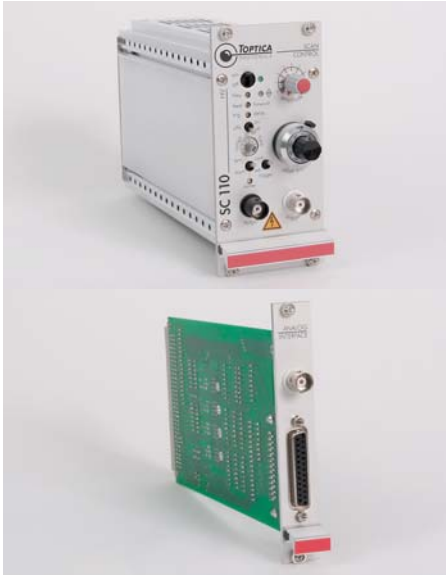


SC 110 & DCB 110

Scan Generator and Computer Analog Interface



SC 110, HV scan generator module.

DCB 110, computer analog interface.

SC 110 – scan control module with HV amplifier

The Scan Control SC 110 has been optimized for driving external cavity diode lasers (DL 100), for use with the regulator PID 110 in frequency stabilization tasks, or for scanning Fabry-Perot interferometers (FPI 100). Depending on the application, the module can be operated in HV (up to 150 V) or LV (up to 24 V) mode.

One of the main features of the device is a feed-forward loop: When the laser is tuned via the grating Piezo, an attenuated version of the HV signal is added to the injection current of the laser diode. A trimpot permits an exact adjustment of the ratio between Piezo scan and current modulation, expanding the mode-hop free tuning range of external-cavity diode lasers.

DCB 110 and DCB 110 AUX – computer analog interface board

The Computer Analog Interfaces DCB 110 and DCB 110 AUX provide direct access to the backplane of the supply rack DC 110. This enables the user to monitor and alter the parameter settings of inserted modules such as the Current Control DCC 110, Temperature Control DTC 110 and Scan Control SC 110. The DCB 110 AUX offers auxiliary DC voltage supplies.

Specifications SC 110

Frequency 0.01 Hz to 10 kHz, coarse frequency range switch and continuous fine tuning

High voltage mode: maximum amplitude 150 V up to 10 kHz, adjustable offset -5 .. +150 V

Low voltage mode: maximum amplitude 24 V up to 10 kHz, adjustable offset -12 .. +12 V

Sawtooth signals with symmetric or asymmetric ramp, variable degree of symmetry (e.g. for generation of steep slopes)

TTL trigger synchronization output, adjustable trigger time delay

Adjustable feed forward for simultaneous control of laser current and grating angle

Specifications DCB 110

Sub-D25 connector to access all relevant backplane parameters

BNC-Connector for additional access to selected backplane lines (e.g. remote scan control or remote temperature control)

Sensitivity of electrical parameters 10 mA/V (DCC 110, 100 mA and 500 mA), 100 mA/V (DCC 110 / 3 A), 10 °C/V (DTC 110)

Depending on the signal, a line is buffered or used as read/write line

DCB 110 AUX: additional supply port for auxiliary DC supply voltages (- 12 V, - 5 V, GND, +5 V, +12 V)