

Installing the IDR-MD Mimic Driver Kit

The NOTIFIER IDR-MD Mimic Driver kit (PN: 020-574) is provided as part of a versatile system to provide effective mimic display solutions. The installer is responsible for the correct assembly and electrical interconnection of the various components of the IDR Mimic system. The kit is simple to install providing the instructions described below are followed.

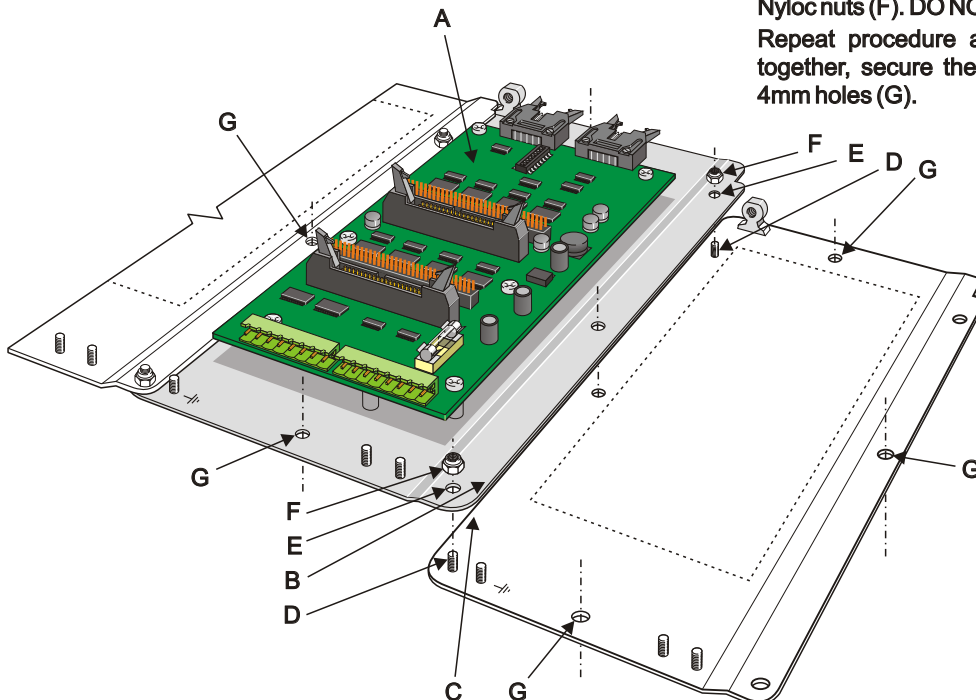
The kit comprises one mimic driver PCB and two mimic driver termination PCBs mounted on separate chassis. One ribbon cable is provided for interconnection between the mimic driver PCB and the mimic control PCB (provided in kit PN: 020-573) or the previous mimic driver PCB. Up to eight driver PCBs can be driven by one mimic control PCB. Two ribbon cables are provided for interconnection between the mimic driver PCB and the two driver termination PCBs. Each driver termination PCB can support the connection of up to 32 LEDs or relays (selected by jumper links) and also has 8 I/O lines. The IDR-MD mimic driver kit is designed for installation either using a third-party provided chassis/enclosure or the NOTIFIER ID/NFXXXX Adapter Mimic Kit (PN: 020-597) for 19" rack mounting applications. The installation must meet the Environmental specifications defined in the IDR-M Mimic Control Board manual (ref. 997-412).



Your kit PN: 020-574 should contain:

Mimic Driver Assembly	PN: 004-096
Mimic Driver Termination Assemblies (2 off)	PN: 004-097
Ribbon Cable, 10-way	PN: 082-171-004
Ribbon cable, 40-way (2 off)	PN: 082-220
Plug, 8-way screw terminating (2 off)	PN: 610-169
M4 x Nyloc locking nuts (2 off)	PN: 750-058
Fuse, 500mA (T)	PN: 570-105
8-way Jumper Block (8 off)	PN: 542-340
Anti-Static Warning instructions	PN: 997-180

For clarity, only the middle Mimic Display board is shown in detail.



Check Your Equipment....

Taking suitable precautions, before proceeding with the installation, remove all packaging and inspect for any damage that may have occurred during transit. If no damage is evident, proceed using the instructions below. In the unlikely event that damage has occurred, or any items are missing, DO NOT PROCEED, contact your supplier and refer to the panel Installation & Commissioning Manual.

Observing all necessary precautions, proceed with the installation of the IDR-MD Mimic Driver Kit.

