

# FuelTech



OWNER'S MANUAL

# SWITCHPANEL

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## 1. Presentation

The SwitchPanel is a backlit button panel that communicates with PowerFT ECUs via FT-CAN 2.0, available in 4 different versions with 4, 5 and 8 buttons.

By using SwitchPanel, your project will appear more neat since installation wiring will be minimized. Each button is identified through several predefined stickers that are included with the product; blank stickers are also included so you can make your own IDs. Thus, each button will be very well identified in particular by the multicolor LED backlight that varies according to the programmed function.

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Another benefit of using SwitchPanel is that you can reallocate up to 8 PowerFT ECU inputs to extra sensors or functions, allowing you to expand your project without having to purchase more devices with more inputs.

SwitchPanel is compatible with all the features in the PowerFT. All buttons from the ECU can be selected such as 2-step, Air conditioning, Boost +, Engine Startup, dashboard screen switch, etc. The switch functions are also compatible such as Day / night mode switch, Burnout, Progressive Nitrous, datalogger, etc. In addition to compatibility with the existing features, of the PowerFT ECUs added map switching through buttons, single-button or a button for each map.

The SwitchPanel has well spaced buttons with clear touch perception and is perfect for use with gloves. It has IP67 protection against water and dust (complete protection against dust and immersion up to 1 meter for up to 30 minutes).

The case has two 10-32 screws on the back, allowing an easy and discrete installation onto the dashboard, making your project even more professional.

## 2. Characteristics

### Electrical Specifications

- Supply Voltage: 12-24Vdc;
- Standby Current: <50mA;
- Communication BUS: FTCAN 2.0;

### Mechanical Specifications

- CAN connector: 1 Molex male, 1 Molex female;
- Switch Life: one million cycles;
- Material: Silicone rubber with polyurethane hardcoat;
- Mounting Studs: #10-32 (3/16"x32);
- Ingress protection Rating: IP67/NEMA6;

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### Dimensions (in)

	SwitchPanel-4 mini	SwitchPanel-5 mini	SwitchPanel-8 mini	SwitchPanel-8
ECU	2.68 x 2.68 x 0.83	6.1 x 1.54 x 0.83	4.96 x 2.68 x 0.83	5.88 x 4.10 x 0.88
Packaging	8.78 x 6.38 x 2.36			
Shipping box	10 x 9.81 x 2.55			

### Peso (oz)

	SwitchPanel-4 mini	SwitchPanel-5 mini	SwitchPanel-8 mini	SwitchPanel-8
ECU	3.4	4	5	10
Packaging	12	13	14	17
Shipping box	15.6	16	17	20.5

### Contents of packaging

- 1 SwitchPanel;
- 1 electrical harness for installation;
- 1 operation and installation guide;
- 1 mounting kit (2 #10-32, 3/16" nuts);
- 1 FT SwitchPanel label;

### 3. Warranty terms

The use of this equipment implies in total accordance with the terms described in this manual and exempts the manufacturer from any responsibility regarding product misuse.

**This product must be installed and tuned by specialized auto shops or professionals with experience on engine tuning.**

The oversight of any of the warnings or precautions described in this manual can cause engine damage and lead to warranty void of this product warranty.

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Before starting any electrical installation, disconnect the battery.

This product is not certified for aeronautic purposes or any flying vehicles, as it has not been designed for such applications.

In some countries where an annual inspection of vehicles is enforced, no modification in the OEM ECU is permitted. Be informed about local laws and regulations prior to the product installation.

**Important warning for proper installation of this product: Always remove and insulate unused wires. NEVER roll up excess wiring as this may create an antenna that captures electromagnetic interference that may generate product malfunction.**

#### Limited Warranty

This product warranty is limited to 90 days from the purchase date, only covering manufacturing defects and requiring purchase invoice presentation.

Damages caused by misuse of the unit are not covered by the warranty.

Warranty void analysis is done exclusively by FuelTech technical support team.

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## 4. Installation

The SwitchPanel must be installed in a location easily accessible to the driver and must be secured by the two screws on the back.

### 4.1 Power Supply

Since the SwitchPanel draws 50mA of current when at idle, it's possible to use the same power supply as the FuelTech ECU's.

