

DOOR INTERLOCKING (V2 OR LATER)

This feature is an enhancement to Access Control operation allowing a Door to be interlocked with other Doors. This prevents the Door from being unlocked if any of the other Doors are either Unlocked or Open. Programming also allows for the Door unlock command to be qualified by Area Status, Auxiliary status and/or Zone Input status.

These features can provide options to prevent a Door from being un-locked:

- When specific Area/s are On.
- When certain types of alarms occur.
- During specified time periods.
- When a keyswitch is in the “alarm” state.
- etc.

Programming has been made simple by allowing an Interlock Group to be programmed that can be assigned to a group of Doors that are to be interlocked together. Where complex interlocking is required, the flexibility still exists to allow different Interlock Groups to be assigned to each Door if required. An Interlock Group can also have a TimeZone assigned where Interlock logic is only required during specified Times of Day and/or Days of Week.

When a User attempts to Access a Door, before unlocking the Door, the system will check that:

- All Doors in the Door List (if assigned) are Locked.
- All Doors in the Door List (if assigned) are Closed.
- All Areas in the Area List (if assigned) are Off.
- The Qualify Zone (if assigned) is Sealed.
- The Qualify Auxiliary (if assigned) is On.

When Interlocking Groups of Doors, an Interlock Group is assigned to each Door. A Door List is assigned to the Interlock Group to define the Doors included in the Interlock Group.

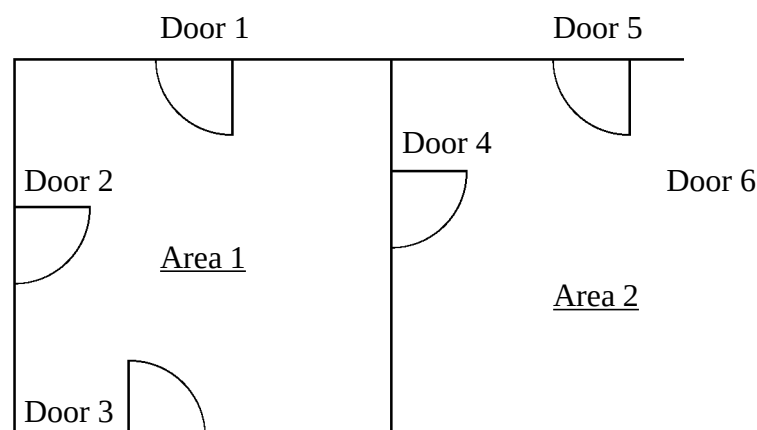
In the example illustrated below:

- 1) All Doors in Area 1 must be interlocked. (Doors 1, 2, 3 & 4)
- 2) All Doors in Area 2 must be interlocked. (Doors 4, 5 & 6)
- 3) As Door 4 provides access between the two Areas, it must be interlocked with all other Doors.

Doors are also to be prevented from being unlocked when any Area associated with the Door is On (armed).

To achieve this, three Interlock Groups must be programmed.

- 1) The first will be assigned to Doors 1, 2 & 3 and will have:
 - A Door List containing Doors 1, 2, 3 & 4.
 - An Area List containing just Area 1.
- 2) The second will be assigned to Doors 5 & 6 and will have:
 - A Door List containing Doors 4, 5 & 6.
 - An Area List containing just Area 2.
- 3) The third will be assigned to Door 4 and will have:
 - A Door List containing Doors 1, 2, 3, 4, 5 & 6.
 - An Area List containing Area 1 and Area 2.



1. Plan the Interlocking requirements.

- 1.1 For each group of Doors to be interlocked note:
- Any Door Lists required.
 - Any Area Lists required.
 - Any Zones or Auxiliaries that are to be used to Qualify the Interlock Logic.
 - Any requirements for the Interlock logic to operate only during specific Times of Day and/or Days of Week.

2. Program Door List/s. [MENU 2, 3, 2]

- 2.1 IF one or more groups of Doors are to be interlocked together, determine the Doors to be included in each group. From this information you can program the **Door Lists** required [MENU 2, 3, 2].
- 2.2 Select a Door List and program a name.
- 2.3 Assign the Door/s to each Door List. A Door List can support any number of Doors up to the maximum number of Doors allowed in the Memory configuration.

3. Program Area List/s. [MENU 2, 3, 1]

- 3.1 IF Area Status is to be used in Door Interlock logic, determine the Area/s that will be used. From this information you can program the **Area Lists** required [MENU 2, 3, 1].
- 3.2 Select a Area List and program a name.
- 3.3 Assign the Area/s to each Area List. An Area List can support any number of Areas up to the maximum number of Areas allowed in the Memory configuration.

