



# elap KP

## OPTICAL LINEAR SCALES

Optical linear scales series KP are accurate and reliable; thanks to their reduced dimensions they can be applied even on small-sized machine tools (millers, lathes, grinders, spark erosion machines..).

The possibility to adjust the scales in the mounting phase avoids any problem linked to mechanical alignment and results particularly useful in case of machines retrofitting.

**STROKES: 250 to 700 mm**

MECHANICAL SPECIFICATIONS	KP10	KP100	KP200
Case	extruded aluminium		
Measuring element	out of stainless steel with thermal compensation		
Operating principle	photoelectric reading by reflection		
Dimensions	20 x 41 mm		
Total dimensions	stroke + 154 mm		
Grating pitch	400 µm	40 µm	20 µm
Reading resolution after the external electronic quadrupling	0.1 mm	0.01 mm	0.005 mm
Accuracy (at 20°C)	± 0.010 mm/m	± 0.005 mm/m	± 0.003 mm/m
Max. speed	120 m/min	80 m/min	60 m/min
Max. acceleration	40 m/sec. <sup>2</sup>	30 m/sec. <sup>2</sup>	30 m/sec. <sup>2</sup>
Thermal expansion	ppm/°C/m = ± 10.6 T rif. 20°C ± 0.1°C		
Vibration resistance (10÷2000 Hz)	100 m/sec. <sup>2</sup>		
Shock resistance (11 ms)	≤ 150 m/sec. <sup>2</sup>		
Operating temperature	0÷50 °C relative humidity 20-80%		
Stocking temperature	-20÷70 °C		
Protection degree	standard IP53, pressured type IP64		

ELECTRICAL SPECIFICATIONS	KP10	KP100	KP200
Zero pulse	1 zero reference at half measuring length (other positions on request)- type 1Z		
Supply	standard: 12Vdc - 40 mA / on request: 5 Vdc 65 mA		
Output signals	2 square waves 90° degree out of phase		
Electronic outputs	NPN pull-up collector/ optional 5 Vdc line driver		
Connections	standard cable with metal sheat 4 mt long		



**DIMENSIONS**

