5 X 3 AND 4 X 2 BUTTON CAN KEYPADS

MoTeC PDM keypads are multi-button backlit CAN keypads that provide a switching solution that can be customised and connected to any MoTeC PDM.

The buttons can be used as an input to control the PDM and other devices in the vehicle. The three LED lights along the top of each button can be used to indicate the state of the devices.

Four separate keypads, each with up to 15 keys can be combined on a single CAN bus, and controlled by the same PDM (factory configuration required).

KEYPAD PART NUMBERS

41400 – 5 x 3 button keypad (includes labels)

41401 – 4 x 2 button keypad (includes labels)

63044 – Replacement keypad labels

FEATURES

- Small, lightweight and compact package
- Rugged design – vibration, and impact resistant for use in extreme environments
- Dust and water resistant, sealed to IP67
- Dimmable LED indicators above each button for real-time feedback
- Backlit buttons
- Pre-designed semi-transparent labels supplied
- Supports multiple key press combinations
- Simplified wiring, only 4 wires required for multiple buttons
- Short circuit and reverse polarity protection

SPECIFICATIONS

Configuration

All configuration (CAN addressing, function, backlight brightness, status LEDs etc.) is done via PDM Manager software.

Communications

- Single CAN bus

Capacity on CAN bus

- Up to 4 keypads, with up to fifteen keys each

⇨ Advise your dealer if multiple keypads are required on the same CAN bus. Use of multiple keypads will require the keypads to be pre-configured at the factory.

LED status lights

- Colours: green, orange, red

Power

- Operating voltage: 8 to 32 V DC
- Operating current: 0.2 A maximum
- Reverse battery protection
- Short circuit protection

Ambient operating temperature

- -40 °C to 85°C

Physical

- 1 x 4 pin Deutsch DT connector

8 button keypad:

- Size (without connector): 104.7 x 62.82 x 15.52 mm
- Weight: 105 g

15 button keypad:

- Size (without connector): 129.54 x 89.46 x 15.74 mm
- Weight: 175 g

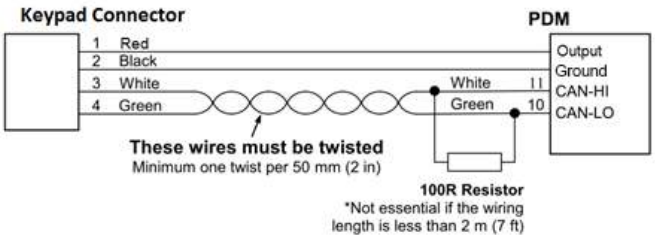
PINOUT

Mating Connector: Deutsch DT-04

Pin	Function
1	Power
2	Ground
3	CAN Hi
4	CAN Lo

WIRING

The keypad has a male 4 pin Deutsch DT connector moulded into the back of it. The corresponding female connector should be wired as follows.



Power wiring

The keypad will continuously send CAN messages to the PDM, which will prevent the PDM from entering standby mode. There are two methods for wiring the supply to the keypad.

1. For vehicles with a battery isolation switch, configure the PDM to always power the keypad. This will allow the keypad buttons to be used for master start up functions, but the PDM will never enter standby mode.

   To minimise battery drain when the vehicle is not being used for extended periods, the battery isolation switch needs to be turned off.

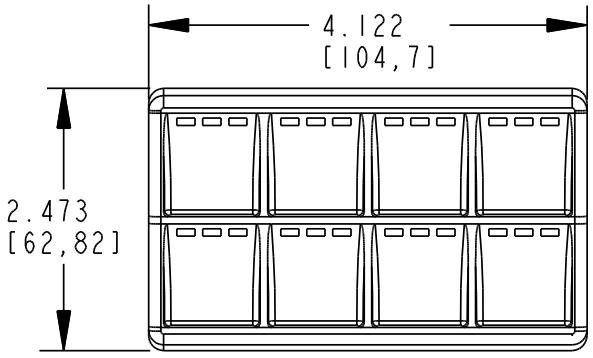
2. Wire a master switch or ignition key into a PDM input and configure the PDM to turn off all the outputs (including the keypad) when the switch or key are turned off. This will allow the PDM to enter standby mode, minimising battery drain.

