

Interguard IG528 Installation Instructions

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The IG528 Interlock controller is a 5,6,7 or 8 door interlock controller also providing the user with good door / interlock status indication at the doors.

Specification

The unit requires 12v dc power, normally from the separate internal power supply.

The 8 x D inputs are for 8 normally closed door contacts (closed when the door is closed).

The 8 x R inputs are 8 normally open request to release inputs (close to request).

The 4 x F inputs are 4 x normally open function inputs (close to invoke the function).

The 4 +ve terminals are for the input references, e.g. R links to + to request to release. D links to + to show that the door is closed and F links to + to invoke the function.

These are also the +ve feeds for the remote (at the door) led indications.

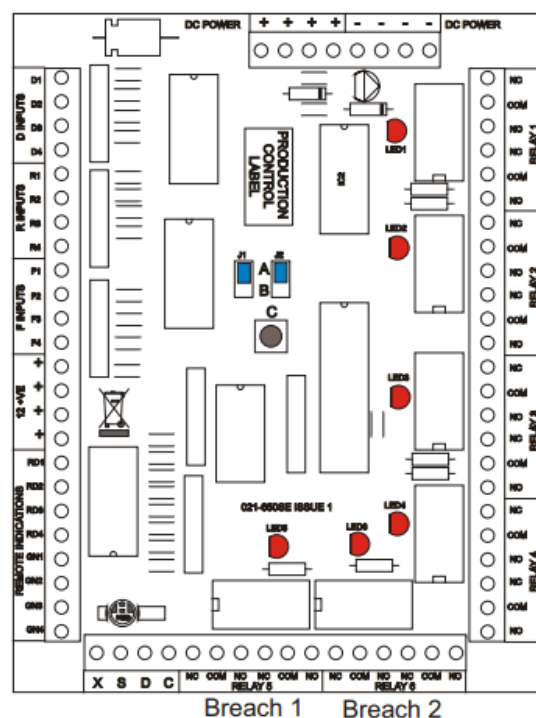
The remote indications are switched -ve for rd (red) and gn (green) indications at the doors.

Each of the 6 relays has 2 sets of clean changeover contacts rated 2Amp at 12vdc.

Relays 1,2,3 and 4 are for the 4 door locks.

Relay 5 is the main breach relay. (Breach 1)

Relay 6 is the secondary breach relay. (Breach 2)



Interlocking Principles

Interlocking in its simplest form is for 2 doors and in theory only one door can be open at once. There are three ways of achieving this:

- | | | |
|--------|---|--|
| Mode 1 | Without Locks | Just trust the staff to look at the indications and close the doors |
| Mode 1 | With Locks | Keep all doors closed but unlocked and lock the other doors if a door is opened. In this method door sensing is critical. If a door is ajar, it may not register as open on a magnetic reed door contact, but it may be too far open for a magnetic lock to pull the door closed. Other methods of door sensing can be used but the cost rises and the expansion / contraction of doors and frames can result in more than one door being open at the same time. (Interlock Breached). |
| Mode 3 | Keep all doors closed and locked and release the relevant door on request only if available to be released i.e. all other doors are locked. | |

The IG528 can be used in modes 1 or 3 above. However, mode 3 is recommended for fewest breaches

Operational Indications

Red/Green indicators are provided at each door. Normally there are no indications, or with the alternative indication, the green indicates steadily when the door is available for use. When a door is legitimately used, it will indicate a steady green, with the other doors indicating a steady red. If the interlock is breached, all door indicators will flash red and the door that caused the breach will alternate with green. If the doors are all released via the fire inputs, all door indicators will flash green.

Breach relay conditions

There are 2 pairs of breach relays

(Relay 5) Breach 1 (normally energized, i.e. will operate if power is lost)

(Relay 6) Breach 2 (normally de-energised).

If a door is forced, left open too long or a request button pressed for too long a period then Breach 1 relay operates. If there is a fire alarm input both breach relays will operate. The breach relays on one card are replicated on the other.

