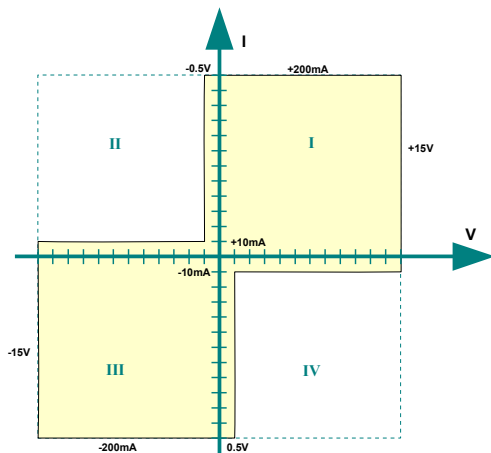


6 Independent DC Sources $\pm 15V$ 200mA

- ✓ General purpose low noise sources
- ✓ Low cost per source

Main features

- 6 independent ground referenced DC sources
- 4-quadrant voltage source with current compliance limit
- 4-wire operation
- Low noise linear regulation
- 1 bipolar voltage range: $\pm 15V$
- 2 current ranges: 2mA and 200mA
- 16-bit measurement and setting resolution
- Accuracy: 0,1% of the range
- Up to 78 sources in a single 13-slot chassis
- Operating area
Yellow area: DC
Dashed line area: transient



- Available accessory: D-SUB to BNC adapter, 1.5-meter (5 ft), Reference AT211-1.5



Bilt System features

- Up to 13 BE584 source modules into a 19" Bilt chassis
- Host connections at chassis level including Ethernet, USB, RS422, RS232 and GPIB (optional)
- Complete software package provided, including a turnkey PC software, Labview driver

Application examples

- Reliability tests for sensitive components requiring multichannel biasing
- Accurate biasing for test and measurement benches

BE584 module specifications

Operating area

Parameters	Conditions/Comments	Min.	Typ.	Max.
Voltage setting range	bipolar operation : continuous voltage setting between polarities, normal operation around 0V	-15V		+15V
Current setting range	% of the range, programmed in absolute value	0,5%		100%
Remote sense operating range	Max. voltage drop in the ground cable when sense connected	-1V		+1V
Voltage output headroom	Max module output voltage for sense compensation	-15V		+16V
Sourced output power	Continuous power, per source			3W
Continuous sink current	Quadrant II and IV, output voltage > 0,5V			10mA
Transient sink current	Quadrant II and IV, during less than 100ms			200mA
Operating temperature	Ambiant temperature in front of Bilt's rear fan openings	15 °C		30 °C

Ranges and Accuracy

Voltage range switching by relay in standby mode with automatic range selection capability. Accuracy specified on a 18 °C-28 °C module temperature range, 15min warm-up.

Voltage :

Parameter	Resolution	2 year Accuracy ⁽¹⁾		Ripple & Noise
		Setting	Read-back	10Hz-20Mhz
Range				
± 15V	0,57mV	±15mV	±7mV	1mVp-p no load, 5mVp-p full load

(1) typical 90 day setting and measurement accuracy: 0,05% of the range

Current :

Parameter	Resolution	2 year Accuracy ⁽¹⁾		Load capacitance	
		Setting	Read-back	Recommended ⁽²⁾	Max ⁽³⁾
Range					
± 200mA	7,6µA	±200µA	±200µA	1µF	47µF
± 2mA	76nA	±2µA	±2µA	47nF	470nF

(1) typical 90 day setting and measurement accuracy: 0,05% of the range amplitude

(2) for best noise and transient response results; low esr ceramic capacitor recommended

(3) for regulation stability

Regulation/measurements

Parameters	Conditions/Comments	Min.	Typ.	Max.
Voltage transient response time ⁽¹⁾	1µF output decoupling capacitor		500µs	
Current transient response time	No output decoupling capacitor		100µs	
Voltage to current transient response time ⁽²⁾	No output decoupling capacitor		500µs	
Line regulation	No line regulation error, guaranteed by design			0%
Load regulation	Ground sense line connected, 0 to max. source current			0%
Measurements sampling frequency	For each source, envelope trace capability at this rate		0,33 ks/s	
Measurements bandwidth			4kHz	

(1) response time to a 5% to 50% load step, time to stabilize to within 15mV of setting

(2) time to stabilize from a constant voltage (CV) regulation to a constant current (CC) regulation after a load step

Safety features

- User programmable measurement thresholds: the module is shut down or sends a warning if a threshold is exceeded. Typical response time: 3ms. Current or voltage threshold, monitored after a programmable delay

