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# 1 Introduction

## 1.1 Safety instructions

The following instructions are for your safety. Due to the particularly simple operation of the PICO-STROB, it is tempting to put the unit into operation without reading the instructions.



**In the interest of your own safety**, take a few minutes of reading time before using it for the first time.

Ignoring the operating instructions, particularly the safety instructions, can lead to accidents and the resulting injuries.

### NOTE

When stroboscopes are in operation, interference with radio-operated systems and radio services can occur. In such cases, stop using the unit.

The period of operation of stroboscopes should be principally kept as short as possible.

**Work with the PICO-STROB may only be conducted by trained personnel.**



Because **danger to the eyes** is possible during the operation of stroboscopes, avoid looking directly into the flash tube.  
When working for long periods with a stroboscope, wear suitable goggles.

## Caution !

If it is necessary to open the unit, this must be conducted by trained specialists.

Special care is necessary because voltages are exposed when the unit is open which are significantly higher than the supply voltage.

Before opening the unit (by specialists only):

- switch off the unit
- disconnect from the mains (by unplugging the mains cable)
- wait approx. 5 min. before opening the case.  
Residual charges are only dissipated with certainty after this time.

## Danger !

The flash tubes become very hot during operation

### **Danger of Burns!**

Allow to cool before touching.

## 1.2 General features

This unit ...

... is equipped with an easy to read analogue circular scale.

... Is conceived exclusively for internal triggering.

... is easy to handle.

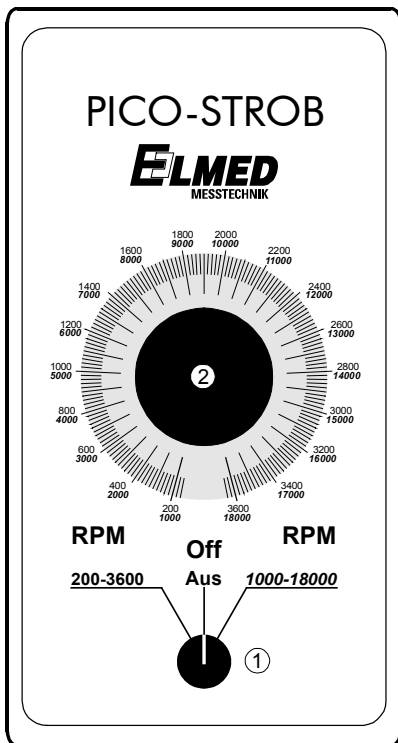
... has a rugged, heat-resistant case.

... is low in weight.

... bears the CE symbol.

## 2 Operating instructions

### 2.1 Controls



## 2.2 Commissioning

- Set power switch ① to OFF position.
- Connect the stroboscope to the mains power 230V AC.
- Switch on (see 2.3.1); the stroboscope flashes immediately at the currently set frequency.

## 2.3 Operation

### 2.3.1 Switching on

The on/off switch ① is combined with the range selector switch. The stroboscope is switched on by twisting the switch to the left or right, simultaneously selecting the lower (200-3600 r.p.m.) or upper (1000-18000 r.p.m.) range. After switching on, the PICO-STROB flashes at the currently set frequency.

### 2.3.2 Adjusting the speed

The desired speed is adjusted with knob ②. The PICO-STROB flashes at a frequency corresponding to the speed.

### 3 Measuring correctly with the stroboscope

To determine an angular speed with the stroboscope, you should begin at the highest possible speed in the upper range. The speed is then **reduced** until the observed object or the marking appear stationary.

If the reverse procedure is used (increasing the flashing frequency), measuring errors can occur because still images are also produced at half (one third, a quarter...) of the flashing frequency of the stroboscope.

## 4 Problems and remedies

### Problem: No flashing

Possible cause/effect	Possible remedy
No mains connection	Make connection
Unit not switched on	Switch unit on
Flash tube defective	Replace flash tube (see 7)

### Problem: Unit operates briefly and then switches off

Possible cause/effect	Possible remedy
Poor contact (loose connection)	Check cable/plug
Flash tube defective	Replace flash tube (see 7 and 8.2)
Flash tube in contact with the reflector	Insert flash tube centrally in the reflector

### Problem: Flash sequence not periodic (intermittent ignition)

Possible cause/effect	Possible remedy
Flash tube shows signs of ageing due to long period of use	Replace flash tube (see 7 and 8.2)

### Problem: Results of measurement do not conform with the expected result

Possible cause/effect	Possible remedy
Measured object behaves not as expected	Check the object
Operator error	Repeat the measurement (see 3)



## 5 Technical data

### Frequency range

1. range: 200 r.p.m. - 3600 r.p.m.
2. range: 1000 r.p.m. –18000 r.p.m.

### Power supply

230 VAC – 50 / 60 Hz

### Power consumption

approx. 32 VA

### Light output

1. range: 0.1 Ws
2. range: 0.05 Ws

### Weight

approx. 0.6 kg

Case, high-impact plastic  
150 x 80 x 55 [mm]

### Operating temperature

0 ... +40°C

### Storage temperature

-20° ... +85°C

### Air humidity

80 % relative air humidity at 30°C



The unit is **not** suitable for permanent operation.

## 7 Changing the flash tube

The flash tube is a wear part which must be replaced sooner or later depending on the intensity of use.

Please proceed as follows to change the flash tube:

- Switch off the stroboscope
- Disconnect the unit from the mains
- Allow the flash tube to cool for at least 5 min.
- Remove the panel.
- Pull the flash tube out of the reflector
- Remove the new flash tube from the package. Avoid touching the glass envelope with your fingers (use a clean cloth).
- Insert the flash tube in the socket located behind the reflector.
- **Important!** Before replacing the panel, check that the flash tube is seated centrally in the reflector recess. It must not be in contact with the reflector, as this will lead to **malfunctions**.
- Install the panel correctly. This not only protects the material, but also prevents unintentional contact during operation.

## 8 Accessories and spare parts

### 8.1 Accessories

<b>Carrying case</b> , colour black, for safe transport and storage.	
<b>Article</b>	<b>Order number</b>
Carrying case	0310150010
Reflective pads (25x75mm <sup>2</sup> ) PU = 5 pcs.	0310000010

### 8.2 Spare parts

<b>Article</b>	<b>Order number</b>
Flash tube, plug-in	0320100010
Panel	0320100020

Any questions? We would be delighted to help.

Technical revisions due to progress reserved.