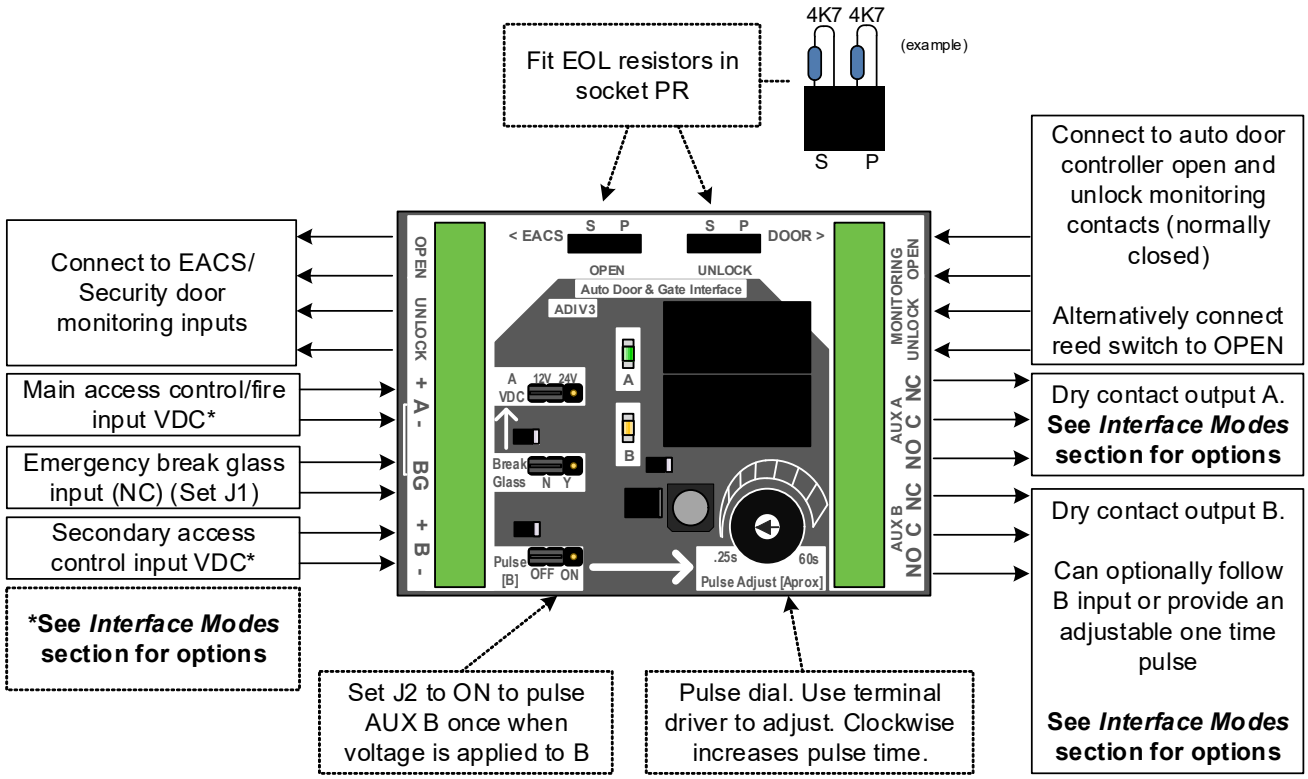
ADI – V3

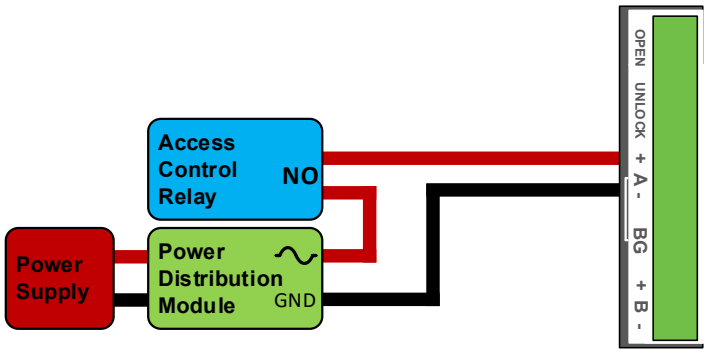
Installation Note

Provides an interface between access control systems, fire indication panels and automatic doors/gates.

