AUTOMATICS

PLC Adaptor Guidelines
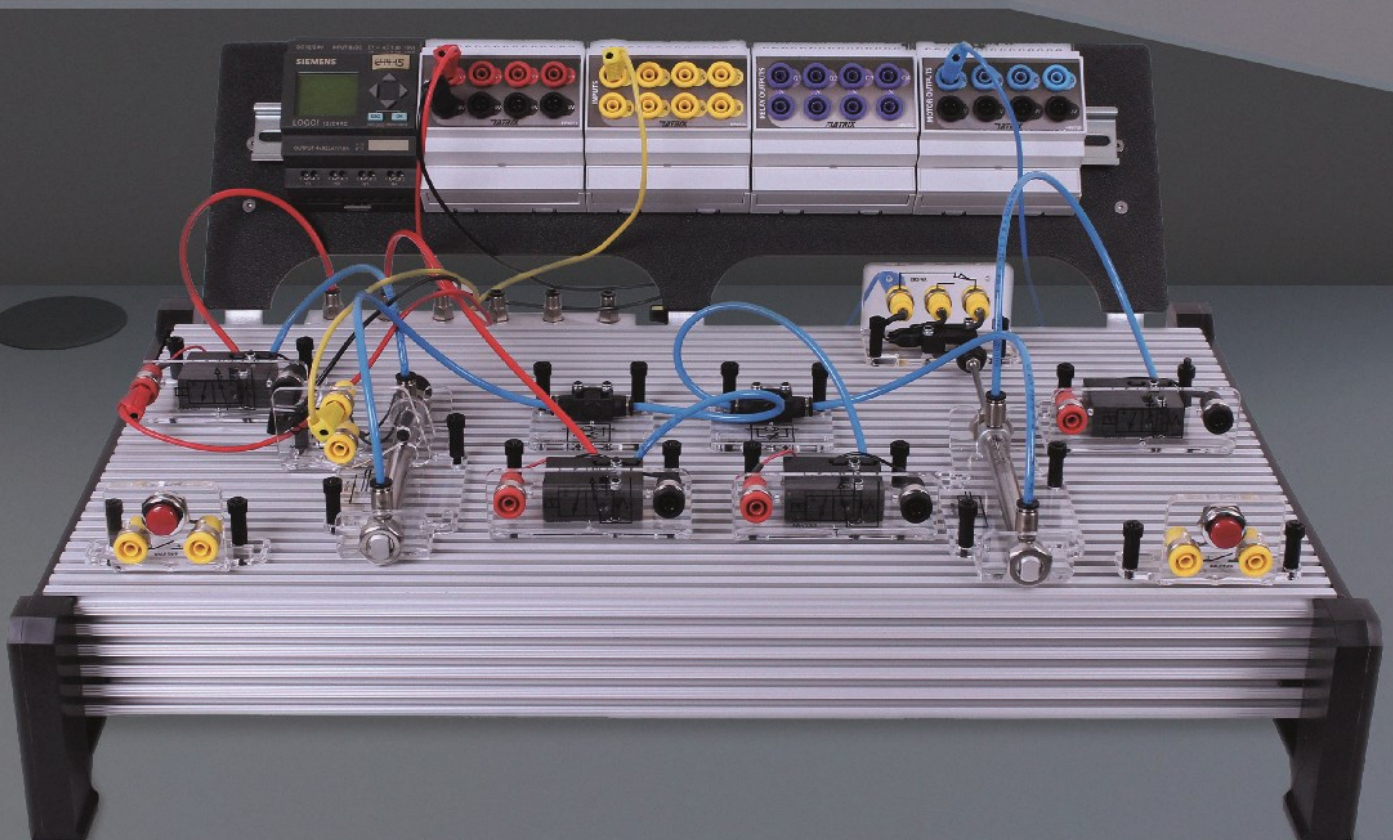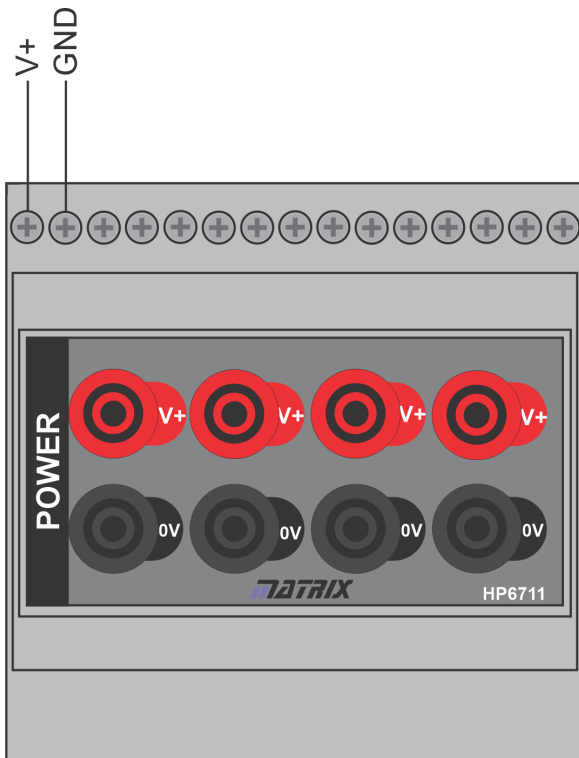
Products

