

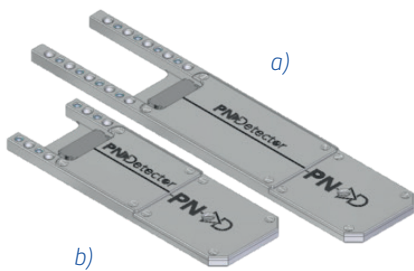
Backscattered Electron Detector Portfolio

The PNDetector Annular Backscattered Electron Detectors portfolio is designed to fulfill any customers wish from standard performance up to highly specific demands like high speed imaging or low noise signal detection at a broad range of energies. The very low signal capacitance of our fully depleted detectors together with our high-speed preamplifiers enables best performance at highest scan rates up to 100 MHz. Our portfolio ranges from standard modules and advanced modules with integrated preamplification up to full systems including retraction mechanism and main amplifier electronics.

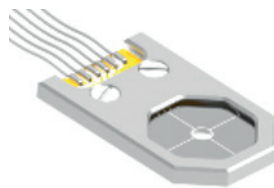


Our compact backscattered electron detector module with integrated 4-channel preamplifier enables scan speeds down to 10 ns / pixel

Detector Configurations



Advanced BSD Module with integrated 4-channel preamplifier: a) Standard and b) short configuration for table top systems



Standard BSD Module – Sensor Chip mounted on substrate with aluminum shield for mechanical protection



High-speed 4-channel Standalone Preamplifier for BSD and STEM detector diodes

Choose your detector now

Type	Total active area	Number of segments / rings	Central hole diameter mm	Outer diameter mm	Max. geom. collection efficiency	Signal capacitance per cell @ full depletion
BSD-40-4-1-10	40 mm ²	4/1	∅ 1.0	∅ 9	50%	3 pF
BSD-50-4-1-56	50 mm ²	4/1	∅ 5.6	∅ 12	20%	4 pF
BSD-80-4-1-20	80 mm ²	4/1	∅ 2.0	∅ 12	50%	6 pF
BSD-150-4-1-20	150 mm ²	4/1	∅ 2.0	∅ 16	65%	12 pF
BSD-150-4-1-50	150 mm ²	4/1	∅ 5.0	∅ 16	45%	12 pF
BSD-150-2-2-20	150 mm ²	2/2	∅ 2.0	∅ 16	60%	12 pF

Contact Information

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Fast and versatile BSD signal processing and image acquisition

In order to accurately process the signals provided by our BSE detectors we offer a wide range of electronics for mixing and amplifying the signals. Different configurations are available and can be used to solve any kind of BSE detection task.

MA-PN4 – PNDetector's 4-channel main amplifier supports all the necessary signal conditioning for many BSE imaging applications. Compositional and topographic images can easily be acquired up to scan speeds of 50 MHz (20 ns/pixel).

MICS – a more advanced multi-channel amplifier from point electronic – provides even more advanced possibilities such as 4x simultaneous signal amplification with gains up to 1,800x and calibration for quantitative BSE detection.

DISS6 – the next generation SEM acquisition system from point electronic – includes fully integrated scan generation and image acquisition software. It provides huge image resolutions up to 65k x 65k pixels and ultra-fast scan speed down to 10 ns pixel dwell time. With the live topographic height reconstruction software you can easily create high-resolution 3D images.



MA-PN4 – PNDetectors 4-channel main amplifier for advanced signal mixing and gain- / brightness-control supports scan rates up to 50 MHz.

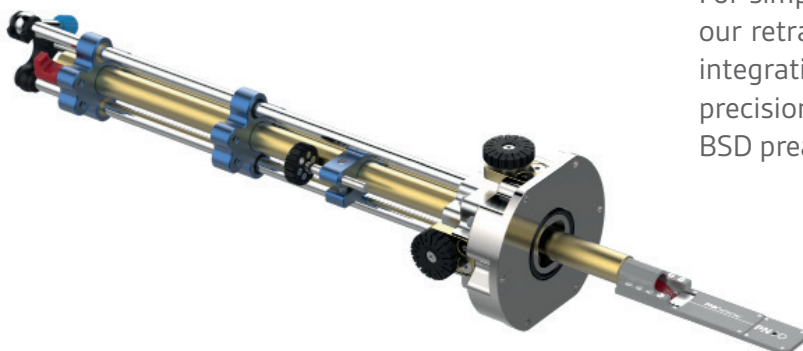


MICS by point electronic – a calibrated amplifier for quantified BSE detection with 4x simultaneous signal amplification and gains up to 1,800x.



DISS 6 by point electronic – the next generation SEM acquisition system with huge image resolution up to 65k x 65k pixels and ultra-fast scan speed down to 10 ns dwell time.

Precise and easy positioning – the PNDetector's retractable arm



For simple integration solutions we are happy to offer our retractable arm for easy mechanical and electrical integration into any SEM. The X-Y-Z adjustment offers a precision < 20 μm and excellent heat transfer from the BSD preamplifier module to the heat sink.

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