Installation

ATTENTION

If this instrument is used in a manner not specified by the manufacturer, the protection provided by the instrument may be impaired.

Warning

To avoid the risk of electrical shock which could cause personal injury, follow all safety notices in this documentation.

Protective earth terminal. Provided for connection of the protective earth supply system conductor.

- POWER SUPPLY
  Ensure the source voltage matches the supply voltage of the video recorder before power on. (In the rear of the video recorder, near to the connector of the power supply)
- PROTECTIVE GROUNDING
  Make sure to connect the protective grounding to prevent an electric shock before power on.
  Do not operate the instrument when protective grounding or fuse might be defective.
  To avoid a potential shock hazard, never cut off the internal or external protective grounding wire or disconnect the wiring of protective grounding terminal.
- FUSE
  To prevent a fire, make sure to use the appropriate fuse (current voltage, type). Before replacing the fuse, turn off the power and disconnect the power source. Do not use a different fuse or short-circuit the fuse holder.
- DO NOT OPERATE IN AN EXPLOSIVE ATMOSPHERE
  Do not operate the instrument in the presence of flammable liquids or vapors. Operation of any electrical instrument in such an environment constitutes a safety hazard.
- NEVER TOUCH THE INTERIOR OF THE INSTRUMENT
  Inside this instrument, there are areas of high voltage; therefore, never touch the interior if the power is connected. This instrument has an internal changeable system; however, internal inspection and adjustments should be done by qualified personnel only.
- If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.
- Do not replace any component (or part) not explicitly specified as replaceable by your supplier.
- INSTALL INDOOR ONLY

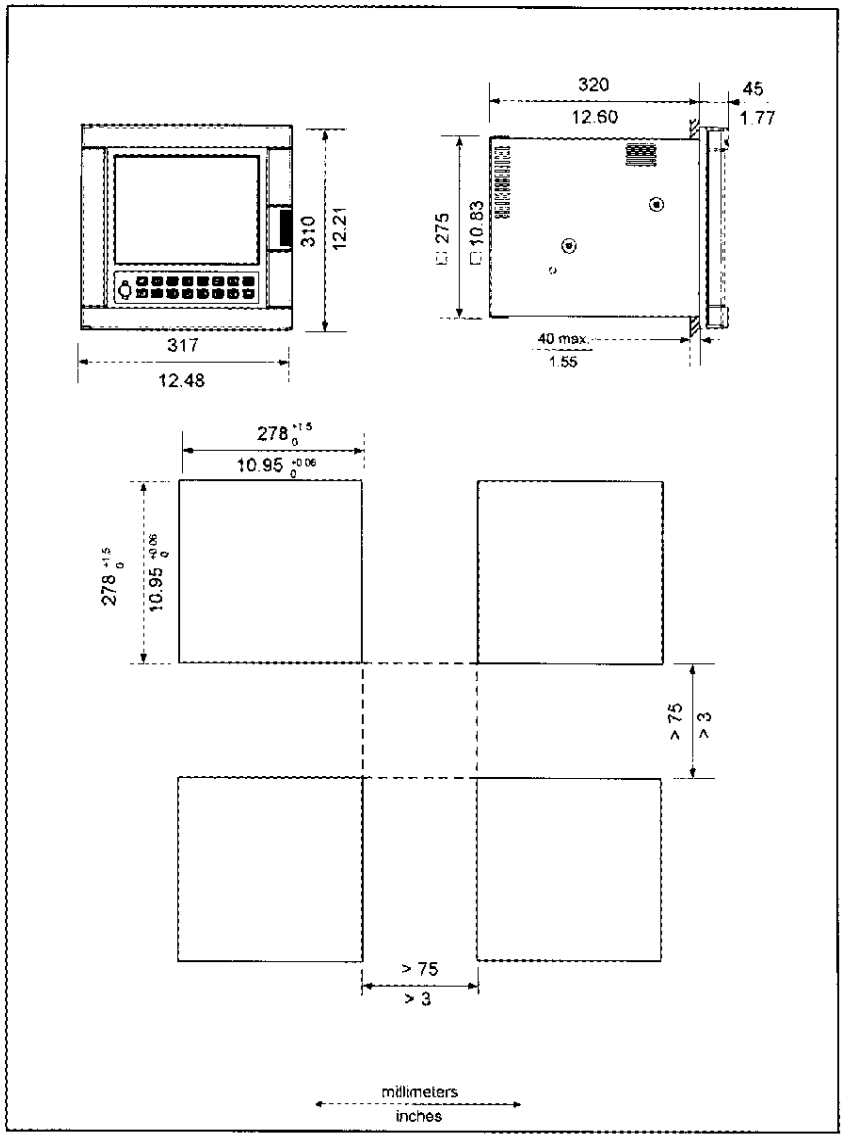
Panel mounting the video recorder

Recommendations

This video recorder is designed to operate under specific conditions. If you need more information, refer to the product specification sheet.

External dimensions and cut-out

Prepare panel cut-out as detailed below:



NOTE: Panel thickness 40 mm (1.55")

ATTENTION

The maximum temperature inside the cabinet should not exceed the ambient conditions specific for the video recorders.

The video recorder must be mounted into a panel to limit operator access to the rear terminals.

