

## Transformation-Measuring-System LT-xxx-PI

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 Germany



- **High Resolution Measurement System**
- **Encapsulated type with slide bearing guide**
- **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 ) .....              | 100, 150, 200, 250 (other measuring lengths on request)   |
| Max. Operating Speed .....                 | 10 ms <sup>-1</sup>   |
| 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<br>Pitches after quad evaluation: 0.4 µm, 1 µm, 4 µm, 10 µm, 20 µm<br>other pitches or 24 V outputs on request |
| Input Options                              |   |
| * 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                  |   |

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## Environmental Data

|   |   |
|---|---|
| Electromagnetic compatibility (EMC) ..... | EN 61000-4-2 (IEC-801-2) / EN 61000-4-4 (IEC-801-4) |
| Operating Temperature .....               | -10 to +60°C  |
| Storage Temperature .....                 | -20 to +70°C  |
| Relative Humidity .....                   | 98 % (non condensing)                               |
| Protection Class .....                    | IP 66 (DIN 40 050)                                  |

### Mechanical Data

Linearity ..... < 5  $\mu\text{m}$  / 100 mm 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 .....  $10 \text{ms}^{-1}$   
Connection ..... Cable module with 1 m / 3 m cable (extendable)

### Dimensional Drawing

