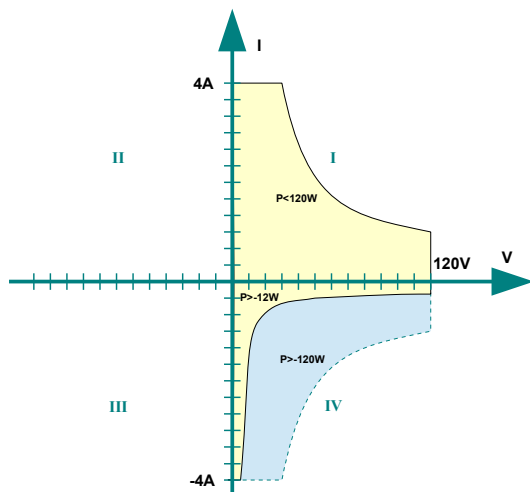


## Voltage DC Source +120V 4A

- ✓ 9 Current ranges, from 5 $\mu$ A to 4A
- ✓ 2 Voltage ranges: +30V and +120V
- ✓ 120W max. output power
- ✓ Low cost

### Main features

- 2-quadrant non-isolated DC source and 4-digit digital multimeter (DMM)
- CV or CC regulation
- Excellent regulation on all kinds of passive and active loads (esp. high output capacitive drive)
- Low noise, typ. 3mVp-p
- Good programming and measurement accuracy (0,05% of range typ.)
- No transient when powering on/off or switching on/off
- Available coupling option for automatic regulation of transistors at constant power
- Operating range:  
DC: yellow area  
Transient: yellow + blue areas



### Bilt system features

- Up to 13 BE517 source modules into a 19" Bilt chassis.
- Host connections at chassis level including Ethernet and USB.
- Complete software package provided, including a turnkey PC software, NI Labview® driver
- Ready-to-use with EasyStress II software for burnin and life-test

### Application examples

- General purpose laboratory power supply
- Accurate power supply for measurements bench
- Reliability tests / life test for active or passive components
- Transistors tests at constant current and DC characterization (coupling available between sources)

# BE517 module specifications

## Operating area

Parameters	Conditions/Comments	Min.	Typ.	Max.
Voltage setting range	% of the range, normal operation around 0V	0%		100%
Current setting range	Programmed in absolute value, % of the range	2%		100%
Overvoltage threshold setting range	Overvoltage or Undervoltage thresholds, % of the voltage range	±5%		±105%
Remote sense operating range	Max. voltage drop in the power or ground cable when sense connected	-2V		+2V
Voltage output headroom	Max module output voltage above voltage range for sense compensation		1V	
Sourced output power				120W
Sink output power				12W
Transient sink output power	During less than 500ms, module shutdown if longer			120W
Operating temperature	Ambiant temperature in front of Bilt's rear fan openings	15 °C		30 °C

## Ranges and accuracy

Range switching when the source is off with automatic range selection capability.

Accuracy specified on an 18 °C-28 °C ambient temperature range, after a 30min warm-up.

### Voltage

Range	Parameter	Resolution	2 year Accuracy <sup>(1)(3)</sup>	Ripple & Noise		
				Setting & Readback		0,1Hz-10Hz
+120V		31mV	0.2% (240mV)	8mVp-p	7,5mVp-p	10,2mVp-p
+30V		7,9mV	0.2% (60mV)	2mVp-p	2,9mVp-p	5,4mVp-p

(1) in % of the range, typical accuracy 0,05%

(2) 1µF output decoupling capacitor, 6.8Ω load, worst peak-to-peak value

(3) Additional voltage offset error if sense lines not used: <2mV.

### Current

Range	Parameter	Resolution	2 year Accuracy <sup>(1)</sup>	Load capacitance	
				Setting & Readback	Recommended <sup>(2)</sup>
± 4A		1mA	0.2% (8mA)	100µF - 1mF	Iset / 150 Uset or 10mF
± 1A		263µA	0.2% (2mA)	100µF - 1mF	Iset / 150 Uset or 10mF
± 150mA		40µA	0.2% (0,3mA)	10µF - 56µF	Iset / 150 Uset or 1mF
± 30mA		7,9µA	0.2% (60µA)	1µF - 10µF	Iset / 150 Uset or 100µF
± 5mA		1,3µA	0.2% (10µA)	---	Iset / 150 Uset or 100µF
± 1mA		263nA	0.2% (2µA)	---	Iset / 150 Uset or 50µF
± 150µA		40nA	0.2% (0,3µA)	---	Iset / 150 Uset or 10µF
± 30µA		7,9nA	0.2% (60nA)	---	Iset / 150 Uset or 2.2µF
± 5µA		1,3nA	0.2% (10nA)	---	Iset / 150 Uset or 2.2µF

(1) in % of the range, typical accuracy 0,05%

(2) for best noise and transient response results, low esr ceramic and/or electrolytic type.