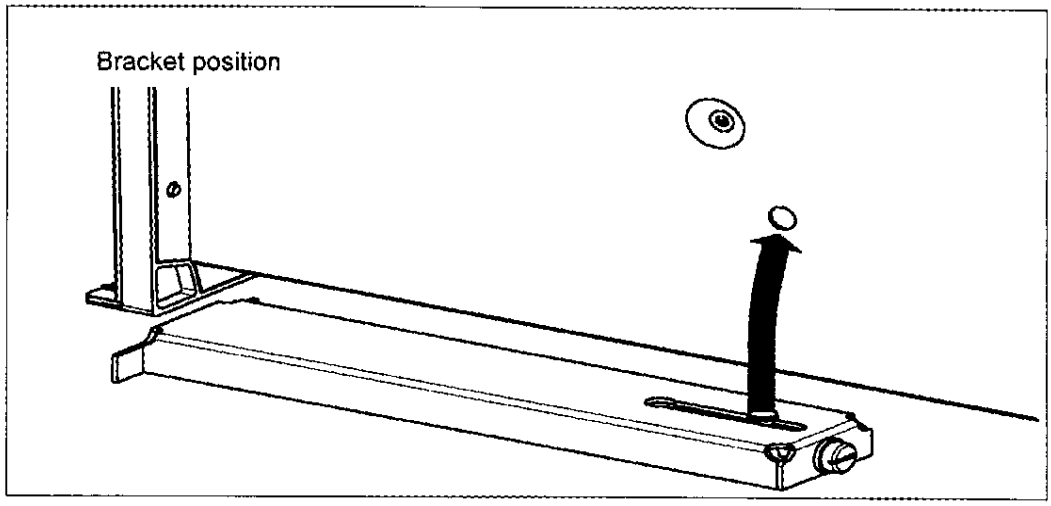
Installing the video recorder

To install the video recorder, follow the figure below:

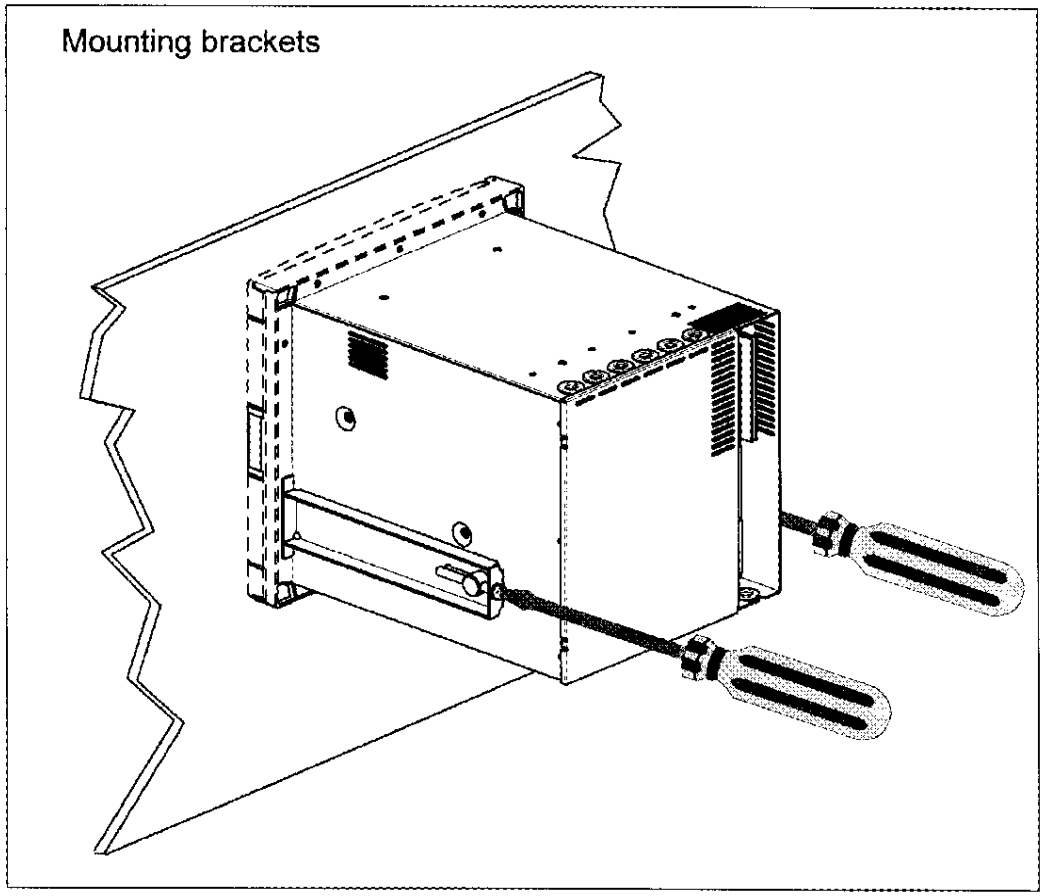
Step 1: Remove rear cover and wire access holes

Step 2: Insert video recorder through the panel cutout

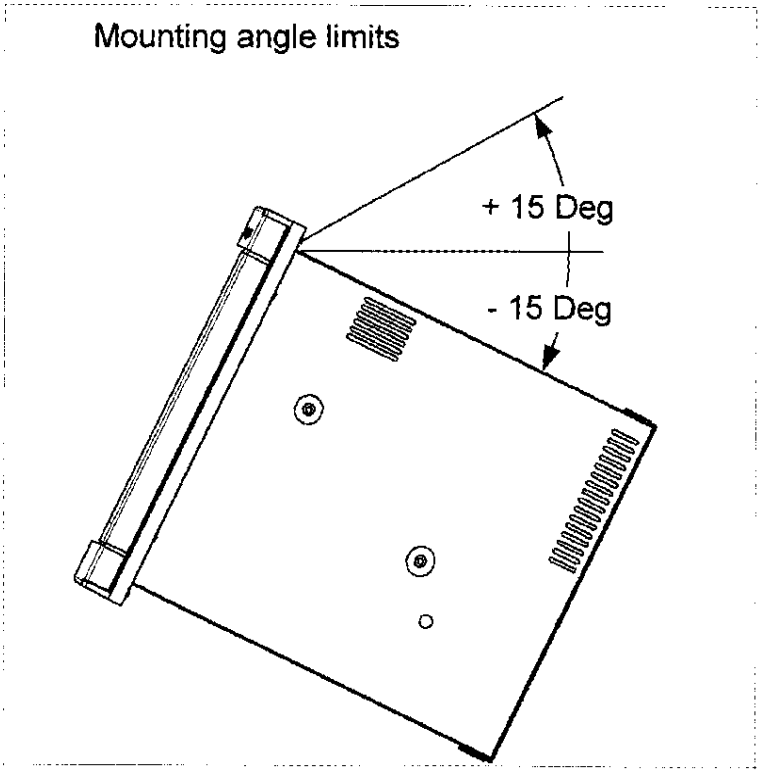
Step 3: Attach mounting brackets to the sides of the video recorder