Fire Alarm operations

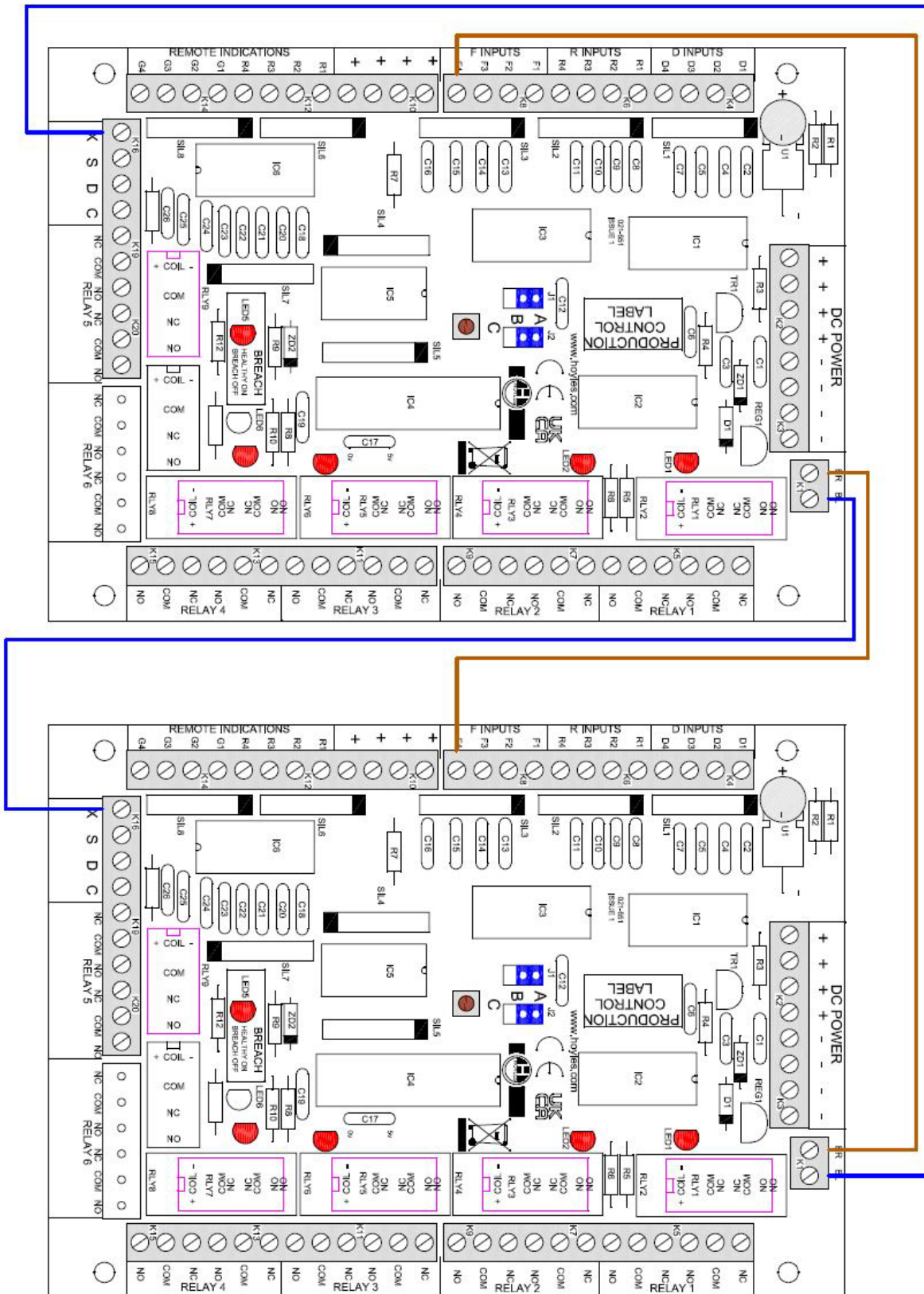
Mode 1 F1 and F2 fire alarm all doors will remain unlocked even when other doors are open.

Mode 3 F1 fire alarm releases all doors. F2 fire alarm disables the interlocking i.e. all doors remain locked but all request to release are accepted and release the doors for the dwell time even if other doors are open.

