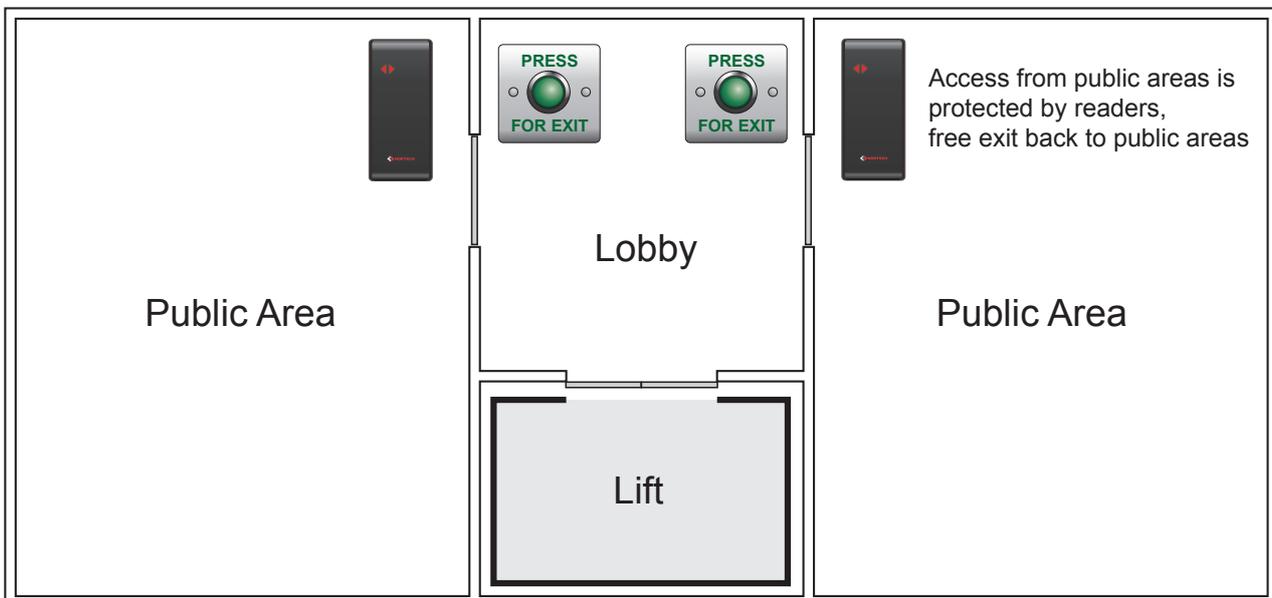# Norpass - Lift Control Integration

Application:

Controlling access to certain floors within a building using an access control system. This can be achieved in several ways:
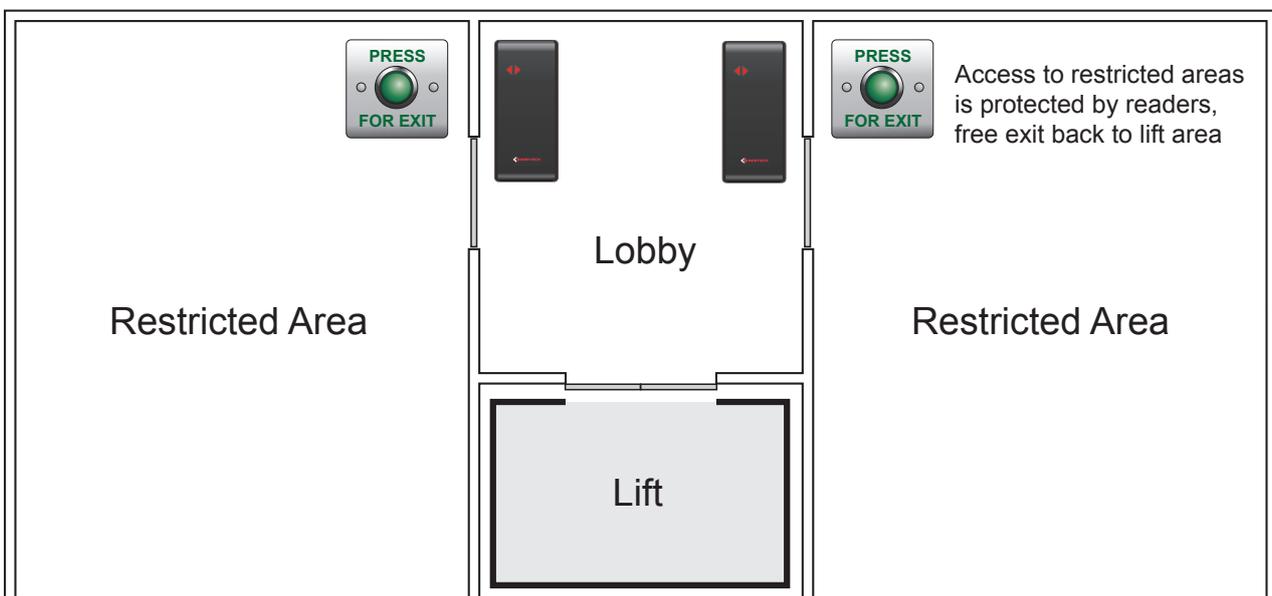
1. The simplest method is to control access to all lift lobby doors, thereby restricting access to and from the lift itself. In the event that an intruder gains access to the lift, they are then confined to the lift and lift lobby, limiting their access throughout the building.

