Transformation-Measuring-System LT-xxx-S

TRWinprog

- **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**

11

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_{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

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

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Mechanical Data

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

Dimensional Drawing

TR-VLT-TI-GB-0200   Changes reserved