4. Program TimeZone/s. [MENU 5, 2]

IF Interlock Logic is only required to operate during specific Times of Day and/or for specific Days of the Week, program the TimeZone/s required. [MENU 5, 2]

- 4.1 Select the TimeZone and program an appropriate name. e.g. Interlock Enable
- 4.2 Program the first TimeZone period to define when the Interlock Logic will be used.
- 4.3 Program the Valid Days of the week for the first Period.
i.e. Days when the function is required to operate.
- 4.4 IF the TimeZone requirements are more complex, program the second (and any subsequent) "TimeZone period" and "Valid Days" to define when the Interlock Logic will be used.
e.g. If the Time periods required differ from Day to Day.
- 4.5 Assign the Holiday Types to be obeyed. (If necessary)
- e.g. Door Interlocking to operate from 5 PM every evening to 8 AM every morning.
- | | | | |
|-------------|----------------------|-------------|----------------------|
| 1st Period: | 17:00-to-__:__ | 2nd Period: | __:__-to-08:00 |
| Days: | SMTWTFSH set to Yes. | Days: | SMTWTFSH set to Yes. |

5. Program the Interlock Group/s. [MENU, 7, 6]

Note: When programming via an LCD Terminal or via PC Direct Upload/Download, Interlock Group Programming can only be accessed via Door Programming. The W Direct Upload/Download software provides a separate Tab and sub-menu option for access to Interlock Group programming.

- 5.1 If programming via the LCD Terminal or PC Direct, select one of the Doors included in the Interlock Group and go to the screen/field where the Interlock Group is assigned.
For LCD Terminals, press <HELP>, 9 to access Interlock Group programming.
For PC Direct, press <INSERT>, use the <UP>/<DOWN> arrow keys to select the Interlock Group to program, then press <F9>.
- 5.2 Select an Interlock Group to program.
- 5.3 IF it is necessary to restrict the valid period of the Interlock Group, or provide an alternate set of Interlock Group Logic for different times of day and/or days of the week, assign the appropriate “TimeZone” to specify when the Interlock Group is Valid.
- 5.4 If a TimeZone is assigned, you may then specify an “Alternate Interlock Group” that will be used when the TimeZone specified in the previous step is Invalid.
- 5.5 Program the Interlock Group options. [Z T]
-Zone Qualify. Set to Yes IF the Interlock logic is to be qualified by a Zone Input. e.g. Keyswitch, etc.
-Tongue Sense. Set to Yes IF Tongue Sense Inputs on the Reader Module/s are utilized and they are to be included in the Interlock logic.
- 5.6 IF two or more Doors are to be interlocked together, assign the appropriate “Door List”.
- 5.7 IF Area Status is to be used in Door Interlock logic, assign the appropriate “Area List”.
- 5.8 IF an Auxiliary is to be used to Qualify the Interlock logic, program the “Qualify Auxiliary”.
- 5.9 IF a Zone Input is to be used to Qualify the Interlock logic, program the “Qualify Zone”.

6. Program/Edit the Door/s [MENU, 7, 6]

- 6.1 Select a Door to program/edit.
- 6.2 Check/program the Door as per “Door Programming” in the Basic Programming Guide.
- 6.3 Assign the appropriate Interlock Group.

7. Ensure Door Reed Zone Inputs and Tongue Sense Zone Inputs (IF used) are enabled for monitoring.

Since Door Forced and Door Open Too Long alarms are System Inputs generated by the Reader Module or LCD Terminal that controls the Door, the actual physical Zone Inputs that the Door Reeds and Tongue Sense Inputs are connected to may not already be enabled for monitoring.

In order to enable these Inputs for monitoring of the Door state, all Door Reed (and Tongue Sense) Zones used in interlocking logic **must** be assigned to an Area that is ON 24hrs.

The Zones are:

- Rxx:Z01 for the Reed on the first Door on a Reader Module.
- Rxx:Z05 for the Reed on the second Door on a Reader Module.
- Rxx:Z06 for the Tongue Sense contact on the first Door on a Reader Module.
- Rxx:Z07 for the Tongue Sense contact on the second Door on a Reader Module.

- 7.1 Program the **Zone Inputs**. [MENU, 7, 0]
-Program the Input names. e.g. Front Door Reed.
-Program any of the Input Attributes required for these inputs. [s C X S R A N T]
Set the "R" (No Review) option to Yes, so that changes of state on these Zones are not saved to Review.
- 7.2 Program a new **Process Group** that monitors for alarm state but does no other processing. [MENU, 2, 4, 3]
-Program a name. e.g. Door monitor.
-Input Type options. [T A E X U P L S] Set "A" (Alarm) option to Yes. All other options to No.
-All Comms options to No.
-All Area Auxiliaries to No.
-All Siren options disabled.
-All Message Types to No.
- 7.3 Assign the Door Reed Zone Inputs (and Tongue Sense Inputs if used) to an **Area** that is permanently On.
[MENU, 7, 1]
You may need to program an Area specifically for this purpose.
When assigning the Inputs use the Process Group programmed in the previous step.