2. Controlling the lift call button. This restricts the use of the lift, but does not restrict access to floors once the lift is being used.

3. Access can be restricted to individual floors or groups of floors, depending on the user's access privileges. This can be achieved either by simple hardware integration or by integration to the lift operating system. We will only look at hardware integration in this document.

Method 1 Overview - Controlling Access to Lobby

Ground Floor:

PRESS FOR EXIT   PRESS FOR EXIT

Access from public areas is protected by readers, free exit back to public areas

Lobby

Public Area

Public Area

Lift

Upper Floors:

PRESS FOR EXIT   PRESS FOR EXIT

Access to restricted areas is protected by readers, free exit back to lift area

Lobby

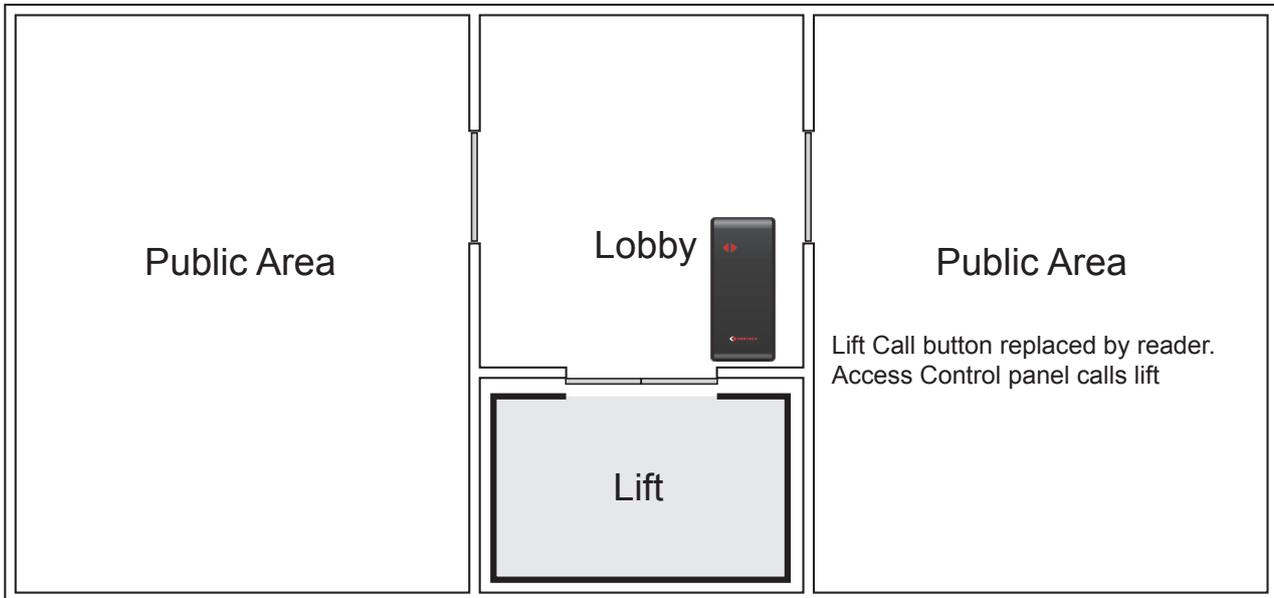Restricted Area

Restricted Area
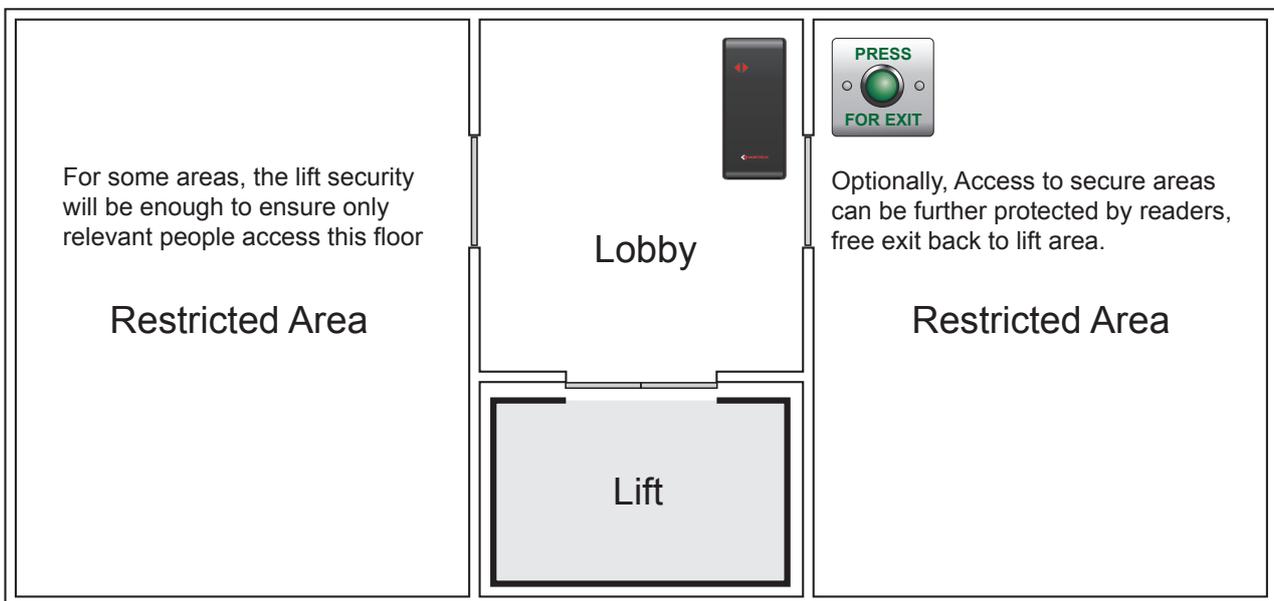
Lift

Method 1 Set-up

Readers are set up as standard doors. Access Levels must be set up to allow users access to the readers at their floor.

Method 2 Overview - Controlling Lift Call Button

Ground Floor:

Public Area

Lobby

Public Area

Lift Call button replaced by reader. Access Control panel calls lift

Lift

Upper Floors:

For some areas, the lift security will be enough to ensure only relevant people access this floor

