

miniScan 102

Scan Generator with Piezo Driver and Photo Diode Amplifier

Scan unit for FPI 100 – and more

The miniScan 102 comprises a scan generator, Piezo driver, and a photo detector amplifier. The unit has been designed for scanning interferometers such as TOPTICA's FPI 100 (see page 49), but can also be used independently for everyday laboratory tasks.

Output amplitude and frequency range of the miniScan 102 have been adapted to low voltage Piezo actuators (up to 100 V output, 2.5 mA). The flexible low noise photo diode amplifier is a transimpedance amplifier (current-to-voltage converter). It is ideally suited for reading out FPI transmission signals, e.g. to monitor the longitudinal mode properties of tunable lasers.



miniScan 102, scan generator with photo diode amplifier.

Key features

- Stand-alone scan generator for scanning interferometers
- Universal transimpedance amplifier for photo detectors

Specifications

Scan generator

| | |
|---------------------------------------|---|
| Frequency | 100 mHz – 200 Hz (linear ramp), adjustable via 3-stage range switch (coarse) and potentiometer (fine) |
| HV amplifier | 0 .. + 100 V output, max. 2.5 mA |
| Offset and amplitude of output signal | Adjustable via potentiometer |
| Trigger output | TTL (+5 V) |
| Operating voltage | 100 .. 120 V / 220 .. 240 V AC, 50 .. 60 Hz (auto detect) |
| Dimensions | 125 x 88 x 205 mm ³ |

Photo diode amplifier

| | |
|-------------------------|--|
| Gain | Adjustable from 3.3×10^4 V/A to 1×10^7 V/A, via 6-stage switch (coarse) and potentiometer (fine, 10 – 100 %) |
| Offset of output signal | Adjustable via potentiometer |
| Output coupling | AC (10 Hz), AC-HF (300 Hz) or DC coupling |
| Detection bandwidth | 30 kHz |