An adjustable delay can be implemented to provide door/gate/lock sequencing.



Connect the ADI control inputs as you would with a normal electric lock. That is, run control power via a fuse module and the access control panel output.



Interface Modes

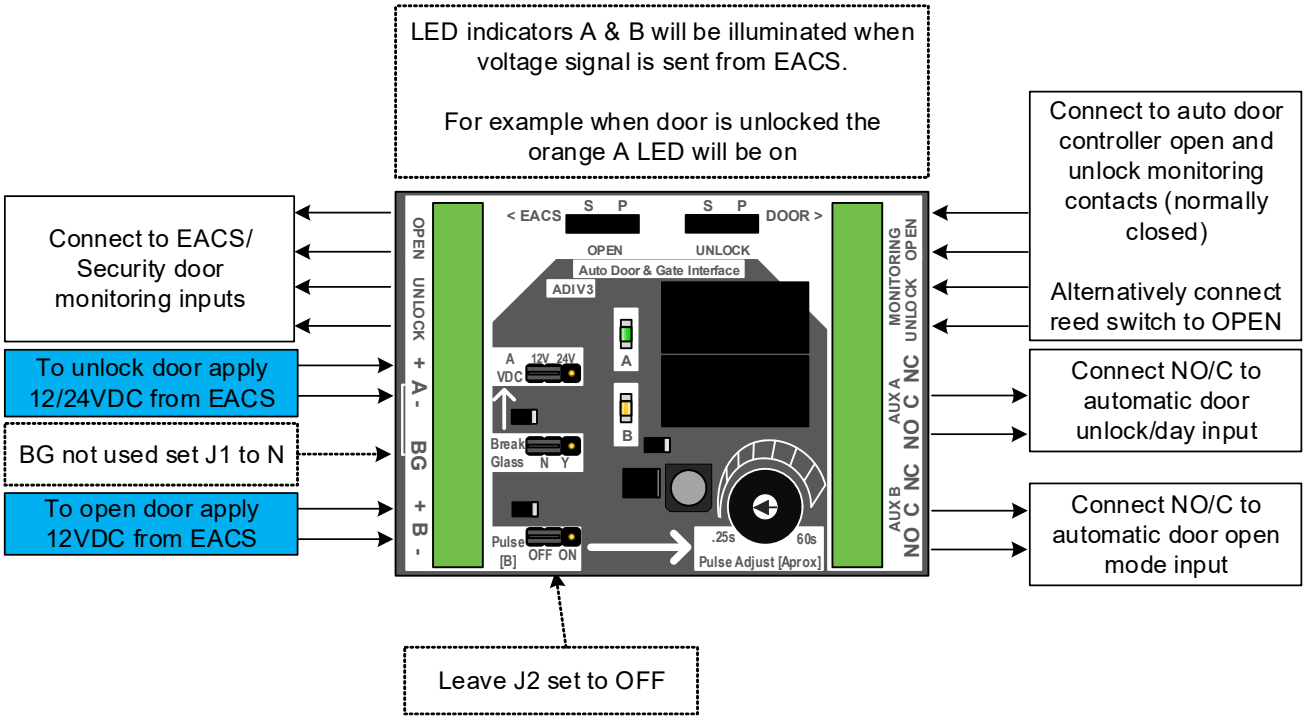
The Jack Fuse ADI can be used in multiple modes to provide versatile control options when interfacing access control systems to automatic doors, motorised gates or speed styles. Care must be taken to ensure proper operation.

Mode 1 – Traditional access control
Mode 2 – Access control plus fire control with break glass option
Mode 3 – Automatic door duplex mode
Mode 4 – Timer mode
Mode 5 – Bi-Directional access control (speed gates or entry/exit Gates)

Mode 1 – Traditional access control

Mode 1 connects two voltage signals from the access control system to an automatic door controller. The break glass is not used in this scenario.

