

PIFOC® Objective Scanning System 2000 µm

NANOMETER RESOLUTION AND FAST STEP-AND-SETTLE



ND72Z2LAQ

- Complete system with digital controller, software and M32 threaded QuickLock insert
- 2000 µm travel range
- Objective positioning with nm resolution
- Highly dynamic step-and-settle for Z stacks
- Further thread adapters as optional accessory
- Extremely robust versions with capacitive sensors

PIFOC® objective scanning system for microscopy

Optimized for large travel ranges and fast step-and-settle with step sizes to 3 µm. Compact design and QuickLock thread adapters for easy integration in all standard microscopes. Ideally suited for 2-photon microscopy and all applications where a large travel range is required

Digital controller

All control parameters can be set and optimized via software. Trace Memory allows for displaying the path-time diagram on the host PC. Implemented macro functionality for carrying out measurement tasks, even without constant connection to the host PC

High resolution sensor

High-resolution, optical linear encoder for direct metrology with sub nm resolution for stable and precise position control

System with controller and software

The compact E-861.1A1 digital servo piezo controller is included in the delivery. Digital servos allow adaptation of all control parameters on the fly, by software. Control is possible via USB and RS-232. Supports PIMikroMove, NanoCapture. PI General Command Set (GCS). Drivers for LabVIEW, shared libraries for Windows and Linux. Compatible with µManager, MetaMorph and MATLAB

Fields of application

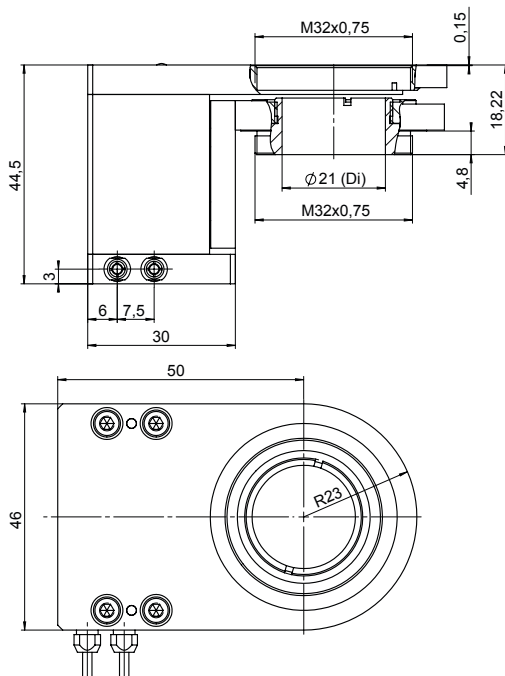
2-photon microscopy, confocal microscopy, 3D imaging, laser technology, interferometry, biotechnology, micro-manipulation, autofocus for large travel ranges

Accessories

M32 thread adapter included in delivery. Other threaded inserts available as option, see data table

	ND72Z2LAQ	Unit	Tolerance
Active axes	Z		
Motion and positioning			
Integrated sensor	Optical linear encoder		
Closed-loop travel	2000	µm	
Min. incremental motion, closed-loop	5	nm	typ.
Mechanical properties			
Step-and-settle time for a 3 µm step at 200 g payload, 100 nm settling band	<20	ms	
Recommended load*	700	g	max.
Drive properties			
Piezoceramics	NEXACT®		
Miscellaneous			
Operating temperature range	15 to 40	°C	
Material	Aluminium		
Mass	290	g	±5 %
Cable length	1.5	m	±10 mm
Piezo controller	E-861 digital servo (included in delivery)		
Communication interfaces	USB, RS-232		
Connector (motor)	HD Sub-D 15-pin		
Connector (sensor)	HD Sub-D 15-pin		
I/O connector	4x digital input (TTL, programmable) 4x digital output (TTL, programmable)		
Command set	PI General Command Set (GCS)		
User software	PIMikroMove®		
Software drivers	LabVIEW driver, dynamic libraries for Windows and Linux. Supports MATLAB, MetaMorph, µManager.		
Supported functionality	Wave generator, data recorder, macro programming		
Controller dimensions	160 mm × 96 mm × 33 mm		

Ask about custom designs!



N-725.2A with M32 threaded insert, dimensions in mm