Step 4: Tighten the mounting screws



NOTE: When installing the video recorder, the following limits should be respected:



Wiring the video recorder

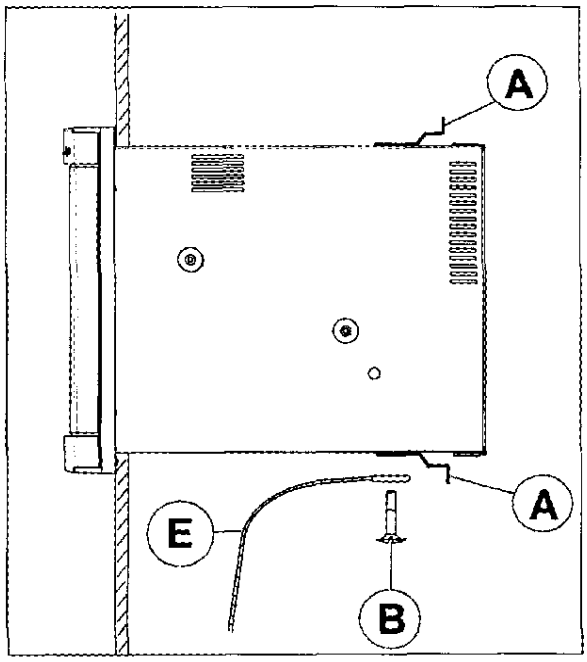
Recommendations

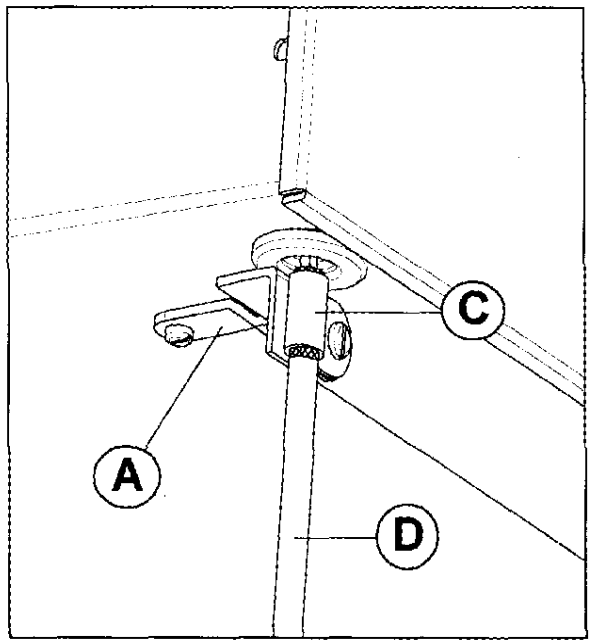
- All wiring must be in accordance with local electrical codes and should be carried out by authorized and experienced personnel.
- the ground terminal must be connected before any other wiring (and disconnected last).
- A switch in the main supply is mandatory near the equipment.
- If an external fuse is used to protect the electrical circuit to the video recorder, the fuse should match the video recorder fuse rating (fuse type) as well as for the fuseholder.
- Sensor wiring should be run as far as possible from power wiring. (motors, contactors, alarms, etc.)
- To reduce stray pick-up, we recommend the use of a twisted pair sensor wiring.
- EMI effects can be further reduced by the use of shielded cable sensor wiring. The shield must be connected to the ground terminal.

EXAMPLE:

Rep. A: Cable retaining bracket (46210075-501)
Rep. B: Grounding screw
Rep. C: Clamp
Rep. D: Shielded cable (inputs)
Rep. E: External grounding cable

- The use of spade terminals on all wiring is recommended.

