iLOCK CONTROLLER

Application
The iLOCK Controller is ideal for applications such as access control, where a DALLAS iButton is used to open a door lock, switch on a vehicle, machine, or any application where identification is required.

Each iButton is equipped with a unique factory programmed serial number, which is used to identify itself to the controller.   The controller can load and store up to 251 serial numbers in memory. When an iButton is pressed, the serial number is read and compared to the pre-programmed serial numbers in the controller's memory. If a match is found the relay output is activated for a pre-set time period to operate an electronic actuator, lock, etc.

The controller is designed to be used in conjunction with Touch (TSM) or Touch & Hold (THM) iButton Sockets with multi colour (red, green & orange) led indication.

Mode of Operation
To add or remove iButtons, a valid iButton is used to put the controller in programming mode, thus allowing new iButtons to the programmed.   Two operating modes are available:

Normal Mode
Any programmed iButton can be used to add or remove iButtons.

Master Mode
The first 2 iButtons programmed are called Master iButtons. Only Master iButtons can add or remove additional iButtons

Status Indication
The status of the controller is indicated via a multi colour led, located on the iButton Socket.

Continuous Red – Relay is off and ready to accept
iButtons.
Flashing Red – No iButton present. Memory Failure.
Continuous Green – Relay on.
Flashing Green – Programming Mode
Continuous Green – iButton present. New iButton
accepted, or existing iButton removed.
Flashing Red – iButton present. Invalid iButton.
Flashing Red & Green – Max. number of iButtons
reached
Continuous Red & Green(Orange) – No iButtons loaded.

Buzzer
A buzzer, if enabled, is activated whenever a valid iButton is successfully read.

Socket ordered mounted or loose for external mounting.

Relay Output
A dry contact relay output is provided with Normally Closed and Normally Open contacts.

Relay off – Contact between COM & NC
Relay on – Contact between COM & NO

The relay can be configured to momentarily switch on once a valid iButton is touched, and automatically switch off after a pre-set delay.   Alternatively press the iButton to latch the relay in the on position. The relay stays latched until an iButton is pressed again to switch it off.

Auxiliary Output
The Aux output is an open collector transistor, with the emitter connected to ground. The output can be configured to give a low signal in addition to the relay output, or as an alarm output when an invalid iButton is touched.

Specifications
Operating Voltage –   12VDC –28VDC.
Absolute max. voltage - 30V.
Relay current rating –   2A standard or 16A on request.
Contact type –   Dry Contact COM,NC,NO.
Maximum nr. of iButtons. – 28 (standard), 64 or 251 on request.
Dimensions –   120mm (w) X 65mm (L) X 40mm (H)
Temperature range –   -20 ºC – 55 ºC
iButton Types: - Compatible with all DALLAS
iButtons

The manufacturer reserves the right to change specifications without prior notice

Configuration

Configuration of the controller is done via jumper links as well as the pushbutton located on the board.

Mode
Closed – Normal Mode   (Default)
    Any programmed iButton can add new iButtons.
Open -   Master Mode
    First 2 iButtons loaded are Master iButtons that can add or remove iButtons. No other iButton can be used.

Aux
Closed – Output switches together with relay. (Default)
Open – Output switches on for 30 seconds, when invalid iButton is touched.

Relay
Closed – Momentarily - Relay will switch off automatically after pre-set delay. (Default)
Open – Latching - Relay changes state every time a valid iButton is touched.

Buzzer
Closed – Buzzer enabled.   (Default)
Open –   Buzzer disabled.

Relay-on Delay

The delay can be set from 1 - 30 seconds. Touch a valid iButton, to set the controller in programming mode. Press the pushbutton within 3 seconds, for the Led to turn to green. Keep touched for 5 seconds, after which the green led starts to flash. The buzzer is activated as well. Each flash equals a one second delay. For example 10 flashes gives a 10 second delay. Release the pushbutton when required number of seconds (flashes) are reached.

Programming Functions

Clear all iButtons
To reset and remove all iButtons switch off the controller. Keep the pushbutton touched and power up the controller. Both green & red led's switches on giving an orange colour to indicate no iButtons are programmed.

Program first iButton (Normal & Master Mode)
Make sure no iButtons are programmed, the led must be orange. The first iButton touched will be programmed in the first position. For Master Mode, this iButton and the next iButton will be Master iButtons.

Touch the first iButton. The green led starts flashing to indicate the controller is in programming mode. Touch the same iButton again to confirm. The first iButton is programmed.

Program additional iButtons
To add new iButtons, touch any programmed iButton (Normal mode), or one of the two master iButtons (Master mode). Touch the new iButton within 3 seconds. The led flashes green for 15 seconds, indicating the controller is in programming mode. Touch the original iButton again to confirm the iButton is programmed. The led switches on for 5 seconds, when the iButton is programmed.

Delete an iButton
To delete an iButton, keep the pushbutton pressed, and touch any already programmed iButton (Normal mode), or one of the two master iButtons (Master mode). Touch the iButton to be deleted within 3 seconds. The led flashes green for 15 seconds, indicating the controller is in programming mode. Touch the original iButton again to confirm deletion. The led switches on for 5 seconds, indicating the iButton is removed.

Delete a Lost iButton
To remove a lost iButton, all the iButtons need to be cleared, and reloaded.

Connection Diagram