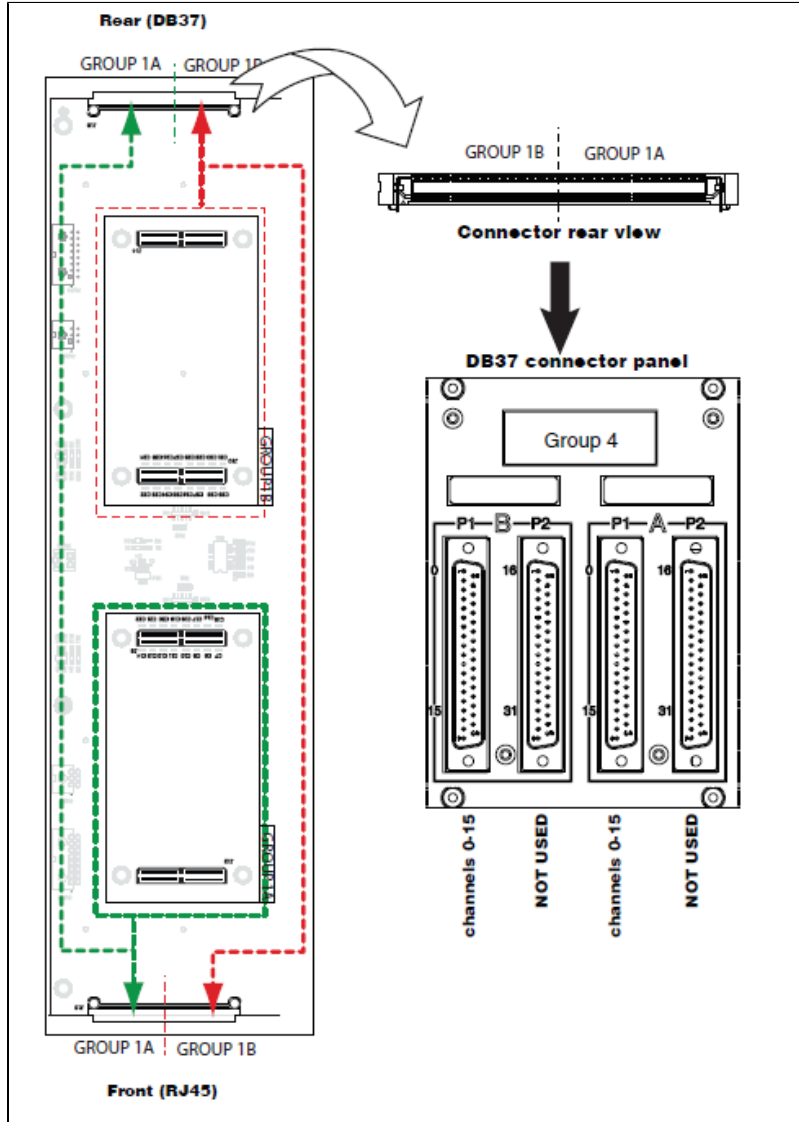


# OP5705XG IO Connectors

- DB37F Connectors
  - Analog I/O Modules
  - Digital I/O Modules
    - Positive/Negative Signals Connection
- RJ45 Connectors
  - RJ45 Channel Assignments

