

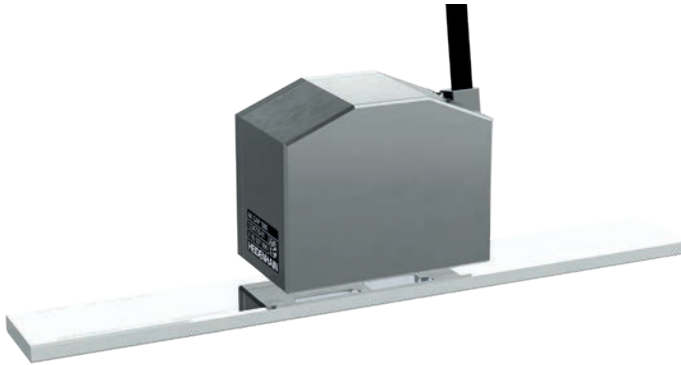
GAP 1081

[GAP 1081](#)

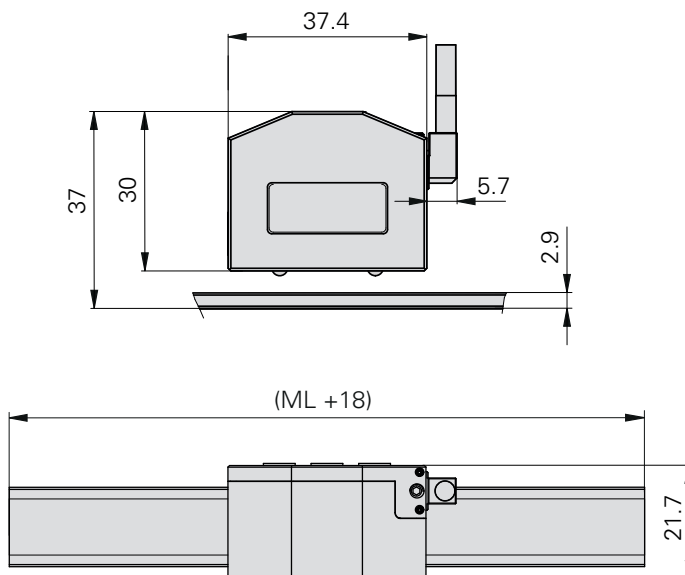


Incremental exposed linear encoder

- For vertical gap measurement
- Mirror on glass; mounting with PRECIMET



Main dimensions (without tolerances)



For technical drawings, visit www.heidenhain.com/documentation.



Mating dimensions
[ID 1345874](#)



Mirror	GAP 1001													
Mirror Coefficient of linear expansion	Glass or glass ceramic with OPTODUR surface layer $\alpha_{\text{therm}} \approx (0 \pm 0.1) \cdot 10^{-6} \text{ K}^{-1}$ (Zerodur glass ceramic)													
Measuring length (ML) in mm*	20 620 1640	30 670 1840	50 720 2040	70 780 2240	120 820 2440	170 870 2640	220 920 2840	270 970 3040	320 1020	370 1140	420 1240	470 1340	520 1440	570 1540
Mass	1.1 g + 0.11 g/mm of mirror length													

Scanning head	AK GAP 108													
Scanning gap (nominal)	4.139 mm													
Measuring range	$\pm 2 \text{ mm}$													
Reference mark	Possible upon request													
Data interface	1 V _{PP}													
Cutoff frequency -3 dB	$\geq 27 \text{ kHz}$													
Signal period Coefficient of linear expansion	2.22 μm $\pm 0.002 \mu\text{m}$ $\alpha_{\text{therm}} \approx 0.5 \cdot 10^{-6} \text{ K}^{-1}$													
Traversing speed	3.6 m/min													
Accuracy grade	$\pm 0.2 \mu\text{m}$ (stationary measurement in the direction of measurement) $\pm 20 \mu\text{m}$ (motion perpendicular to the direction of measurement)													
Baseline error	$\leq \pm 30 \text{ nm}/4 \text{ mm}$ (stationary measurement in the direction of measurement) $\leq \pm 0.5 \mu\text{m}/5 \text{ mm}$ (motion perpendicular to the direction of measurement)													
Thermal position drift	$\leq \pm 36 \text{ nm/K}$													
Interpolation error	$\pm 2 \text{ nm}$													
Non-reproducible position error	$\pm 5 \text{ nm}$													
Electrical connection	Cable (0.5 m / 1 m / 3 m) with 15-pin D-sub connector; interface electronics in the connector													
Cable length	With HEIDENHAIN cable: $\leq 30 \text{ m}$ During signal adjustment with the PWM 21: $\leq 3 \text{ m}$													
Supply voltage	DC 5 V $\pm 0.25 \text{ V}$													
Current consumption	$\leq 200 \text{ mA}$ (without load)													
Laser	Class 3B													
Vibration 55 Hz to 2 kHz Shock 11 ms	$\leq 200 \text{ m/s}^2$ (IEC 60068-2-6) $\leq 400 \text{ m/s}^2$ (IEC 60068-2-27)													
Operating temperature	10 °C to 40 °C													
Mass	Scanning head	50 g												
	Connector	80 g												
	Cable	27 g/m												

* Please select when ordering