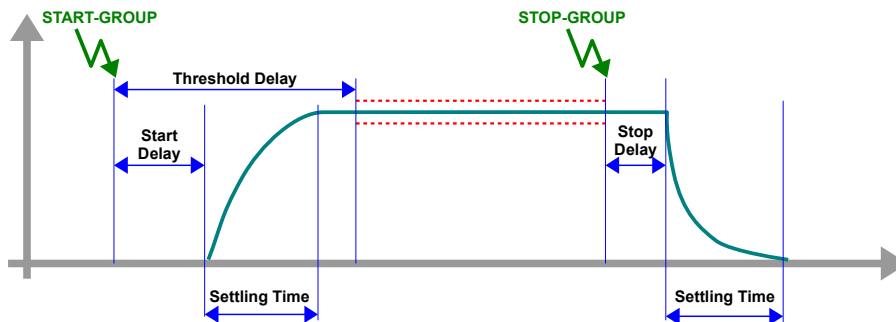
BE584 module specifications

Module start/stop

Parameters	Conditions/Comments	Min.	Typ.	Max.
Settling time ⁽¹⁾	Source switching on or off, or any setting change, 95% of the step (first order, 2.4ms time constant).		7ms	
Start delay		5ms		250ms
Stop delay		0ms		50ms
Threshold delay	Time after which the measurement thresholds are monitored	0ms		60s
Off output impedance	Source off, max current 1A, impedance of the relay contact		100mΩ	

(1) no output transient perturbation during output rise/cut-off and mains Starting/ Stopping, several possibilities for programmable sequences

Start-Stop sequence overview:

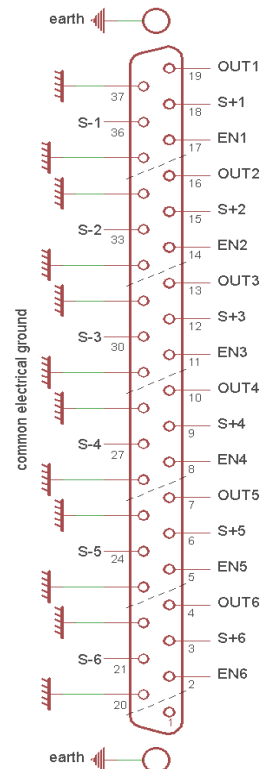


Connection

- 1 D-SUB 37 connector. Pinout is compatible for twisted pair ribbon cables
 - Ground and power sense signals are available for each source for remote voltage measurement and regulation.
 - “Enable” signal allows to install a remote «voltage presence» LED (no resistor needed, 5mA max)

Pinout example for channel 6:

STANDARD CONNECTION			
Pin	Channel	Name	Function
1	-	NC	
2	6	Enable	Channel ON : 5V, channel OFF : 0V.
3	6	Sense+	Remote power sense
4	6	Output	Power Output
...			
20	6	Ground	Power ground
21	6	Sense -	Remote ground sense
22	6	Ground	Power ground
...			



BE584 Related Products

Related product			
BE582	10V 1A / 6 channels 6W per channel max	6 x 6W	1 voltage range: $\pm 10V$ 1 current range: 1A
BE586	120V 200mA / 3 channels 12W per channel max	3 x 12W	1 voltage range: $\pm 120V$ 2 current ranges: 2mA and 200mA
BE587	250V 1mA / 4 channels very low noise: 6mVp-p	4 x 0,25W	2 voltage ranges: -250V and +250VV 1 current range: 1mA

Documentation			
BE584 Brochure	Rev 6.1	2017/02/27	module's data sheet: specifications and main features
BE584 User Manual	-	-	additional specification, quick-start guide
http://www.bilt-system.com/			bilt user manual and any other Bilt modules specification

Accessories	
AT211	DSUB-37 adapter to 6 male BNC, 1.5 meter (5ft)

Standards, Calibration, Warranty, Maintenance & Integration

Bilt system is compliant with CE Standards.

Each module comes with a two-years initial guarantee, which can be increased on request.

Each module is fitted with an on-board memory for complete part tracking, software calibration and test report edition.

iTest develops integrated test benches dedicated for each module, and therefore can proceed on request to on-site check and periodic calibration. The recommended periodicity for regular calibration is two years.

According to the customer requirements, iTest can offer either on-site maintenance or return to workshop maintenance.

When delivering large or dedicated systems, iTest performs on site integration and training for both software and hardware.



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