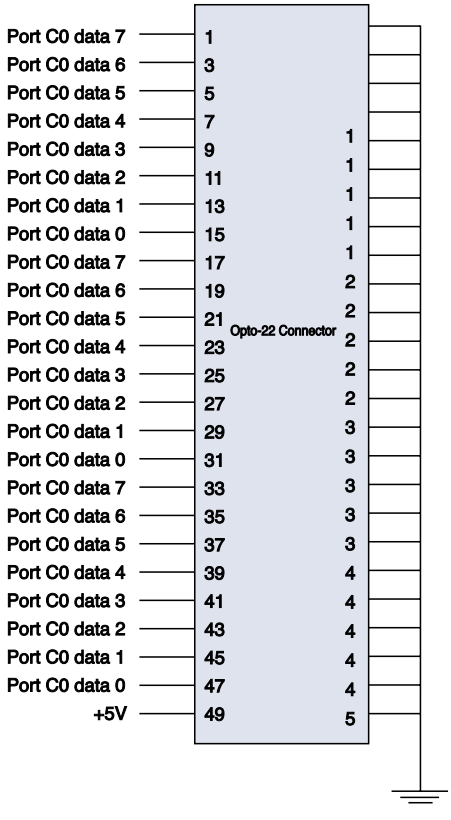
DIN-24P

24-CH Isolation/Dry contact termination board with DIN socket
(include 1 m cable ACL-10250-1)

DIN-24/P24, TB-24P/24

24V input version of DIN-24P & TB-24P

Pin Assignments for 50-pin connector of TB-24P

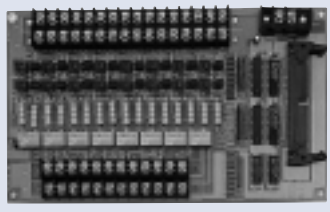


TB-16P8R

Termination Board with 16-CH-Isolated DI & 8-CH Relay

Features

- 16 isolated digital input and 8 SPDT form-C relay output
- 2500V rms isolation voltage
- Maximum 220V DC / 250 V AC switching voltage, 2A DC switching current
- LEDs indicated relay and input status
- 50-pin male mating connector
- Screw terminal for easily filed wiring



Specifications

- Number of isolated DI channels: 16
- Electronics characteristics of isolated DI: refer to the TB-24P's specifications
- Number of relay output channels: 8
- Electronics characteristics of relay: refer to the TB-24R's specifications
- Power requirements:
  - +5V@ 40mA (max.)
  - +12V@ 100mA (max.)
- Operating temperature: 0˚ ~ 60˚C
- Storage temperature: -20˚~ 80˚C
- Operating humility: 5~95%, non-condensing

Dimensions: 220 mm x 132 mm

Ordering Information

TB-16P8R/12

Termination Board with 16 Opto-isolated inputs & 8 relay outputs and 12 volt relay coils. (includes one 1.5 meter 50-pin flat cable)

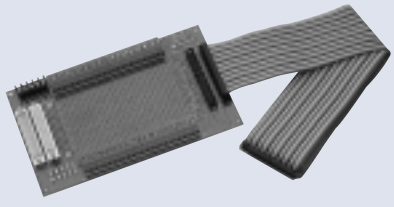
TB-16P8R/24

24V relay coil version

TB-24

General Purpose Termination Board for DB-37 and Opto-22 Connectors

- Connects easily to all 50-pin mating connector or 37-pin D type connector system boards
- Breadboard area for customer design
- 37-pin male D type connector: 2
- 50-pin male mating connector: 2
- Breadboard area: 125 mm x 73 mm



Ordering Information

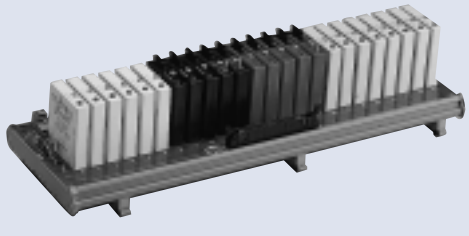
TB-24

General Purpose Termination Board (Includes one 1.5 meter 50-pin flat cable)

DIN-24G

Termination Board for 24-CH Grayhill I/O Modules

- Supports any standard or miniature G5 size modules
- Termination board for installing Grayhill I/O modules
- At most 24 modules can be installed
- Every 8 channels form a group of input or output channels