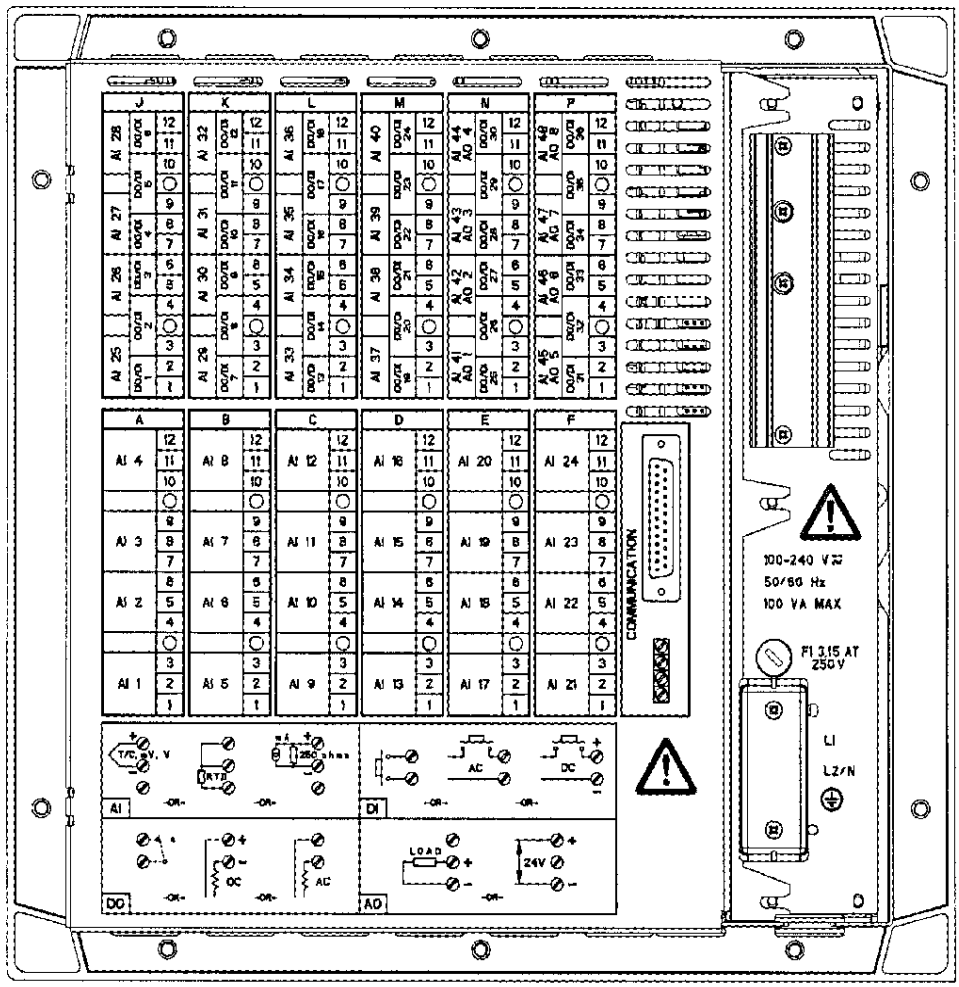




Terminal connections

Rear cover

The rear cover protects the I/O boards terminal connectors. On the rear cover, a drawing reminds the user of the terminals use.

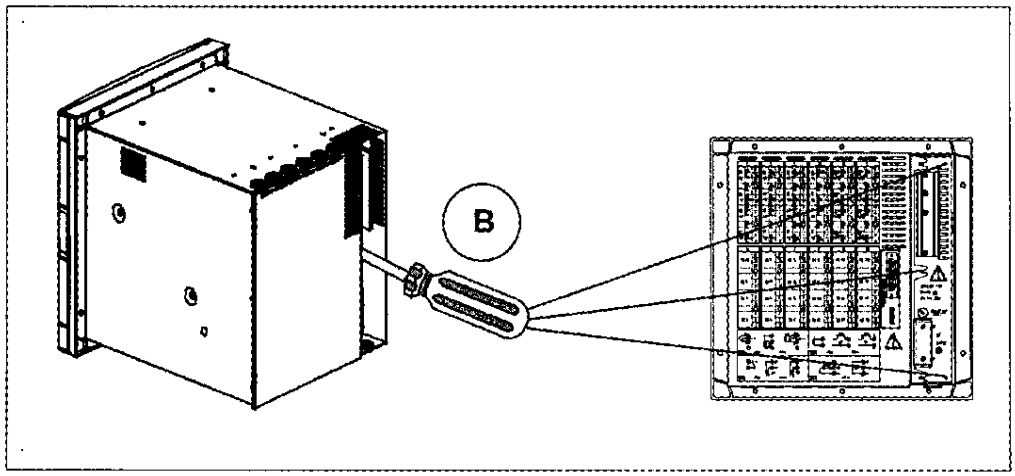


	Positions
AI = Analog input	From **A** to **F** + **J** to **P** (Upper and lower rack)
AO = Auxiliary output	From **N** to **P** (Upper rack)
DI = Digital input	From **J** to **P** (Upper rack)
DO = Digital output (relay)	From **J** to **P** (Upper rack)

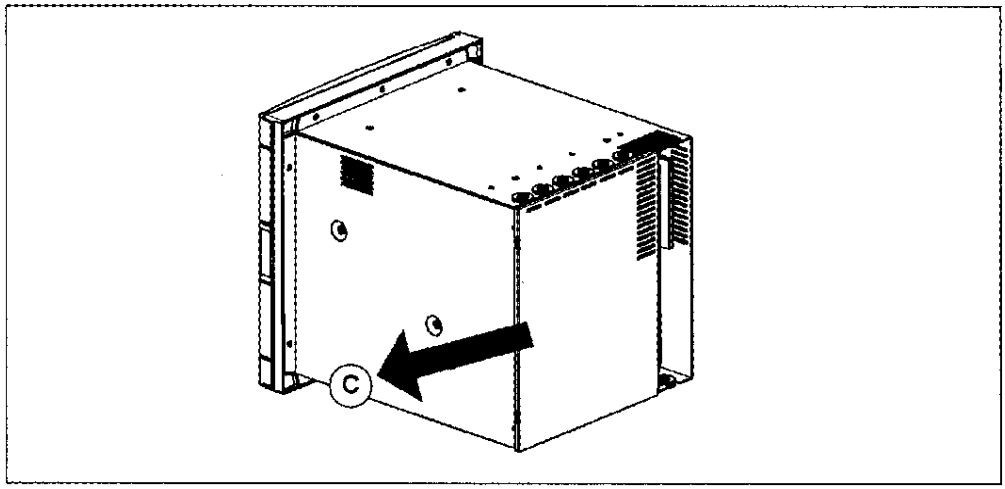
Note: Terminal blocks can be removed from the board for easier wiring and board replacement.

Removing the rear cover grants access to the terminals location:

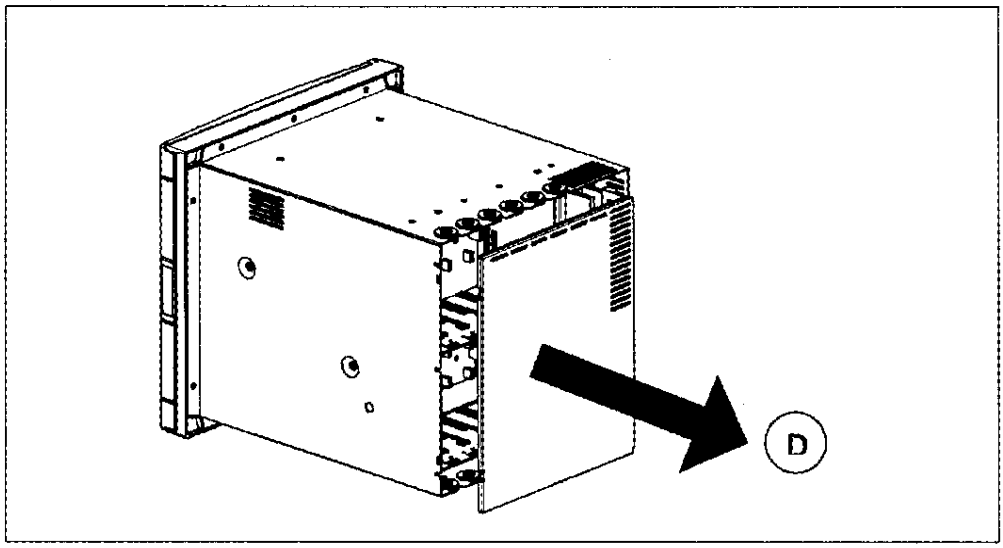
Step A: Turn off power
Step B: Loosen screws holding rear cover