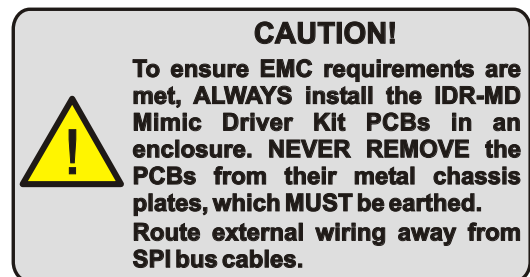
Fixing Multiple Mimic Driver Assemblies Together to Form an Interlocking Module

The mimic driver assemblies are designed to interlock using the provided studs and corresponding holes of each metal chassis and the supplied M4 Nyloc locking nuts.

Procedure

Position the mimic driver assemblies (A) as shown below so that each joggled (cranked) long-sided edge (B) is adjacent to the non-joggled long-sided edge (C) of the next assembly. Pass the two studs (D) through the holes (E) of the next assembly. Secure together using the supplied M4 Nyloc nuts (F). DO NOT over-tighten!

Repeat procedure as required. When all assemblies are connected together, secure the assembly within its enclosure using the provided 4mm holes (G).



Procedure for Fitting a Mimic Driver Assembly (typical)

Proceed as follows:

- 1 Find a suitable location to install the mimic driver PCB assembly (H), such as a third-party-supplied enclosure. Four fixing holes (I) are provided. Mark and drill the surface where the assembly is to be mounted to take suitable 4mm-sized screws (not supplied).
- 2 Fit the assembly and secure with the 4mm screws. The assembly can be mounted vertically or horizontally.
- 3 Refer to the section at the bottom of this page for all required cable and wiring connections.

Procedure for Fitting a Mimic Driver Termination Assembly (typical)

Proceed as follows:

- 1 Find a suitable location to install the mimic driver termination PCB assembly (J). To keep the LED wiring as short as possible, locate the mimic driver termination board(s) close to the LEDs. An option of four 'flat-mounting' holes (K) and/or two 'edge-on-mounting' holes (L) are provided for fitting convenience. Mark and drill the surface where the assembly is to be mounted to take suitable 4mm-sized screws (not supplied).
- 2 Fit the assembly and secure with the 4mm screws. The assembly can be mounted vertically or horizontally.
- 3 Refer to the next section for wiring and LED connections.

Jumper Links

The 64 output channels are arranged in two banks of 32. Each bank is arranged in four groups of 8 outputs. Each group is provided with a jumper link which configures the group to drive either LEDs or relays:

JUMPER LINK FITTED = GROUP DRIVES RELAYS

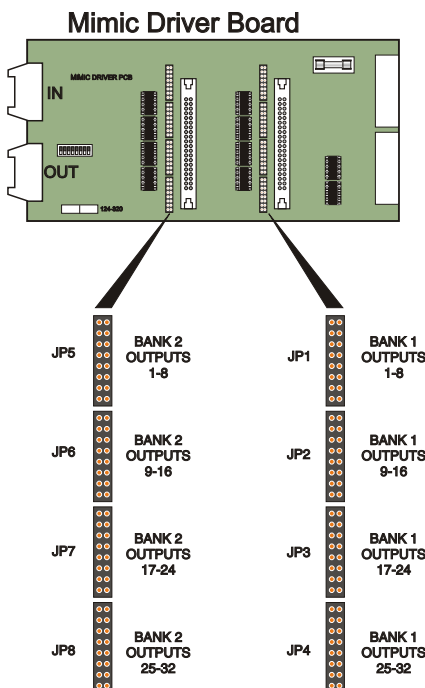
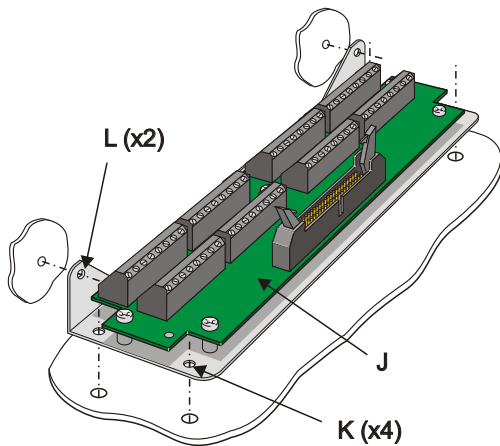
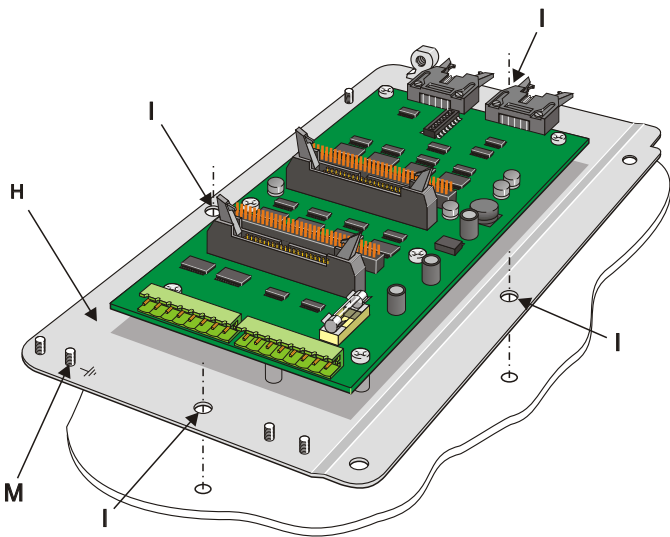
JUMPER LINK NOT FITTED = GROUP DRIVES LEDs