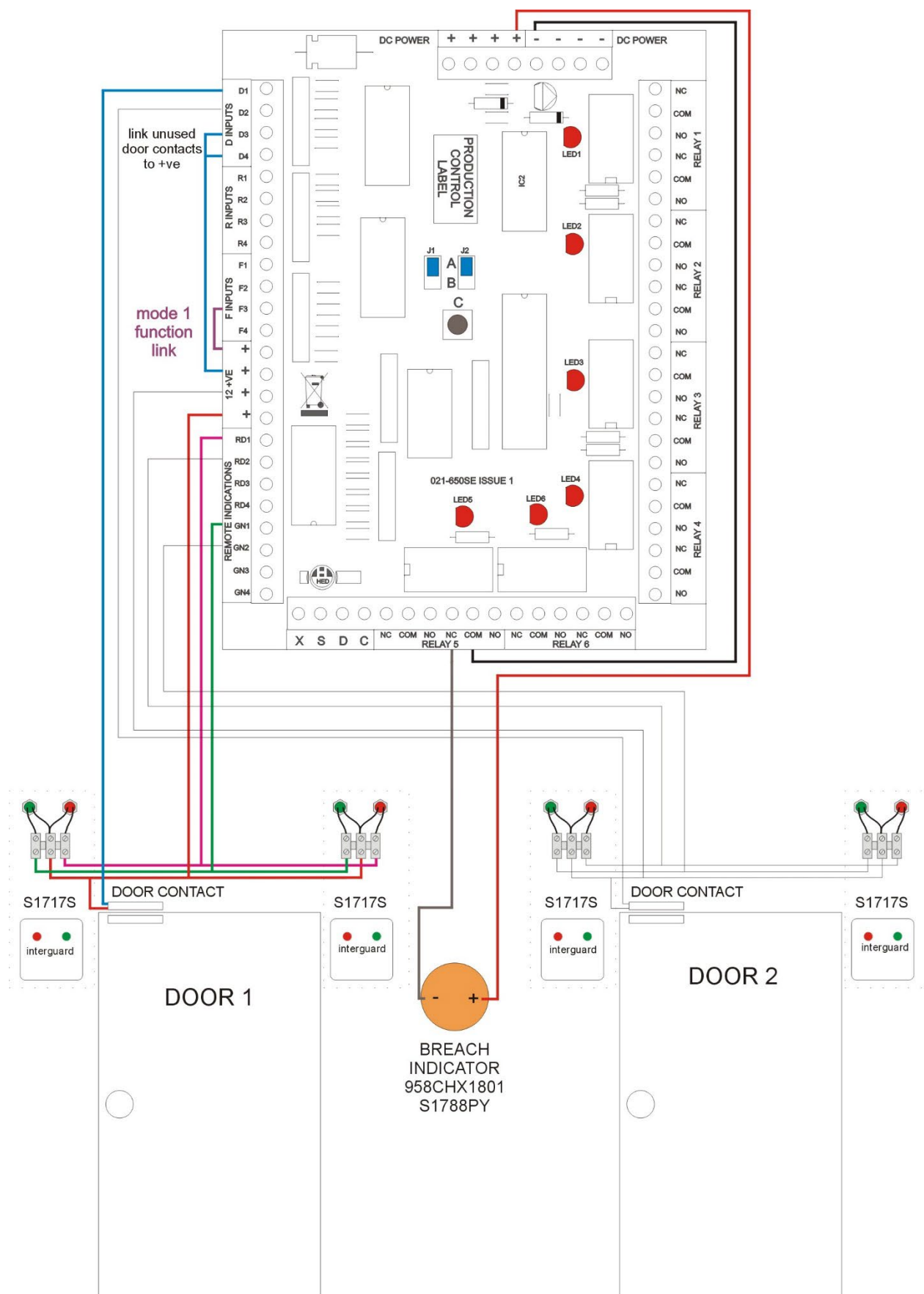
Combination

As there are two linked independent control boards, it is possible to have up to 4 doors as Mode 1 operation combined with up to another 4 doors as Mode 3 operation.