## DB37F Connectors

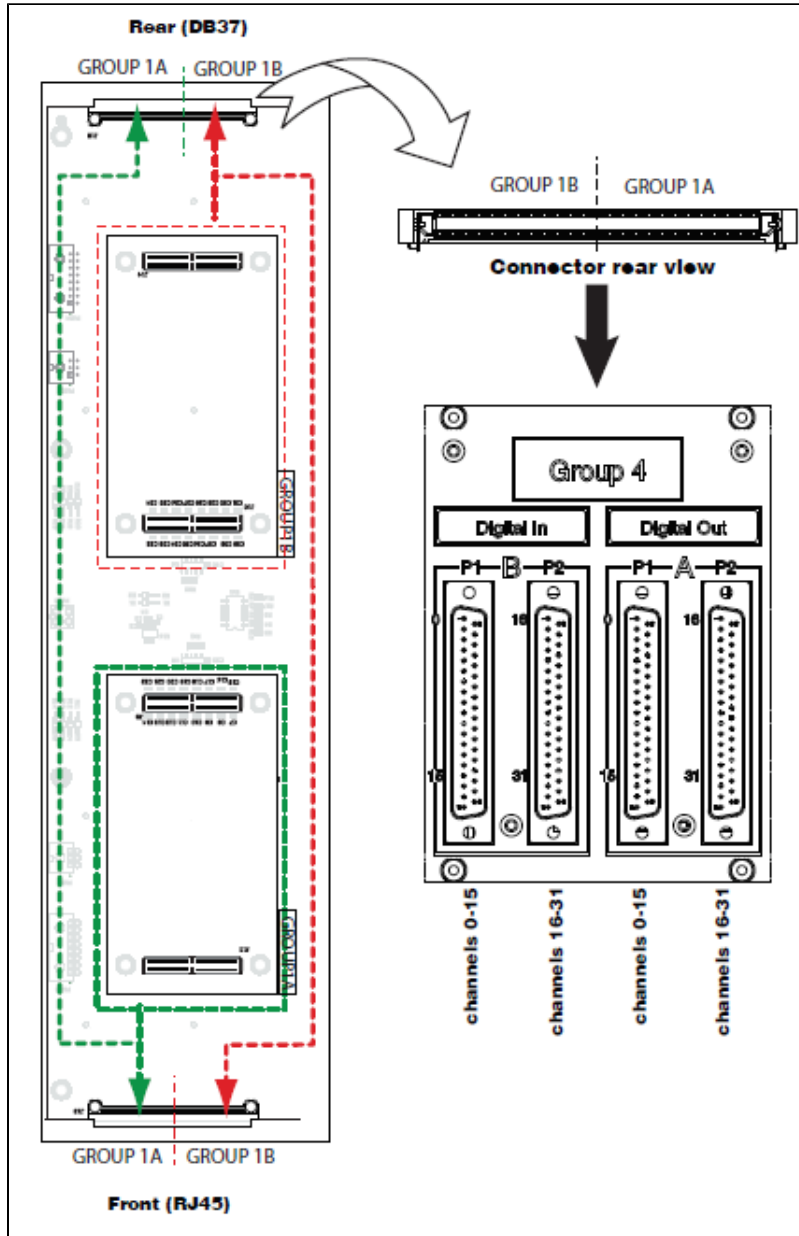
### Analog I/O Modules



Each pair of I/O modules (A & B) is linked to four (4) female DB37 connectors (I/Os) on the back of the chassis:

- The first two connectors (left to right) represent channels from Group B, which are linked to the conditioned channels from the rear I/O module.
- The last two connectors (left to right) represent channels from Group A, which are linked to the conditioned channels from the front I/O module.
- If the front I/O module is an analog module (DAC or ADC), the 16 channels are on connector A and connector B does not carry any signals.
- If the back I/O module is an analog module (DAC or ADC), the 16 channels are on connector C and connector D does not carry any signals.

## Digital I/O Modules



- If the front I/O module is a digital module (Din or Dout), the first 16 channels (00 to 15) are on the first connector, and the next 16 channels (16 to 31) are on the second connector.
- If the back I/O module is a digital module (Din or Dout), the first 16 channels (00 to 15) are on the first connector, and the next 16 channels (16 to 31) are on the second connector.

All signals are represented by a **positive-negative pair** that are **always available on the connector pins**, for example: for channel 08 : (08+, -08)

