



GT05 GLASS GRATING LINEAR TRANSDUCER

Technical Specifications

FEATURES:

- 5 um resolution
- Precision engineered Infrared sensor
- 5 ball bearings supporting system
- Dual seals IP53 protection
- Armored cable
- High noise immunity
- 5V operation
- Quadrature digital output



DESCRIPTION

Glass Grating Linear Transducer (or Linear Scale) is a precision instrument designed for measuring linear motion. The sensor output can be used to determine the relative position of the reader head to the scale body. Speed and acceleration can also be found by utilizing digital signal processing.

Most common application is a position measurement for manual machine tools and other equipment having linear motion. Linear scales can also be used as a feedback sensor in a control loop of CNC machines, linear robots and other automated equipment.

Any coordinate measuring equipment can utilize glass grating scales for the superior precision and years of a trouble free performance.

SPECIFICATIONS

Table 1. Measuring System Specifications

Parameter	Value	Unit
Resolution	5	um
Repeatability	2	um
Hysteresis	3	um
Accuracy: Scales up to 450 mm long	6	um

Scales 500 to up to 800 mm long	10	um
Scales 850 to 1200 mm long	15	um
Maximum travel speed	60	m/min
Optical grating pitch	20	um
Measuring system wavelength	880	nm
Index/Reference signal	1 pulse, center of the scale	
Protection level, when installed as per recommendations	DIN 40050 IP53	
Current consumption	50	mA

Table 2. Recommended operating conditions

Parameter	Min	Typ	Max	Unit
Supply voltage	4.75	5.0	5.25	V
Operating temperature range	0		45	°C
	32		113	°F
Relative humidity, non condensing	20		90	%
Storage temperature range	-20		70	°C
	-68		158	°F

OUTPUT SIGNAL

Glass Sale produces a quadrature digital waveform with 5V TTL logic levels. Quadrature waveform is a 2 channel output with 2 square waves phase shifted 90 degrees relative to each other.

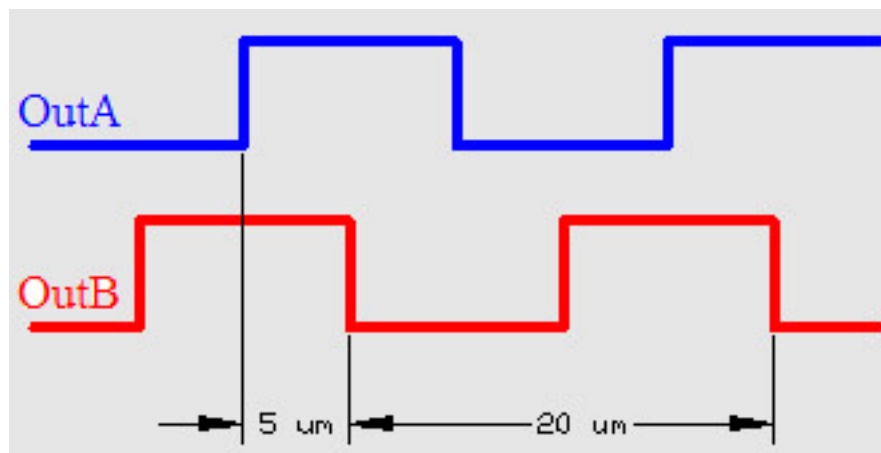
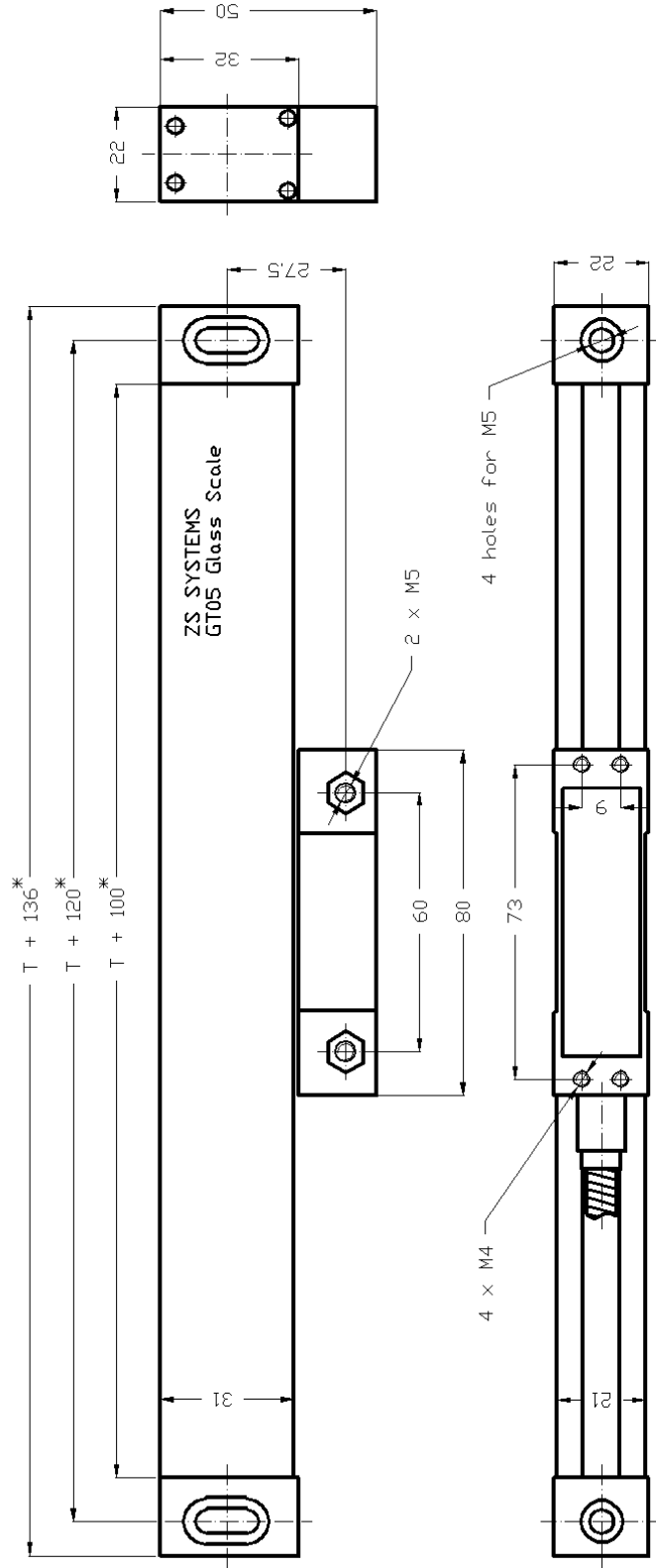


Table 3. Pin Out Information

Parameter	Value	Description
Default connector	DB9	
Default pinout		
Pin 2	0V	Signal/power ground
Pin 4	GND	Cable shield
Pin 6	A	Quadrature output A
Pin 7	5V	+5V power supply
Pin8	B	Quadrature output B
Pin9	R	Reference mark output

DIMENSIONS



* T = advertised travel length in mm

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