Restricted Area

Lobby

PRESS
FOR EXIT

Optionally, Access to secure areas can be further protected by readers, free exit back to lift area.
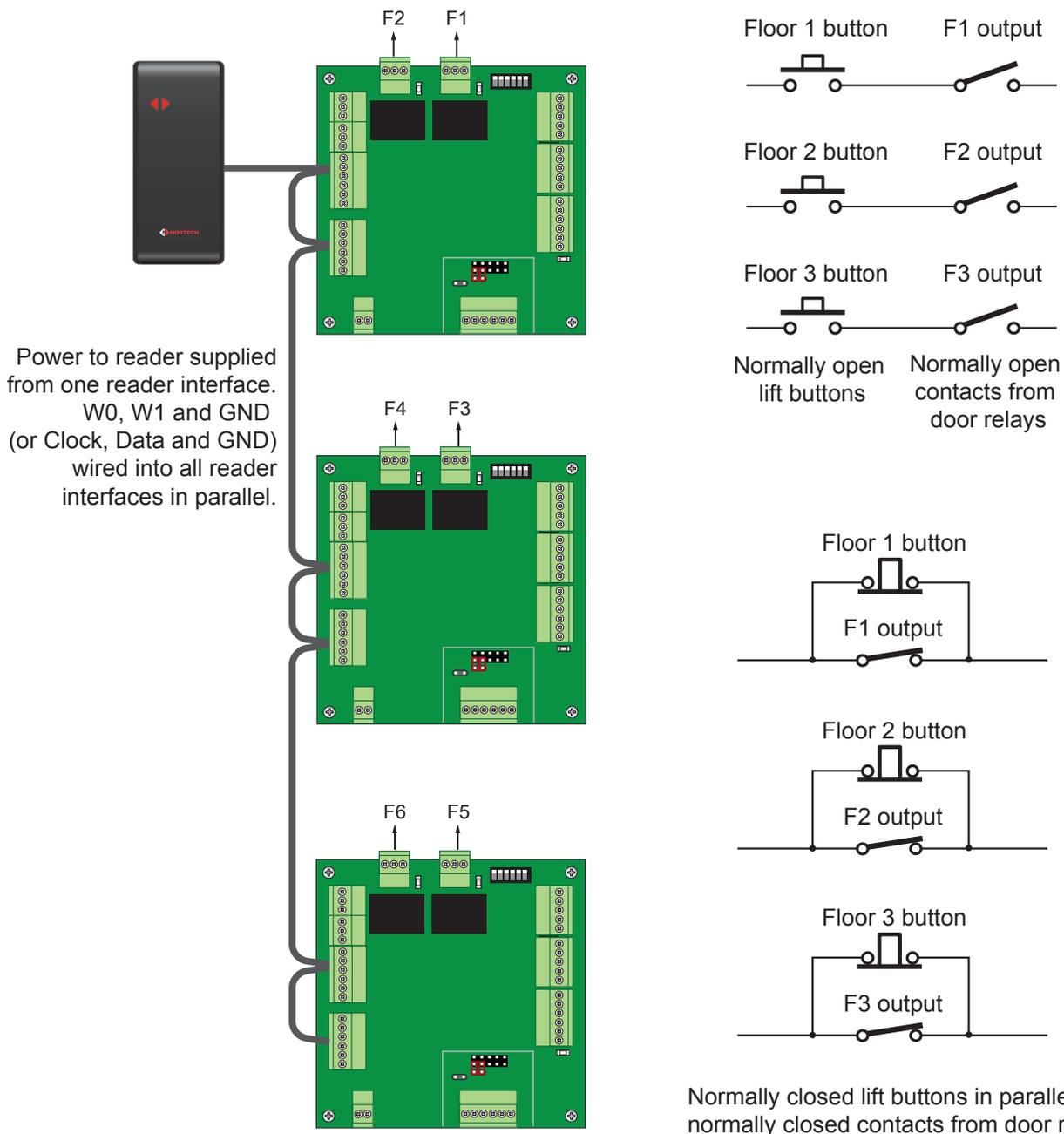
Restricted Area

Lift

Method 2 Set-up

Door readers and access levels are configured as normal. People allowed to use the lift are given access to the lift call button reader. The contacts of the call button must be replaced by the relay output of the access control panel.

