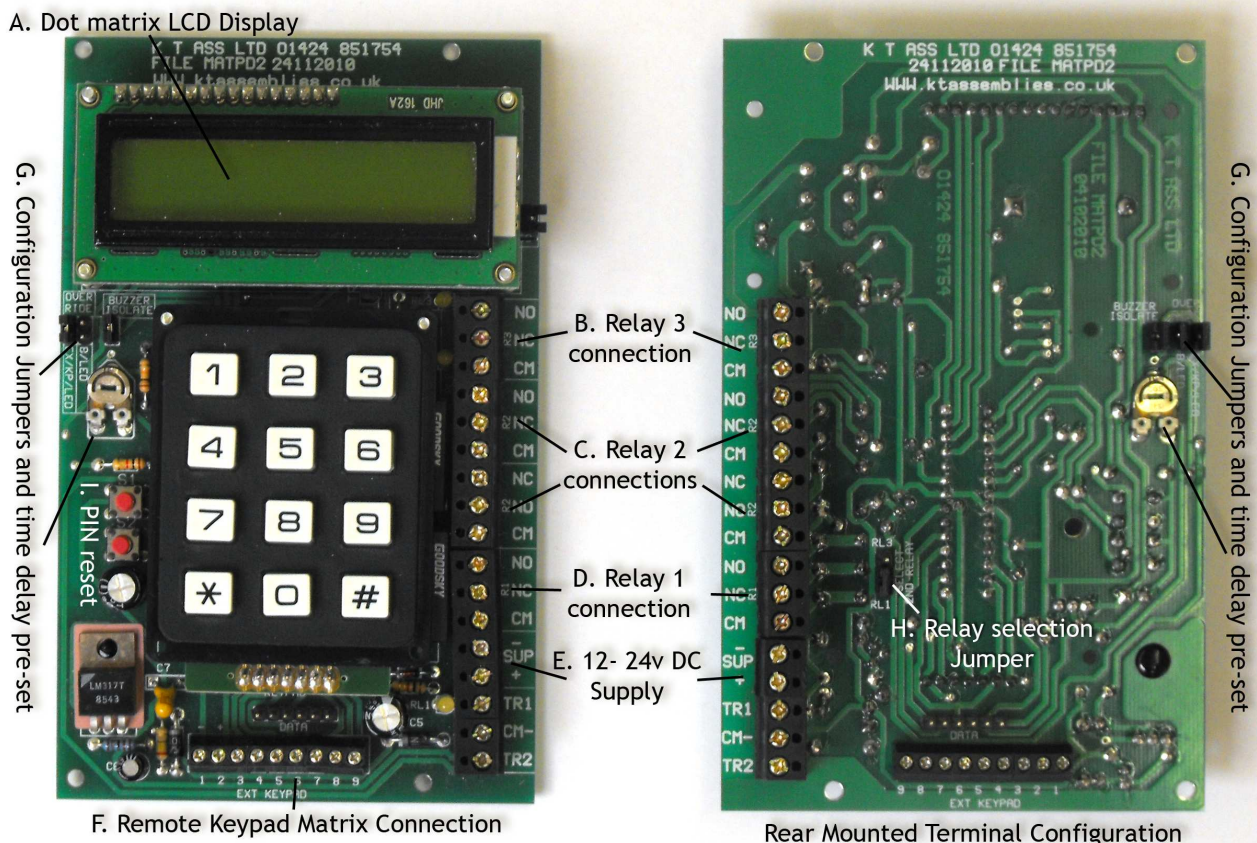


KTKP01 Fully programmable electronic PIN lock keypad



The KTKP01 is designed as an electronic combination lock. Entering the correct 6 digit PIN will activate up to 2 relays, configurable via on-board jumper pins (G), which can switch 3 12v DC lines. Both relays can switch either Normally Open or Normally Closed connections, and Relay 2 will switch 2 outputs at once (C, D). The relays remain activated for a pre-determined amount of time which can be set via an on-board potentiometer (I). The default time range is approximately 5 seconds - 2 minutes, but custom times can be written in to the board software on request. While the relays are active a built in sounder emits a high pitch tone to signify the relay status as active. The sounder also emits a short tone upon each key press. This sounder can be disabled via a configuration jumper mounted on the PCB. (G)

The keypad features a back-lit dot matrix LCD (A) to provide operational feedback. By default the back-light is activated whenever any button is pressed on the keypad, during any programming operation, and while the switching relays are active. This behaviour can be overridden by use of on-board jumper pins (G) to configure the LCD back-light to be permanently lit, should the unit be deployed in a poorly lit environment. The LCD back-light also operates a third relay (B) which can be used to switch external lighting circuits, behaving in the same way as the LCD back-light during it's default configuration, even when the back-light itself is overridden. Messages on the LCD display the status of the keypad, and can be customised to requirement during manufacture, please state any requirements when ordering.

Programming the keypad:

The keypad can be programmed with a new 6 digit PIN at any time. Pressing both * and # and the same time will switch the keypad into programming mode, during which it will

not operate with its default behaviour. The keypad will ask you to confirm the existing PIN to validate your authorisation. If the PIN is entered incorrectly, or the programming mode is left to time out the keypad will return to normal operation. After correctly entering the PIN (factory pre-set at 123789) the keypad will ask you to enter a new PIN twice to confirm it. If successful the LCD_(A) will display 'Code Updated'. Once you have done this the new PIN will become effective immediately and the keypad will return to normal operation. The new PIN will remain programmed into the keypad even during power outages. Should you require the PIN be returned to its default factory setting of 123789 you may do so by simultaneously pressing the two tactile switches on the left side of the PCB_(I). The display will ask you to confirm resetting the PIN by pressing * or cancel the operation by pressing #.

Configuring the keypad:

The keypad is available in several configurations from manufacture, and is also user configurable. The unit can be provided as a PCB only configuration, or mounted in one of a variety of enclosures. These enclosures can either be moulded IP rated ABS, steel, wood, aluminium or any combination thereof. KT Assemblies can also custom design and build any enclosure to requirement. The keypad matrix is available as either moulded ABS or die-cast aluminium with LED back-lighting. The LCD_(A) is available in a range of colours to suit environment or to provide limited field of vision so that it is only visible to a user standing directly in front of the unit. Terminal connections on the PCB can be front or rear mounted to account for enclosure configuration and security access to the unit.

User configuration offers a range of options. A terminal connection at the bottom of the board_(F) allows use of a remote keypad to operate the unit from another location, and includes a +5v output on terminal 2, and a common negative on terminal 1 to provide power to LED back-lighting on a remote unit. This output is switched by the LCD back-light by default but this behaviour can be overridden by a jumper pin_(G) on the left of the board below the LCD_(A). Jumpers here also provide option to override the back-light of the LCD and to isolate the on-board sounder, preventing any audible indication. Below these jumpers is a pre-set_(G) which adjusts the amount of time the relays stay active when a valid PIN is entered. The keypad matrix can be carefully removed to reveal a forth jumper pin_(H), which configures the output relays. Leaving this unconnected will make relay 2_(C) solely operational. Placing a connection between the bottom 2 pins will enable relay 1_(D) operation, and the top 2 override relay 3_(B) into switching operation (by default this is switched with the LCD back-light). The keypad matrix and the LCD_(A) are both replaceable and spares can be ordered from KT Assemblies on 01424 851754. Please note that should the terminals be rear mounted on the unit then the configuration connector locations will be reversed horizontally.

The unit can be powered with a supply from 12-24v DC connected via the SUP terminal_(E) on the bottom right hand side of the PCB. Keypad settings are written to on-board memory and PINs will remain intact even during power failure.