



LP24 digital measuring amplifier

For all tensile force measuring devices,
torque and force measurements

The measuring chain consists of the electronic
measuring amplifier and the electromechanical
equipment for the capture of tensile or compressive
forces or torques.

The amplifier has been designed as a
surface-mounted device and features a

4-line display, 2-channel design, microprocessor-controlled input signals: channel A: 0..10
mV, channel B: 0..10 mV, channel A+B: 0..10 mV (synchronous signal conversion); output
signals: 0..10 V, 0..20 mA, 4..20 mA.

Permanent synchronous import and synchronous output of the signals from channels A, B
and A+B.

The measuring sensors are isolated from the system earth and from the signal processor.

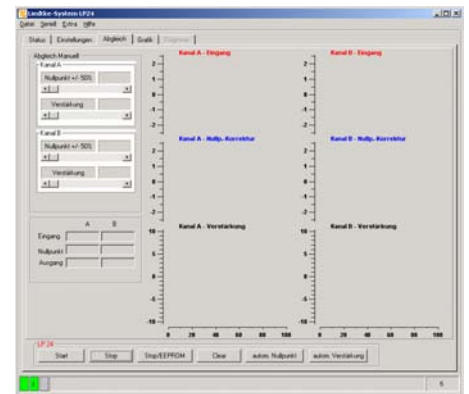
For basic amplification, the input amplifier can be switched with a reed relay.

Dynamic measurement as an option at $f = 1$ kHz.



PID controller for tension/torque/dancer control (optional).

Operation via membrane keyboard or programming
software for Windows® (included in the scope of supply)
via serial interface, data logger for graphics-based
evaluation of analog signals, 19" cassette enclosure with
front panel 3 U/21 UP, snap-on foot for rail mounting.



Technical data:

Bridge resistance	120...800 Ω
Bridge supply	5 VDC
Temperature influence on bridge supply	< 2.1 mV/K
Sensitivity	1 mV... 0.1 V adjustable
Appropriate amplification	1...2000 (12,000)
Input resistance	> 1 M Ω
Linearity error	< 0.1%
Measuring frequency range	0...5 Hz with filter
Output for indicating instrument	1 mA indicating instrument
Voltage output 0...10 VDC	Load resistance $R > 1$ k Ω
Current output 0(4)...20 mA	Load resistance $R < 500$ Ω
Zero suppression	± 15 mV
Power supply	24 VDC
Power consumption	max. 8 VA
Degree of protection	IP20
Chassis	19" rack-mounted enclosure, 3 U/21 UP, with snap-on foot, connection via terminal strip



Signal output

Signals are output on three DA converters with filtering:

Channel A : Converter 1
Channel B : Converter 2
Channel (A+B)/2 : Converter 3

Output signal standard : Adjustable
Absolute
Positive bridge signal
Bridge signal

Further features:

- Separate current loop
- Two additional analog inputs
- Scaleable display
- Online actual value display on a PC
- Operation via RS 232 interface/USB port as an option
- Scaleable data logger function; additional text editor

Options:

Option 1: Limit frequency 1 kHz includes modification of input low-pass filter to maintain the scanning theorem as well as modification of the low-pass filter on the DA converter side; software adaptation of the signal processor; as a result, the measuring amplifier has a single channel.

Option 2: Modification of low-pass filter to change the input and output frequency responses.