The groups can be configured independently, i.e. within a bank some groups may drive relays and others may drive LEDs.



CAUTION:

Ensure that jumper links are configured correctly. If an LED is connected to an output for which the link is fitted, the LED will have a short life expectancy. Conversely, if a relay is connected to an output for which the link is not fitted, the relay will not operate.

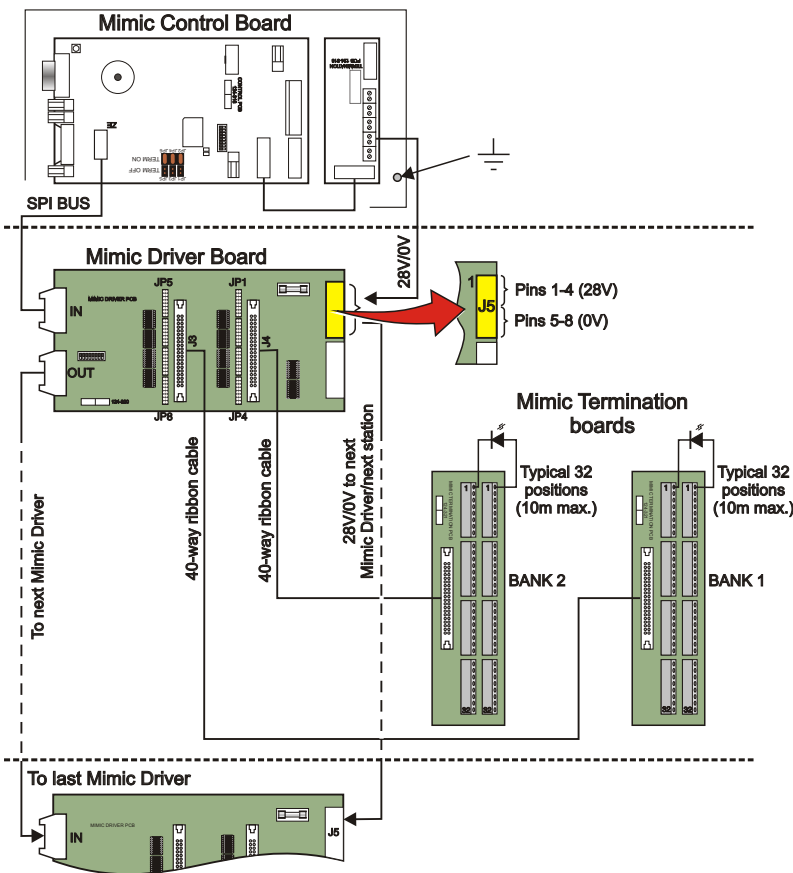


Cabling and Wiring Connections

To Drive LEDs...



There are restrictions on the types of LED that can be driven by the IDR-M Mimic. The IDR-M Mimic Installation and Commissioning Manual (ref. 997-412) defines the requirements.



Up to eight mimic driver boards can be driven by one control board. Connection between each 'daisy-chained' mimic driver board, and between the control board and the first mimic driver, is via a Serial to Parallel Interface (SPI) bus. A 10-way ribbon cable is supplied for the interconnection (using the connector marked IN) of:

- i) The first mimic driver board and the control board (ZE), or
- ii) The mimic driver board and the previous 'daisy-chained' mimic driver board connector (marked OUT).

Two 40-way ribbon cables are supplied for interconnection between the mimic driver board and two mimic termination boards, using connectors J4 (first group of 32 zones) and J3 (second group of 32).

Note: If the supplied 40-way ribbon cables are not long enough for your site application, use a suitable alternative, up to a maximum length of 10m. The system uses standard specification ribbon cable: 28AWG, 0.050" pitch. Connectors used are 40-way, bump-polarised, female plugs.

For the discrete wiring between the Mimic Termination board and the LEDs (maximum of 10m): 7/0.2 wire is recommended.

Each mimic driver board chassis plate is provided with an M4 earth stud (M), one of which **MUST** be connected to earth - earthing of the other units is provided through the interlocking-chassis arrangement.

