



PID-02

HIGH-SPEED SERVO CONTROLLER



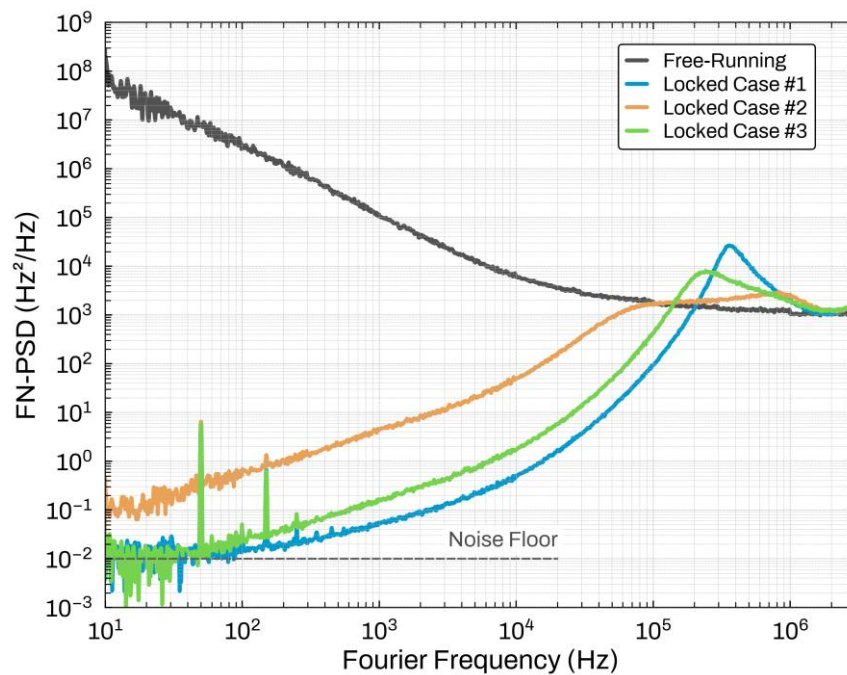
PID-02 is a high-speed servo controller that is digitally controlled using an integrated touchscreen and/or USB. It provides Proportional, simple Integrator, double Integrator, and slow Integrator functions. It features ultralow voltage noise, more than 160 dB open-loop gain, and a bandwidth of > 60 MHz.

SPECIFICATIONS

- Input voltage noise: 1 nV/ $\sqrt{\text{Hz}}$
- Control bandwidth: > 60 MHz
- Output offset range: - 2 V / + 2 V
- Slow output offset range: - 2 V / + 2 V
- Input offset range: - 2 V / + 2 V
- Input attenuators: 0 dB, 20 dB, 40 dB
- Voltage offset resolution: 100 μV
- External ramp function
- Open-loop gain: 160 dB
- Loop delay: 16 ns
- Output impedance: 50 Ω
- Input impedance: 50 Ω / 1 M Ω
- Input voltage range max: - 5 V / + 5 V
- Output voltage range max: - 3.7 V / + 3.7 V
- Output/input connectors: SMA female
- Proportional Gain:
OFF, from - 10 dB to 20 dB (0.5 dB increments)
- Simple Integrator:
OFF, from 100 Hz to 10 MHz (16 settings)
- Double Integrator:
OFF, from 1 Hz to 1 MHz (16 settings)
- Slow Integrator:
From 1 mHz to 1 kHz (16 settings)
- Product dimensions: 155 x 150 x 112 mm³
- Product weight: approx. 1.5 kg
- Interface: Touchscreen and/or USB



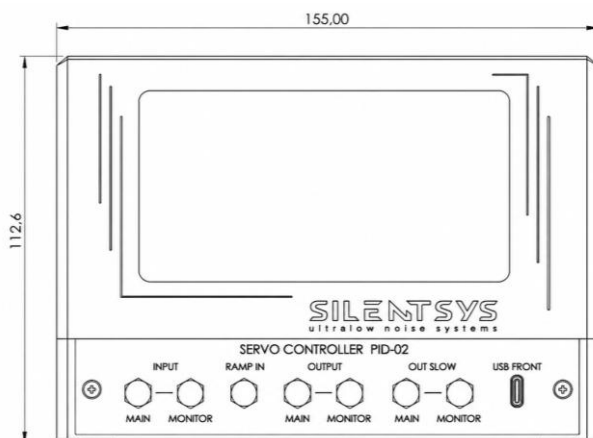
PERFORMANCES



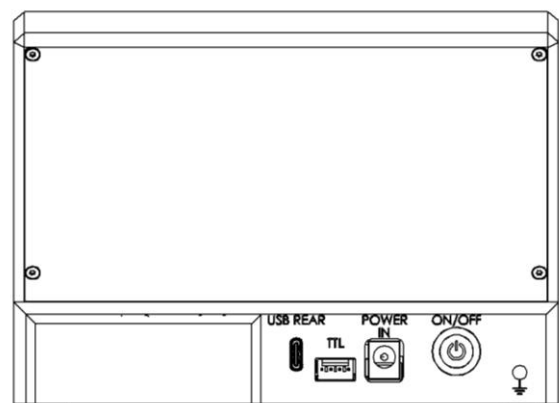
In-loop laser frequency noise measured with FSPN-26 from Rohde & Schwarz using three different configurations of the PID.

DRAWINGS

The dimensions of the device are presented here with a simplified view. It also shows the connections from the front and back view of the instrument.



FRONT



BACK

Dimensions are in [mm]

