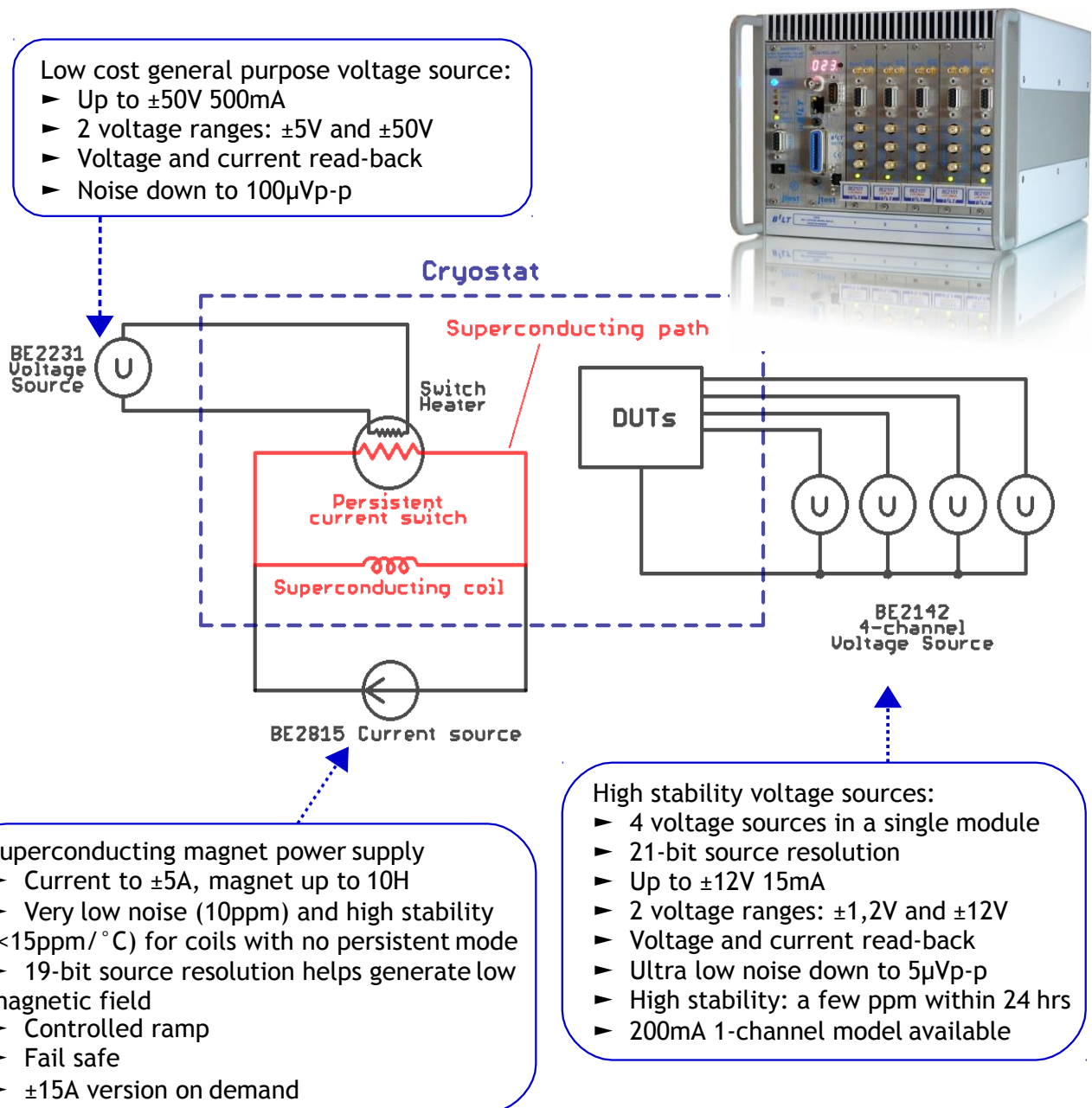


Very low noise sources for physics applications requiring a superconducting magnet

Unrivalled noise and stability performances using iTest source modules

- ✓ BE2142 for noise sensitive component biasing and monitoring
- ✓ BE2815 to supply a superconducting magnet
- ✓ BE2231 to supply a switch heater
- ✓ All in a small, cost effective chassis



Application note: very low noise sources for cryostat applications

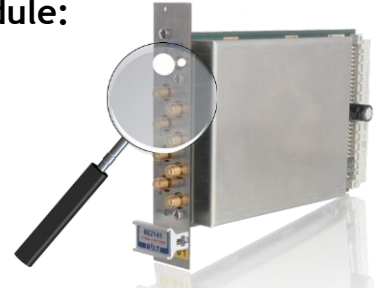
Focus on the BE2142 high stability voltage source module:

World's lowest noise power supply.

No more than the output noise of a very low-noise operational amplifier without additional filtering.

Widely used for:

- Polarization of nanostructures, nanotube, graphene, quantum devices, 2D high conductivity gases...
- Battery replacement for ultra-low noise application



Range	Resolution	Settling time		Noise		Voltage noise density	
		To 99%	To 21 bit	0,1Hz-10Hz	10Hz-100kHz	1kHz	10kHz
$\pm 12V$	$12\mu V$	45ms	<200ms	<30 μV p-p	37 μV p-p	7nV/ $\sqrt{Hz}$	<3nV/ $\sqrt{Hz}$
$\pm 1,2V$	$1,2\mu V$	45ms	<200ms	<3,5 μV p-p	5 μV p-p	<3nV/ $\sqrt{Hz}$	<3nV/ $\sqrt{Hz}$

All source model features:

- No voltage transient when powering on/off or switching on/off
- Short-circuited output when source is switched off
- Synchronization and triggering functions
- Voltage and current memories and plotting
- User programmable thresholds to automatically stop the test
- NI Labview® driver provided
- Custom versions on demand



Empty 5-slot BE103 BILT chassis

Chassis features:

- Ethernet, USB, GPIB
- 5 slots for modules (13-slot chassis available)
- Complete software package provided, including a turnkey PC software
- Many other module models available: voltmeters, power sources and so on...

Product summary		
<u>BN103</u>	5-slot chassis, USB, Ethernet, 100-230V power line, 250Watts	
<u>BE2141</u> <u>BE2142</u>	$\pm 12V$ 15mA	DC Voltage source module, 4 independent channels Ultra low noise, very low drift, 21-bit, down to 1 μV resolution
<u>BE2101</u> <u>BE2102</u>	$\pm 12V$ 200mA	DC Voltage source module, 1 channel Ultra low noise, very low drift, 21-bit, down to 1 μV resolution
<u>BE2231</u>	$\pm 50V$ 500mA	DC Voltage source module, 1 channel Very low noise, low drift, 19-bit
<u>BE2815</u>	$\pm 5A$ 18V	DC Current source module, 1 channel Very low noise, low drift, 19-bit, up to 10H
<u>BE4082</u>	$\pm 50V$	4 fully independent 6½-digit voltmeters Low input noise, 24-bit A/D, 100ppm typ. accuracy