Step C: Slide rear cover to the left



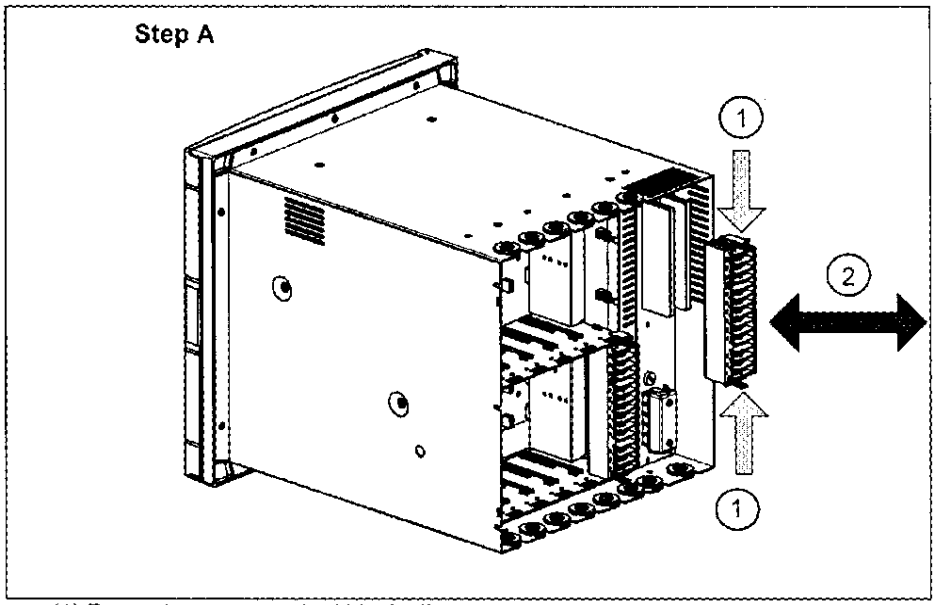
Step D: Remove rear cover



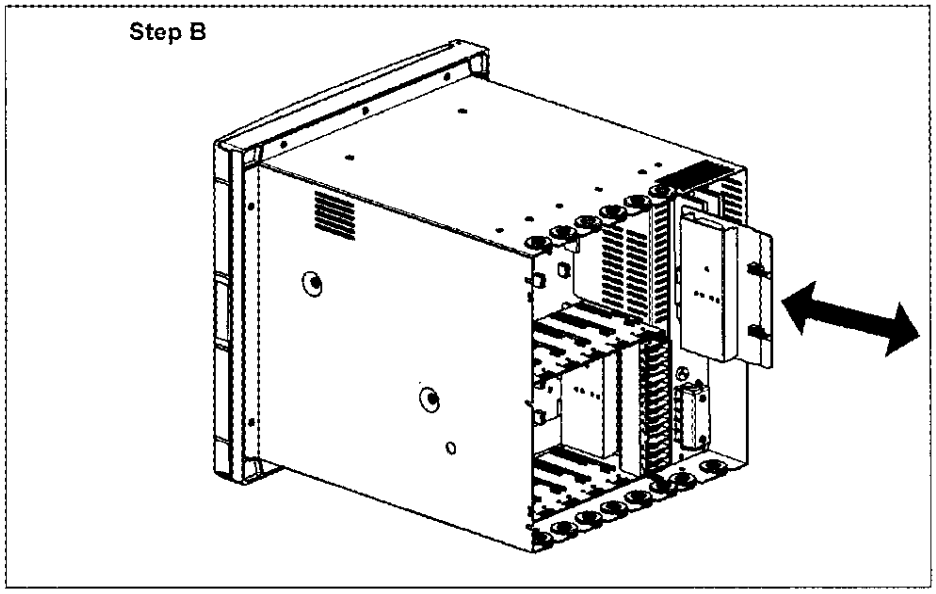
Inserting and extracting inputs and outputs board:

Steps A and B show how to insert or extract a board from the video recorder.

To extract a board: Step A then Step B.
To insert a board: Step B then Step A.



(1) Press down on terminal block clips
(2) Pull in or out to insert or remove from board



Pull in or out on the board to insert or remove from video recorder

Analog input boards

A universal Analog Input board accepts a variety of input signals from field devices. Figure 2-1 illustrates the terminal block connections for the various inputs. One AI board can be configured to accept multiple input types.

