

BPS 1002

## Beam Pointing Stabilization



### User-friendly interface

Intuitive and clear layout

### Stand-alone controller

Digital controller and piezo driver

### Precise position detection

4-quadrant photodiode sensors



### Improved laser performance

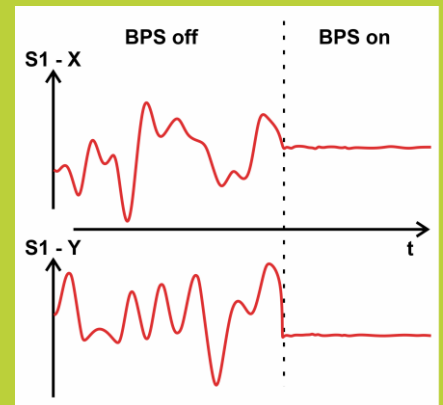
Shorter warm-up times

Consistent results

Live data display

# BPS 1002

High average power laser systems are often associated with longer thermalization behaviors interfering with reproducibility of experimental measurements and implying optical realignment throughout the day. Using the BPS 1002, you will speed up your warm-up time and stabilize the performance of your system by precisely locking the laser beam position.



01

## High precision sensors

The state-of-the-art 4-Quadrant photodiode sensors with integrated digital data acquisition detect the beam position with high accuracy and precision. The recorded values provide feedback to control the real-time motions of the mirror mounts. Your system can be effortlessly fine-tuned for optimal and consistent performance.

02

## Modern user interface

A user-friendly Graphical User Interface (GUI) is employed to set up and monitor the controller. Thanks to a clear and organized layout, all functions are easily accessible right from the start. The laser beam stability is monitored in real-time with live data display, allowing for immediate adjustments. The logged data enable comprehensive analysis and tracking of the system performance over time.

## Technical data

| BPM2 1010 - Sensor            |                              |
|-------------------------------|------------------------------|
| Detector type                 | Si PIN 4-quadrant photodiode |
| Spectral range                | 400 nm .. 1100 nm            |
| Input pulse frequency         | >10 Hz .. cw                 |
| Laser beam Size (recommended) | 0.3 mm .. 3 mm               |

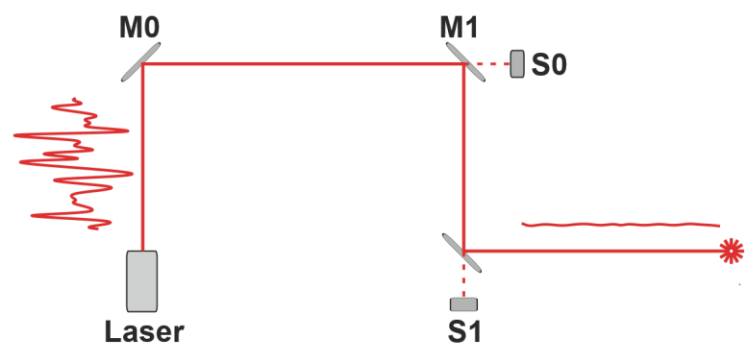
03

## Stand-alone controller

This powerful stand-alone laser beam position control system incorporates an embedded digital control loop (PID) for each axis, along with two position sensors (S0, S1) and two piezo mirror mounts (M0, M1). It can be quickly set up using a PC application, and once configured, the system operates independently without the need for a continuous PC connection.

04

## Typical optical setup



| BPS 1002 - Controller   |                             |
|-------------------------|-----------------------------|
| Controller type         | Digital PID                 |
| Controller refresh rate | 100 Hz                      |
| Piezo driver voltage    | 0 V .. 120 V                |
| Connectivity            | Ethernet<br>USB-C (USB 2.0) |