

MLS-3252 – Precision Linear Stage

The **SMAR**SHIFT MLS-3252 is a miniaturized precision linear stage with electromagnetic direct drive. Its compact size simplifies integration into existing systems and leaves enough space for your application. Thanks to its compatibility with the **SMAR**BOTIC modular system, it can be easily combined with the CLS family and other SmarAct positioners.

Applications

The MLS-3252 has been specifically designed for demanding tasks in industrial manufacturing, including micro assembly, pick-and-place operations, and the alignment and adjustment of components for adhesive processes. Additional application areas include high-precision metrology, such as fly-scan procedures, ultra-fine additive manufacturing, and the precise alignment of optical components in the semiconductor and photonics industries. As the smallest positioner in its precision class, it sets new standards for integration into compact and high-density manufacturing environments.

All **SMAR**SHIFT products are suitable for use in ambient conditions and inert gas environments, including as helium and nitrogen. Cleanroom options are available.
Travel: 25 mm Dimensions (mm): 32 × 52 × 15 Weight: 80 g

	Mechanical
Travel [mm]	25
Continuous Force [N]	1
Peak Force [N]	2.5
Max. Normal Force [N]	14
Moved Mass (unloaded) [g]	40
Max. Lift Force [N]	0.5
Dimensions [mm]	32 × 52 × 15
Weight [g]	80

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	Material
Base Material	Aluminum, black anodized
	Closed-Loop
Sensor Types	SC
Max. Acceleration (no load) [m/s²]	50
In-Position Stability [nm]	±5
Sensor Resolution MCS2 [nm]	1
Uni-Directional Repeatability MCS2 [nm]	±40

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