

Transformation-Measuring-System LT-xxx-PI

Eglshalde 6
 D-78647 Trossingen
 Tel. +49 - (0) 74 25 / 228 - 0
 Fax +49 - (0) 74 25 / 228 - 33
 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 ⁻¹
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 _{SS}	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
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 μm / 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 10ms^{-1}
 Connection Cable module with 1 m / 3 m cable (extendable)

Dimensional Drawing

