

NC linear scales TGM133/173:

	NC linear encoders	
Model Name	TGM 133(Slim size)	TGM 173(Medium size)
Model picture		
Output signals	SI=11mApp, SV=1Vpp, DS=square wave differential RS422A	SI=11mApp, SV=1Vpp, DS=square wave differential RS422A
Engraving pitch	20mm	20mm
Resolution	for SI and SV output signals: Recommended: : 0.1mm, 0.5mm, 1mm For DS output signals: Available: 0.1mm, 0.5mm, 1mm	for SI and SV output signals: Recommended: : 0.1mm, 0.5mm, 1mm For DS output signals: Available: 0.1mm, 0.5mm, 1mm
Accuracy (at 20°C/68°F)	mm, ±10 mm, ±5	±3 mm, ±5 mm, ±10 mm
Light source	IR LED	IR LED
Photo detector	Solar Cell	Solar Cell
Cross section	18 x 32 mm (46 mm)	37 x 58,5 mm (85 mm)
Measuring length [mm]	70,140,170,240,270,340, 370, 440, 470, 540, 570, 640, 670, 740, 770, 840, 940, 1040, 1140 (max for TGM133 without mounting bar), 1240, 1340, 1440, 1540, 1640, 1740, 1840, 2040 (max for TGM133 with mounting bar), 2240, 2440, 2640, 2840, 3040 (max for TGM173)	
TGM133: max length up to 2040mm		
TGM173: max length up to 3040mm		
Measuring length [inch]	5.5, 7.5, 9.4, 13.4, 17.3, 21.3, 25.2, 29.1, 33.1, 37.0, 40.9, 44.9, 48.8, 52.8, 56.7, 60.6, 64.6, 68.5, 72.4, 80.3, 88.2, 96.1, 103.9, 111.8, 119,7	
Reference Mark	Distance coded: Passing two adjacent reference marks that are max. 20 mm apart from each other reproduces absolute position.	
Operating temperature	0 °C to +50°C, (32°F to 122°F)	
Storage temperature	-30°C to +70°C, (-22°F to 158°F)	
Humidity range	30% to 90% (no condensation)	
Protective design grade (class)	Normal: IP53; with Air Purge: IP64	
Atmosphere	Corrosive gas should not be contained in the atmosphere	
Vibration resistance (max vibration)	100 m/s ²	
Shock resistance (max shock)	100 m/s ²	
Max. Response speed	120 m/min	
Power supply	+5V±5%	
Power consumption	130 mA max.	
Cable length:	3m standard, SI: up to 20m DS: up to 50m SV: up to 150m	