HP6711

The HP6711 requires only 2 connections to the PLC module, V+ and GND, and is wired as seen in the diagram below. The module then provides 4 common V+ connections, and 4 common GND connections.
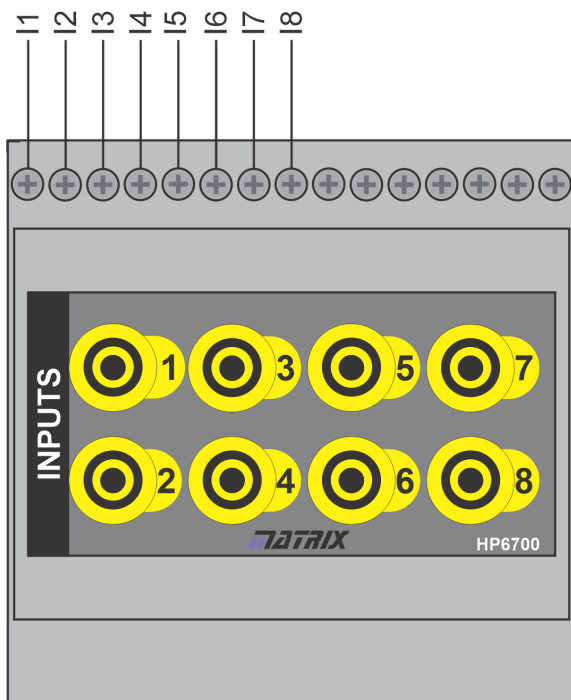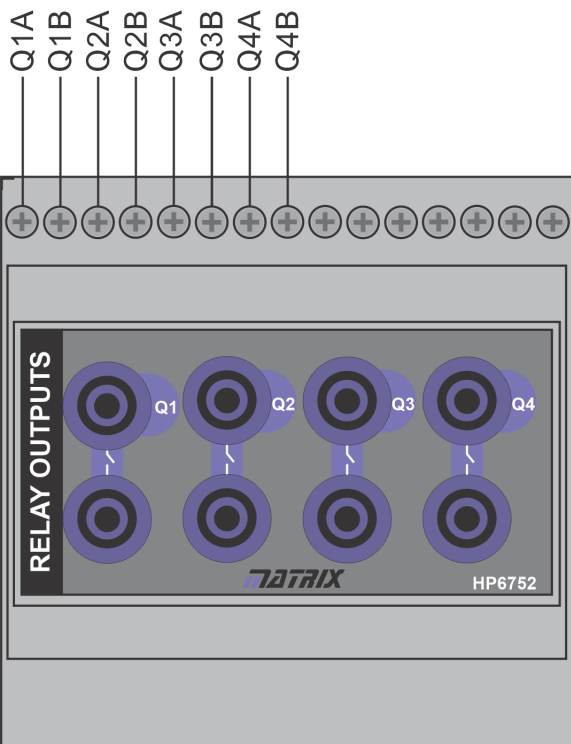
HP6700

The HP6700 allows users to connect 8 inputs into the PLC module (number of inputs on the PLC determines how many of the 8 inputs can be used on the HP6700). The diagram shows the wiring diagram for the HP6700 using all 8 inputs.

