

apt™ Modular Rack System – High Current Piezo Driver with Feedback

- Single Axis Stages
- Multi-Axis Stages
- Flexure Stage Accessories
- Motorized Mirror Mounts
- Rotation Stages
- Drive Electronics & Auto-Alignment
- Actuators & Adjusters
- Brief Tutorials

Features

- Two Piezo-Actuator Output Channels
- Open and Closed-Loop Operation
- Strain Gauge Feedback Connections
- USB Plug-and-Play Connectivity
- User Controlled Digital I/O Port
- Full Software GUI Control Suite
- ActiveX® Graphical Panel Controls
- ActiveX® Programming Interfaces
- Seamless Software Integration with apt™ Family



Modular apt™ Piezoelectric Controller

This modular apt™ piezoelectric controller, compatible with the apt™ rack, incorporates the latest high-speed digital signal processing (DSP), low-noise analog electronics, and ActiveX® software technology to provide two low noise, fully software controlled, high-voltage (0-75 V) output channels. These modular controllers are designed for use in larger scale critical alignment applications where nanometer-level motion control is required. The modular apt™ piezo controller is supplied with a full suite of software support tools. An intuitive graphical instrument panel allows immediate control and visualization of the operation of the piezo controllers. See pages 380-382 for a full description of the apt™ system software, and page 378 for details on the apt™ modular rack system that houses this module.

Easily Configured Closed-Loop Operation

Module operation is fully configurable (parameterized) with key settings exposed through the associated graphical interface panel. Open-loop or closed-loop operating modes can be selected quickly. In both modes, the display can be changed to show drive voltage or position (in microns). In the closed-loop operation mode, both the P & I (proportional and integral) components of the feedback control loop can be altered to adjust the servo-loop response. Adjustment of all key parameters is possible through direct interaction with the graphical panel or through the ActiveX® programmable interfaces that are included with each instrument. This allows the user to build automated alignment routines in almost any programming language.

Software Developers Support CD

A developers' kit is shipped with all of our apt™ Series controllers. This additional software is intended for use by software developers working on large system integration projects which incorporate apt™ products. The kit contains an extensive selection of useful code samples as well as tutorial information.

Remote Control Handset

It is often convenient to make adjustments to the piezo output while closely watching the device being positioned, which can prove difficult when using the front panel keys or a remote PC.

To allow this kind of use, Thorlabs has developed the PHS201 handset, which enables the piezos to be positioned remotely from the controller and PC (i.e. without using the front panel buttons, GUI, or software method calls). It is supplied with 3m (9.75') of cable.

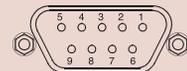


See pages 380-382 for more information on the included apt™ software.

Specifications

- **Piezoelectric Output:**
 - **Two Output Channels:** SMC Male Connector
 - **Voltage Output:** 0-75VDC/Channel
 - **Voltage Stability:** 100ppm Over 24 Hours
 - **Noise:** <3mV (RMS)
 - **Output Current:** 500mA/Channel
- **Differential Analog Inputs (BNC):** 0-10VDC
- **Position Feedback (D-type 9 Pin Connector)**
 - **Strain Gauge Feedback**
 - **Voltage Feedback:** 0-10 VDC
- **User Input/Output (26 Pin D-type Female):**
 - **Two Output Monitors:** 0-10VDC
 - **Two Potentiometer Inputs:** 10-Turn Pots
 - **Trigger Input/Output:** TTL
 - **Digital I/O Lines:** Opto-Isolated
- **General:**
 - **One Slot apt™ Rack**
 - **Dimensions (W x D x H):** 190 x 270 x 50mm
 - **Weight:** 1.5kg (3.3lb)

Displacement Sensor Input



Pin	Description	Return
1	Wheatstone bridge excitation	4 or 6
2	+15V	4 or 6
3	-15V	4 or 6
4	Equipment ground	
5	Feedback signal in	4 or 6
6	Equipment ground	
7	Actuator ID signal	4 or 6
8	RS485 NOT (0-5V)	9
9	RS485 (0-5V)	8



ITEM#	\$	£	€	RMB	DESCRIPTION
MPZ601	\$ 2,456.50	£ 1,547.60	€ 2,284.50	¥ 23,459.60	apt™ 2 Channel Piezoelectric Drive Module with Feedback
PHS201	\$ 270.00	£ 170.10	€ 251.10	¥ 2,578.50	Piezo Remote Control Handset for MPZ001 Control Module