Ordering Information

DIN-24G

24-CH Grayhill I/O module Termination Board with DIN socket

ACLD Screw Terminal Boards

Features

General

- Low cost universal screw terminal board
- Blank pads accommodate applications such as break detection, low-pass filter, current shunt and voltage attenuator on ACLD-9178, 9188, 9138
- Table-top mounting using nylon standoffs

ACLD-9178

- 40 terminal points for two 20-pin connectors
- Reliable screw clamp terminal blocks
- Dimension: 102 mm x 114 mm

ACLD-9188

- 40 terminal points for two 20-pin flat cable connectors or one DB-37 connectors
- Reliable screw clamp terminal blocks

ACLD-9138

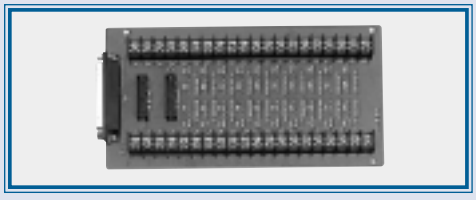
- One 37-pin DB-37 connector
- Blank RC circuits for analog input boards
- Reliable screw clamp terminal blocks

ACLD-9137 / ACLD-9137F

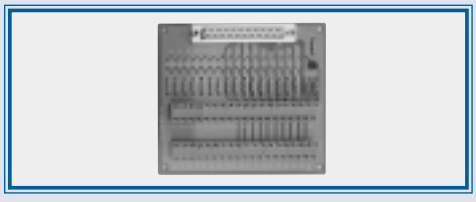
- ACLD-9137 is with 37-pin DB-37 male connector, ACLD- 9137F is with female connector
- Reliable screw clamp terminal blocks

ACLD-9178

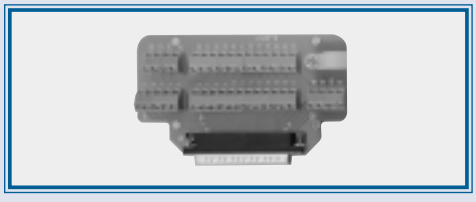
ACLD-9188



ACLD-9138



ACLD-9137



Ordering Information

ACLD-9178
Screw Termination Board for Two 20-pin Headers(Includes two 20-pin flat cable ACL-10120-1)

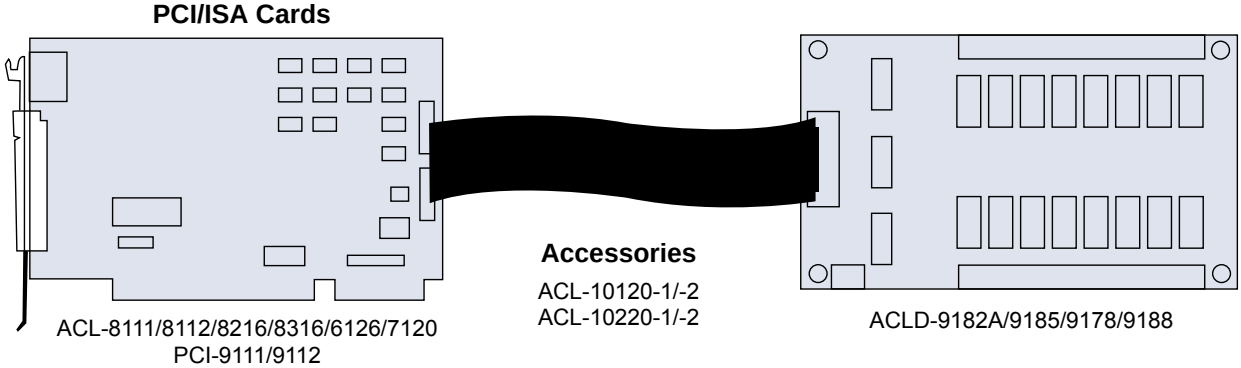
ACLD-9188
Industrial Termination Board

ACLD-9138
Screw Termination Board for DB-37 Connector (Includes 1meter cable ACL-10237-1)

ACLD-9137
Screw termination board with male DB-37 Connector

ACLD-9137F
Screw termination board with female DB-37 Connector

Selection Guide of the 20-pin Header ACLD Termination Board

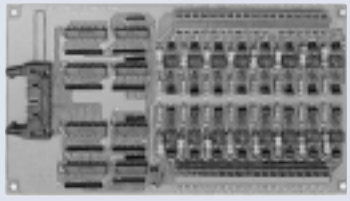


ACLD-9182A

Termination Board with 16-Channel Opto-Isolated Digital Inputs

Features

- 16 Opto-Isolated digital input channels
- For use with 20-pin digital input connector of NuDAQ cards
- AC or DC polarity-free digital input
- On-board LEDs reflect the input logic status
- Screw terminals for easy field wiring
- Isolation and dry contact