#### Electric diagram

- A - SwitchPanel;
- B - DEUTSCH Connector;
- C - CAN Network FT2.0 - To connect on ECU (Power FT line);
- D - CAN Network expansion FTCAN2.0 - to connect others equipments FTCAN;
- E - CAN Terminator;

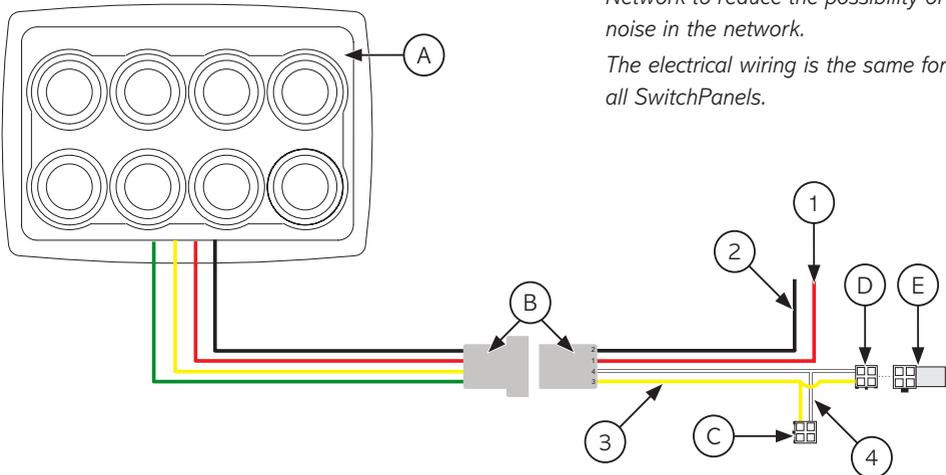
- 1 - Red Wire - Switch 12V;
- 2 - Black Wire - Ground;
- 3 - Yellow Wire - CAN LOW;
- 4 - White Wire - CAN HI;



#### NOTE:

The use of the Terminator (E) is mandatory at the end of the CAN Network to reduce the possibility of noise in the network.

The electrical wiring is the same for all SwitchPanels.



#### ATTENTION:

If there is a connection error in the CAN network, the currently active functions will not be affected.

## 5. Setting up the buttons

There are 2 ways to set up the buttons, via FTManager or through the ECU screen.

### 5.1 Setting up via FTManager

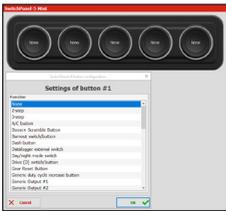
To assign functions to the buttons of the SwitchPanel, start FTManager and go to “sensors and calibration/CAN Communication/SwitchPanel”. Click on the button then choose one of the pre-set functions.



SwitchPanel-4 Mini



SwitchPanel-8 Mini



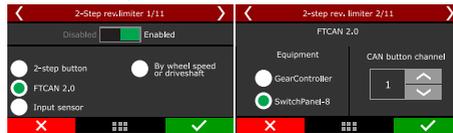
SwitchPanel-5 Mini



SwitchPanel-8

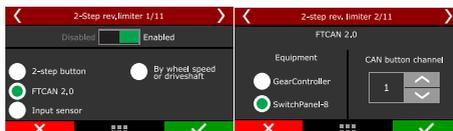
### 5.2 Setting up via ECU screen

To set up a button for 2-step, go to “drag race features/2-step rev limiter”, select FTCAN 2.0 then set SwitchPanel as the equipment and choose the button channel to be assigned to.



### Setting up for features other than 2-step

The same procedure can be applied to assign functions to the other buttons, select FTCAN 2.0 and then the CAN button channel.



## 5.3 Identifying the buttons

The SwitchPanel comes with a sticker sheet that should be used to identify the function of each button.

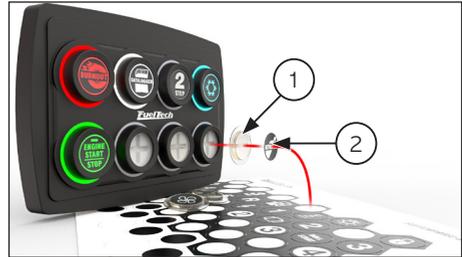
### How to apply the stickers

- 1 - Clean the cap (1) with alcohol;
- 2 - Remove the sticker (2) from the sheet;
- 3 - Apply the sticker (2) on the cap (1);



**NOTE:**

*The sheet comes with both black and white stickers so the identification of buttons can be personalized.*



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## 5.4 Backlight colors table

When the button is pressed it will change color depending on the function assigned to it. The following table contains information regarding which color belongs to which function.



