

7154-05-12 MultiSource TEC Controller



- **Available now**
- **4 Channel TEC**
- 60W of TEC power per channel
- 0.004°C stability
- Bi-polar output: heat & cool
- Thermistor sensor
- Compact enclosure

Overview

The 7154-05-12 MultiSource is a compact, four channel temperature controller for lower power applications. With 60W of TEC control and support for thermistor sensors, it is the ideal choice for high density, multi-channel TEC applications requiring more power than the [7154-04-08](#) can provide. Each of the four channels includes an auxiliary DC fan power supply for controlling external fans, such as those in our 207 LaserMounts.

AutoTune Automatic PID Calculation

All Arroyo Instruments temperature controllers feature AutoTune for automatic PID calculation. With AutoTune, you no longer need to fiddle with PID parameters to find values that work with your application. Simply hook up your mount, set the appropriate limits, and start the AutoTune process. The instrument will automatically calculate PID parameters that will work with your mount.

Excellent Stability

The MultiSource offers excellent short term and long term stability. At less than 0.004°C stability over one hour, and 0.01°C over 24 hours, it provides an excellent solution for precision temperature control.

Standard Computer Interfaces

The MultiSource includes both Ethernet and USB computer interfaces, allowing for quick and easy connection to a PC for remote operation. In addition, the TECSource's command set is compatible with ILX and Newport controllers, allowing you to leverage any existing software you may have already developed.

Simple Local Control

While intended to be primarily operated from a PC, the display on the MultiSource allows you to locally monitor status and turn channels on and off.

Specifications

Key Specs

Number of Channels	4
Power (A, V, W)	±5A, ±12V, 60W
Stability (1 hour, °C)	0.004
Stability (24 hours, °C)	0.01

Temperature

Range (°C)	-99 to 250 (dependent on sensor)
Resolution (°C)	0.001
Thermistor Accuracy at 25°C (°C)	0.03 (10k thermistor)
Accuracy (±[% reading + kΩ])	0.05 + 0.005
Range (kΩ)	0.05 – 45
Resolution (kΩ)	0.001

Current

Range (A)	±5
Compliance Voltage (V)	>12
Max Power (W)	60
Resolution (A)	0.01
Accuracy (±[% value + A])	0 + 0.03
Noise/Ripple (A, rms)	< 0.003
Current Limit Accuracy (A)	0.05

Voltage (measurement only)

Accuracy (±[% reading + V])	0 + 0.05
Range (V)	±12
Resolution (V)	0.01

Other

TEC Connector	4 x DB-15, female
External Fan Support	Yes, fixed 11.5V, 350mA
Display Type	2x20 VFD
Computer Interface	Ethernet 100 Base-T USB 2.0 Full Speed (USB Type B)
Power	Universal 90 - 250 VAC, 50/60 Hz
Size (H x W x D) [inches (mm)]	1.75 (45) x 19 (483) x 14.76 (375)
Operating Temperature	+10°C to +40°C
Storage Temperature	-20°C to +60°C