

LTR-1200 Catalog



Description:

The LDD / TEC 19" rack enclosure LTR-1200 is a highly configurable, ready-made carrier system facilitating the integration of Meerstetter devices. The system caters for power, cooling and communication.

Up to 4 fans drag air sidewise through the rack enclosure. Their speed is managed by intelligent fan control on a dedicated PCB. For table-top operation, the rack mounting brackets can be removed.

The status of the rack enclosure and of the built-in devices are indicated on the front side display and by dual color LEDs. The most important settings (parameters of the built-in devices and of the front side data interfaces) can be adjusted over the navigation switch.

For advanced operation and configuration, all internal devices can be addressed over one of the interfaces; therefore, the usual Service/Configuration Software can be used. For continuous monitoring and control by customers' systems, the serial communication protocol 'MeCom' can be used: on one hand, it allows direct control of each built-in device, on the other hand it allows polling further information about the overall system status. For fast signals three digital input lines are available. Also, one digital output is available (e.g. for error indication).

- Rack Enclosure Size: 1U, 400 mm in depth
- AC Input
- Output power: Up to 180/360W per CH
- No. of Channels: Up to 8 channels
- Data Interfaces: Ethernet 10/100 Mbit/s
USB
RS485
RS232
- Digital I/O Signals: 3 Digital Inputs
1 Digital Output
- Human Machine Interface (HMI): Display and Navigation Switch for Local Monitoring and some Main Settings
- Status Indication: 2 LED (Dual Color)
- Forced Air Cooling: Temperature-Dependent Fan Speeds

Advanced Operation

- Remote Control: LDD / TEC Service Software, Configuration Software and 'MeCom' Protocol

Applications

- Optics (Laser Diodes, Crystals, ...):
e.g. autonomous turn-key solutions for comprehensive control (supply, cooling) of lasers
- Electronics (Detectors, RF References, ...):
e.g. low-noise camera cooling
- Instrumentation (Microscopy, Materials, Biochemistry, ...):
e.g. precision multi-temperature control (thermal zones)

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1 Standard Configurations

These configurations are available to order. Please select the HR temperature input configuration (see datasheet of fitted device for options and characteristics) when ordering.

Custom configurations are possible but can be subject to engineering costs, please contact support with your request.

Note that outputs belonging to the same (and only to the same) TEC controller can be driven in parallel, this doubles the output power per control channel.

Model	TEC control channels	Operating limits (all must be respected at the same time)
LTR-1200 (101)	2	± 10 A, ± 20 V, 360W per channel pair
LTR-1200 (102)	4	± 10 A, ± 20 V, 360W per channel pair
LTR-1200 (103)	6	± 10 A, ± 20 V, 360W per channel pair
LTR-1200 (104)	8	± 10 A, ± 20 V, 360W per channel pair
LTR-1200 (105)	2	± 16 A, ± 30 V

2 Electrical Limits

Each TEC Controller model comes with its own voltage and current limits. However, the integrated power supplies inside the LTR-1200 also impose their own power and voltage limits.

This results in power limits that are applied to each device. This can mean that you cannot drive 2 channels of the same TEC Controller at full power. Consider the descriptions when choosing a device.

If the power, current or voltage limits are insufficient, it's possible to:

- Redesign the thermal system to have more channels. This would normally require more temperature sensors but using an external master device (such as a computer running a script), it's also possible to use several TEC Controllers to control a single temperature control channel. This also applies if you have separate temperature measurement devices.
- Create a custom configuration. However, this cannot increase the total electrical power available in an LTR-1200.
- Switch to a higher power TEC Controller not supported by the LTR-1200, and a more powerful power supply. Meerstetter Engineering or a partner company can develop custom projects if device integration is needed.

3 Accessories

Most interfaces use standard screw headers or connectors, refer to user manual for details.

For the sensor interface, the CAB-6194 TEC Sensor cable (open-ended) is available.



A Change History

Date of change	Doc/Version	Changed/ Approved	Change / Reason
2 Feb 2026	A	RS / NZ	<ul style="list-style-type: none">• Initial creation
2 Mar 2026	B	RS / ML	<ul style="list-style-type: none">• Simplify for clarity