**NOTE:**

*The backlight colors can not be edited.*

Input / Function	Function ON Pushed Button	Function OFF Released Button
Air conditioning	Cyan	Red
2-Step	Green	White
3-Step	Green	White
Transbrake	Blue	Purple
Burnout	Purple	Red
ProNitrous	Blue	Red
Progressive Nitrous	Blue	Red
Datalogger	Active: Green Log Full: Red	White
Day/Night	Blue (night)	Yellow (day)
Dashboard	Yellow	White

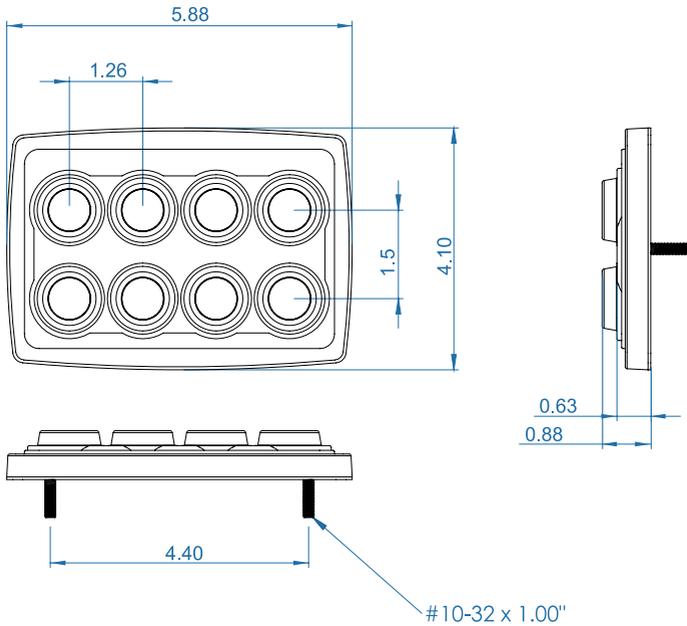
Input / Function	Function ON Pushed Button	Function OFF Released Button
Starter	Yellow	Engine ON: Green Engine OFF: Red
PWM Output	Green	White
Up shift Button	Green	White
Boost+	Green	White
Gear Reset	Green	White
Adjust change	Active: purple Pressed: Green	White

\*\*\* Button not configured without light

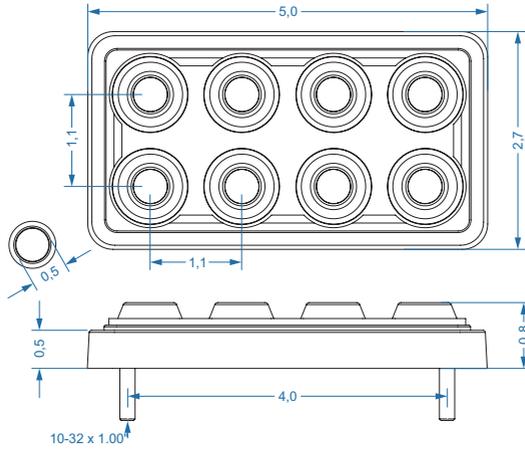
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## 6. Dimensions (in.)

### SwitchPanel-8

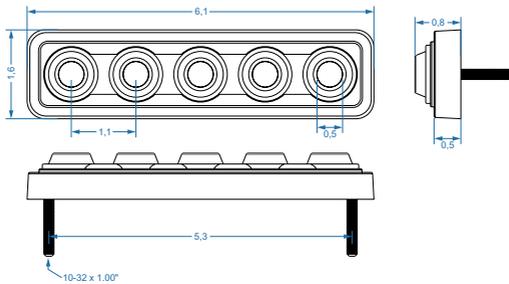


## SwitchPanel-8 MINI

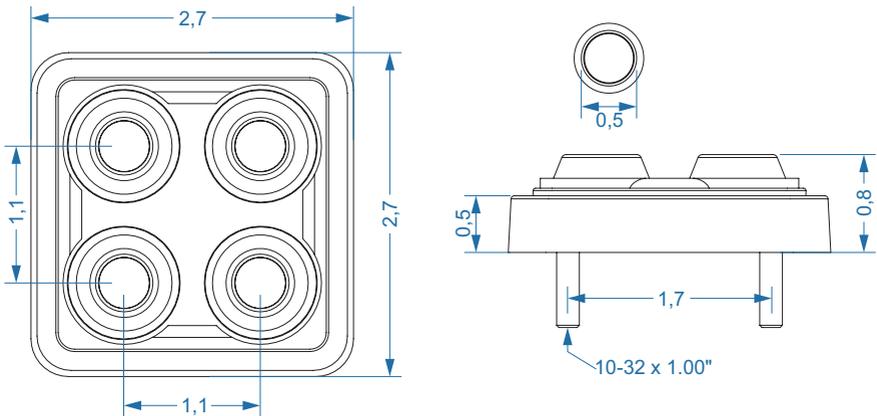


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## SwitchPanel-5 MINI



## SwitchPanel-4 MINI



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