LTT 500 General-purpose Measuring Amplifier

for dynamic and static sensor signals

- 1 MHz bandwidth for DMS strain gauge, charge, ICP, Volt, current and resistance inputs
- 8 differential galvanic isolated inputs with intelligent monitoring for errors and TEDS
- Suitable for crash tests
- IP65 compliant, 0-60°C, sealed against dust and splash water

LTT

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LTT 500

Innovative step into the future – with General-purpose Measuring Amplifier LTT 500

LTT 500 – is an intelligent general-purpose measuring amplifier for dynamic and static sensor signals featuring 8 galvanic isolated DMS strain gauge, Volt, charge, ICP, current and resistance inputs that can be set up separately using dedicated software. There is no need for exchanging modules for different applications as all channels are fully equipped.

Any channel accepts Volt signals, strain gauge configurations (full, ½ and ¼ bridges), charge sensors, ICP accelero-meters, ICP microphones and even resistors. The differential inputs can handle voltages from ±1µV to ±150V. Integrated current measurements using shunt resistor round off the variety of measurement options.

- **Bandwidth per channel**

Distortion-free from DC to 1MHz: The LTT500 reaches the 1MHz mark with the incredible frequency response of -0.02dB (>99.7%), providing a phenomenally low noise level down to -100dB.

- **Splash-proof according to IP65**

The completely sealed aluminium housing is milled from the solid and IP65 sealed against water and dust. It is very sturdy and usable in crash objects for crash testing.

- **Possible application areas**

include the full range of tasks where high signal quality in dynamic and static processes matters, even in harsh environments!

- **PC interfacing options**

To set up the LTT500, the amplifier is connected to a computer via Ethernet or USB interface. The provided software allows for individual setup of each channel. Setup changes are performed within split seconds. The latest settings can be optionally stored in the amplifier to allow further operation without computer.

- **Input channel monitoring: Errors are detected !**

Sensor or cable defects and signal errors are detected. All channels are monitored for overload, short-circuit, cable break and high thermic load of the sensor supply voltage. Several LEDs per channel provide status information.

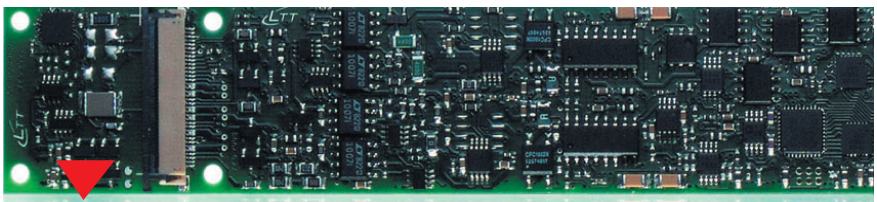
- **Sensor supply with constant current or voltage**

The ultra low-noise and high-precision sensor supply can be set individually per channel. There is a choice between constant current and constant voltage. Each channel has its own, galvanic isolated power supply with a maximum load of 2W from the sensor.

- **Quick change from one measuring setup to another**

Fully equipped channels featuring all signal conditioning functions eliminate the need for exchanging different input modules and allow connecting any sensor to any input.

The time from one setup to another is reduced considerably.



Sophisticated "control centers"

More than 600 components per channel not only provide these small power packs with flexibility and impressive precision, but also monitor each others reliable performance.

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Channels	8 differential and galvanic isolated inputs with intelligent error detection and TEDS
Sensors	Volt, ICP, Strain Gauge (sense, full-, 1/2-, 1/4-bridge), charge, current, resistance etc.
Inputs	±1µV up to ±150V
Bandwidth	DC – 1MHz
Noise floor	-100dB
Coupling	DC, AC 1Hz, AC 15Hz respectively differential and single-ended
Sensor power supply	Current supply: 0 – 100mA Voltage supply: 0 – 20V
Setup	Online via PC (USB or Ethernet) Stand-Alone with internal saved setup
Environmental	IP65, 0 – 60°C, crash test applicable, 12VDC power supply

- **AutoZero function**

If required, the built-in AutoZero function compensates zero point errors in the connected signal up to +/- 200% of the selected measuring range.

- **Charge sensors for high temperatures**

Should your measurement task become a hot affair you can just replace the existing sensors with heat-resistant charge sensors. The LTT500 will also amplify these signals with high precision and resolution over a broadband range (0.1Hz-1MHz). Optionally, the LTT500 can tame drifting sensor signals using a range of high-pass filters and apply automatic or time controlled zero corrections.

- **TEDS simplifies commissioning**

TEDS technology is today widely accepted for ICP-based sensors. The LTT500 amplifier reads out sensor data from the TEDS chip, thus facilitating the selection of the adequate measuring range.
The LTT500 also supports this technology with all other sensor types such as strain gauge bridges.

- **Enhancement of existing measurement systems**

The new LTT500 Measuring Amplifier not only complements the LTT product series **Transient Recorder LTT184/186** and **SensorCorder LTT180/182** with additional signal conditioning features, but also any A/D converter card and front-end already used by the customer.

- **Minimising the risk of commissioning problems**

Every now and then test benches and other measurement systems will reach their technical limits. Enhancements are expensive and time-consuming. Extensive software customisation often involves risks that are identified too late.
New software packages mean staff training and start-up issues.
With the LTT500, the user will benefit from the wide range of new features without having to customise existing measurement concepts and software packages. The LTT500 can be set up separately and works even without a PC. This will bring down costs and risks to an acceptable level.

- **Measurement concepts implemented with LTT18x systems**

When LTT18x measurement systems and the LTT500 are used together Labview drivers or DASYLab10 software offer a comfortable and fast option for integrating measured LTT data into complex test bench programs. Graphical programming using function blocks allows fast creating of test sequences. Furthermore, these systems are eminently well-suited for mobile operation due to sample rates up to 20 MHz per channel and 16-bit precision.

Among LTT's customers are:

ABB • Audi AG • BARD Emden • BMW AG • Robert Bosch GmbH • Bosch Engineering • Bundeswehr WTD • Continental • Conti-Teves AG • Daimler AG • EADS Deutschland GmbH • FH Ingolstadt • Fraunhofer Institut • FWG - Forschungsanstalt der Bundeswehr • Heckler & Koch • Linde AG • Marine • Maschinenfabrik Reinhausen GmbH • MBtech Powertrain GmbH • RUAG • Siemens AG • Siemens AG - Power Generation • TU München • Volkswagen AG • and many others.

About LTT

Development, administration and sales are located at the head office in Würzburg.
The production is outsourced to quality certified companies: technosert electronic GmbH in Austria and Englert Gmbh & Co. KG in Wertheim, Germany.

The core focus of LTT GmbH is permanent enhancement of hardware and software and full service for high customer satisfaction.

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Interested?

If you wish more detailed information about the products of LTT, please visit
www.tasler.de
or give us a phone call.

We are happy to advice you.

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