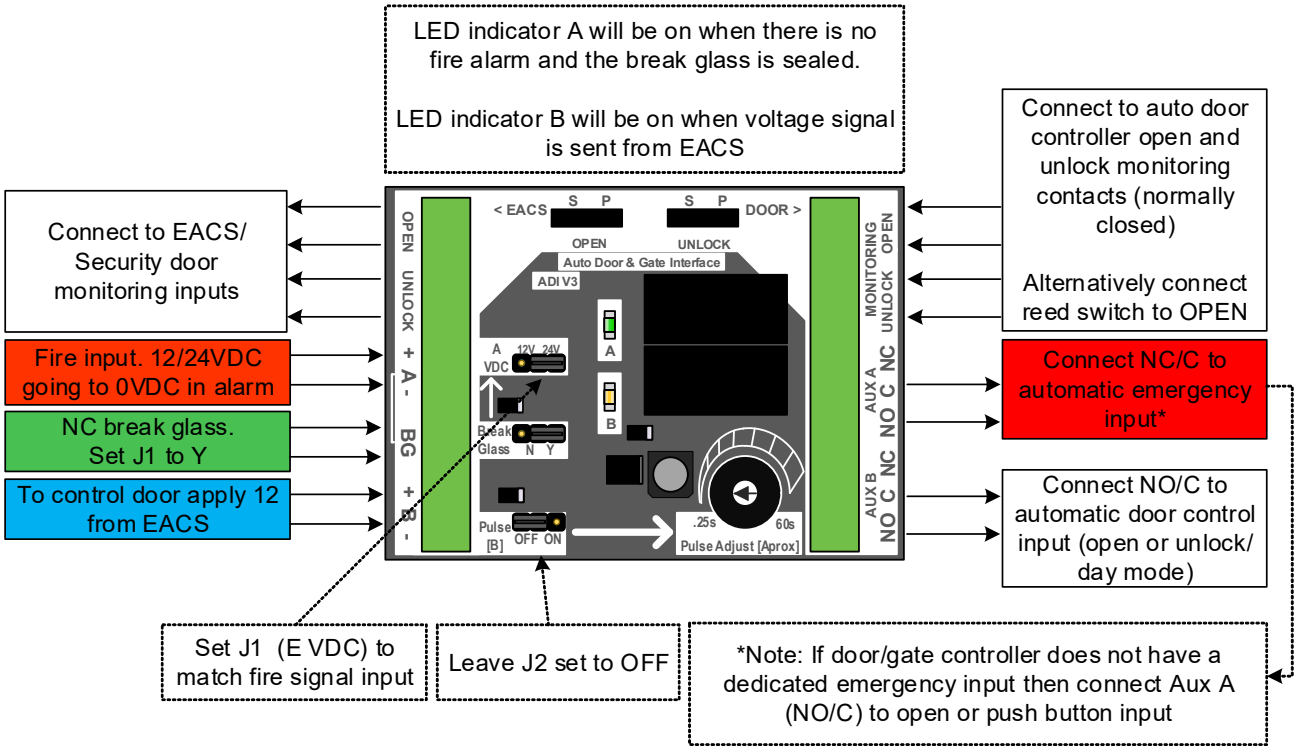
Note: Mode 1 will require at least two control signals from the electronic access control system (EACS) for full control of an automatic door.



Mode 2 – Access control plus fire control with break glass option

Mode 2 connects one voltage signal from the access control system and one voltage from the fire indication panel (or similar) to the automatic door controller.

This mode provides a failsafe fire trip connection to the automatic door that also incorporates an emergency break glass unit.