Products

A B C D GND

MOTOR OUTPUTS

A B C D

0V 0V 0V 0V

MATRIX HP6723
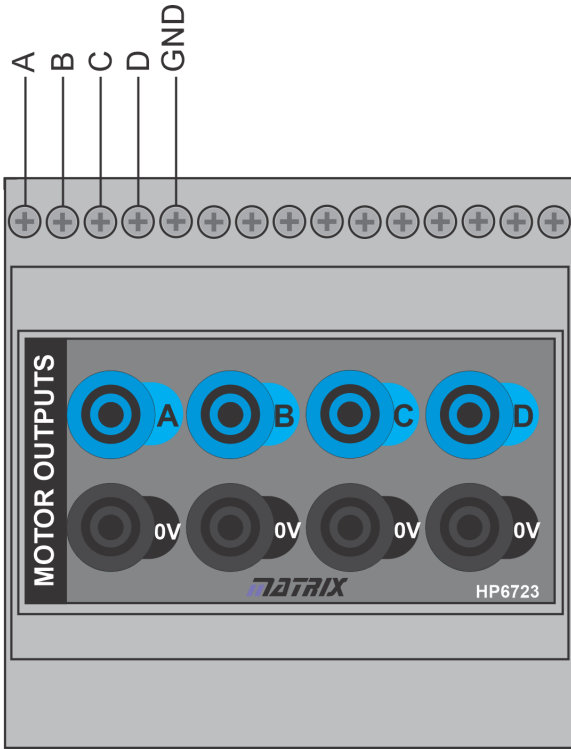
HP6723

The HP6723 module provides 4 separate outputs which should be connected to the transistor outputs of your PLC. The fifth connection is a common ground and provides a GND connection on the lower four sockets. This allows the transistor/ motor outputs to be connected back to the module for ease of use. The diagram below demonstrates the wiring of the HP6723 to the PLC.

Q1A Q1B Q2A Q2B Q3A Q3B Q4A Q4B

RELAY OUTPUTS

Q1 Q2 Q3 Q4

MATRIX HP6752

HP6752

The HP6752 allows for 4 relay outputs to be connected to your PLC. These are typically labelled Q1-Qn, depending on the number of relay outputs. The diagram shows the pin out for the terminals, where relay outputs are wired in pairs.