NORTECH

Method 3 Overview - Controlling Access to Individual Floors

It may be necessary for several controllers to operate in parallel so that multiple floors can be controlled. Each controller can be used to control access to up to 2 floors. Assuming that each cardholder will require access to more than one floor, the floor selection buttons in the lift are left in place but wired in series with the relay contacts of the corresponding controllers. When a user presents their card, the floor selection buttons that correspond to their access level will be activated. Other buttons will remain disabled.
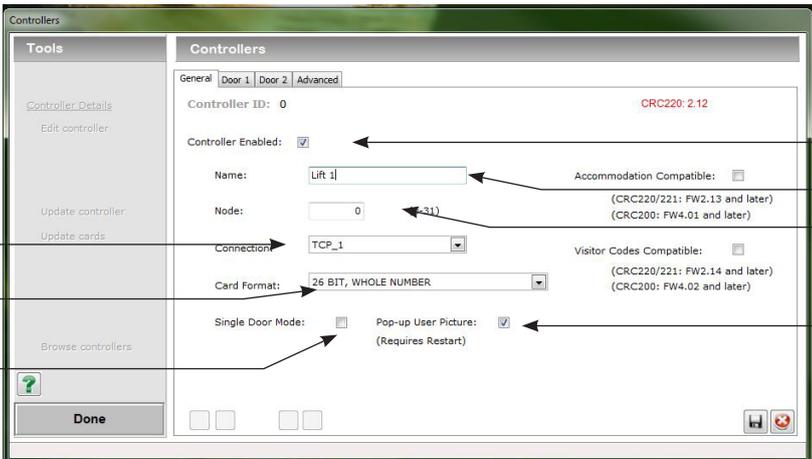
Method 3 Hardware Configuration

Power to reader supplied from one reader interface. W0, W1 and GND (or Clock, Data and GND) wired into all reader interfaces in parallel.

Floor 1 button   F1 output

Floor 2 button   F2 output

Floor 3 button   F3 output

Normally open lift buttons   Normally open contacts from door relays

Floor 1 button
F1 output

Floor 2 button
F2 output

Floor 3 button
F3 output

Normally closed lift buttons in parallel with normally closed contacts from door relays

Method 3 Setup

All standard doors should be configured as normal. When setting up access levels, the floors that an individual needs access to via the lift must be added to the doors that they require access through. The number of combinations of floors and doors is limited to the number of access levels available (15 configurable), but this is normally sufficient for small buildings. Also, a major advantage of this method is that once programmed, the system can be left to function offline.
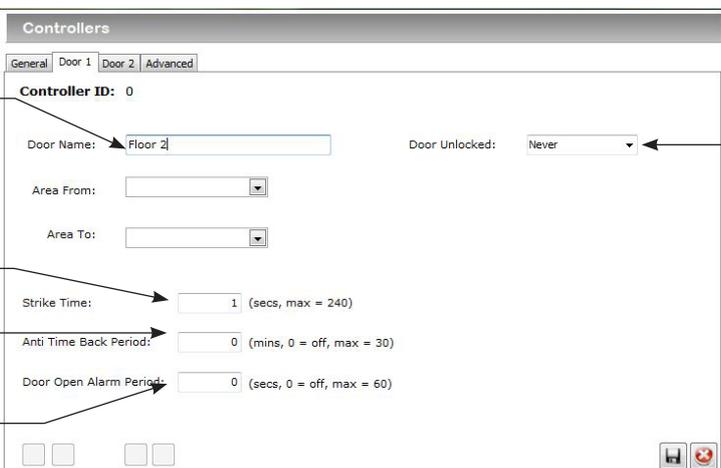
Select 'Edit Controller' and then carry out the following:

Enable the controller

Give it a meaningful name

Set the node (if required)

Picture pop-up can be selected if required

Choose the communication port

Select the card format

Do 'not' select 'Single door mode'

Select 'Door 1' tab:

Give the door a meaningful name (Floor X)

If the floor needs to be accessible by everyone for periods of time, then this can be done by setting the Door unlocked to something other than 'Never' (see App. note AN-05023 for further details)

Set the strike time in seconds (depends on lift manufacturer data)

Leave this setting at '0' if you don't require anti-timeback

Set the Door Open Alarm Period to '0' seconds (this is the amount of time the door can be held open for once it has been unlocked).

Select 'Door 2' tab and repeat the process. Under the 'Advanced' tab, check that the 'Anti-passback' box is not ticked and that 'Fire Input Action' is set to 'No Action' . Also check that the 'Buddy Mode' box is not ticked if the feature is not required. If you do wish to configure any advanced features, refer to the associated application notes.

Save the settings and exit the 'Controllers' window. If the controller is online, this will update the controller automatically. If the controller is not currently online, you will need to return and click 'update controller' when it is online.

Notes:

Lift Button voltage must not exceed 30V.

Check Lift control for strike time compatibility.

A suitable location for the Control units should be found.

Related Application Notes: