

A5710 AC Current Source



TECHNICAL DATA SHEET

Features

PXI

VXI

LAN

cPCI

PXIe

GPIB

USB

RS232
485

external
PCIe

- Modern switching technology
- Output current up to 1,600 A_{eff}
- Variable output frequency between 45 and 65 Hz (option FREQ)
- Continuous data acquisition (option DAQ)
- Readback of output current (option MEAS)
- Digital regulation loop with the integrated digital processing unit
- Digital calibration

Product Information

The A5710 AC Current Source is a high current AC source in a 3U 19" chassis.

In combination with a separate special power supply (3U 19") the A5710 supplies currents up to $1,600 A_{\text{eff}}$.

Benefits of modern switching technology:

- Much lower power dissipation
- Much lower heat generation
- Much lower weight and size
- Much lower fan noise

Various output ratings available

This AC current source is available with output currents from $125 A_{\text{eff}}$ to $1,600 A_{\text{eff}}$. With the option FREQ the output sine frequency is programmable between 45 and 65 Hz. The maximum output voltage depends on the device variant.

Digital signal processing unit

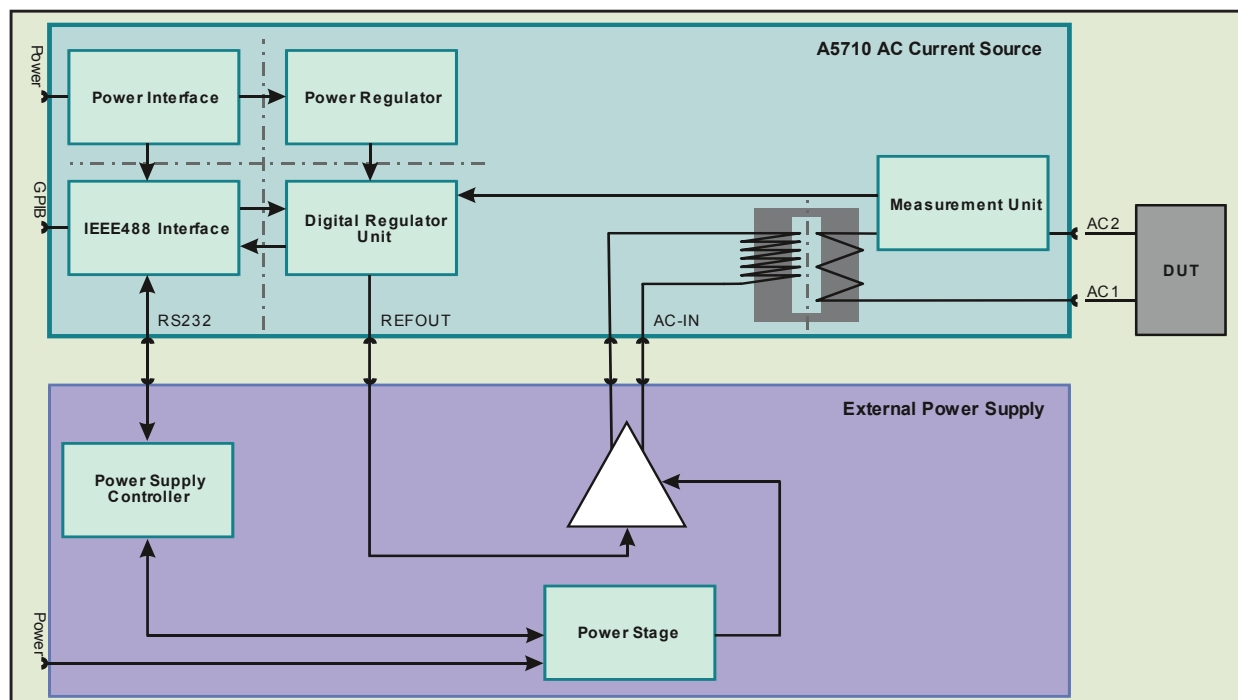
The A5710 contains a digital signal processing unit which provides the following advantages:

- Digital current regulation guarantees stable regulation even with long load-lines
- Open circuit detection provides high operation security
- Continuous current sampling for waveform recording (option DAQ)

Controller interface

The A5710 is equipped with a GPIB interface.

