



## Laboratory controller LTR 2500-M

- Low-cost temperature controller
- High-technology
- Suited for all kind of sensor type
- Simple handling
- Selfoptimization
- Large LED display
- Breaking capacity 230 V / 10 A

The laboratory controller **LTR 2500-M** offers an optimum in accuracy and reliability. It is used for temperature control in magnetic stirrers (Alternative to contact thermometers). The net plug of the magnetic stirrer is plugged into the protective contact socket and can be switched on and off by the LpHdTrans01. A delivered cable connects the magnetic stirrer and this device by a socket on the backside. A high accuracy in controlling of the magnetic stirrer is reached by the selfpotimization function.

As temperature sensor every kind of sensor is useable (for specific sockets please inquiry in case of order!). The 4-digit LED display is configurable with two digits behind the comma, that means up to 999,9 or 99,99.

### Temperature ranges as following:

Resistance-thermometers Pt 100 and Pt 1000: - 200...+850°C, KTY: - 50...+150°C

#### Thermocouples

Fe-CuNi „L“	- 200...+900°C	Fe-CuNi „J“	- 210...+1200°C
NiCr-Ni „K“	- 270...+1372°C	NiCrSi-NiSi „N“	- 270...+1300°C

For resistance-thermometers a 4-pole lemo socket according to laboratory automization and for thermocouples an adequate TC socket is installed.

### Technical datas:

Dimensons:	Plastic housing 160 x 82 x 130 mm
LED display:	10 mm high, green
Measurement accuracy:	For resistance-thermometers 0,1%, for thermocouples 0,4%
PID feedback:	Free selectable, or selfoptimization or ramp function
Sensor protection:	For resistance-thermometers in sensor-/line-short-cut and sensor-/line-breach, for thermocouples in sensor-/linebreach as well as in measurement over-/understepping
Breaking capacity:	230V/50-60 Hz, 2200W/10A ohme resistive load
Operation equipement:	Controller, green reflecting on-off switch, sensor socket, <b>Output socket for controlling of magnetic stirrer on the backside</b> Protective contact socket, 1,5 m long net cable with protective contact plug
Options:	Security shut-down 10K above setpoint (configurable) irreversible and glow lamp with unlock-key



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The laboratory controller **LTR 2500-MS** has a second temperature controller for security.

Because of its second temperature controller, which is a security controller, the device assures security additionally without any loss in easy handling. Therefore it is qualified for unmanned operations at night.

As temperature sensor a double resistance-thermometer 2x Pt 100 (recommended) or 2 pcs. of single resistance-thermometers 1x Pt 100 have to be used anyway. For the thermocouple version 2 pcs. of thermoelements are needed. The sensors are plugged by 7-pole Tuchel plugs.

After reaching the programmed security temperature the magnetic stirrer is shutted-down in all-poles.

**Temperature ranges** (see LTR 2500-M)

## Technical datas:

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PID feedback:	Free selectable, or selfoptimization or ramp function
Sensor protection:	For resistance-thermometers in sensor-/line-short-cut and sensor-/line-breach, for thermocouples in sensor-/linebreach as well as in measurement over-/understepping
Breaking capacity:	230V/50-60 Hz, 2200W/10A ohme resistive load
Operation equipement:	Controller, green reflecting on-off switch, sensor socket, <b>Output socket for controlling of magnetic stirrer (control and security shut-down)</b>
Security:	Protective contact socket, 1,5 m long net cable with protective contact plug additional security controllerwith second sensor socket and security shut-down in all poles

**Resistance-thermometers 1 x Pt 100, 250 x 3 mm, stainless, with Lemo plug**

**Resistance-thermometers 2 x Pt 100, 250 x 3 mm, stainless, with Tuchel plug**

**Already available temperature sensors can be used too!**