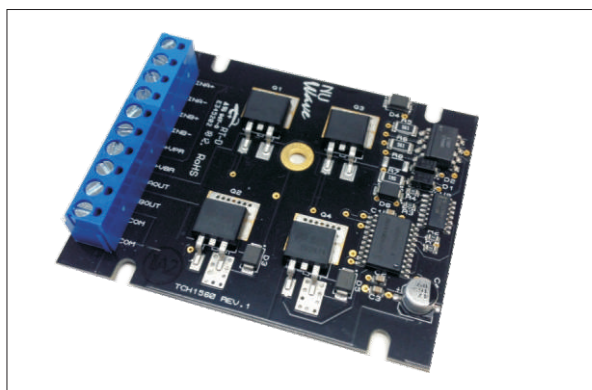


THERMOELECTRIC (TEC) H-BRIDGE AMPLIFIER TCH1560

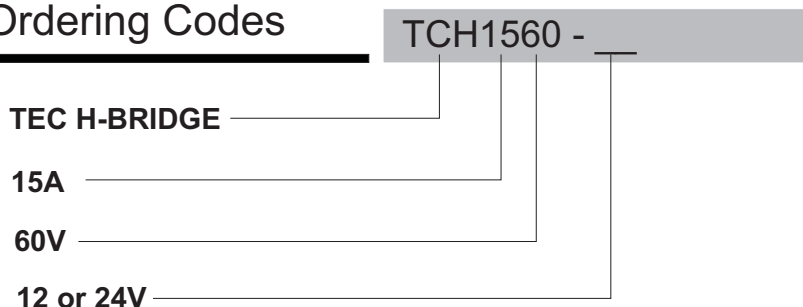


- **Interfaces to Heat/Cool Temperature Controllers**
- **Controls TECs (peltier) in heat / cool directions**
- **Wide H Bridge Voltage Range 12-60VDC**
- **High Output Current 15A**
- **Transient Protection @ 70V**
- **Optically Isolated Control Inputs**
- **Low Cost**

Product Description

The TCH1560 TEC Amplifier provides a cost effective solution for interfacing a heat/cool temperature controller to a Thermo Electric Module (peltier module). The heat and cool inputs are used to control the high current, wide voltage range H-bridge output. The heat and cool inputs are optically isolated and can be driven from logic sources ranging from 5-12VDC.

Ordering Codes



Input Specifications

Supply Voltage	12 or 24VDC Module Power, 12-60VDC H-Bridge Power
Supply Current	50mA @ 24VDC Module Power
Heat/Cool Control Input	4.75V MIN / 12.25V MAX
Control Input Impedance	~600 Ohms (requires ~ 7mA @ 5VDC)
Response Time	< 0.5 mS
Maximum PWM Frequency	2KHz