DIMENSIONS AND MOUNTING

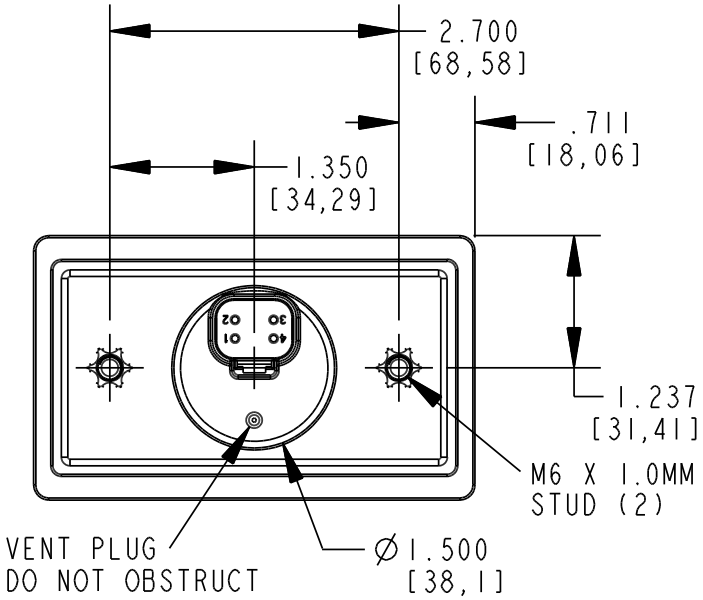
Dimensions are in inches and millimetres (in brackets).