Table 2-1 Universal Analog Input Board Specifications

Specification	Description
Input Types	mV, V, mA, T/C, RTD, and Ohms
Number of Inputs	4 per board, up to 12 boards per video recorder (48 inputs)
Signal Source	Thermocouple with cold junction compensation, for operation between 0 to 80° C (32 to 176° F) Line resistance up to 1000 ohms, T/C, mV, mA, V RTD Pt 100 3-wire connections, 40 ohms balanced max.
Input Impedance	10 Meg Ω for T/C, mV inputs, > 1 Meg Ω for volt inputs

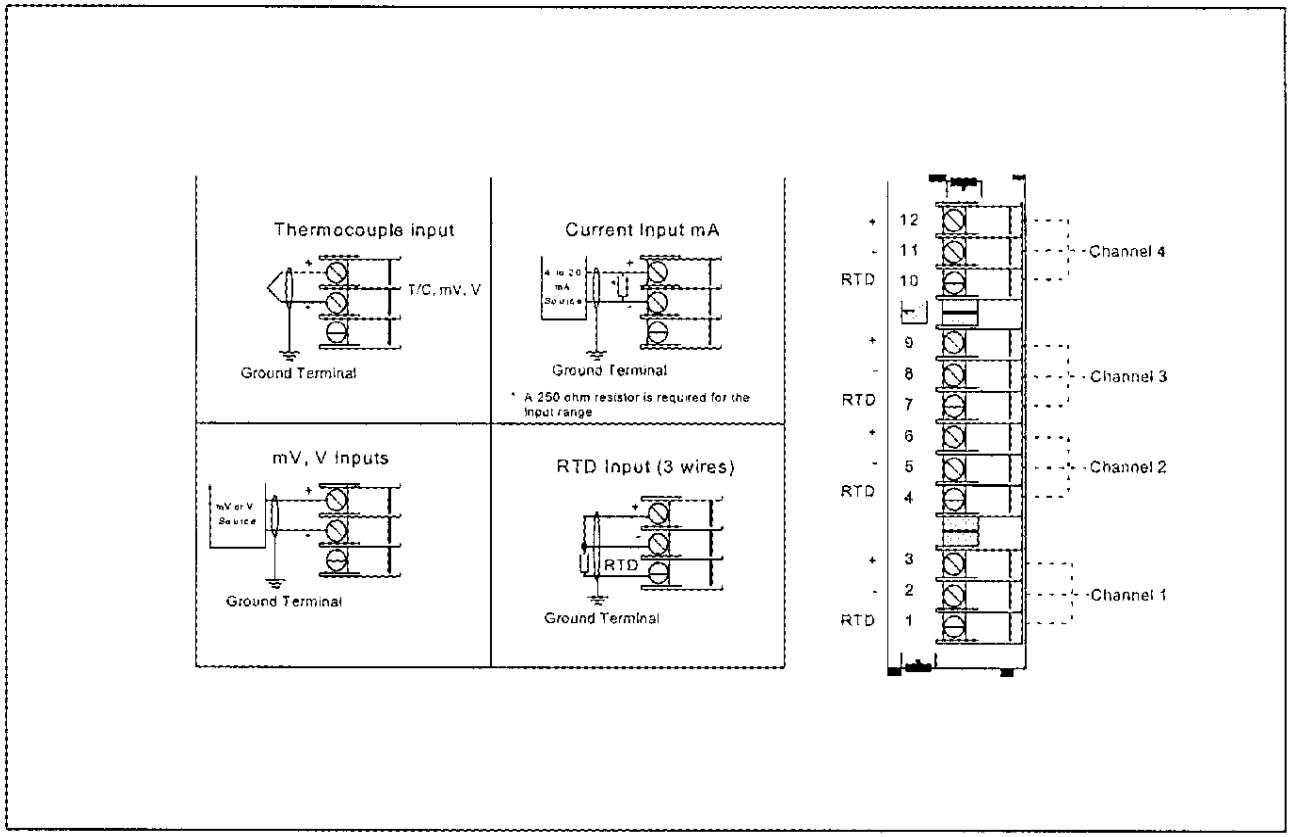


Figure 2-1 AI Board Terminal Block Connections

Digital Inputs Boards

Three types of Digital Input (DI) boards accept three types of input signals.

1. Logic Input
2. DC Input
3. AC Input

Each type is described on the following pages. Figure 2-2 shows the terminal block connections for all DI boards. See Section 1 for details on all I/O board specifications.

