REQUIREMENTS ON AN EXPOSED LINEAR ENCODER

- CONTAMINATION RESISTANCE
- IMMUNITY AGAINST AGING AND TEMPERATURE CHANGES
- HIGH TRAVERSING SPEED
- EASY MOUNTING - LARGE MOUNTING TOLERANCES
- LOW COST AND HIGH QUALITY
- FLAT DIMENSIONS
- OPERATING CYCLES
- NO MECHANICAL BACKLASH
- ZERO FRICTIONAL FORCE
- REFERENCE MARKS, REPEATABLE FROM BOTH TRAVERSING DIRECTIONS
- RESOLUTION: 10 µm – 0.5 µm

THE MS 45 MEETS ALL THESE REQUIREMENTS!

SCANNING PRINCIPLE

The model MS 45 incremental linear encoder works with the imaging, photoelectric measuring principle and a **singlefield reflective scanning** method. A scale graduation pattern with 200 µm grating pitch is used on a steel tape.

The regulated light of an infrared LED is collimated by a condenser lens and passes through the grid of the reticle. After being reflected from the scale the infrared LED generates a periodic intensity distribution on the structured sensor.

The sensor generates high qualitiy sinusoidal signals which are highly insensitive to possible contaminations.

The regulation of the LED ensures a constant signal amplitude, guaranteeing stability in the case of temperature fluctuations as well as with long-run operation.