Pre-Wired Interconnections

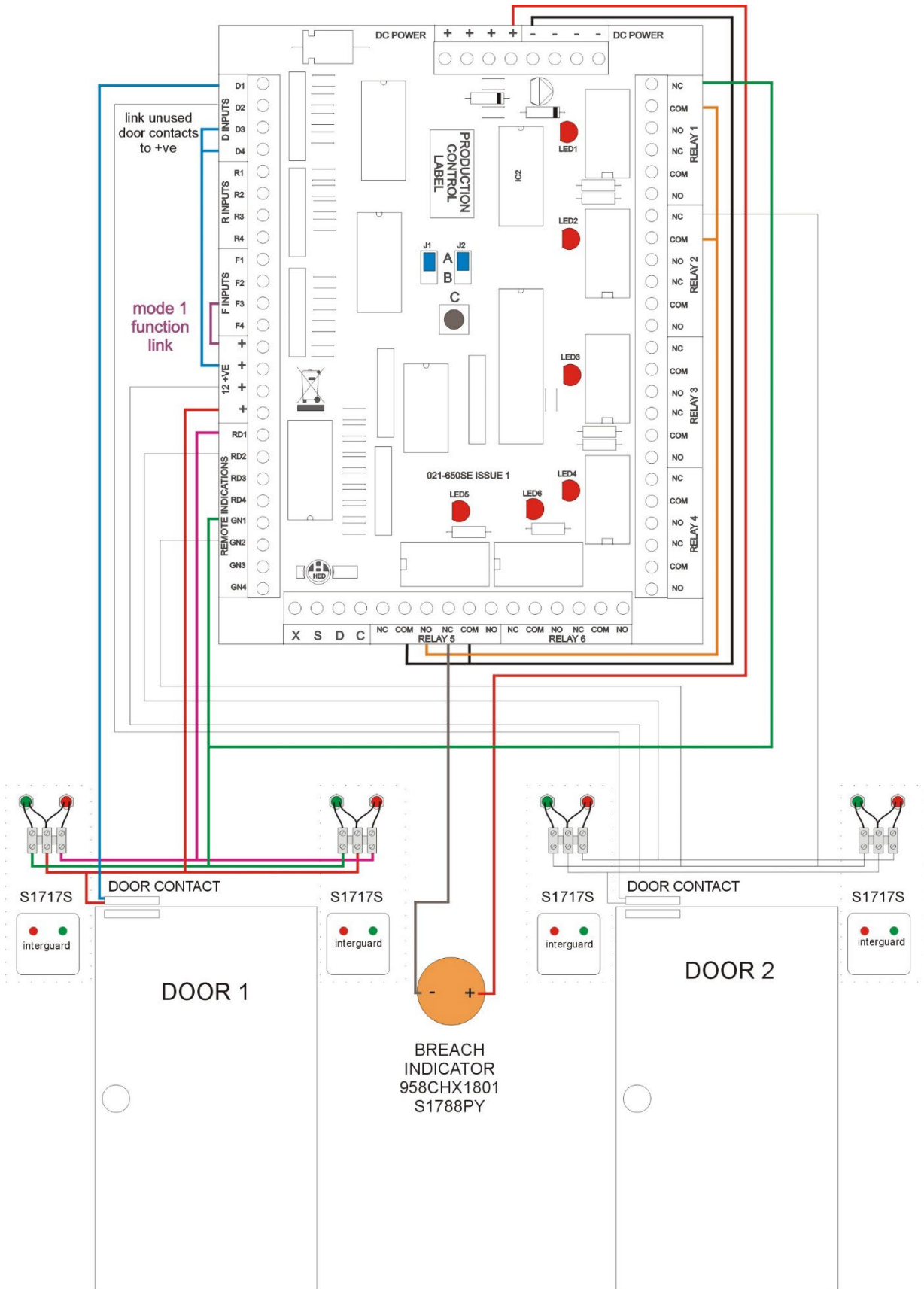


Mode 1 Operation Without Locks (Indication Only)

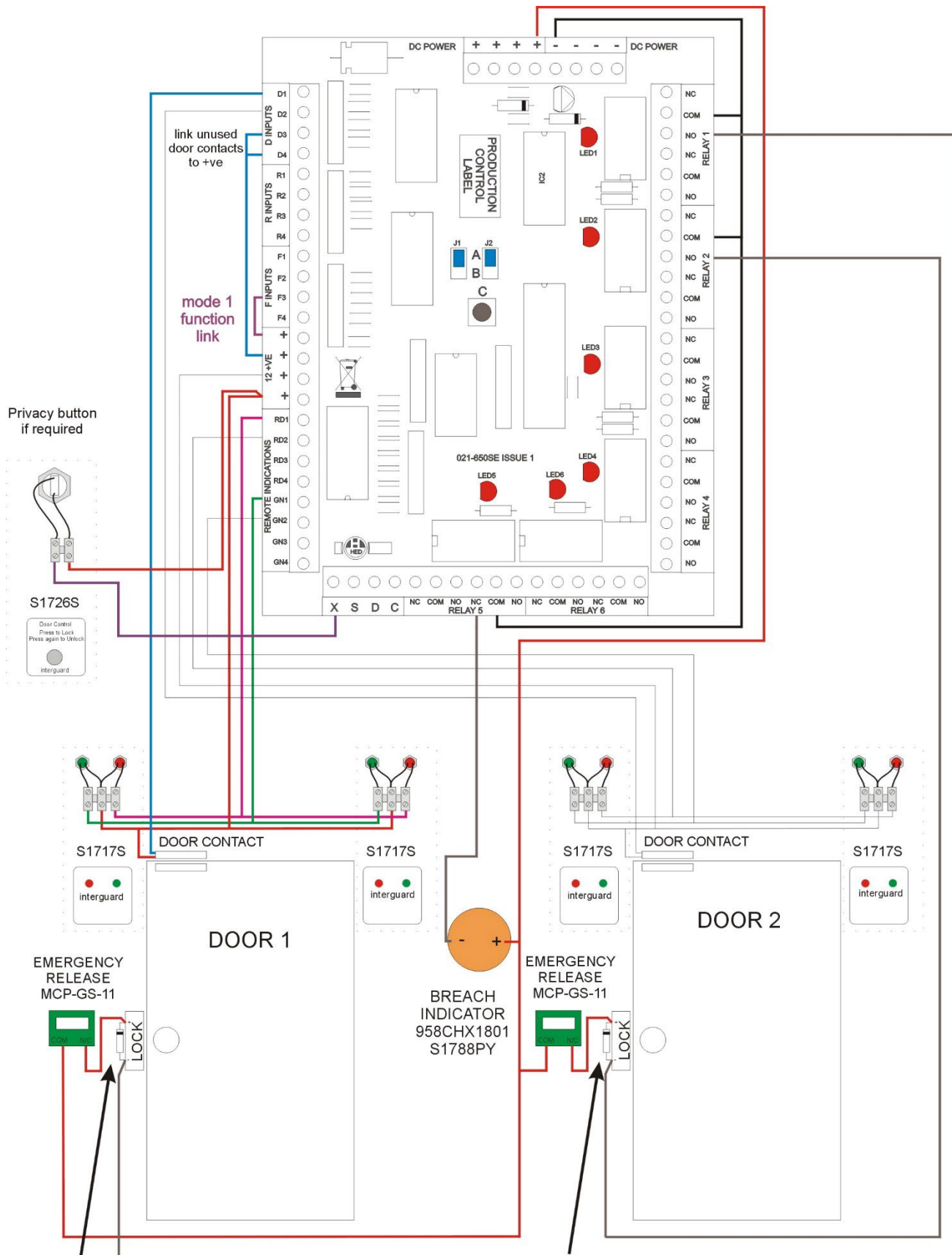


Mode 1 Operation Without Locks (Alternative Indication Only)

The door status LEDs are green instead of not being illuminated. All other indications are as the standard indications.



