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TECHNOLOGY GROUP

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Find the *Newport 325AN* at our website: ***Click HERE***

Temperature Controllers



The **300 Series Temperature Controllers** offer a combination of features, performance, and value that is unmatched by other laser diode temperature controllers.

Three operating modes are user selectable: constant R (thermistor), constant T (IC sensors), or constant I_{TE} (TE cooler), while delivering high output power of up to 50 W.

Quiet, safe output current results from fast hybrid P-I control circuitry. And an I_{TE} current limit setting protects TE coolers from damage, regardless of operating mode.

The system offers multiple sensor capability since it is compatible with thermistors, AD592 Series, and LM335 Series temperature sensors. Direct temperature readings are displayed in °C when using IC sensors.

Additional Benefits

- Preset display lets you adjust operating setpoint before switching the output on
- Low noise, bipolar current output
- Wide TEC temperature range from -50 to +150°C
- Analog interface provides remote control capability

Key Features

- *Ultra-stable temperature control (±0.005°C) over a broad temperature range*
- *TEC is compatible with the most widely-used temperature sensors: thermistors, and AD590/592 and LM135/335 IC sensors*
- *Two models are offered, covering a wide range of output powers*

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Specifications

	Model 325/325AN	Model 350/350AN
Output		
Type	Bipolar, constant current source	
TEC Control Loop Type	Hybrid P-I	
Maximum Current	±2.5 A	±5 A
Compliance Voltage	<6 V	<10 V
Available Output Power	15 W	50 W
Current Limit		
Range	0–2.5 A	0–5 A
Accuracy	±10 mA	±20 mA
Ripple/Noise (rms)	<1 mA	<2 mA
Stability		
Short-Term Stability (1 h)	0.005°C	
Long-Term Stability (24 h)	0.01°C	
Display		
Range		
Temperature	-50.0 to +150.0°C	
Resistance (10 µA)	0.1–199.9 kΩ	
Resistance (100 µA)	0.01–19.99 kΩ	
TE Current	-2.50 to +2.50 A	-5.00 to +5.00 A
Resolution		
Temperature	0.1°C	
Resistance (10 µA)	100 Ω	
Resistance (100 µA)	10 Ω	
TE Current	10 mA	
Accuracy		
Temperature	±0.2°C	
Resistance (10 µA)	±200Ω	
Resistance (100 µA)	±20Ω	
TE Current	±10	±20

Temperature Sensors			
Sensor Type	Thermistor NTC 2-wire	AD592CN	LM335AZ
Temperature Control Resolution	0.01°C	0.1°C	0.1°C
Temp. Sensor Control Accuracy (at 25°C)	±0.2°C	±0.5°C	±3.0°C
Sensor Bias	10/100 µA	+12 V	1 mA

Call Newport's Application Sales Engineers to help you determine which Temperature Controller best meets your LD Cooling requirements.

Phone: 1-800-222-6440 • Fax: 1-949-253-1680

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Specifications

Power Requirements	90 to 125, 180 to 250 VAC, 50 to 60 Hz
Chassis Ground	4 mm Banana jack
Size (H x W x D)	3.5 x 8.5 x 11 in. (88 x 215 x 280 mm)
Weight	6.5 lb. (2.9 kg)
Operating Temperature	0°C to 50°C
Storage Temperature	-40°C to + 70°C
Relative Humidity, Storage	<90% humidity non-condensing
Connectors	
Output Connectors TE Module and Sensor	15-pin female D-sub
Analog Output	Isolated BNC
Analog Interface Connection (Models 300AN)	15-pin, high density D-sub (female)

Analog Interface Card

Inputs	
Analog Interface Input ON/OFF	TTL
Analog Interface Input Set Point	R Mode 0 to 2 V; T Mode -0.5 to 1.5 V; I_{TE} Mode (model dependent)
Outputs	
Analog Interface Output ON/OFF Status	TTL
Analog Interface Output ERROR Status	TTL
Analog Interface Output MODE Status	TTL
Analog Interface Output LIMIT Status	TTL
Analog Interface Output R/T Monitor	0–2 V (R); -0.5–1.5 V (T)
Analog Interface Output REMOTE ON/OFF	Switch on rear panel, OFF disables input set point line only

Ordering Information

Model	Description
325	Temperature Controller (15 W)
325AN	Temperature Controller (15 W) with analog interface
350	Temperature Controller (50 W)
350AN	Temperature Controller (50 W) with analog interface

Accessories

Model	Description
300-02	Temperature Controller Cable
300-04	TEC/Mount Cable
300-16	10.0 kΩ Thermistor (±0.2°C)
300-22	AD592CN IC Sensor (-45°C to +125°C Range)
35-RACK	Rack Mount Kit

Please see page 68 for Cable Diagrams

Related Products

Newport 300 Series Temperature Controllers are complemented in performance and value by our 500 Series Laser Diode Drivers and our complete line of Temperature Controlled Mounts and Telecom Mounts for laser diodes.

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