Lehr– und Didaktiksysteme
LD Didactic GmbH
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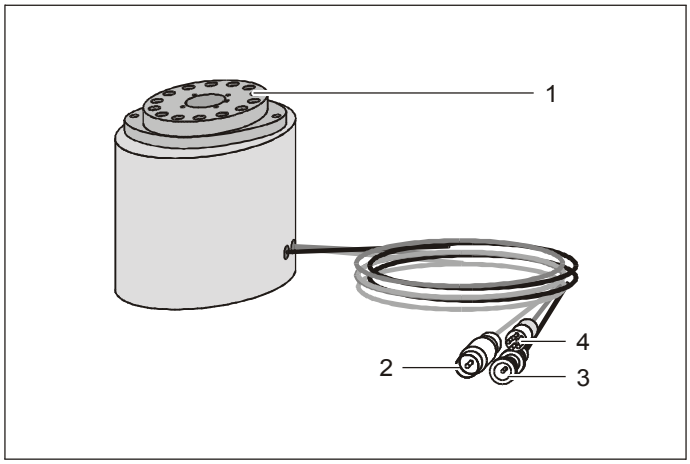


Instruction sheet 559 912

Detector output stage (559 912)

1 Detector jack
2 High-voltage cable
3 Signal output cable
4 Low-voltage cable (also: high-voltage measurement)

1 Description

The detector output stage provides the high-voltage supply for the scintillation counter (559 901) and enables the low-resistance decoupling of the output signal. It consists of a high-resistance voltage divider for supply of the dynodes of the photomultipliers, a differentiating circuit and an impedance transformer. The high voltage can be measured by tapping the voltage divider.

2 Technical data

Voltage divider for photomultiplier:

Total resistance:	6.75 MΩ
Working resistance:	100 kΩ
High voltage:	max. +1500 V

Impedance transformer:

Type:	emitter follower
Supply voltage:	-15 V to -9 V

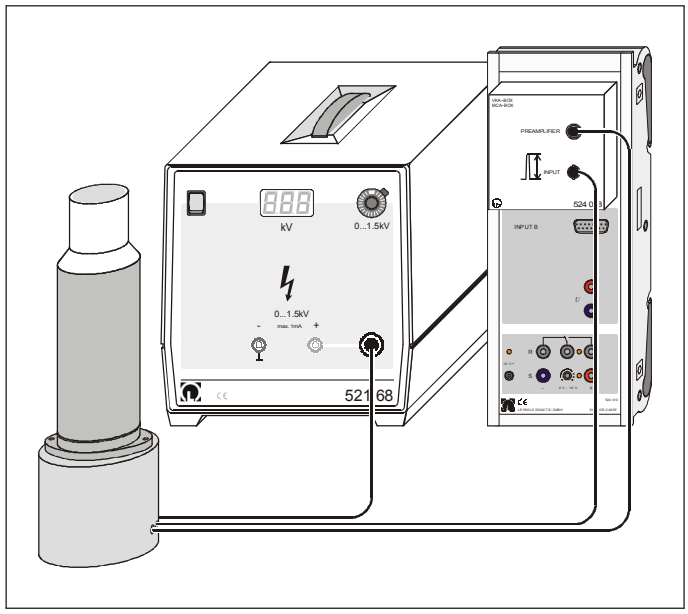
Output signals:

Polarity:	negative
Rise time:	approx. 0.4 µs
Total time:	approx. 4.5 µs
Signal height:	-0.05 V ... -2.0 V (max. -7.0 V)
High-voltage measurement:	Divider 670:1

Connections:

Detector jack:	B14A (14-pole)
High voltage:	high-voltage cable with 1-pole plug, screened
Low voltage and high-voltage measurement:	multicore cable, with 6-pole plug, screened
Signal output:	50-Ω cable with BNC plug, screened

3 Operation



additionally required:

1 scintillation counter	559 901
1 Sensor CASSY	524 010
1 MCA Box	524 058
1 high-voltage power supply, 1.5 kV	521 68

Remark

Used in conjunction with the detector output stage, the scintillation counter may be set up vertically as well as horizontally.

If the scintillation counter is set up vertically, keep in mind that it may be destroyed by tipping over. A corresponding protection of the setup is recommendable, e.g. by use of the socket for scintillation counter 559 891.

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