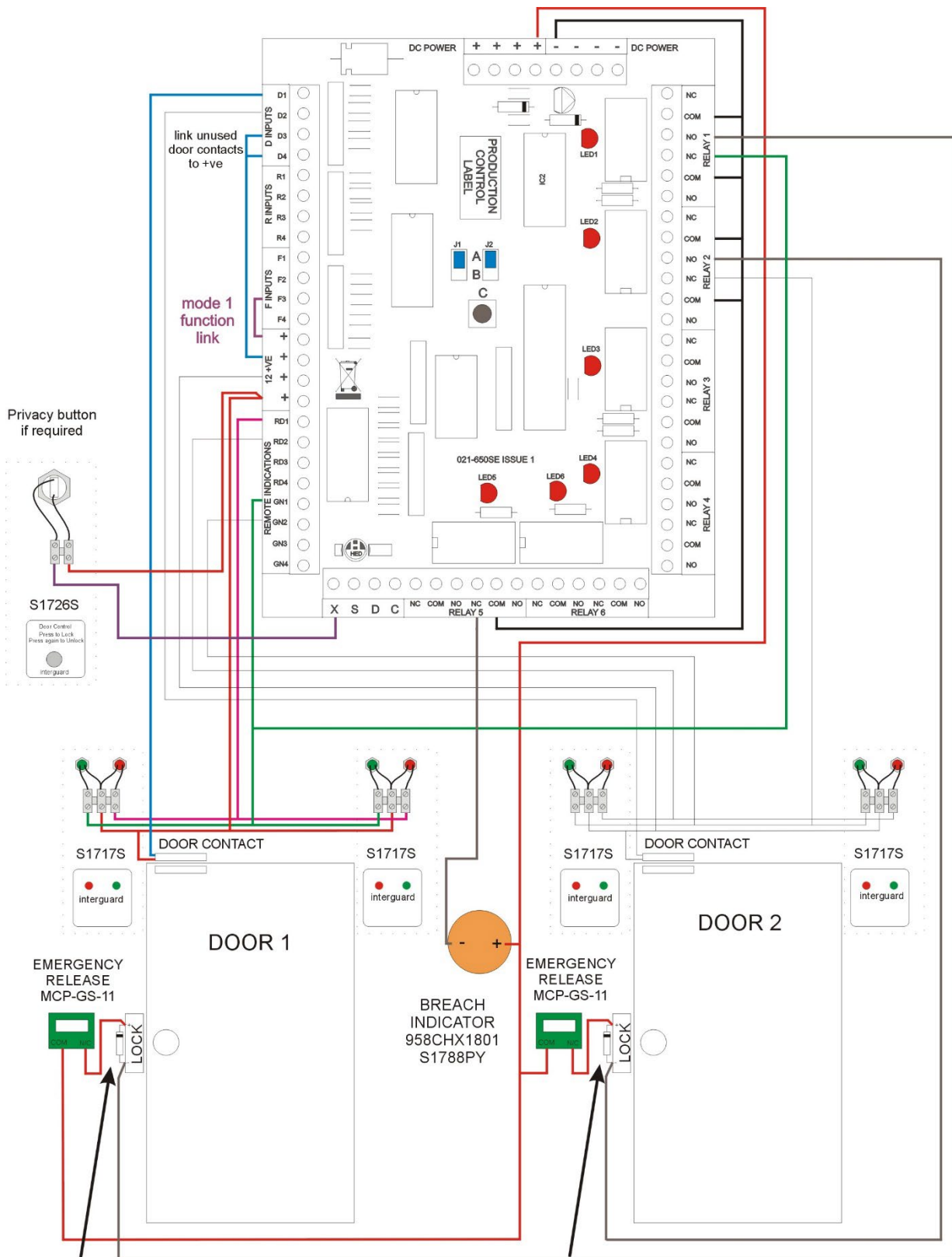
Mode 1 Operation with Locks and Standard Indications



