



# Smart Focus Encoder

“Eliminate focus errors and increase productivity with better precision”

The cutting edge technology of the **Smart Focus Encoder** is the difference between simply detecting position and actually measuring position.

Most conventional encoders are designed to detect a change in position. As the position changes it signals the controlling system with a series of pulses. The number and frequency of the pulses allow the controller to determine the position. However, since all of the pulses are identical its impossible for the controller to determine the position without an initial reference.

The **Smart Focus Encoder** achieves a new level of focus performance utilizing a high speed, proprietary digital interface to report the current focus position in absolute terms. This completely eliminates the need to initialize or reference the encoder - it will *always* report the correct position. Cycle power, re-boot software, change specimens, switch objectives; the encoder will always report the correct position within fractions of a micron!



**New Technology!**

- **Never loses position**
- **Programmable soft limits**
- **Anti-crash protection**
- **Self initializing**
- **Noise immunity**
- **High dynamic response**

## Performance Characteristics

Resolution	23nm	Measuring Range	12mm
Refresh Rate	5µs	Repeatability	40nm
Max Rate	1m/sec	Ingress Protection	IP 64

## Ordering Information

The Smart Encoder can be an add-on to an existing MAC 6000 system or as a stand-alone system when included with the 996001 MAC 6000 base system.

Catalog Number	Description
96A422	Linear focus smart encoder *
73006057	MAC 6000 stepper motor drive with external encoder input
73006365	Digipot control for manual/interactive focus
* microscope specific mounting brackets are required, contact LEP for more information	

**Ludl Electronic Products Ltd. · [www.ludl.com](http://www.ludl.com) · [sales@ludl.com](mailto:sales@ludl.com) · 888-769-6111**