



- **High Resolution Measurement System**
- **Encapsulated type with slide bearing guide**
- **SSI-Interface (synchronous-serial)**
- **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 ) .....	400, 520 (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
	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
Pin Configuration .....	Upon Request
* Programmable Parameters	

## Environmental Data

Vibration, DIN EN 60068-2-6: 1996 .....	≤ 60 m/s <sup>2</sup> , sine 55-2000 Hz
Shock, DIN EN 60068-2-27: 1995 .....	≤ 200 m/s <sup>2</sup> , half-sine 11 ms
Electromagnetic compatibility (EMC) .....	DIN EN 61000-6-2 / DIN EN 61000-4-2 / DIN EN 61000-4-4
Working temperature .....	0 °C...40 °C, optional -10...+60°C
Storage temperature .....	-20...+70°C
Relative humidity .....	98 % (non condensing)
Protection class, DIN EN 60529 .....	IP 54

## Mechanical Data

Linearity .....	< 5 $\mu\text{m}$ / 1000 mm measuring length
Temperature Coefficient (Glass scale) .....	$\alpha_{\text{therm}} \approx 8 * 10^{-6} \text{ K}^{-1}$
Reproducibility .....	$\leq 0.2 \mu\text{m}$
Max. Mechanical Operating Speed .....	2 $\text{ms}^{-1}$
Mass .....	approx. 11 kg
Connection .....	Cable module with 1 m / 3 m cable (extendable)

## Dimensional Drawing

