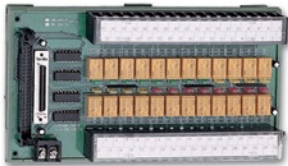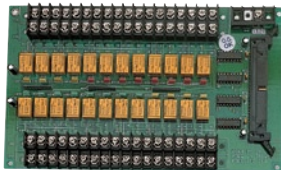# DIN-24R-01, TB-24R-01

Terminal Boards with 24-CH Relay Outputs

DIN-24R-01

TB-24R-01

Introduction

The DIN-24R-01 and TB-24R-01 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-7224, PCI-7248, PCI-7296, ACL-7112, ACL-7124, PET-48DIO, and ND-6058.

Each relay's switching capacity is 60 W, 125 V_{AC} The normally closed, and common contacts for each relay are made available for maximum flexibility.

Features

- 24-CH single-pole, double-throw (SPDT form C) relay outputs
- 50-pin Opto-22 compatible connector
- Maximum switching voltage 220 V_{DC}/250 V_{AC}
- Maximum switching current up to 2 $A_{DC/AC}$
- LED indicator for relay status
- Onboard relay driver circuitry
- Screw terminals for easy filed wiring
- DIN socket available on DIN-24R-01
- 50-pin SCSI-type connector available on DIN-24R-01 to interface with ND-6058

Specifications

- Relay Output
  - Number of channels: 24
  - Relay Type: SPDT (Form C)
  - Contact Rating
    - ♦ AC: 125 V @ 0.6 A
    - ♦ DC: 30 V @ 2 A
  - Breakdown Voltage: 1500 V_{RMS}
  - Contact Resistance: 50 mΩ
  - Relay ON/OFF Time
    - ♦ Operate time: 3 ms
    - ♦ Release time: 3 ms
  - LED Indicators for Relay Status: per channel
  - Expected Life: 5 x 105 operations @ 2 A, 30 V_{DC}
  - External Coil Excitation Voltage:
    - ♦ 12 V nominal, 19.2 V maximum (TB-24R/12-01 & DIN-24R/12-01)
    - ♦ 24 V nominal, 38.5 V maximum (TB-24R/24-01 &DIN-24R/24-01)

- I/O Connector
  - 50-pin ribbon male
  - 50-pin SCSI-II female
- Operating Temperature: 0°C to +60°C
- Storage Temperature: -20°C to +80°C
- Relative Humidity: 5% to 95%, non-condensing
- Power Consumption:

	+12 V	+24 V
TB-24R/12-01 DIN-24R/12-01	288 mA maximum	-
TB-24R/24-01 DIN-24R/24-01	-	44 mA maximum

- Dimensions
  - TB-24R-01: 220 mm x 132 mm x 15 mm (W x L x H)
  - DIN-24R-01: 203 mm x 120 mm x 55 mm (W x L x H)
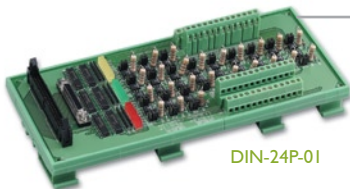
Ordering Information

- **TB-24R/12-01**
  Terminal board with 24-CH relay outputs @ 12 V coil voltage
- **TB-24R/24-01**
  Terminal board with 24-CH relay outputs @ 24 V coil voltage
- **DIN-24R/12-01**
  Terminal board with 24-CH relay outputs @ 12 V coil voltage and DIN-rail mounting
- **DIN-24R/24-01**
  Terminal board with 24-CH relay outputs @ 24 V coil voltage and DIN-rail mounting
- **Accessory**
  - Cabling
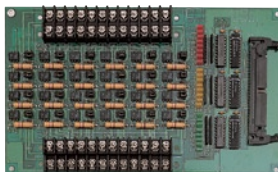   ACL-10150-: 50-pin flat cable

  Contact your sales representative for cable length options.

DIN-24P-01, TB-24P-01

Terminal Boards with 24-CH Opto-Isolated Digital Inputs

DIN-24P-01

TB-24P-01

Introduction

The DIN-24P-01 and TB-24P-01 digital input terminal boards feature high-voltage optoisolation on all input channels. They provide 24 channels that are accessed through a single 50-pin connector that is standard on the NuDAQ digital I/O boards, including ACL-7122, ACL-7124, PET-48DIO, PCI-7224, PCI-7248, PCI-7296 and ND-6058. Each channel's input mode is configurable via jumper settings.

Features

- 24-CH opto-isolated digital inputs
- 50-pin opto-22 compatible connector
- Non-polarity digital input range
- Isolated input voltage up to 24 V
- 5000 V_{RMS} optical isolation
- Jumper configurable for voltage input or dry-contact input mode
- LED indicator for input status
- Screw terminals for easy field wiring
- DIN socket is available on DIN-24P-01
- 50-pin SCSI-type connector available on DIN-24P-01 to interface with ND-6058

Specifications

- Input Modes
  - Voltage input
  - Dry contact input
- Isolated Digital Input
  - Number of channels: 24, maximum
  - Maximum input range: 24 V, non-polarity
  - Digital logic levels
    - ♦ 0 to 24 V, non-polarity
      * Input high voltage: 5 V to 24 V
      * Input low voltage: 0 to +1.5 V
  - Input resistance: 1.2 kΩ @ 0.5 W
  - Isolation voltage: 5000 V_{RMS}
- Dry Contact Input
  - Number of channels: 24
  - Internal pull-up voltage supply: +5 V_{DC}
- LED Indicators for Input Status: one per channel

- I/O Connector
  - 50-pin ribbon male
  - 50-pin SCSI-II female
- Operating Temperature: 0°C to +60°C
- Storage Temperature: -20°C to +80°C
- Relative Humidity: 5% to 95%, non-condensing
- Power Requirement:

+5 V
40 mA maximum

- Dimensions
  - TB-24P-01: 220 mm x 132 mm x 23 mm (W x L x H)
  - DIN-24P-01: 259 mm x 121 mm x 55 mm (W x L x H)

Ordering Information

- **TB-24P/24-01**
  Terminal Board with 24-CH isolated digital inputs
- **DIN-24P-01**
  Terminal Board with 24-CH isolated digital inputs and DIN-rail mounting
- **Accessory**
  - Cabling
    ACL-10150: 50-pin flat cable

  Contact your sales representative for cable length options.

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