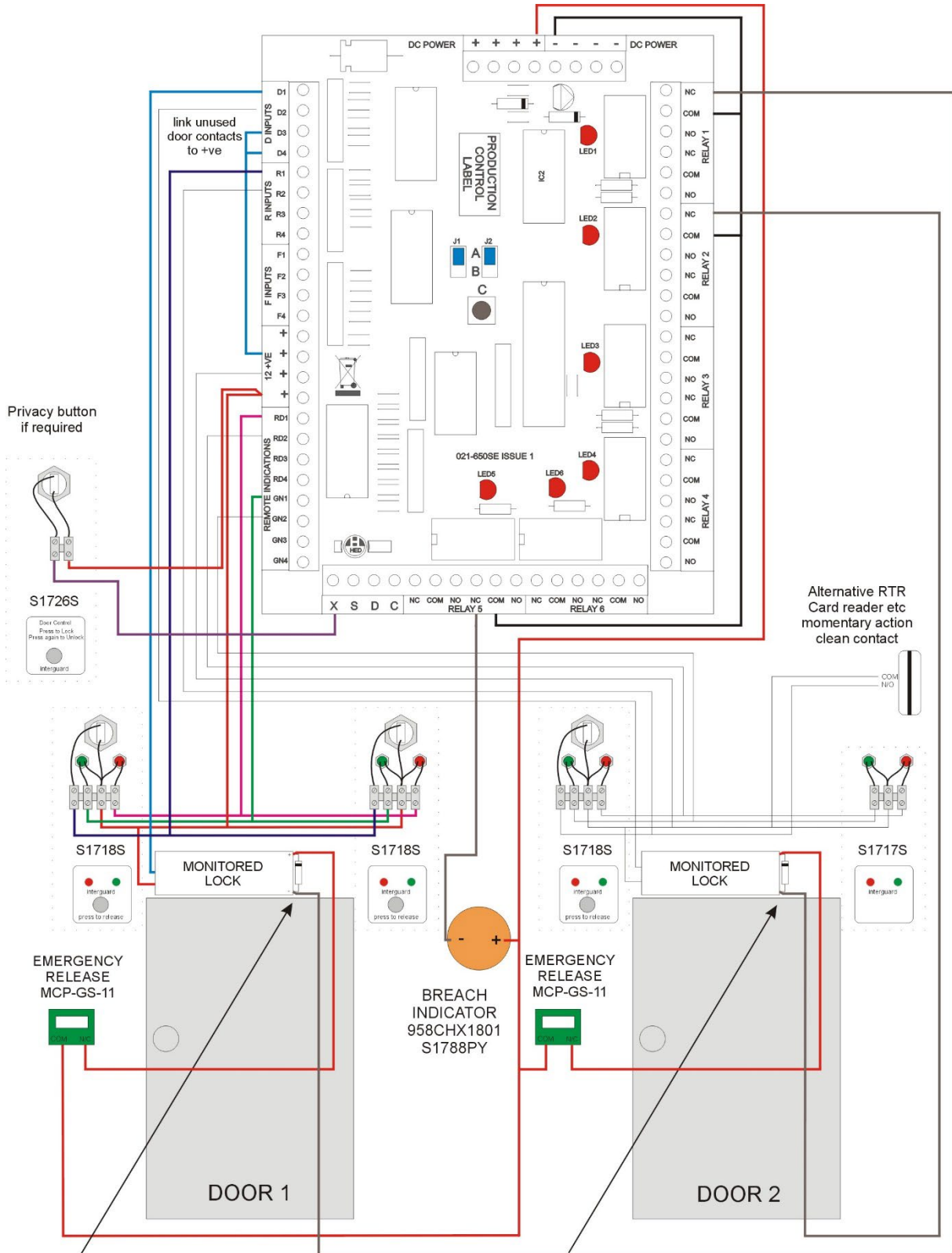
NOTE. Fit back EMF protection diode to magnetic lock.

Mode 1 Operation with Locks and Alternative Indications

The door status LEDs are green instead of not being illuminated. All other indications are as the standard indications