(3) The minimum of both values. Iset and Uset are the user programmed current (in A) and voltage setting (in V). The resulting capacitance is in mF. This limit guarantees that the source will switch off within the specified fall time. Exceeding this value can damage the module. The second value guarantees regulation stability.

# BE517 module features

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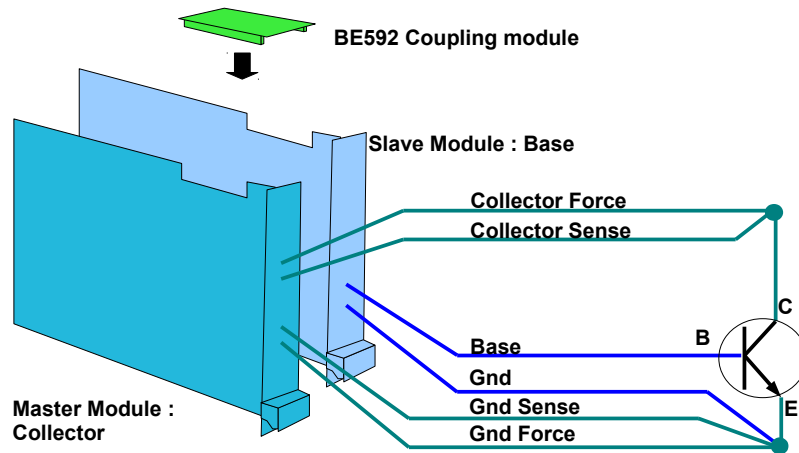
## Connections

2 types of output available:

- 2 laboratory jacks Ø4mm providing power output (red) and power ground (black)
- 1 standard Bilt (type A) 9-pin D-SUB connector. Pinout is compatible for crimped connectors and twisted pair ribbon cables

## Application example

BE515, BE516 and BE517 modules can be coupled in order to bias a transistor at constant power. Using a bipolar transistor for instance, one module is configured as a current source (CC regulation) to control the base current (slave), one module is configured as a voltage or current source (master). The slave module is regulated so that the transistor operates at a defined  $V_{ce}$  and  $I_c$ .


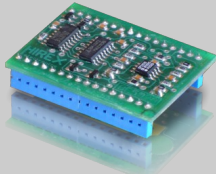


$V_{ce}$  and  $I_c$  constant thanks to automatic  $I_b$  control

## BE517 module related products and documents

Related product			
<b>BE515</b>	40V 200mA 4 quadrant bipolar source	8W	4 voltage ranges: $\pm 5V$ , $\pm 10V$ , $\pm 20V$ , $\pm 40V$ 8 current ranges from $6\mu A$ to 200mA
<b>BE516</b>	20V 6A 4 quadrant bipolar source	120W	2 voltage ranges: $\pm 5V$ , $\pm 20V$ 9 current ranges from $\pm 5\mu A$ to $\pm 6A$
<b>BE547</b>	fast response time 15V 12A pos.source	120W	

Documentation			
BE517 Brochure	5.2	2017/02/27	module data sheet / specifications and main features
BE517 User Manual			module user manual including chassis, network, software, connections description
<a href="http://www.bilt-system.com/">http://www.bilt-system.com/</a>			bilt user manual and any other Bilt modules specification

Accessories			
	<b>AM264</b> 9-pin D-SUB to female BNC converter.		<b>BE592</b> Inter-module coupling for regulating NPN, PNP, MOS-P, MOS-N, FET, etc transistors.

Standards, Calibration, Warranty and Maintenance
<p>Bilt system is compliant with the applicable European Directives and holds the CE mark. Any iTest product comes with a two-year parts and labour guarantee and a calibration certificate if applicable. A telephone support service is also available for the same period. Our calibration laboratory performs according to ISO/CEI 17025 "General requirements for the competence of testing and calibration laboratories". All measurements are traceable to the International System of Unit. The recommended calibration interval of this product is 2 year.s On request, Itest can proceed to scheduled calibration (in our workshop or at the customer's site). Maintenance can also be performed on-site or in our workshop.</p>



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