Specifications

- Number of channels: 16
- Opto-isolator: 4N35
- Input impedence: 1.2K Ohms
- Input voltage range: 0~24VDC
- Threshold voltage: 1.5VDC
- Isolation voltage: 1,000 Vdc channel-to-channel and channel-to-ground
- Input mode: Isolation and Dry Contact Input Range
- Response time: 20msec without AC filter
- 2.2m sec with AC filter
- Connector: 20-Pin flat ribbon cable connector
- Screw terminal: #22 to #12 AWG wires
- Dimension: 205 mm x 114 mm
- Operating temp.: 0˚~ 60˚C
- Storage temp.: -20˚~ 80˚C
- Humidity: 5~95%, non-condensing

Ordering Information

ACLD-9182A

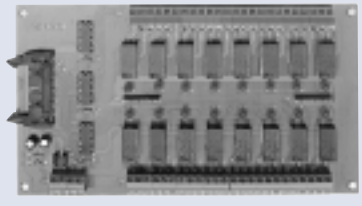
16 Channel Isolation/Non-Isolation DI Terminal Board(includes 1m 20-pin flat cable ACL-10120-1)

ACLD-9185

16-Channel Output Termination Board

Features

- 16 Single-Pole-Double-Throw (SPDT Form C) Relays
- For use with 20-pin digital input connector of NuDAQ cards
- LED Indicators to show relay status
- On-board relay driver circuitry
- Screw terminals for easy field wiring



Specifications

- Number of channels: 16
- Relay type: SPDT (Form C)
- Contact rating:
  - AC 120V/0.5A Resistive
  - DC 30V/1A Resistive
- Breakdown voltage:500VAC 1 min. DC/Peak AC min.
- Relay ON time: 6 msec typical
- Relay OFF time: 3 msec typical
- Control logic: Input TTL High (5V) relay on
- Insulation resistance: 100M Ohms
- Life expectancy: > 5 million operations at full load
- Dimension: 205mm x 114cm
- Operating temp.: 0˚~ 60˚C
- Storage temp.: -20˚~ 80˚C
- Humidity: 5~95%, non-condensing
- Power consumption:
  - +12V:33mA for each relay
  - 528 mA for all relays on
  - +5V: 200mA maximun

Ordering Information

ACLD-9185

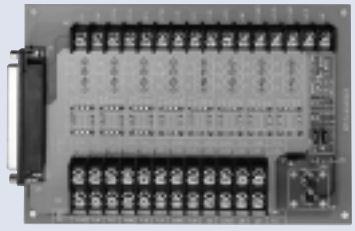
16 Channel Relay Output Terminal Board (includes 1m 20-pin flat cable ACL-10120-1)

ACLD-8125

Termination Board with Cold-Junction Temperature Sensor

Features

- Low cost universal screw terminal board
- Blank pads accommodate applications such as break detection, low-pass filter, current shunt and voltage attenuator
- Table-top mounting using nylon standoffs
- One DB-37 connector for multi-function DAQ boards
- Reliable screw clamp terminal blocks



Specifications

- Cold-junction temperature sensor
  - LM334 & LM335 generate voltage proportional to temperature,
  - Jumper selectable SE or DI output
  - Output to analog input channels #0
  - Power from DB-37 Pin-13: +12V
  - Calibrated by VR
- DB-37 Connector
  - Pin1..8: Single-ended voltage input channel 0~7
  - Pin10..17: Single-ended voltage input channel 8~15 or differential input channel 0~7
  - Analog ground screw terminal for every analog input channels
  - Screw terminal for two analog output and their reference voltage
  - Screw terminal for counter input, output and gate signals
  - Screw terminal for +5V and external A/D trigger
- Dimension: 168 mm x 114 mm

Ordering Information

ACLD-8125

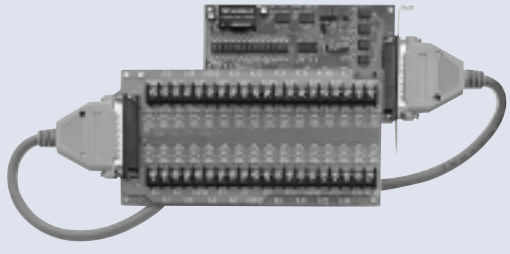
Termination Board with cold-junction temperature sensor

