

## Transformation-Measuring-System LT-xxx-S

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 Germany



- **High Resolution Measurement System**
- **Encapsulated type**
- **SSI-Interface (synchronous-serial)**  
**On Request: Additionally with Incremental signals, alternative with SIN/COS signals**
- **Programmable parameters**
- **Preset + Count direction**

## Electrical Data

Measurement Principle .....	absolute coded (transformation measuring method)
Measurement Embodiment .....	Glass scale with code structure
Accuracy Class .....	±5 µm
* Recommended measuring step .....	0.1 µm, 1 µm, 10 µm
Measuring Length ( mm ) .....	140, 240, 340, 440, 540, 640, 740, 840, 940, 1040, 1140, 1240, 1340, 1540, 1640, 1740, 1840, 2040, 2240, 2440, 2640, 2840, 3040 (other measuring lengths on request)
Operating Voltage .....	8-27 V DC
Power Dissipation (No Load) .....	< 4 Watt
Programmable via RS485 / RS232 .....	IBM PC Compatible TRWinProg-Software
Clock Input SSI .....	Opto Coupler
Clock Frequency SSI .....	95 kHz – 1 MHz
Transmission Cable Length .....	Dependent on Cable Cross Section, Shielding, Clock Frequency etc.
* Output Code (programmable) .....	Binary, Gray
Data Output .....	RS422 (4-wire)
Load capacity .....	100 mA / short-circuit proof
* SIN/COS Signals, 1 V <sub>SS</sub> .....	Pitches: 10 µm, 20 µm, 40 µm, others on request
* Incremental Signals, TTL 5 V .....	Resolutions: 0.1 µm, 0.25 µm, 1 µm, 2.5 µm, 5 µm Pitches after quad evaluation: 0.4 µm, 1 µm, 4 µm, 10 µm, 20 µm other pitches or 24 V outputs on request
<b>Input Options</b>	
* Forward / Reverse .....	Change direction of count
* Preset .....	Adjust zero position of the measurement system (saved permanently)
Logic Levels .....	"0" < + 2 V DC, "1" > + 8 V DC, max. 30 V DC
* Programmable Parameters	

**11**

## Environmental Data

Electromagnetic compatibility (EMC) .....	EN 61000-4-2 (IEC-801-2) / EN 61000-4-4 (IEC-801-4)
Operating Temperature .....	0-40°C (Optional -10 to +60°C)
Storage Temperature .....	-20 to +70°C
Relative Humidity .....	98 % (non condensing)
* Protection Class .....	IP 53 (DIN 40 050)
* The protection class is valid if the mounting instructions are followed correctly	

## Mechanical Data

Linearity .....	< 5 $\mu\text{m}$ / 1 m measuring length
Reproducibility .....	$\leq 0.2 \mu\text{m}$
Temperature Coefficient (Glass scale).....	$\alpha_{\text{therm}} \approx 8 \cdot 10^{-6} \text{K}^{-1}$
Max. Mechanical Operating Speed .....	2 $\text{ms}^{-1}$
Weight .....	approx. 0,110 kg
Connection .....	Cable module with 1 m / 3 m cable (extendable)

## Dimensional Drawing