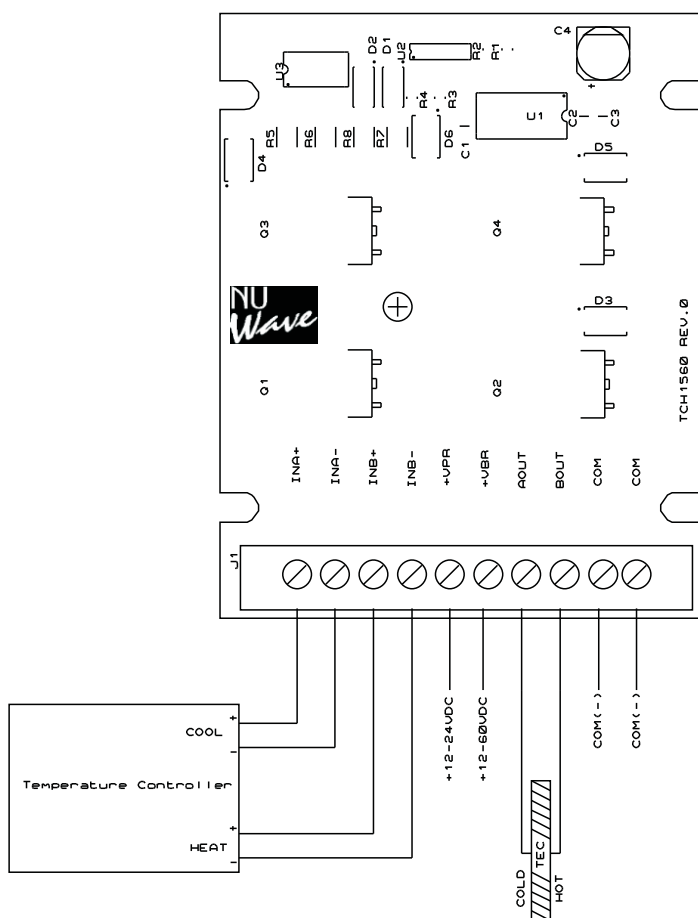
Output Specifications

Output Voltage	Based on 12-60VDC H-Bridge Power
Output Current	15A DC (requires insulated thermal pad and heatsink for currents > 8A)

Thermal Specifications

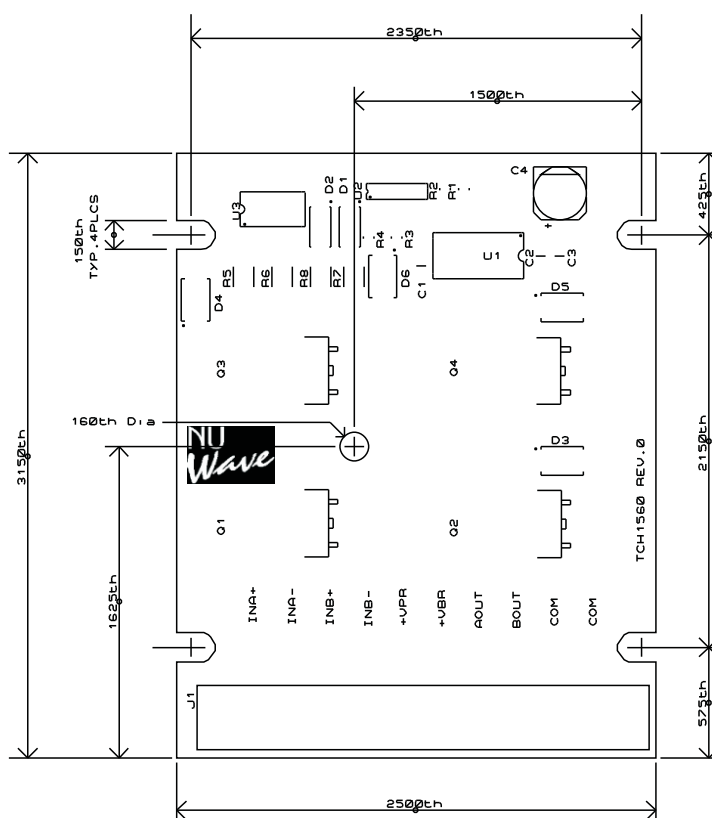
Operating Temperature Range	0 to 40 degC
Storage Temperature Range	-40 to 100 degC

Wiring



TRUTH TABLE			
INA	INB	OUTA	OUTB
0	0	HIGH-Z	HIGH-Z
1	0	+	-
0	1	-	+
1	1	HIGH-Z	HIGH-Z

Dimensions



(Dimensions shown in thousandths of an inch)

NOTES:

*TCH1560 must be mounted to a heatsink for currents > 8A. An insulating thermal gap filler material such as Stockwell Elastomeric .020 INCH THICK TC3008 SE CON can be used to bond the thermal transfer pads on the bottom of the TCH1560 to the heatsink.

**For currents < than 8A, the TCH 1560 can be mounted on standoffs. The thermal transfer pads and connector pads are circuit connected and must not contact any conductive surface.

***INA and INB must be low before power is applied to VPR. INA and INB should not be asserted until atleast 500ms after power has been applied. If power is applied and inputs are high, the bridge is locked out and will not respond to the inputs until power is reset.