

08735.99



## 1. PURPOSE AND DESCRIPTION

The Control Unit is for use together with the Si-Photodetector with amplifier 08735.00 for photometric measurements of weak direct and alternating light intensities, and is particularly suitable for photometric measurements in experiments with light-emitting diode displays and photoconductors.

## 2. FUNCTION AND OPERATING ELEMENTS (SEE FIG.)

- Diode input socket 1
  - for reception of signals from the Si-photodetector, as well as for its voltage supply.
- Monitor output 2 with BNC socket for display of direct and alternating light input signals (directly connected to the Si-Photodetector).
- 3 Voltage amplifier with variable voltage amplification, exclusively for alternating light input signals. Direct light components of the input signal are suppressed.
- 4 Voltage output with BNC socket for alternating light input signals.
- 5 Frequency filter (active band pass filter).
- 6 Voltage output with BNC socket for frequency filtered alternating light input signals.
- 7 Operating control diode.

## 3. HANDLING

Connect the Control Unit to the power supply unit supplied via the ratch-plug on the back for the supply of the required operating voltage.

Connect the Si-Photodetector with amplifier to the diode input socket 1. For the detection of light input signals, connect an

appropriate voltage measuring instrument (e.g. an oscilloscope) to a voltage output (2, 4 or 6).

Output 2 serves as monitor output and also for the determination of alternating light instensities. Should it be necessary to suppress interfering direct light components for the determination of pure alternating light intensities, then output 4 is to be used.

The use of output 6 is recommended when, in the determination of alternating light intensities, both low frequency ripples or scattered light components (e.g. from fluorescent tubes) as well as high frequency noise signals are to be suppressed.

Note: Because of the high input sensitivity of the Si-Photodetector, the internal photoamplifier can be overdriven in the presence of a large proportion of direct light. This can be avoided by suitable weakening of the input signal, e,g, by using diaphragms or polarization filters.

#### NOTES ON OPERATION 4

This high quality unit fulfils the technical requirements summarised in the actual guidelines of the European Community. For this reason, the unit carries the CE-symbol.

Please observe the following when using the unit:

- The instrument can be so strongly influenced by electrostatic charges, or other electromagnetic phenomena, that it no longer works within the given specifications. The following measures reduce disturbing effects: Avoid fitted carpets; balance potentials; carry out experiments on a conductive, earthed underlay; use screened cables; do not operate high frequency emitters (radio sets, mobile phones) in the immediate vicinity.
- The connected cables may not be longer than 3 m.
- The usage of this unit is only allowed in residential, commercial or vocational zones (colleges, universities, laboratories, etc.).



# 5. SPECIFICATIONS

Input	5 pin diode socket
Output (2)	DC 60 kHz (monitor output) max. 5 VDC Amplification 1
Output (4)	AC; 10 Hz60 kHz Amplification 110
Output (6)	AC; 200 Hz10 kHz Amplification 110
Anschluss	+9 V+12 V
Power consumption	1 W
Housing	194 x 140 x 130 (mm)
Power supply unit	Primary: 110 VAC240 VAC Secondary: 12 VDC/2 A
Weight	0,5 kg

# 6 GUARANTEE

We give a guarantee of 24 months on equipment that we have supplied; it does not include natural wear and tear and faults which are the result of improper handling.

The manufacturer can only be regarded as being responsible for the proper function and safety characteristics of the equipment if maintenance, repair and modifications have been carried out by the manufacturer or by agents expressly authorised by the manufacturer.