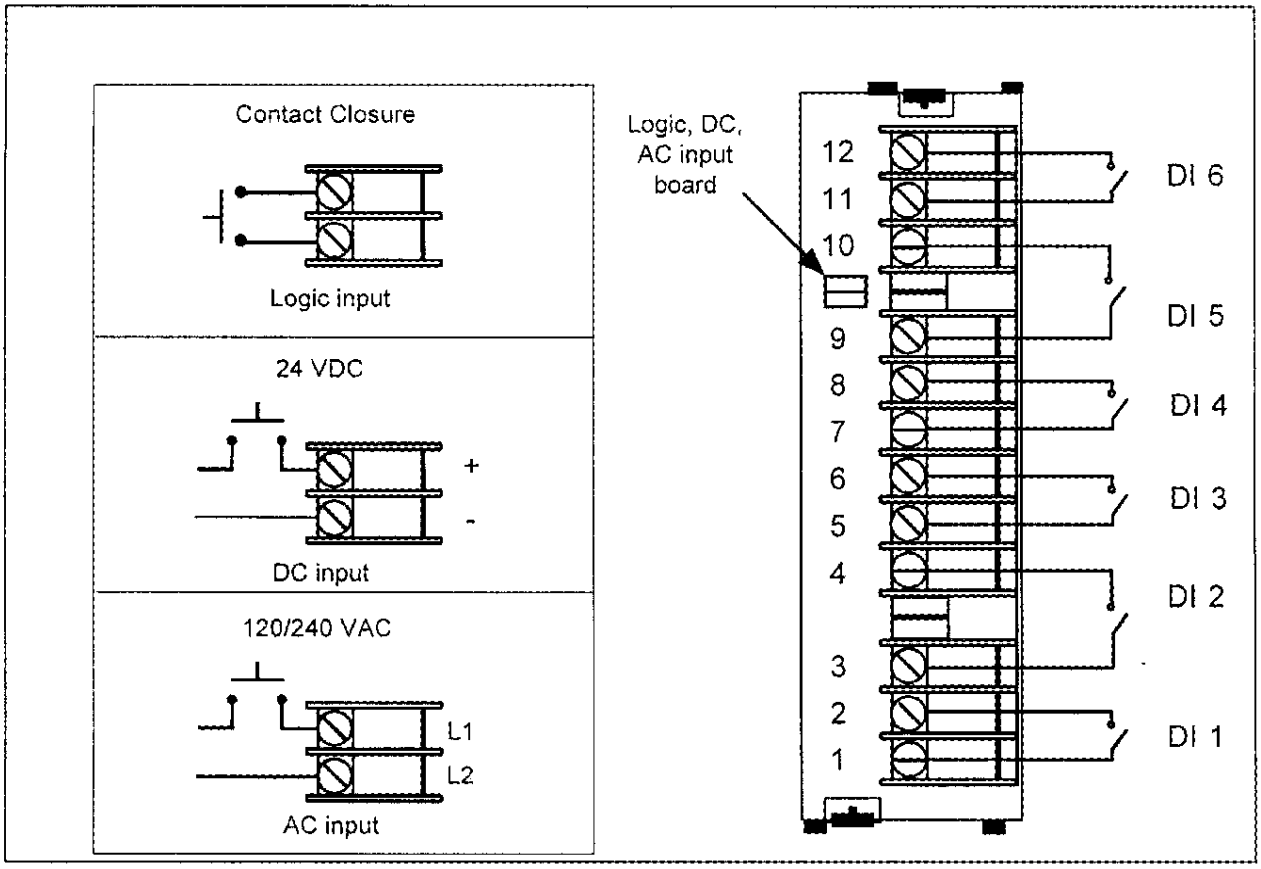
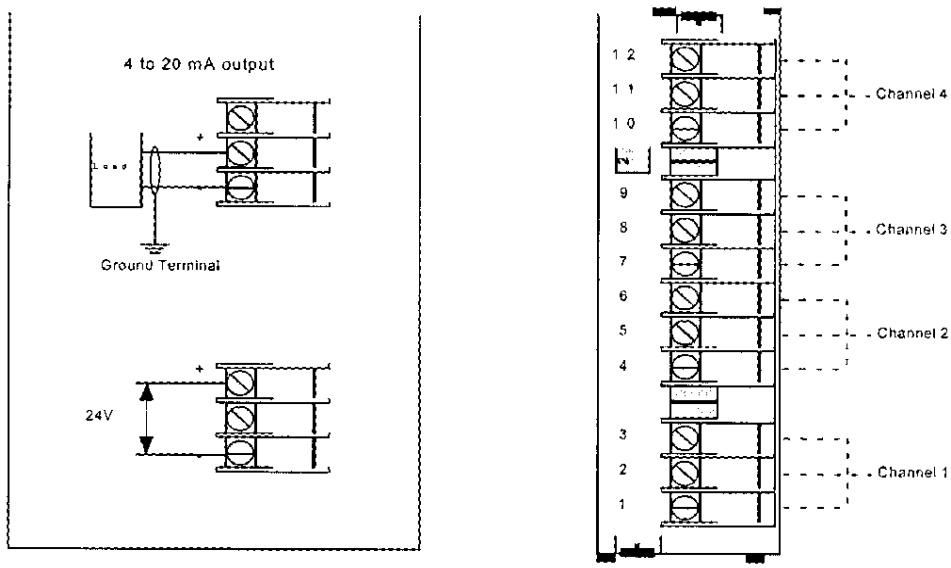


Figure 2-2 DI Board Terminal Block Connections

Analog Outputs

The Analog Output (AO) board provides four outputs at 0 to 20 mA (configurable for 4 to 20 mA or any span between 0 to 20 mA). When not used for an analog output, an output channel may be used to power a transmitter with 24 Vdc power. The video recorder will support up to two AO boards, for a total of eight outputs. Figure 2-3 shows the terminal connections for the AO board. See Section 1 for details on all I/O board specifications.



NOTE - Channels not used as analog outputs can be used to supply a transmitter with 24 Vdc power.

Figure 2-3 AO Board Terminal Block Connections

Digital Outputs

There are three types of Digital Output (DO) boards which provide three types of Off/On control.

1. Relay (alarm) Output
2. DC Output
3. AC output

Figure 2-4 shows the terminal block connections for the DC output and AC output DO boards. See Section 1 for details on all I/O board specifications.