Products
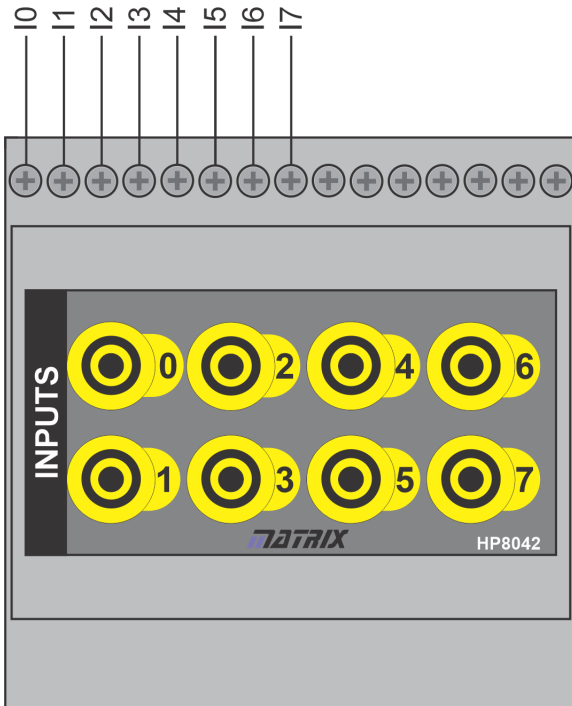
HP8042

The HP8042 allows users to connect 8 inputs into the PLC module (number of inputs on the PLC determines how many of the 8 inputs can be used on the HP6700). The diagram shows the wiring diagram for the HP6700 using all 8 inputs.
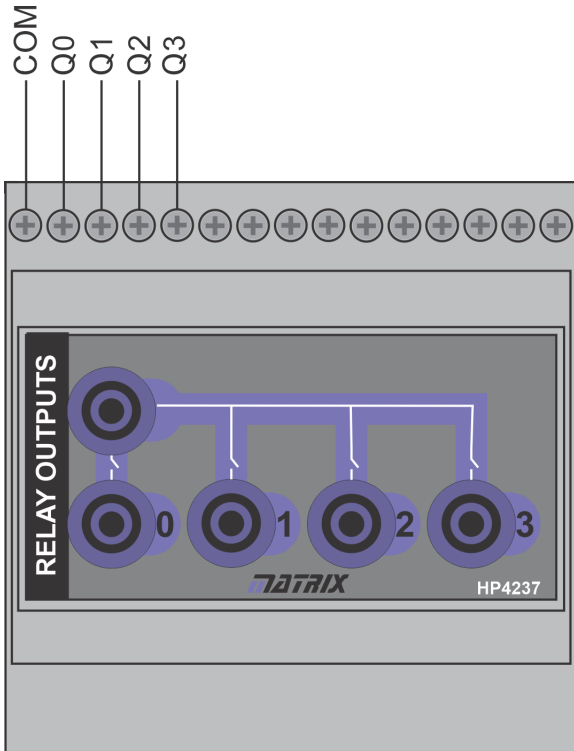
HP8042 is used with PLCs whose input numbering starts at 0 (e.g. Siemens).
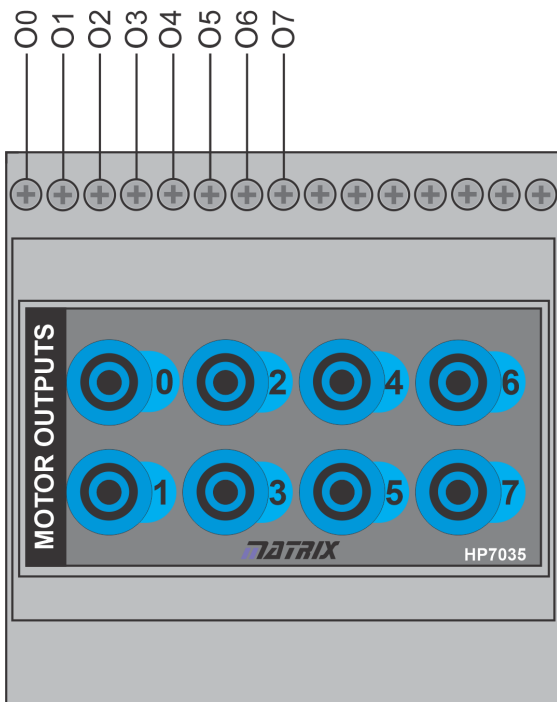
HP7035

The HP7035 module provides 8 separate outputs which should be connected to the transistor outputs of your PLC. This allows the transistor/ motor outputs to be connected back to the module for ease of use.

HP7035 is used with PLCs whose output numbering starts at 0 (e.g. Siemens).

Products

HP4237

The HP4237 allows for 4 relay outputs to be connected to your PLC. The diagram shows the pin out for the terminals, where relay outputs are wired with a common connection.

HP4237 is used with PLCs whose input numbering starts at 0 (e.g. Siemens).

Products

HP6758

The HP6785 mounting bracket is fastened directly to the back of the Automatics platform using 6xM4 screws. All new automatics platforms are fitted with 6 spare nuts within the guide rail to allow a fitting of the mounting bracket. Older Automatics platforms must have the side bracket removed to allow nuts to be slid down the mounting rails. A 50mm DIN rail is used to mount the PLC and adapter modules. You can typically fit one PLC and 4 PLC adapters of your choice to the 50mm DIN rail. Connecting the bracket; Remove the 6xM4 screws from the back of the Automatics platform. Position the captive nuts within the guide rails approximately in the location of the 3 mounting bracket fixings. Use the longer screws and washers provided with the HP6758 to fasten the mounting bracket to the Automatics platform. Placing the DIN rail; The DIN rail can be located in 3 vertical positions to suit your requirements. By default it is located in the middle position. If you require to adjust this, unscrew the 3 locating screws and mount the DIN rail to the height you need.
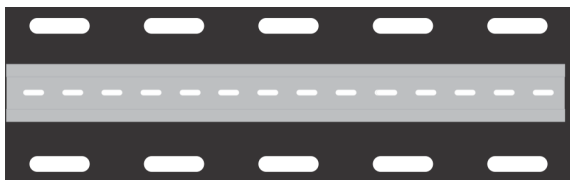
MET1122

MET1122 is an alternative mounting solution for PLC components using a standard 50mm DIN rail consisting of a metal U shaped bracket with the Din rail mounted centrally.

