

HIGH-SPEED PHOTO-SYSTEME

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MINISTROBOKIN 20



Nanosecond-Flashsystem with Whitelight Flash

The MINISTROBOKIN was developed for flashfrequencies up to 20 kHz working with HSPS NANOLITE Flashlamps to analyze particle movement and velocity, e.g.:

- Microdroplets in streams
- Bubbledevelopment
- Capturing of metaldeforming and -destruction
- Schlieren-Photography
- mikroskopische illumination of heat-sensitive objects

The system has diverse trigger and operation modes for internal or external triggering and frequency. In frontal illumination image areas of up to 100mm (depending on the optical setup) can be achieved. In shadowgraphic mode larger image areas are possible.

For single flashes and multiple exposures up to 8-10 flashes, standard photo- or ccd-cameras can be used. For highfrequencies of longer duration this unit can be easily synchronized with a high-speed camera up to 20.000 frames per second.

1. Mechanical Data

Width: 460mm
Height: 150mm
Length: 310mm

Weight: 8 Kg

2. Technical Data

Mains supply 220 V 50 Hz optional 110 V 60 Hz

Triggering

- a) Ext. through pos. Pulse 5 V Risetime $\leq 1\mu\text{s}$
- b) Ext. through Contact
- c) Int. through Pulsegenerator 2-15 Hz

Output

for NANOLITE KL-Type Flashlamps.

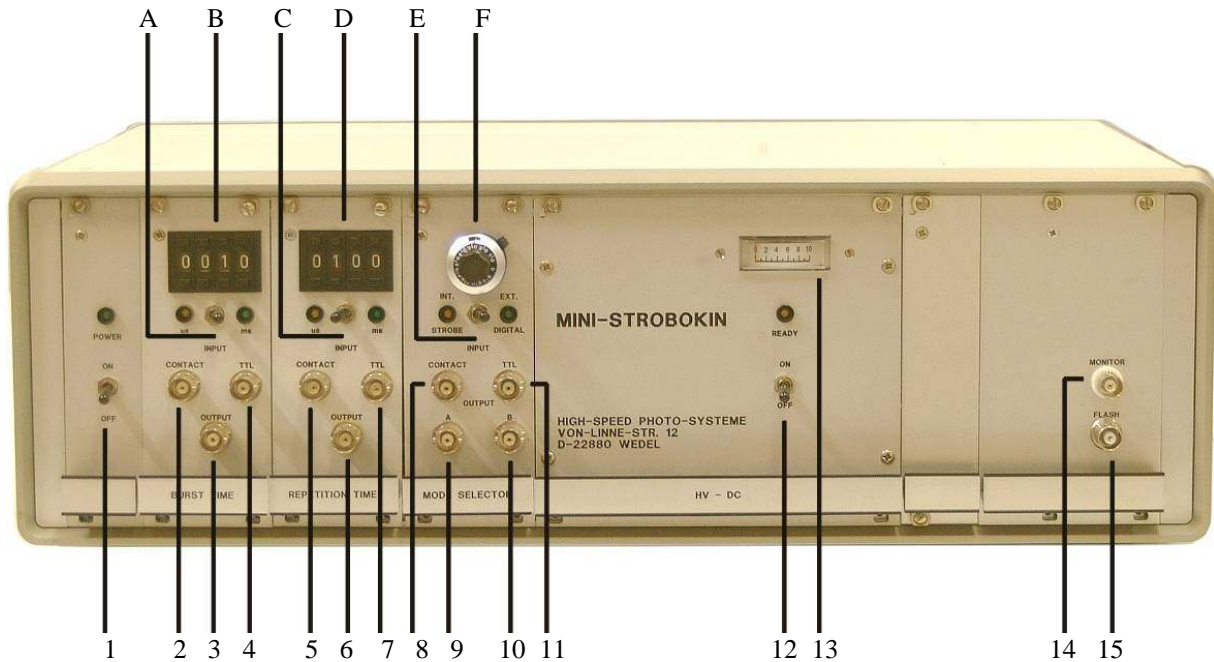
Flashfrequency

- a) Adjustmentfrequency up to 15 Hz
- b) Flashsequencefrequency up to 20 kHz

Monitoroutput

- a) Trigger Power Amplifier (TPA): Highvoltagedivider 1: 10.000

MINISTROBOKIN



1	-	LINE VOLTAGE	Power ON/OFF
2	-	BURST TIME	Start trigger input CONTACT
3	-	BURST TIME	Monitor TTL
4	-	BURST TIME	Start trigger input TTL
A	-	BURST TIME	μ s/ms-switch
B	-	BURST TIME	Digital adjustment for burst time ms/ μ s
5	-	REPETITION TIME	Do not use!
6	-	REPETITION TIME	Monitor
7	-	REPETITION TIME	Do not use!
C	-	REPETITION TIME	μ s/ms-switch
D	-	REPETITION TIME	Digital adjustment for repetition time ms/ μ s
8	-	MODE SELECTOR	Trigger input CONTACT single pulse
9	-	MODE SELECTOR	Monitor
10	-	MODE SELECTOR	Do not use!
11	-	MODE SELECTOR	Trigger input TTL single/multiple pulse(s)
E	-	MODE SELECTOR	Switch intern strobe / extern trigger
F	-	MODE SELECTOR	Adjustment knob for intern strobe
12	-	HV-DC	High voltage power ON/OFF
13	-	HV-DC	High voltage control instrument
14	-	TPA	Monitor
15	-	TPA	High voltage connection flashlamp