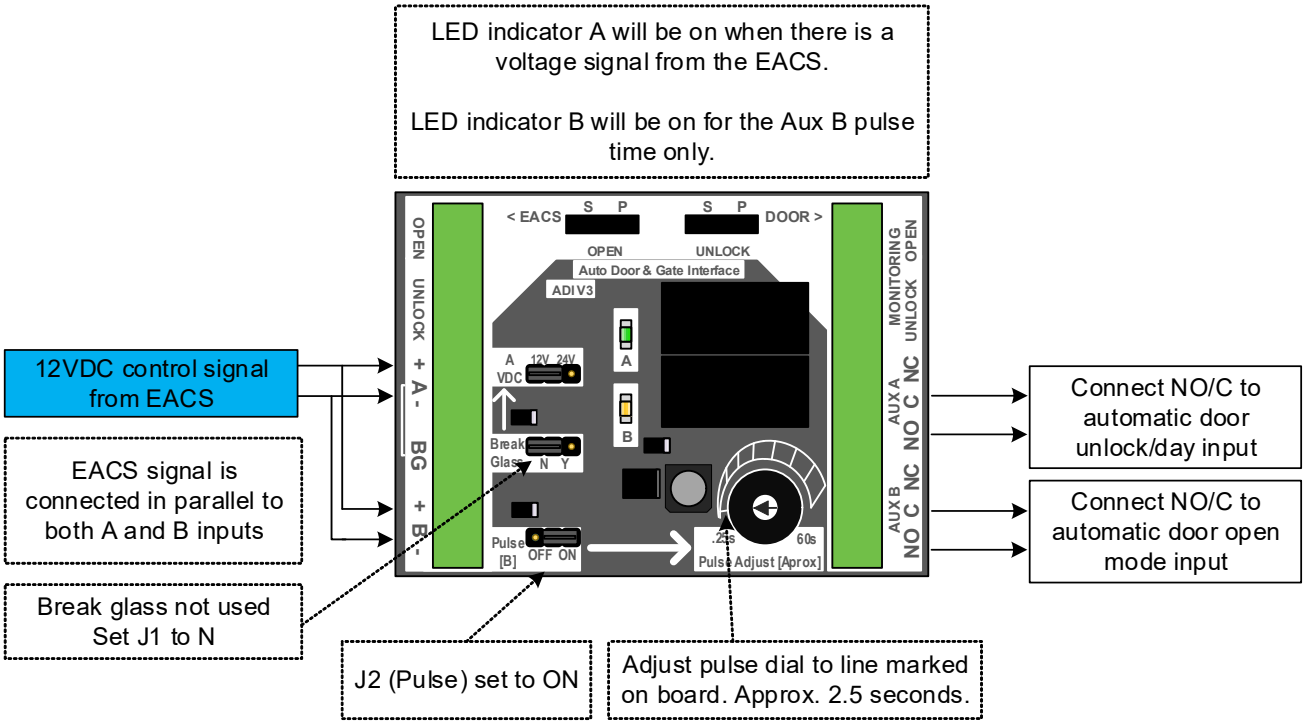
Note: The fire control input must be a 12-24 DC voltage dropping to zero volts during a fire alarm. This voltage can be sourced via a fire tripped output from a Jack Fuse Power Port module or directly from the Fire Indication Panel. Set *E VDC* to match the fire control voltage.

Mode 3 – Automatic door duplex mode

Duplex mode allows one access control signal to control both the automatic door open and unlock/day modes. This helps avoid the common scenario where a user must present their card/push the REX button then move/wave in front of the door sensor to open the door.

Duplex mode controls both relays Aux A and Aux B. In this manner a single control signal from the access control system will both unlock the door and trigger it to open. Aux A will remain on, keeping the door in day mode, while Aux B will provide a short pulse to open the door.

When using duplex mode, only one EACS control output and one pair of control wires are required (2 cores).



Note: For automatic doors that have a schedule to unlock during the day this mode will cause the door to open and close once, at the start of the schedule, and then revert to the correct scheduled day mode.

Mode 4 – Timer Mode

Mode 4 uses the on-board adjustable timer to provide a one-shot pulse on the Aux B output. When a voltage is applied to the B input the timer will start and turn off after the selected time.