Mode 3 Operation with Monitored Locks and Request to Release

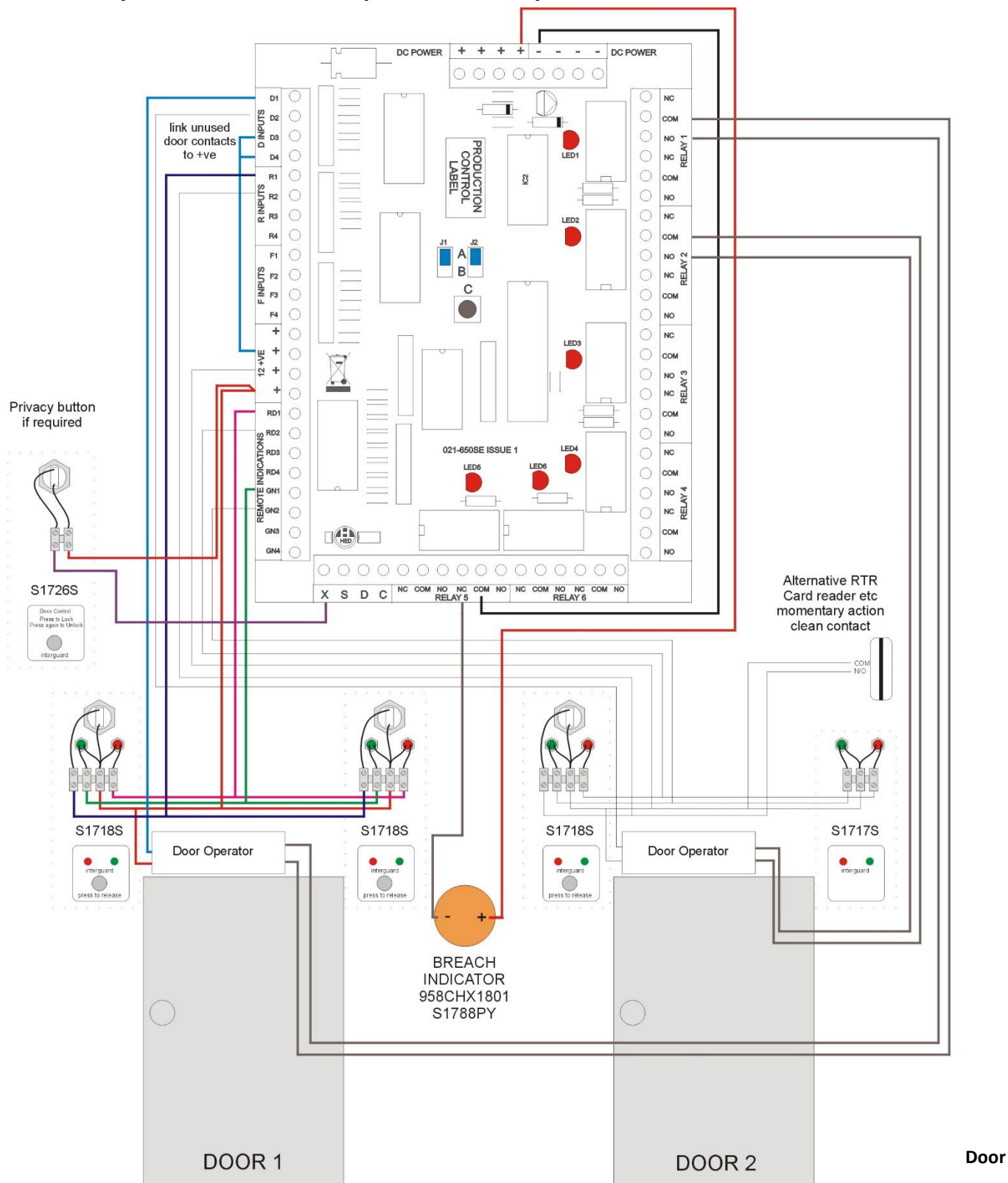


NOTE. Fit back EMF protection diode to magnetic lock.

Operational Note

The lock relay switches when a request is accepted and then remains switched for the entire dwell time. If the door is opened the relay will follow the request input after the dwell time has expired.