Suggestions

If you are using a PLC for this course then there are two options:
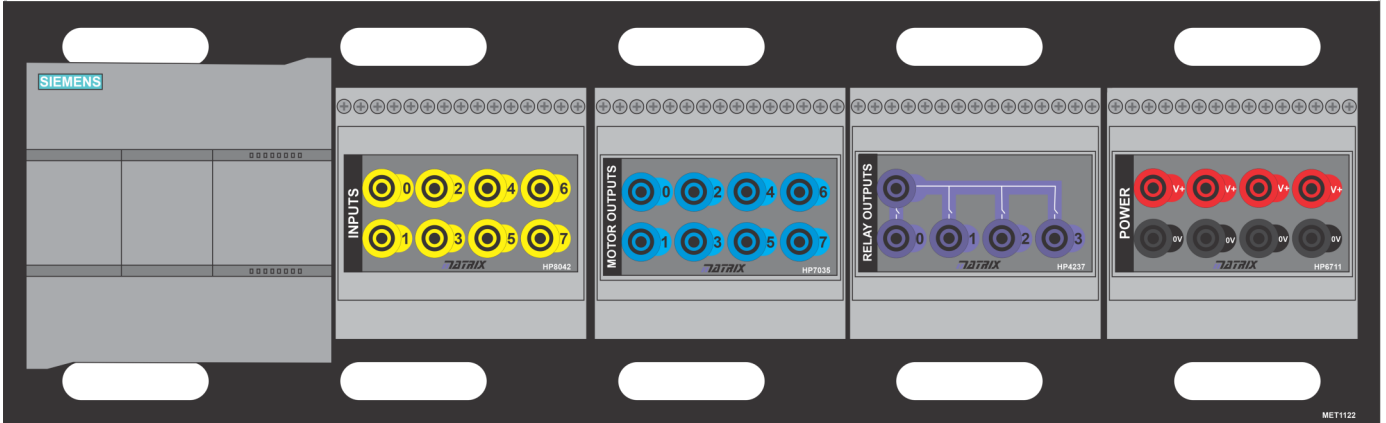
Option 1 - Siemens S7 with Matrix expansion boxes

Siemens S7 is a popular choice for industrial control. 4mm connector add-ons for Siemens PLCs are available from Matrix as shown in the diagram. Siemens input outputs start numbering at 0. Not all S7s have relays - make sure you choose the correct model.
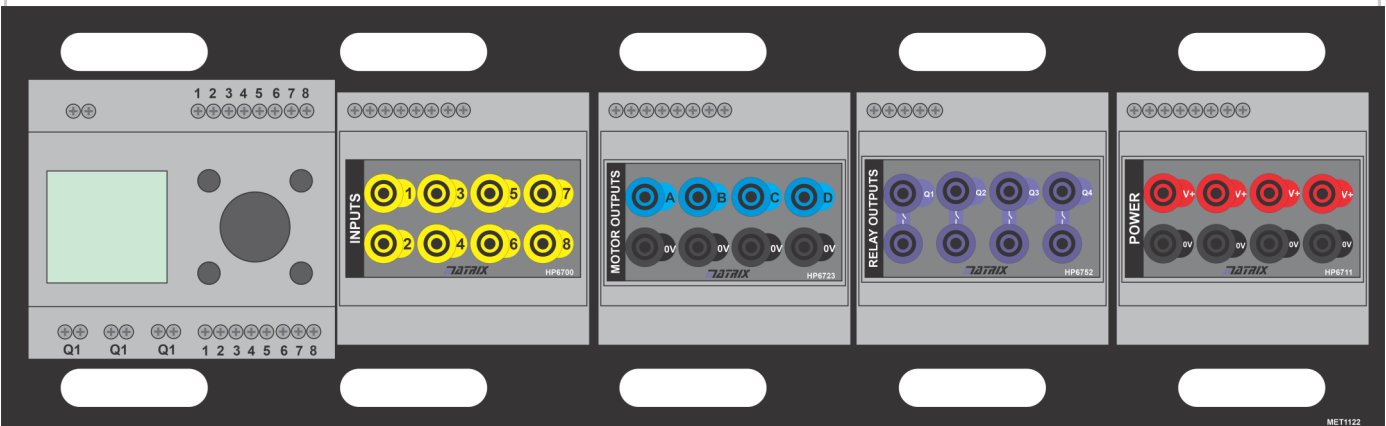
Metal base: MET1122 (includes gromets)
Input module: HP8042
Motor module: HP7035
Relay module: HP4237
Power module: HP6711

Option 2 - Other PLCs with Matrix expansion boxes

There are many other PLCs with input output numbering starting at 0 or 1, with different numbers of onboard motor outputs, relays etc. Make sure that you have the correct input output modules for your PLC. 4mm interfaces for these PLCs are also available from Matrix. 4mm interfaces that may be of interest from Matrix are:

MET1122 (includes gromets)
Input module: HP6700
Motor module: HP6723
Relay module: HP6752
Power module: HP6711

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