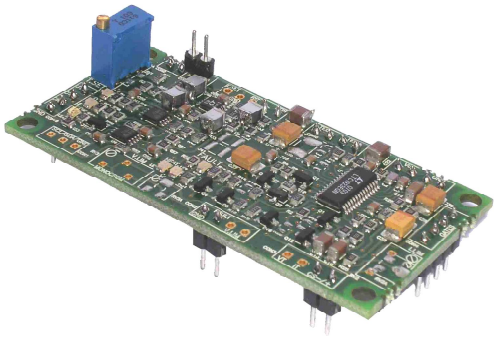
TELTHV-PW

Thermo Electric Cooler Driver



Compact design
Bidirectional TEC Control
Switching technology: high efficient driver
NTC resistor as a temperature sensor
PID for precise temperature control (0,01ºC)
Security stop when the sensor is open/shorted
External shutdown control
2,5V Reference voltage output
Current soft-start for controlled start-up
Visible running by LED

Technical data

Specifications	
Output current	≤ 4.5 A
Max. compliance voltage	4.7 V
Supply voltage	5 V
Operation mode	Automatic
Max. output power	20 W
Temp. Sensor	10kΩ @25ºC, B25/100=3497
Temp. Set	Internal pot./input signal
Thermal Power Control	PID
Cooling	No required
Signals	
TSET	Temp selected (mV)
REF	2,5V
ERR	V between T_{SET} and the T_{NTC}
SDW	Shutdown signal
IT	$0.1*I_{TEC}$
VT	= voltage across the TEC
FAULT	= 5V if exist a sensor problem
TOK	= 0V if ERR < 1º
OT	Over temperature at T_{NTC}
UT	Under temperature at T_{NTC}
Visual Interface	
RED right	Over temperature
YELLOW right	Under temperature
GREEN right	Temperature OK
RED1 center	Heating
YELLOW center	Cooling
RED2 center	NTC error
Mechanics	
Dimensions	68.8x33.1x16.6 mm
Operating temperature	15 to 40ºC

Description

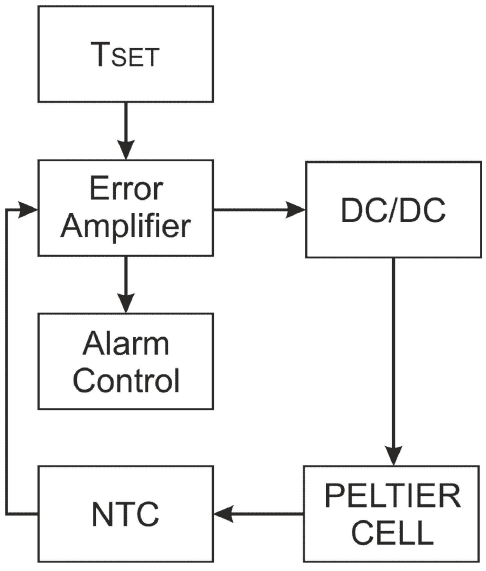
The TELTHV-PW is a specialized TEC controller / power supply able to drive Peltier elements.

This TEC driver can deliver to the TEC up to 4,5A. The current is CW and variable, then there is no thermal shock to the TEC cell. The CW current is supplied by a switched power supply, and then the cooling requirements are minimum.

The TEC driver could, automatically, reverse the TEC current. Then give to the TEC the capability of cool or heat the part to control.

Higher current values are possible attaching a Power PCB under TELTHV. Ask us for more information.

Block diagram



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