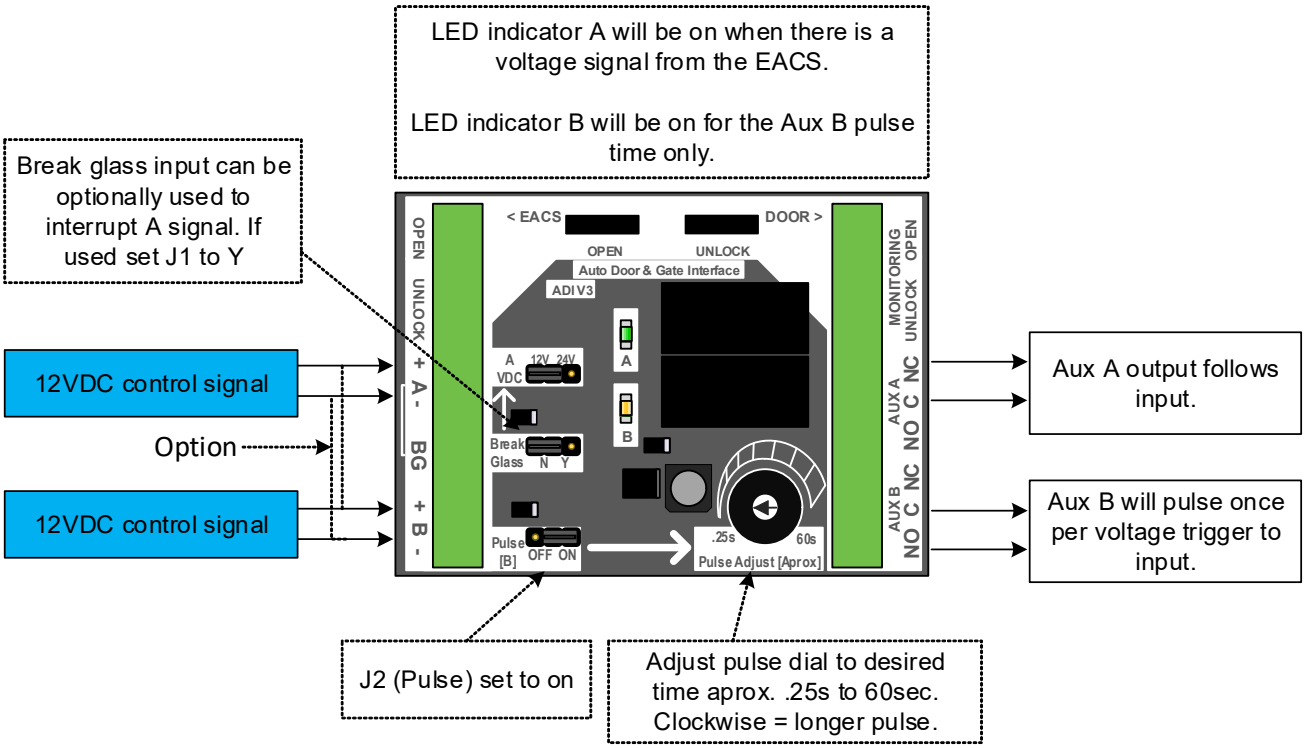
The pulse time can be adjusted from approximately .25 seconds to 60 seconds. This can be used for applications were an extended on-time or delayed response is required. Use a 2.5mm terminal driver to adjust the time via potentiometer R5. Turning the potentiometer clockwise will result in a longer pulse.

Note that this is a one-shot pulse timer. To restart the timer the A input voltage must be interrupted and re-applied. This function may be useful, and a button/switch (normally closed) can be connected in series with A to provide a timer reset.

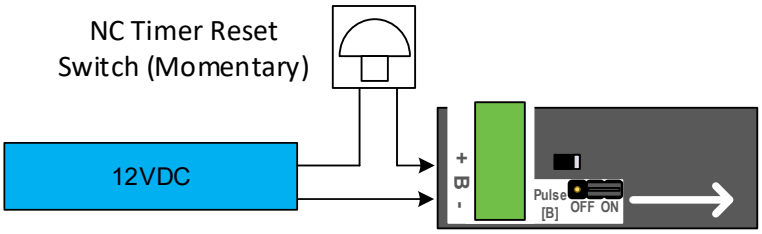
Further note that if the voltage controlling the A input is removed the timer will stop and the output will turn off.

Timer mode can be useful for applications such as delayed lock release or delayed re-lock, timing of gate control and sequencing of double or 'air lock' gates.

Events can be sequenced by connecting the A and B inputs in parallel. The Aux A output will follow the input. The Aux B output will pulse once for the set time and then turn off until the next 12VDC edge trigger event. The NC or NO contacts may be used depending on the application.

