

### 4 Way relay node installation / troubleshooting manual.

The 4 way relay node is an output card that as its name suggests has 4 programmable relay outputs. Generally the 4 way relay node is used for control panel and car I/O as part of the CAN-X/CAN-X\* distributed I/O system, but can be used in any of the 3 distributed networks, CAN 1, (landing) CAN 2, (Car) or CAN 3 (Controller) to provide 4 relay outputs.

Each 4 way relay node on a network needs to have a unique binary address set via DIP switch SW1. Switches 1-6 are for node address, switches 8 and 9 are used to identify whether the node is in the controller, car, landing simplex or landing group, switch 7 is unused and switch 0 is an on board CAN resistor to identify the end of the network. (See relevant section for more detail of DIP switch settings)

Fig 1.

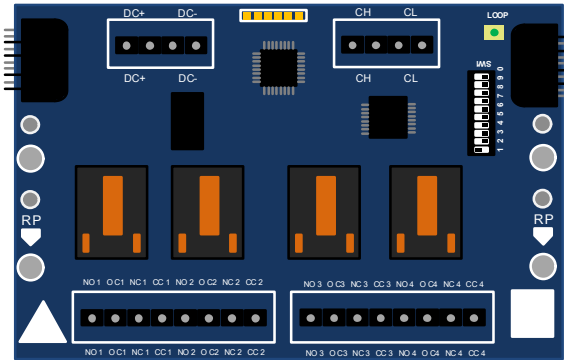


Fig 1 shows the basic board layout, connection locations and LED's.

The 4 way relay node has 1 CAN port, its connections are marked as CH and CL. There is also a diagnostic LED associated with the nodes processor marked LOOP (green) (See diagnostic paragraph overleaf for more detailed description of the LED) The power connections are marked as DC+ and DC- and have 2 connection points each, 1 for the supply in and 1 to connect to the next node (if required). The 4 relays have 1 N/O and 1 N/C contact each. The common connection for the N/O contact is marked as OC1-4 and the common connection for the N/C contact is marked as CC1-4. The N/O contacts are marked as NO1-4 and the N/C contacts are marked as NC1-4. When the 8 way node is attached to a DIN rail, a screwdriver should be inserted to the holes marked RP and upward pressure applied to release the DIN rail clips whilst putting downward pressure on the PCB. If the node is to be mounted via the standoff posts with the self-adhesive pad provided the mating surface should be clean and free of contaminants to promote maximum adhesion.

**Note:** Nodes should not be left loose in trunking or push boxes where their connections could short out.

The 4 way relay node has an edge connector at each end to transfer power and CAN connections to and from the board.

**Note:** If the edge connector is connected to the CAN-X/CAN-X\* CPU the DC+ connection will have to come in via the 8 way nodes DC+ connection.

No specific connection diagram is shown here for the 4 way relay node as generally they are prewired in the control panel, car top or COP. If a 4 way relay node is to be wired on site please refer to the site specific drawing.

Fig 2. The DIP switch settings of SW1 shown below are for node address.

Node Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
DIP number 1	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
DIP number 2	0	1	1	0	0	1	1	0	0	1	1	0	0	1	1	0	0	1	1	0	0	1	1	0	0	1	1	0	0	1	1	0
DIP number 3	0	0	0	1	1	1	1	0	0	0	0	1	1	1	1	0	0	0	0	1	1	1	1	0	0	0	0	1	1	1	1	0
DIP number 4	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	0
DIP number 5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
DIP number 6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1

Fig 3. The DIP switch settings of SW1 below are for node location (control panel, car, landing simplex and landing group)

Node Location	Panel	Car	Landing(simplex)	Landing (Group)
DIP number 8	0	1	0	1
DIP number 9	0	0	1	1

Fig 5. The DIP switch settings of SW1 for CAN termination. (If the node is on a pre-wired shaft loom from ILE the resistor is located on the loom so no need to switch on the termination resistor)

Node Location	Mid	End
DIP number 0	0	1

### Problem reporting / diagnostics

The basic status of the 4 way relay node is reported by the loop LED (connected or not). The expanded status of the 2 way node is reported in the CAN-X/CAN-X + event history.

LED
Loop



Flashing once every second. Node is connected to the CPU and ready to receive or send CAN data.



Flashing 3 times a second. Node is not connected to the CPU so will not receive or transmit CAN data.

### Specification

Operating Voltage	18-30VDC
Operating Current	21mA
Contact rating (resistive)	8A @ 250VAC and 30VDC
Contact rating (inductive)	3.5A @ 250VAC and 30VDC

### EMC

Care should be taken when running the group interconnect cable. All CAN interconnect should be segregated from mains / motor wiring and the screens connected to the screen clamps provided. If the interconnect cables need to pass cross high voltage cables they should do so at right angles. For further information on EMC refer to the ILE EMC manual.