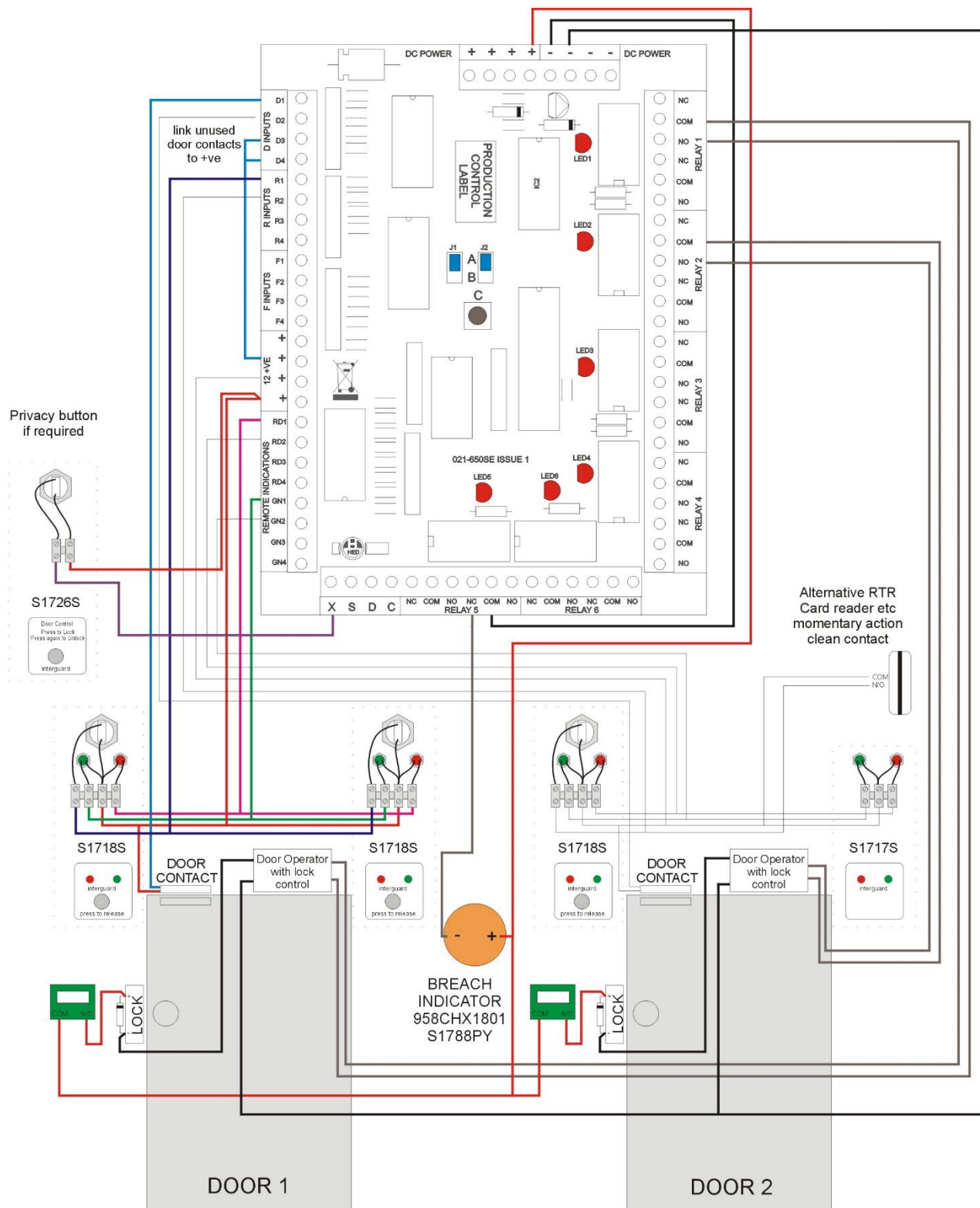
Mode 3 Operation with Door Openers and Request to Release



Operators The door operator requires a momentary closed input to open the door and then automatically closes it. The door operator may have a door status output. If not, a door contact must be used.

Operational Note The lock relay switches when a request is accepted and then remains switched for the entire dwell time. If the door is opened the relay will follow the request input after the dwell time has expired.

Mode 3 Operation with Door Openers with Lock Controls

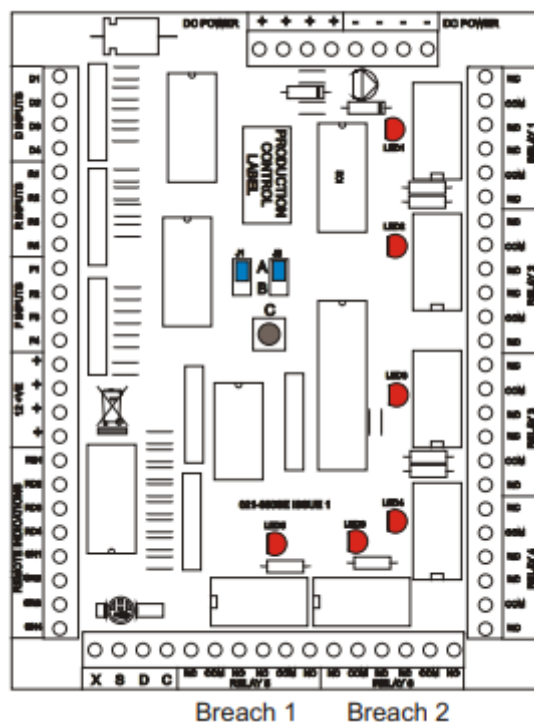


Door

Operators. The door operator requires a momentary closed input to unlock then open the door. The door operator then closes and locks the door. A door contact must be used for door status.

Operational Note. The lock relay switches when a request is accepted and then remains switched for the entire dwell time. If the door is opened the relay will follow the request input after the dwell time has expired.

Setting up Dwell and DOTL (Door Open too Long) Times



To set up the dwell time. Move J1 to the B position and momentarily press button C to scroll through the options. Each press will illuminate 1 of the 4 LEDs, numbered LED1 to LED4.

- LED1 2 seconds
- LED2 5 seconds (The default time)
- LED3 10 seconds
- LED4 20 seconds

To set up the DOTL time. Move J2 to the B position and momentarily press button C to scroll through the options. Each press will illuminate 1 of the 4 LEDs, numbered LED1 to LED4.

- LED1 20 seconds
- LED2 60 seconds (The default time)
- LED3 10 minutes
- LED4 85 minutes

The times indicated when the jumpers are returned to position A will be the stored and used as the Dwell and DOTL times.

Note each jumper must be used independently. Do not have both jumpers in position B at the same time.

We recommend that both boards are set with the same Dwell and DOTL times.