



# elap KD

## LINEAR OPTICAL READERS

Linear optical readers series **KD** are accurate and reliable, especially suited for applications in severe industrial environments.

They can be profitably employed on machine tools (CNC, boring machines, planomillers, vertical lathes, punching machines.....) and on operating and automatic machines (eg. bending presses, cutting machines, beading machines).

STROKES: standard: 250 to 6500 mm; over 6500 mm: modular version

MECHANICAL SPECIFICATIONS	KD10	KD100	KD200	KD1000
<i>Case</i>	extruded aluminium			
<i>Measuring element</i>	out of stainless steel with thermal compensation			
<i>Operating principle</i>	photoelectric reading by reflection			
<i>Dimensions</i>	23 x 56.7 mm			
<i>Total dimensions</i>	stroke + 150 mm			
<i>Grating pitch</i>	400 µm	40 µm	20 µm	40 µm with inside divider by 10
<i>Reading resolution after the external electronic quadrupling</i>	0.1 mm	0.01 mm	0.005 mm	0.001 mm
<i>Protections</i>	anti-oil double gum sealing			
<i>Accuracy (at 20°C)</i>	± 0.010 mm/m	± 0.005 mm/m	± 0.003 mm/m	± 0.003 mm/m
<i>Max. speed</i>	120 m/min	80 m/min	60 m/min	25 m/min
<i>Max. acceleration</i>	40 m/sec. <sup>2</sup>	30 m/sec. <sup>2</sup>	30 m/sec. <sup>2</sup>	25 m/sec. <sup>2</sup>
<i>Thermal expansion</i>	ppm/°C/m = ± 10.6 T rif. 20°C ± 0.1°C			
<i>Vibration resistance (10÷2000 Hz)</i>	100 m/sec. <sup>2</sup>			
<i>Shock resistance (11 ms)</i>	≤ 150 m/sec. <sup>2</sup>			
<i>Operating temperature</i>	0÷50 °C relative humidity 20-80%			
<i>Stocking temperature</i>	-20÷70 °C			
<i>Protection degree</i>	standard IP54, pressured type IP64			

ELECTRICAL SPECIFICATIONS	KD10	KD100	KD200	KD1000
<i>Zero pulse</i>	1 zero reference at half measuring length (other positions on request)- type 1Z			
<i>Supply</i>	standard: 12Vdc - 40 mA / on request: 5 Vdc 65 mA		5Vdc 65mA	
<i>Output signals</i>	2 square waves 90° degree out of phase			
<i>Electronic outputs</i>	NPN pull-up collector/ optional 5 Vdc line driver		5Vdc line driver	
<i>Connections</i>	standard cable with metal sheat 4 mt long			

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