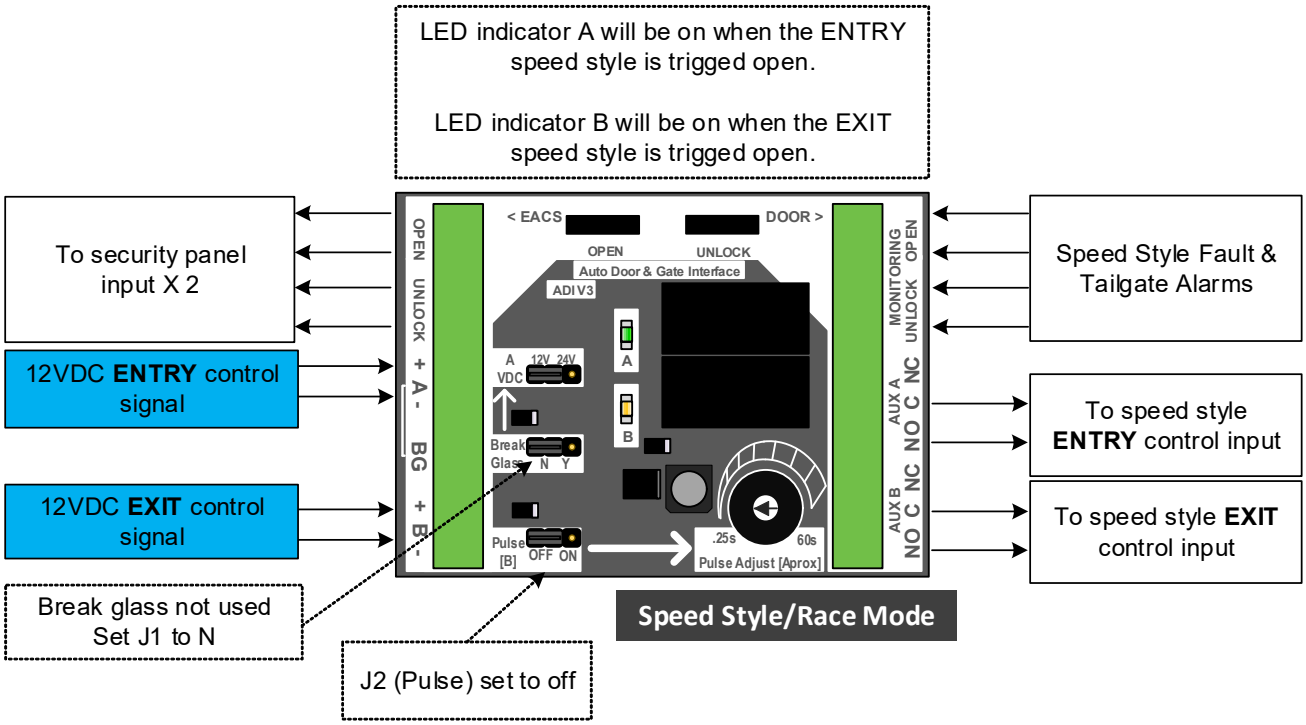


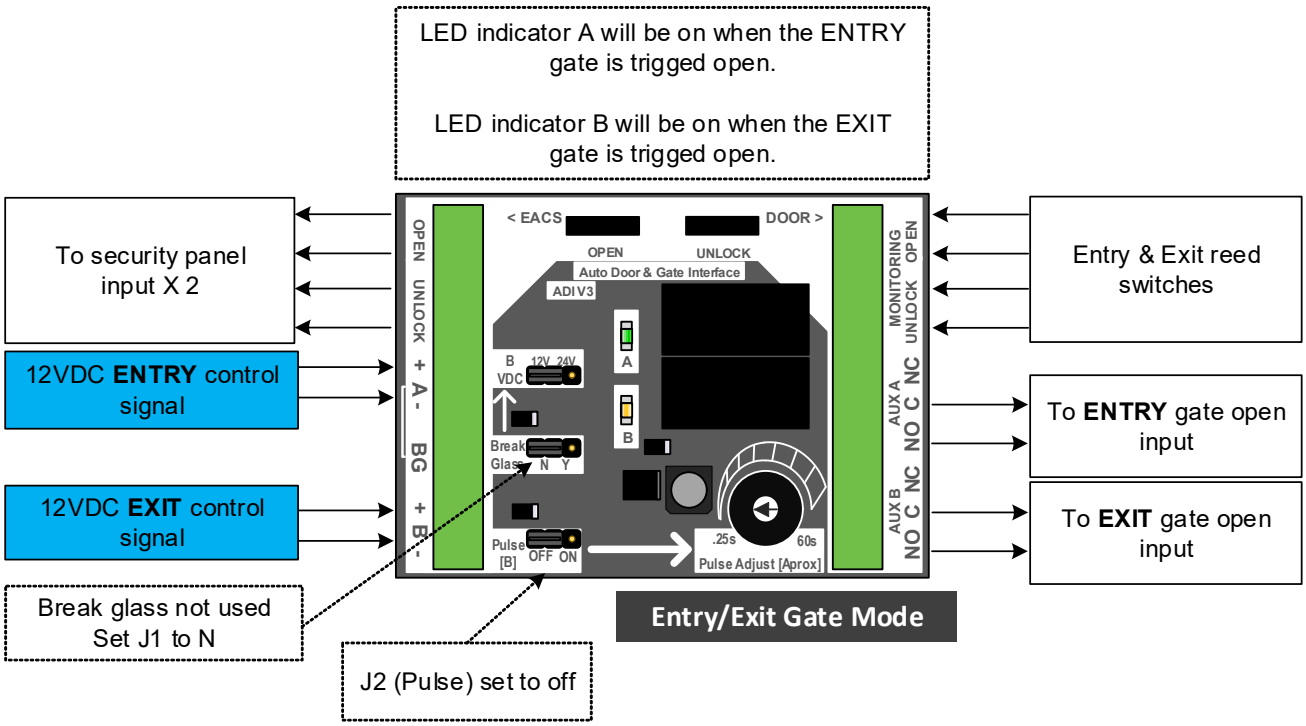
Timer Mode Reset Switch



Mode 5 – Bi-Directional Access Control (Speed Gates or Entry/Exit Gates)

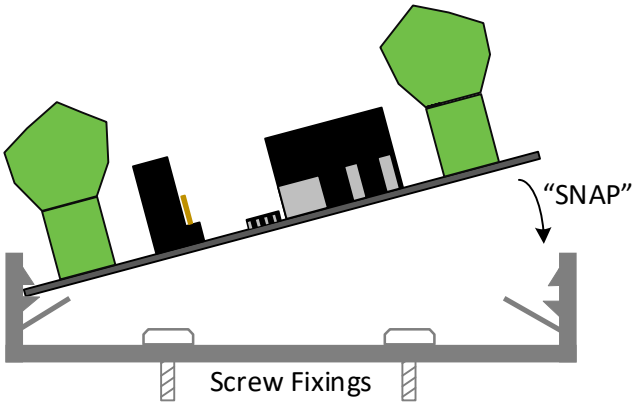
Mode 5 is useful for controlling & monitoring access control points that need to differentiate between entry and exit signals such as speed styles (races) or entry and exit gates.





Mounting

The ADI V3 is supplied clipped into a plastic mounting track. This track can be unclipped from the main module and attached via screws to any suitable surface. The ADI module can then be clipped securely back into the base.



Jack Fuse recommends mounting the ADI V3 as close as possible to the door/gate controller. That is, inside the door control head or in the ceiling nearby. Ideally the LED indicators shall be visible to assist with fault finding/maintenance.

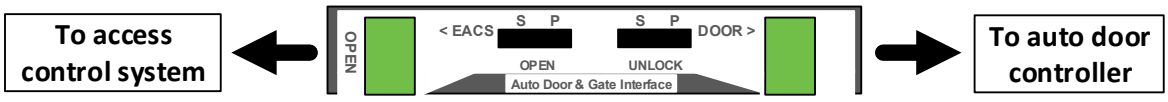
Demarcation Point & Testing

The ADI is useful for creating a demarcation point between the electronic access control system and the automatic door controller.

