

miniScan



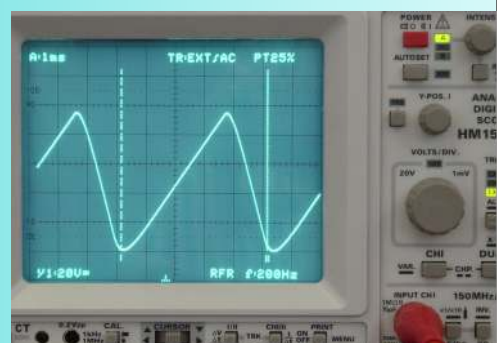
miniScan

Scan generator, piezo driver and PD amp - for Fabry-Perot interferometers and other applications.

miniScan is a combination of a scan generator, piezo driver and PD amplifier impressing with its easy-to-use operation. Although it has been designed for the usage with Toptica's Fabry-Perot interferometer FPI 100, it can also be used independently.

The *FPI 100* is tuned by moving a resonator mirror via a piezo element. The output amplitude and the frequency behavior of the scan generator and piezo driver have been adapted to these piezo actuators (up to 100 Volts, 200 Hz).

The flexible low noise photo diode amplifier, incorporated in the same laboratory housing, allows to monitor for example the single longitudinal mode behavior of tunable lasers.



Scan Generator

- Frequency: 100 mHz ... 200 Hz (linear ramp), adjustable via a three stage range switch (coarse) and a potentiometer (fine)
- Bandwidth limit adapted to piezo actuators
- HV / LV power supply (low noise linear regulator, no switching power supply)
- HV amplifier with very low noise class-A driver, output up to 100 volts
- Offset and amplitude of output signal adjustable via potentiometer
- Output amplitude 0 to + 100 volts, maximum 2.5 mA
- Standard trigger output with TTL level (5V)
- Direct supply connection (100...120 V / 200...240 VAC, 50...60 Hz), automatic supply voltage detection

Photo Diode Amplifier

- Universal pre-amplifier for photo diodes, transimpedance amplifier (current-to-voltage converter)
- Connection of different photo detector types via a shielded cable (to BNC socket)
- Very robust against oscillations, so that an adaption to the photo diode and cable used can be omitted in most cases
- Amplification of the photo diode input signal adjustable via range switch (coarse switch with 6 positions) and via potentiometer (fine, 10 to 100%), $3.3 \times 10^4 \dots 1 \times 10^7$ V/A
- Offset compensation of the photo diode input signal adjustable via potentiometer
- Output coupling switchable between AC (10 Hz), AC-HF (300 Hz) or DC coupling
- Bandwidth: 30 kHz
- Laboratory housing 125 x 88 x 205 mm

Subject to change without notice

Development, Manufacturing and Distribution



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TEM Messtechnik GmbH
Grosser Hillen 38
30559 Hannover
Germany

tel. +49-511-51089630
fax +49-511-51089638
info@tem-messtechnik.de

www.tem-messtechnik.de