Accuthermo Technology
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Application Note for FTX700D Connections

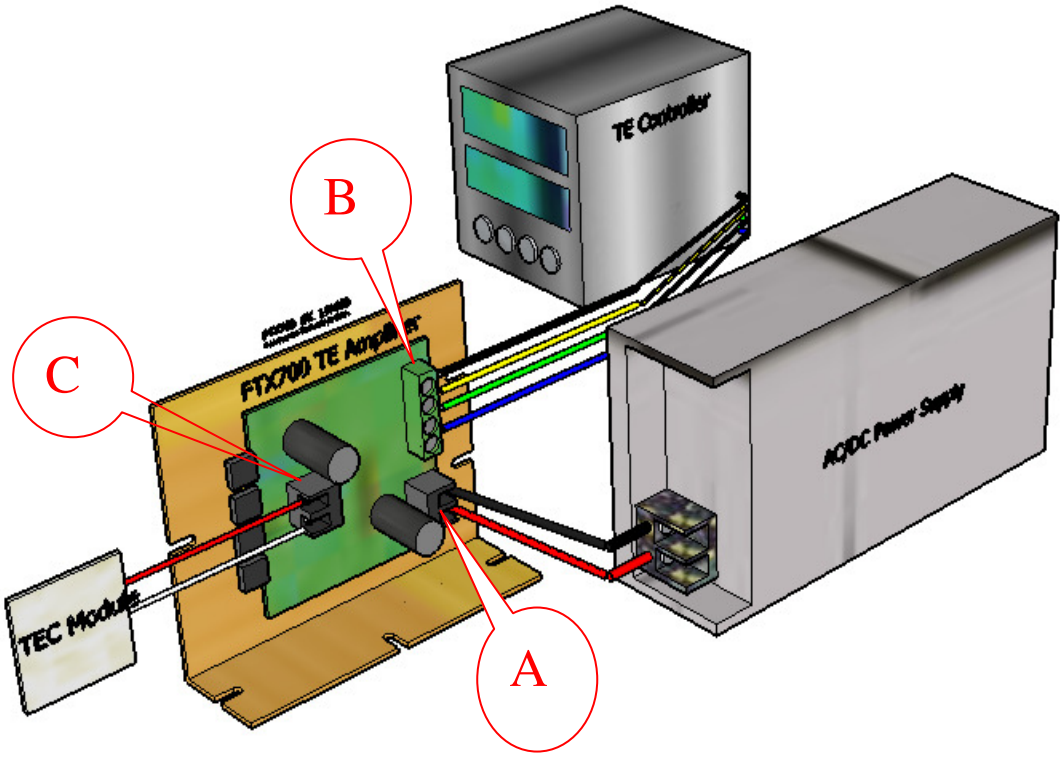
The new **FTX700D** is a new design from the old FTX700 with better power handling and wider operating voltage. We keep the physical dimension identical to the FTX700. FTX700D is direct drop in replaceable to the FTX700. FTX700D H-bridge amplifier is used to drive the TEC module(s) that use DC voltage from **5V to 36V**. The maximum current rating is **30A**. The total power handling should not exceed **700 watts**. If power consumption is over 400 watts in ambient condition, an active fan is strongly recommended to blow toward the heat sink area. If the TEC module(s) you are using is within these criteria, then the connections are explained here:

(A) Two-pin Black connector on the bottom right: Connect these two pins to the DC output power supply. This is the DC power source requirement for the TE modules. Users need to know what voltage they're planning to use on the TE module(s). Supply voltage range from 5~36VDC

(B) Four-pin Green connector on the right: The 4-singal pins should connect to the TE temperature controller (ex: FTC100, FTC200 or ATEC302). And make sure the pin definitions are matched (do not use the color code matching). These four command signal lines are **TTL logic level** compatible.
Control Signal Definitions: **G**-**G**ND, **P**-**P**WM, **D**- Hot/Cold **D**irection, **E**-**E**nable

(C) Two-pin Black Connector on the left: connect them to TE module directly

Usage example: If you want to supply 12V dc to your TE module(s), then you need a PSU that can supply 12V and connect the power from PSU to (A) connections (and make sure the polarity is matching).



FTX700D Control Logic vs. TE Ouput Polarity

Control Signal Input			TE Output Power	
Enable	PWM (% duty cycle)	Hot/Cold Direction	TE-1	TE-2
1 (high)	>1%	1 (high)*	-V	+V
1 (high)	>1%	0 (low)	+V	-V
0 (low)	Don't Care	Don't Care	0	0

*Note: TE controller default logic state = high (REV direction)