A demarcation point helps provide a clear separation between trades. During installation the access control technician connects access control wiring to the EACS side of the ADI only. Similarly, the automatic door installer connects door wiring to the DOOR side of the ADI.

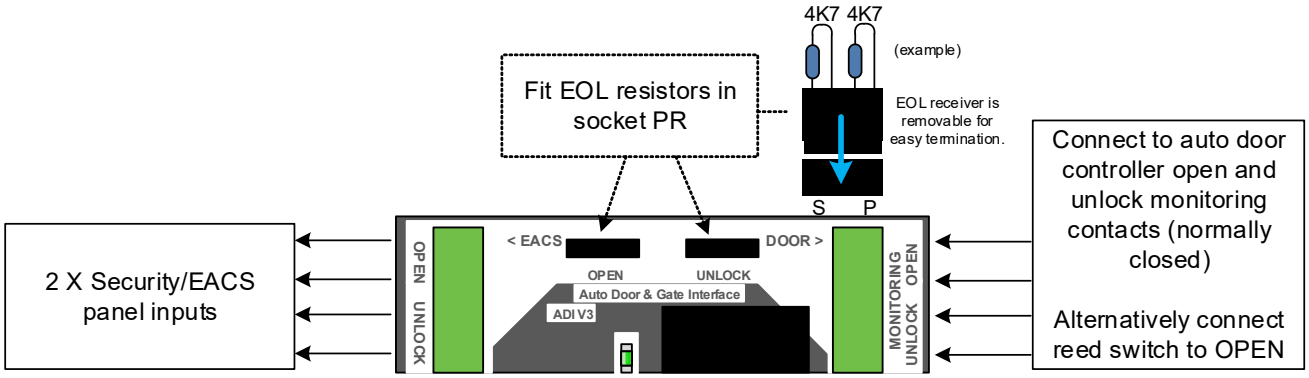
The status of the control inputs is clearly indicated in the middle of the demarcation point by the A & B LEDs.

During fault finding the plug-in terminals for both sides can be removed and independently tested without the need for one trade to interfere with the other trades' connections.



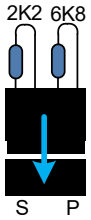
Alarm Contacts & Trip Monitoring

End of Line (EOL) resistors can be fitted on-board the ADI to quickly add supervised alarm monitoring for two field devices.

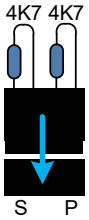


EOL resistors should be bent as shown and the conductors trimmed 6-8mm below the resistors base. The resistors can then be inserted into the receiver. Note that the receiver can be unplugged from the board for ease of termination.

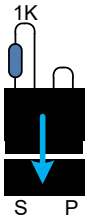
A 2mm terminal driver is inserted into the EOL receiver to remove the resistors if required.



Different EOL Resistors



Same EOL Resistors



Single EOL Resistor

Settings

Jumper/Link	Position	Description
J1	N	Emergency break glass unit not used
	Y	Emergency break glass unit (NC) connected to BG input
J2	OFF	Pulse timer not used
	ON	Pulse timer enabled (Aux B output will pulse for time set by R5)
J3	12V	A input set to 12VDC
	24V	A input set to 24VDC
R5	↺	Counter clockwise shortens Aux B pulse time
	↻	Clockwise lengthens Aux B pulse time.

Technical Data

Maximum conductor size	2.5mm^2
Max current per output	3A
Voltage range A input	11-28VDC (Typical 13.8-27.6)
Voltage range B input	14VDC (Typical 13.8)
Dimensions	55 L X 82 W X 43 H (mm)
RoHS	Compliant
AUS/NZ (RMC-EMC) 61000.6.3	Compliant
Primary materials	PVC, fiberglass, Polyamide 66
Country of origin	China

Ordering Code

ADI	Automatic Door/Gate Interface with Pulse Timer

Learning

Become a **Jack Fuse Product and Power Certified Technician**. Free training available online.

More Information: For complete installation notes, data sheets and technical support please visit www.jackfuse.com