Ordering Option	Comment
Option FREQ	Frequency changeable (45... 65 Hz)
Option MEAS	RMS output-current measurement
Option DAQ	Data acquisition for waveform recording
Option RMK	19" rack mounting kit



General	Specification	Comment
AC line voltage	230 V _{AC} ±10%	
AC line frequency	47 Hz...53 Hz	
Power consumption	<(50 W + up to 4,000 W)	A5710 + external power supply
Operating temperature	0 ... 40°C	
Operating altitude	<2,000 m	
Relative Humidity	Up to 85% at 35°C	
Storage temperature range	-25 ... 70°C	
Electrical safety	According EN61010-1	
Isolation output to PE	50 V CAT I, Pollution Degree 2	

Device Specification	A5710-125-17V0	A5710-160-3V0	A5710-200-11V0
Output Ratings			
Output current (RMS)	1 ... 125 A _{eff}	2 ... 160 A _{eff}	5 ... 200 A _{eff}
Output voltage (Peak)	17.0 V, 1 Phase AC	3.0 V, 1 Phase AC	11.0 V, 1 Phase AC
Output frequency	50 Hz (45 ... 65 Hz optional)	50 Hz (45 ... 65 Hz optional)	50 Hz (45 ... 65 Hz optional)
Output current gain error	<1% of full scale	<1% of full scale	<1% of full scale
Measurement gain error	<1% of full scale	<1% of full scale	<1% of full scale
Size (+ext. power supply)	19" 12U	19" 6U	19" 12U
Weight (+ext. power supply)	≈65 kg	≈42 kg	≈65 kg

Device Specification	A5710-250-2V5	A5710-400-2V0
Output Ratings		
Output current (RMS)	5 ... 250 A _{eff}	10 ... 400 A _{eff}
Output voltage (Peak)	2.5 V, 1 Phase AC	2.0 V, 1 Phase AC
Output frequency	50 Hz (45 ... 65 Hz optional)	50 Hz (45 ... 65 Hz optional)
Output current gain error	<1% of full scale	<1% of full scale
Measurement gain error	<1% of full scale	<1% of full scale
Size (+ext. power supply)	19" 6U	19" 6U
Weight (+ext. power supply)	≈44 kg	≈46 kg

Notes: All product data are specified for 1 year at an ambient temperature of 23°C ±5°C (after 1 hour warm-up time). Product specification and description in this document are subject to change without notice.

Device Specification	A5710-630-1V5	A5710-630-3V5	A5710-630-5V0
Output Ratings			
Output current (RMS)	20...630 A _{eff}	20...630 A _{eff}	20...630 A _{eff}
Output voltage (Peak)	1.5V, 1 Phase AC	3.5V, 1 Phase AC	5.0V, 1 Phase AC
Output frequency	50Hz (45...65Hz optional)	50Hz (45...65Hz optional)	50Hz (45...65Hz optional)
Output current gain error	<1% of full scale	<1% of full scale	<1% of full scale
Measurement gain error	<1% of full scale	<1% of full scale	<1% of full scale
Size (+ext. power supply)	19" 6U	19" 12U	19" 12U
Weight (+ext. power supply)	≈50 kg	≈85 kg	≈87 kg

Device Specification	A5710-1600-1V0	A5710-1600-2V0
Output Ratings		
Output current (RMS)	40...1,600 A _{eff}	40...1,600 A _{eff}
Output voltage (Peak)	1.0V, 1 Phase AC	2.0V, 1 Phase AC
Output frequency	50Hz (45...65Hz optional)	50Hz (45...65Hz optional)
Output current gain error	<1% of full scale	<1% of full scale
Measurement gain error	<1% of full scale	<1% of full scale
Size (+ext. power supply)	19" 6U	19" 12U
Weight (+ext. power supply)	≈60 kg	≈80 kg