V-BMB

**Precision Control Solutions
Made Simple**

THERMOELECTRIC CONTROLLERS

We offer a range of high performance and innovative precision thermoelectric (TEC) controllers for the most demanding thermal control applications.

TEC Controller Selections

1-Channel	2-Channel	3-Channel	6-Channel
VTC1501-A	VTC1502-A	VTC1503-A	VTC2016-A

Superior Efficiency and Stability

Compact

Configurable & Flexible

ABOUT OUR
PRODUCT

Featuring our innovative patent pending technology, these thermoelectric controllers offer outstanding precision and stability to meet even the most demanding cooling/heating applications. It delivers the highest power efficiency, fits perfectly in tight spaces, and is highly configurable and flexible using supplied software.

Features

- Superior power efficiency without requiring a heatsink on the controller
- Excellent temperature stability
- Our 6-channel controller is no bigger than most competitors 2-channel model
- Configurable and flexible using supplied software
- Support wide range of analog and digital temperature sensors
- Independent temperature control per channel, with support for either direct feedback (sensor) or indirect feedback (sensor + thermal model)
- DC bipolar output capability
- PID control with auto tuning capability
- Standalone operation or remote control via USB / RS485 / TTL UART

VBMB PTE LTD (V-BMB)

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Specifications

	VTC1501 1-Channel	VTC1502 2-Channel	VTC1503 3-Channel	VTC2016 6-Channel
Input Voltage V_{in}	12–36VDC			
Max Input Current, A	20	30		60
Limit Output Voltage	Configurable, up to $\pm V_{in}$			
Limit Output Current	Configurable, up to ±16A per channel			
Typical Cooling Power Per Channel	288W (50% of output electrical power)			
Power Control Scheme	Configurable input current limit	Configurable input current limit, dynamic power allocation		
Temperature Stability	±0.002°C (1 hour duration @25°C ambient temperature)			
Power Efficiency	95% @ 50% load, 98% @ 100% load			
Analog Temperature Input	8x (PT100, PT1000, NTC, TMP61, TMP63, TMP64)			
Digital Temperature Input	3x I2C bus (Digital temperature sensor TMP117, TMP1075 etc..)			
Fan Control	3x for speed control & detection			
GPIO (configurable for input / output)	6x			
PID Control	Auto-tune, Manual-tune			
Interface	USB / RS-485 / TTL UART			
Dimensions, mm	90 x 70 x 15			120 x 90 x 15

Connector Types

Connector Type A

Terminal Block
AWG 14-28

VTC1501/1502/1503/2016-A

Connector Type B

Molex 2002411212
AWG 12-16

VTC1501/1502/1503/2016-B

Connector Type C

Molex 2002411112
AWG 12-16

VTC1501/1502/1503/2016-C

*Variant B & C are available on special order in larger quantity

Accessories

TEC Controller Starter Kit

Temp Sensor Interconnection Cable x2
Fan Cable x3
Temp Sensor Extension Cable x10

VTC-SK-1

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