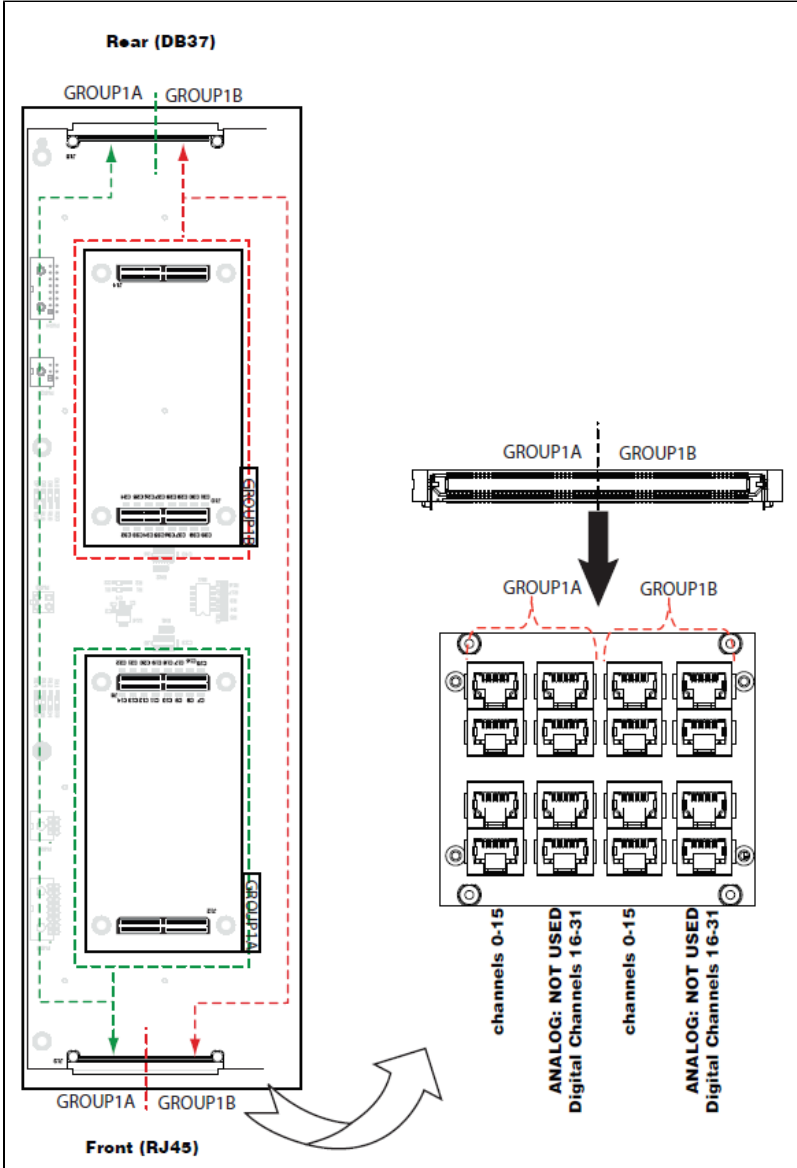
### Positive/Negative Signals Connection

- For a **single-ended output**, the **negative conductor** is connected to **Ground**
- For a **differential output**, the **positive** and negative signals are on the **connector**
- For a **differential input**, the connection must be **between the positive/negative pair**
- If the **input is single-ended**, **user's ground** must be connected to the **negative side of the pair**

## RJ45 Connectors

Each RJ45 monitoring panel on the front of the OP5705XG simulator **connects to front and back I/O modules**. The following images illustrate how the I/O modules are linked to the connectors.

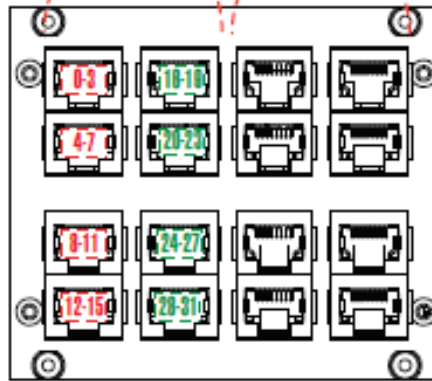
OP5705XG Rear (DB37)



RJ45 Channel Assignments

Each I/O module is assigned two columns of RJ45 connectors. Each column represents a series of channels, divided into 4 channels per jack, as shown in the figure below.

SLOT xA      SLOT xB



Column 1:  
Channels 0-3  
Channels 4-7  
Channels 8-11  
Channels 12-15

Column 2:  
Channels 16-19  
Channels 20-23  
Channels 24-27  
Channels 28-31

Analog boards use only channels 0-15

Digital boards use channels 0-31