ACLD-9881

Termination Board of General Purpose 32-CH Signal Conditioning

Features

- Low cost universal screw terminal board
- Table-top mounting using nylon standoffs
- Pin definition for 32-CH analog input board such as ACL-8113 and PCI-9113A.
- Blank RC-filter pads accommodate applications such as break detection, low-pass filter, current shunt and voltage attenuator
- Industrial type terminal blocks permit heavy-duty and reliable connection of signals
- One 37-pin connector



Specifications

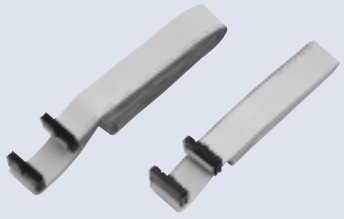
- Number of screw terminals: 40
  - 32-Screw terminal for AI signal
  - 8 Screw terminal for GND
- Number of RC-filter pads: 32
- Dimension: 221mm x 105cm
- Connector: DB-37
- Pin definition: The same as ACL-8113 and PCI-9113A
- Pin 9,10,28,29 are grounding pins.

Ordering Information

ACLD-9881

Terminal board for general purpose 32-CH signal conditioning

Accesories

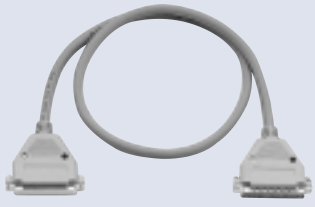


ACL-10120-1/-2
20-pin Flat Cable, 1M/2M

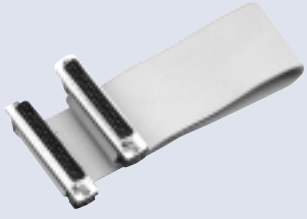
ACL-10220-1/-2
20-pin Shielded & Grounded Cable, 1M/2M

ACL-10232
DB-9 RS-232 male-female Cable, 5M

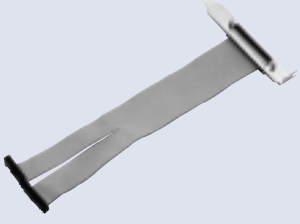
ACL-10137-1/-2
DB-37 Cable, 1M/2M, (male-male)



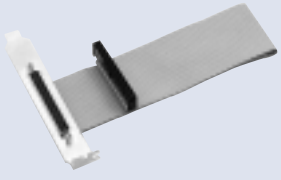
ACL-10137-1 MF
DB-37 1M male/female Cable(for ACLD-9137)



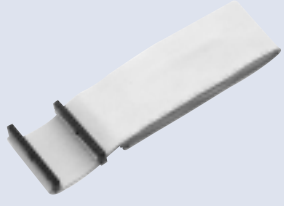
ACL-10237-1
DB-37 Flat Cable, 1M



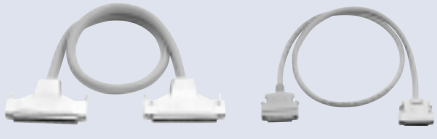
ACL-10337
Two 20-pin header to DB-37 PC back panel



ACL-10437
40-pin Header to DB-37 PC back panel
(for ACL-7225, PCI-7200)



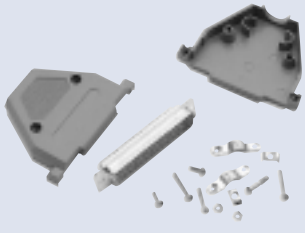
ACL-10150-1.5
50-pin Flat Cable, 1.5M



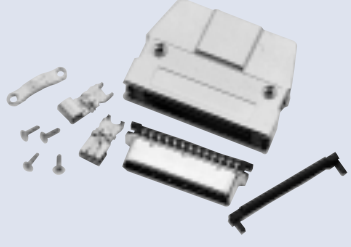
ACL-10250: 50-pin SCSI-II Cable
ACL-102100: 100-pin SCSI-II Cable

ACL-10252
100-pin to 2x50-pin Cable (for DIN-502S)

ACL-10450
50-pin Header to SCSI-II with PC back Panel



ACL-10537
DB-37 Assembly



ACL-10550
50-pin SCSI-II Assembly

ACL-105100
100-pin SCSI-II Assembly

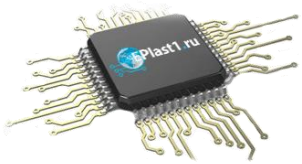
Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits,General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

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