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Data Sheet

August 13, 2026

LAMBDA / TDK

Lambda / TDK / EMI TCR 20T250

Lambda TCR TCR20T250 High Power DC Supply 20 V 250 A The Lambda TCR TCR20T250 (also written TCR 20T250) isaTCR-series high-power regulated DC supply. The catalog model encodes rated voltage and current: 20 V and 250 A (5000 W class, V times I). TCR units are thyristor/phase-control laboratory and systems supplies with constant-voltage and constant-current operation, front-panel metering, and analog remote programming compatible with later EMS/EMHP/ESS programming practices. EMI TCR literature describes three pairs of bidirectional SCRs in the delta-connected transformer primary, with the secondary rectified and double L/C filtered. Exact ripple, regulation percent, and AC input (typically 208/230/460 Vac three-phase on high-current frames) belong on the nameplate and TCR instruction manual for that frame size. The Lambda TCR TCR20T250 (also written TCR 20T250) isaTCR-series high-power regulated DC supply. The catalog model encodes rated voltage and current: 20 V and 250 A (5000 W class, V times I). TCR units are thyristor/phase-control laboratory and systems supplies with constant-voltage and constant-current operation, front-panel metering, and analog remote programming compatible with later EMS/EMHP/ESS programming practices. EMI TCR literature describes three pairs of bidirectional SCRs in the delta-connected transformer primary, with the secondary rectified and double L/C



MODEL

**Lambda / TDK TCR
20T250**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

TCR 20T250

LISTING

<https://aumictechlabs.com/products/tcr-20t250-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The TDK Lambda EMI TCR 20T250 is an SCR phase-controlled regulated DC power supply delivering 5 kW at 20 V and 250 A output in a compact 2U rack format. Built for industrial, commercial, and laboratory environments, it combines constant voltage and constant current regulation with automatic crossover to maintain stable power delivery across test, measurement, and manufacturing applications. The unit features low output ripple, high efficiency, and flexible analog and digital programming interfaces for seamless integration into automated test systems and production equipment.

Technical Specifications

Output Characteristics: 5 kW output power at 20 V, 250 A Constant Voltage (CV) and Constant Current (CC) regulation with automatic crossover

Line regulation: 0.05% of rated output

Load regulation: 0.1% of rated output

Temperature coefficient: 0.02%/°C (output voltage), 0.03%/°C (output current)

Low output ripple; fan-cooled with horizontal airflow

Input Power: Single-phase: 85–265 VAC (47–63 Hz) Three-phase: 208/220/230 VAC (47–63 Hz); optional 342–460 VAC for 400 V models

Typical input current draw: 23 A at full load (3-phase)

Active Power Factor Correction (three-phase AC input)

Key Features

Remote sensing for accurate voltage delivery at load

Analog programming: 0–100% voltage and current via 0–5 V or 0–10 V signal, or resistor programming (0–5/10 kΩ)

Programming accuracy: ±0.5% (voltage), ±1% (current)

Digital interface: RS-232/RS-485 standard; optional IEEE 488.2 (GPIB) with SCPI, isolated analog programming, and LAN

Voltage and current monitoring outputs: 0–5 V or 0–10 V, ±1% accuracy

CV/CC indicator and Power Supply OK status signals

On/off control via electrical signal (0–0.6 V or 2–15 V) or dry contact with user-selectable logic

Typical Applications

Test and measurement, manufacturing process control, research facilities, and industrial power delivery applications requiring precise voltage and current regulation.

Compatibility & Integration

Standard RS-232/RS-485 connectivity enables integration with test automation and data acquisition systems. Optional GPIB and LAN interfaces support legacy and modern network-based control architectures.

Features & description

From manufacturer datasheet

Features

- Rated 20 V, 250 A per TCR model decoder (5000 W class)

TCR20T250 Characteristics / Specifications

PARAMETER	VALUE
Model	TCR20T250
Manufacturer	Lambda Electronics (TDK-Lambda / EMI successor path)
Instrument Type	High Power DC Power Supply
Series	TCR
Alias	TCR20T250; TCR 20T250; Lambda TCR20T250; EMI TCR 20T250
Rated Output Voltage	20 Vdc
Rated Output Current	250 A
Rated Power Class	5000 W class (VxI)
Output Mode	constant voltage / constant current automatic crossover
Topology	phase-controlled / thyristor TCR family
SCR Arrangement	three pair bidirectional SCRs in the delta connected transformer primary (EMI TCR literature)
Output Filter	secondary rectified and double L/C filtered DC
Metering	front-panel voltage and current meters
Remote Program	analog resistance, voltage, or current (TCR/EMS/EMHP common program class)
Protection	overcurrent and overvoltage provisions per TCR manual for the frame
Cooling	forced air
Form	rack or cabinet TCR high-power frame (size is current-dependent)
Programming Compatibility Note	EMS/EMHP/ESS literature cites common analog programming with TCR
AC Input	high-current TCR frames typically three-phase; confirm 208/230/460 Vac on the nameplate
Regulation	published on the specific TCR instruction sheet for the frame; do not assume EMHP 0.1% unless that sheet is attached
Family Decoder	TCR plus voltage plus letter plus current (this unit TCR20T250 = 20 V, 250 A)
Letter Code	T is the construction/cooling code on this model string (S is the alternate letter on other TCR units)

PARAMETER	VALUE
Duty	continuous laboratory/systems DC source
Connections	high-current DC output bus or lugs on the rear/front per frame
Sense Compare	outputVandIsensed against internal references or externally applied control levels
Documentation	TDK-Lambda legacy TCR PDF / EMI TCR instruction sheet Notes Verified identity is Lambda/EMI TCR TCR20T250 at 20 V / 250 A from the TCR model decoder used across Lambda/EMI high-power catalogs. Ripple, regulation %, and AC input amperes are frame-specific; read the TCR manual and nameplate. Do not invent precision.

TCR20T250 Specifications

PARAMETER	VALUE
Lambda TCR TCR20T250 High Power DC Supply 20 V 250 A	Overview
Key Features	- Rated 20 V, 250 A per TCR model decoder (5000 W class)
Technical Specifications	Model: TCR20T250

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

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Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.