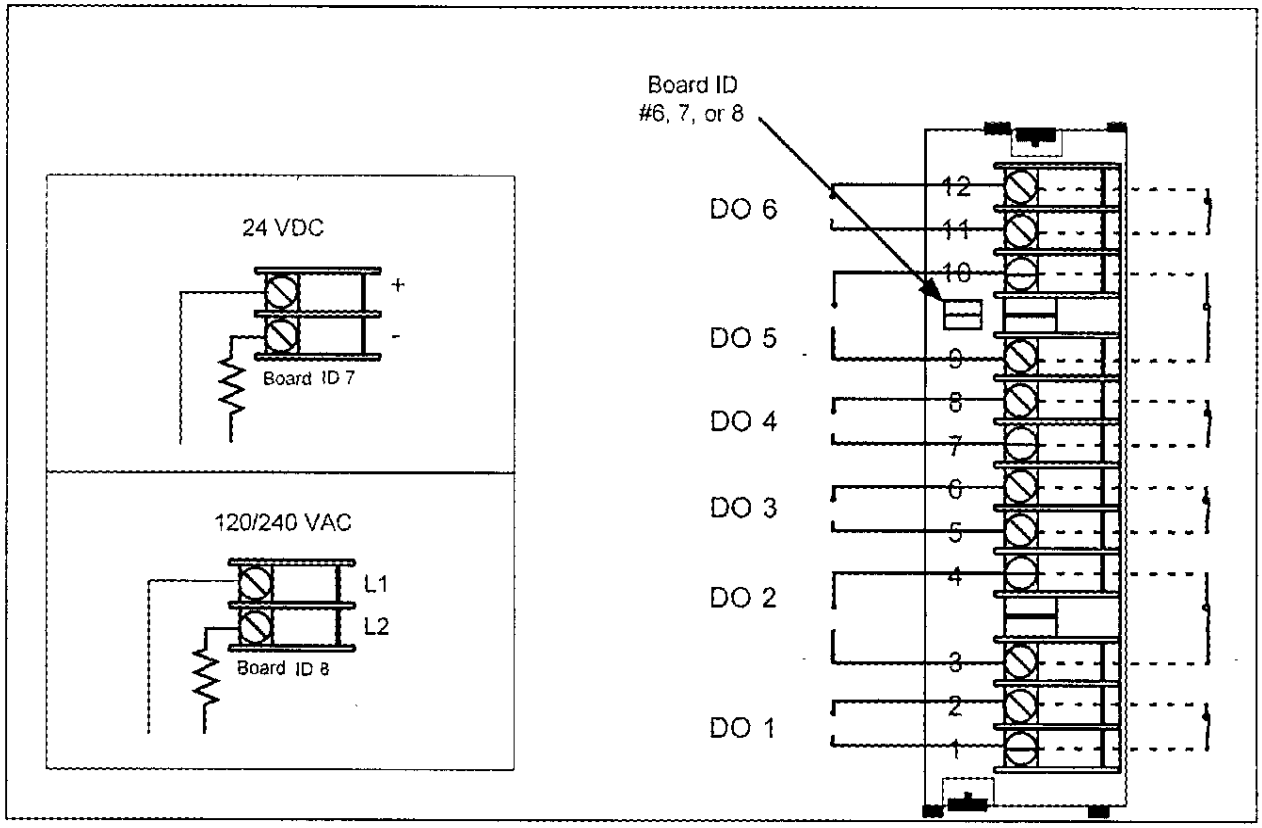


Figure 2-4 DO Board Terminal Block Connections

The Digital Output board with relay outputs contain jumpers to set the de-energized state of the relay contacts. The relays are factory set to normally open (NO) for each output on the relay alarm board, as shown in Figure 2-5.

To change the state of the contacts: Use a pair of needle-nose pliers and move the jumper from the location NO (normally opened) to the location NC (normally closed).

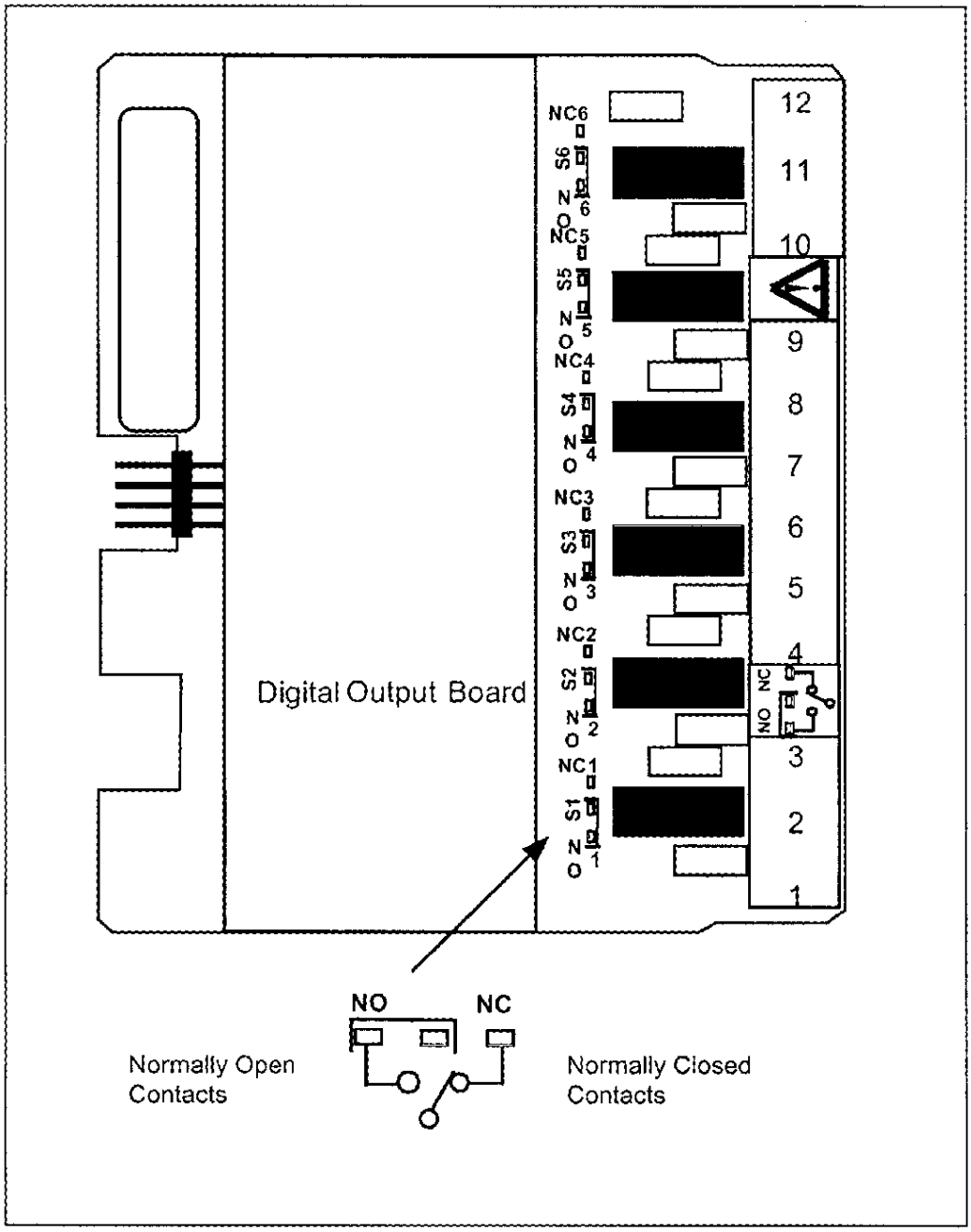


Figure 2-5 DO Board Relay Contact Setting