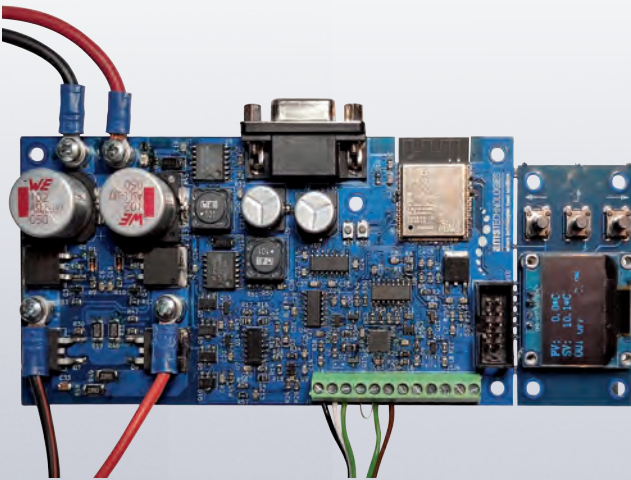


mCTRL-T-20-12/55 – mini TEC controller

down to 0.1 K TEC / Peltier temperature control with H-bridge

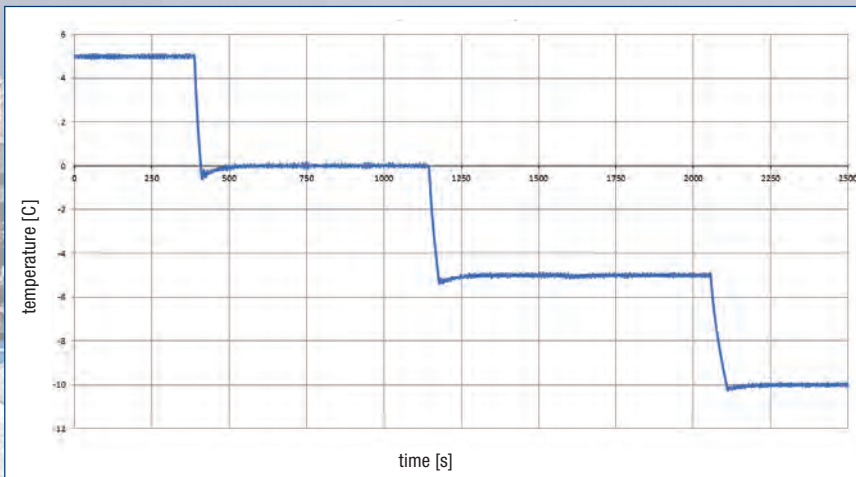
AMS Technologies' mCTRL-T-20-12/55 miniature TEC controller uses an electrical H-bridge to drive thermoelectric coolers (TECs)/ Peltier elements with broadly variable voltages and currents of up to 10 A, or up to 20 A using a heat sink. An auxiliary temperature sensor (RTDs such as Pt100, Pt1000 or thermistors) can be connected to allow highly accurate temperature control within less than $\pm 0.1^\circ\text{C}$.

The user can select a set temperature between -100°C and $+100^\circ\text{C}$ via analog interfaces such as 0-5 V or 4-20 mA, or via digital interfaces like RS232 (serial) or WiFi. The layout of the board allows to separate the graphic OLED display, including the device's three control buttons, enabling OEMs to separate this display/control unit from the main board and connect it to the main board via ribbon cable.



specifications	
input voltage	12 – 55 VDC
output voltage	0 – 55 VDC
load current	0 – 10 A (20 A)
temperature precision/stability	better than 0.1°C
temperature resolution	0.1°C
selectable temperature sensors	RTDs like Pt100, Pt1000, thermistors
temperature regulation algorithm	PID or ON/OFF
PWM base frequency	10 kHz
process control rate	50 Hz
current limit	adjustable
ambient temperature range	$-20 - +70^\circ\text{C}$
power dissipation	$<10\text{ W}$
output power resolution	0.1%
dimensions	$157 \times 66 \times 25\text{ mm}$

efficiency diagram



key features

- H-bridge control
- programmable via PC or keyboard
- 0-5 V/4-20 mA optional setpoint input
- configurable alarm output
- auxiliary TEC heatsink NTC temperature sensor input
- communication interface: RS232, WiFi
- set temperature range: -100°C to $+100^\circ\text{C}$
- graphic OLED display
- detachable display board
- RoHS compliant



THERMAL
MANAGEMENT

SOLUTIONS



enabling your ideas.

Optical, Power and Thermal Management Technologies

■ GERMANY

AMS Technologies AG
Fraunhoferstr. 22
82152 Martinsried, Germany
Phone + 49 (0) 89 895 77 0

■ ITALY

AMS Technologies S.r.l.
Via Copernico, 21
20025 Legnano (MI), Italy
Phone + 39 0331 596 693

■ SPAIN

AMS Technologies S.L.
C/Filadors 35, 3^o, 7^a
08208 Sabadell, Spain
Phone + 34 93 380 84 20

■ FRANCE

AMS Technologies S.A.R.L.
Silic 649 – Bâtiment Magnolia
16, avenue du Québec
91945 Courtaboeuf Cedex
Phone + 33 (0) 1 64 86 46 00

■ NORDICS

AMS Technologies Nordics
Azpect Photonics AB
Aminogatan 34
431 53 Mölndal, Sweden
Phone + 46 (0) 8 55 44 24 80

■ UNITED KINGDOM

AMS Technologies Ltd.
Nene House, Drayton Way
Daventry, Northamptonshire
NN11 8EA, United Kingdom
Phone + 44 (0)1455 556360

Download
Brochure



info@amstechnologies.com
www.amstechnologies.com
www.amstechnologies-webshop.com