**Data Dictionary**

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| **Name** | **Type** | **Location** | **Description** |
| current\_floor | 8-bit integer | R16 | Used to store the lift's current floor level |
| col | 8-bit integer | R21 | Used to store the current column number. Used in keypad scanning |
| colmask | 8-bit integer | R23 | Mask for current column during keypad scan |
| door\_state | 8-bit integer | R19 | Used to indicate the state of the doors. Takes on 4 values:  0 (closed), 1 (opening), 2 (opened), 3 (closed) |
| eighthTimeCounter | 16-bit integer | dseg | Determines whether 1/8th of a second has passed. Used in Timer2 |
| final\_dest | 8-bit integer | R17 | Used to store the destination floor that the lift is moving towards |
| floor\_changed | flag | dseg | Used to indicate whether the floor level has changed |
| LED\_door\_state\_output | 8-bit integer | dseg | LED pattern for the door state component |
| LED\_lift\_direction\_output | 8-bit integer | dseg | LED pattern for the lift direction component |
| lift\_direction | 8-bit integer | R18 | Used to indicate the direction lift is moving. Takes on 3 values: -1 (down), 0 (stationary), 1 (up) |
| oldCol | 8-bit integer | dseg | Used for keypad debouncing |
| oldRow | 8-bit integer | dseg | Used for keypad debouncing |
| row | 8-bit integer | R20 | Used to store the current row number. Used in keypad scanning |
| rowmask | 8-bit integer | R22 | Mask for current row during keypad scan |
| stop\_at\_floor | flag | dseg | Used to indicate a "stop at current floor" request |
| stop\_at\_floor\_progress | 8-bit integer | dseg | Used to keep track of the different stages within the "stop at current floor" procedure |
| temp1 | 8-bit integer | R24 | Temporary register used for general processing. Sometimes used with temp2 for 16-bit processing. |
| temp2 | 8-bit integer | R25 | Temporary register used for general processing. Sometimes used with temp1 for 16-bit processing. |
| timer4\_TimeCounter | 8-bit integer | dseg | Used to count number of timer 4 overflows |