A simple schematic diagram showing all required power and signal connections is shown at left. For more details, refer to the IDR-M Mimic Installation and Commissioning Manual (ref. 997-412).

Continued overleaf.....

To Drive Relays...



There are restrictions on the types of relay that can be driven by the IDR-M Mimic. The IDR-M Mimic Installation and Commissioning Manual (ref. 997-412) defines the requirements and provides recommendations.

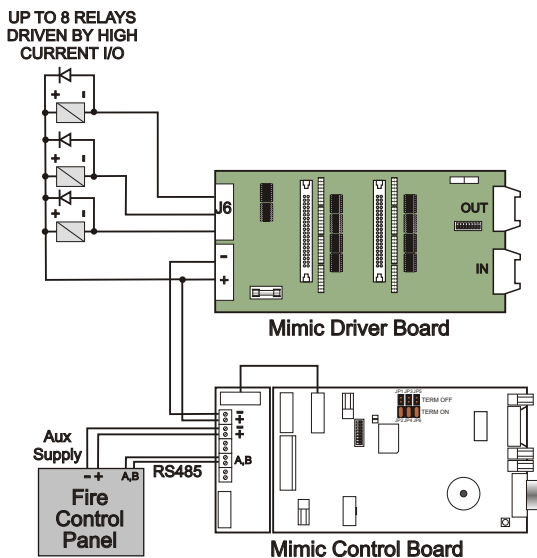
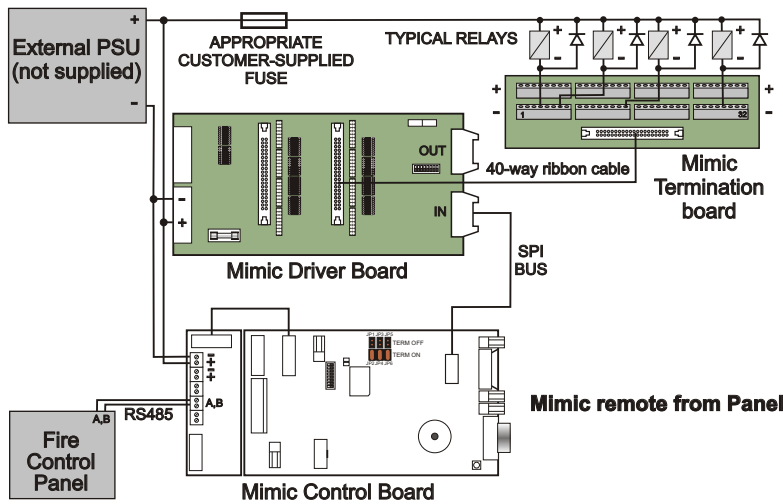
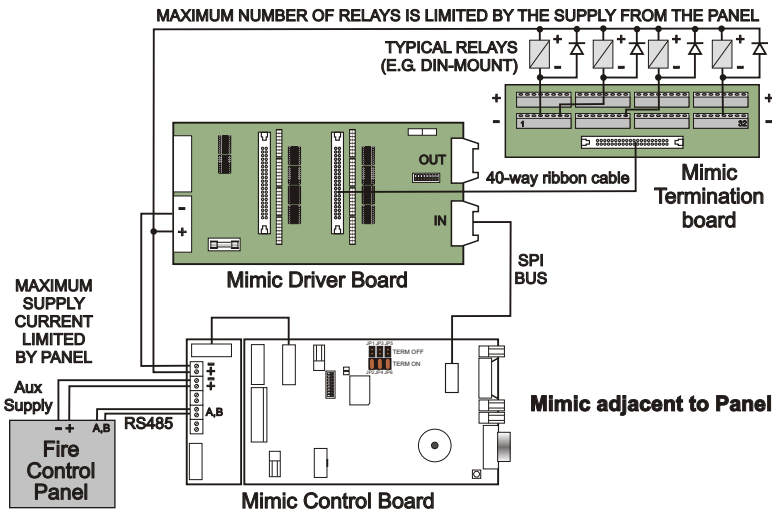
Note: To reduce EMI and prevent damage to the drive circuit, diodes should be connected across each relay coil as illustrated.

The method of 'daisy-chaining' Mimic Driver Boards, and of earthing them, is identical to that described above for LED connections.

Simple schematic diagrams showing all required power and signal connections are shown at left. These examples cover the possibilities that the Mimic is located adjacent to the panel and that it is located remote from the panel. Both examples show only one Mimic Driver Board and one Termination board for simplicity.

Further details are given in the IDR-M Mimic Installation and Commissioning Manual (ref. 997-412).

The discrete wiring between the Mimic Termination board and the relays must be suitable for the purpose.



Additional I/O relay connections are provided at J6 on the Mimic Driver Board; these are shown in the simple schematic diagram at left.

Mimic adjacent to Panel