4 x 2 button keypad

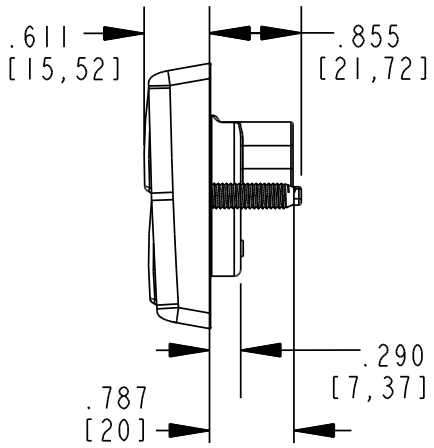
Front



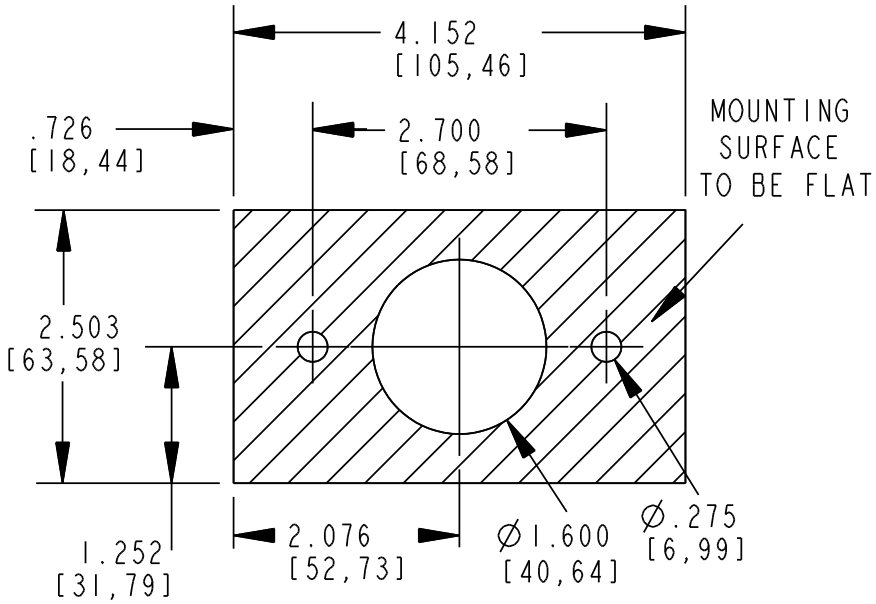
Back



Side

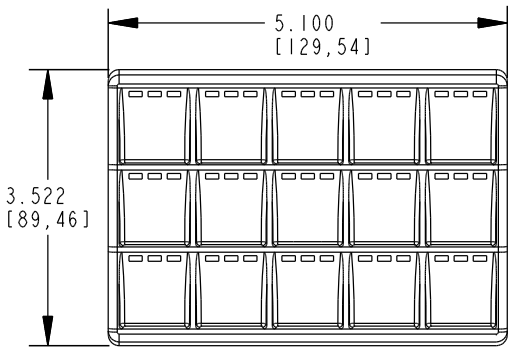


Mounting surface

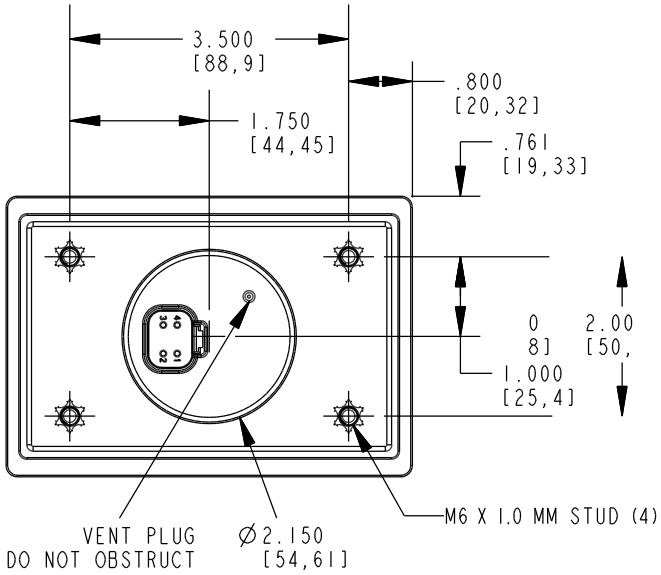


5 x 3 button keypad

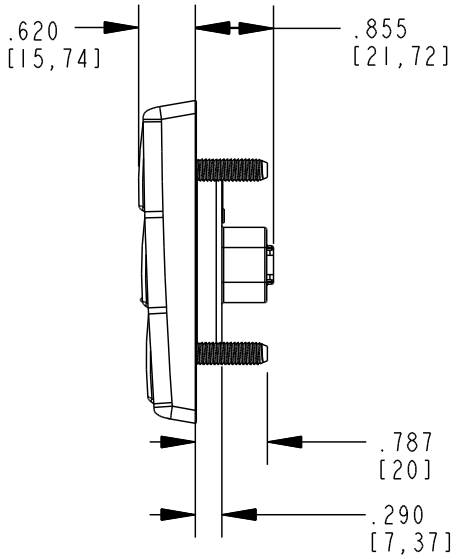
Front



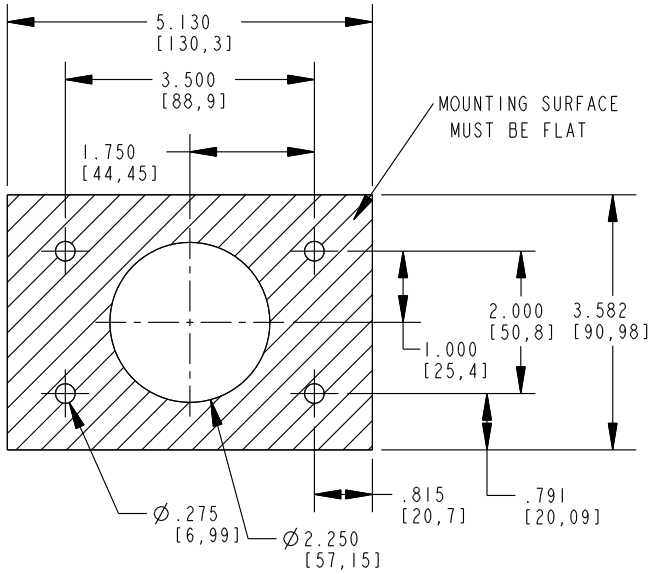
Back



Side



Mounting surface



PDM MANAGER SETUP

PDM global setup

CANopen Node ID, Button CAN Address, LEDs CAN Address and Brightness CAN address options are set by MoTeC and should not be changed. These default settings are required for the keypads to work correctly.

The brightness of the backlight and status LEDs can be set as a percentage of maximum intensity. An additional brightness setting can be set, which is used when a selected channel becomes true.

Keypad setup

Keypad buttons can be allocated to control an input channel in a similar fashion to controlling the input pins of the PDM. Each input can then be used for multiple functions as required. See the sample configurations built into PDM Manager.

The three LED lights along the top of each button can be configured to indicate the state of devices. **One example is:** LED 1 (green) may be turned ON when the button output channel is active; LED 2 (orange) could be used to show that the output has gone into fault; LED 3 (red) could turn on if the output channel has faulted and stopped retrying.