

## USB Programmable Pulsed High Current Source



**ICS-A-I 500**, a product of the ISAscale® product line, is a brand new programmable high current source for the direct connection to any PC/laptop via the USB port.

The ICS-A-I 500 is based on the high precision data acquisition system ISA-ASIC, developed by ISABELLENHÜTTE.

The need for programmable high current sources, with both high accuracy and stability is increasing steadily. Highly stable currents are for example required for testing and simulating car batteries or complete battery or power management systems, as well as for calibration applications. Also, life cycles of electronic parts for high power applications have to be tested with a high accuracy. From a cost point of view, the sourcing should be done at high speed and fully automatically with a PC or laptop.

The system is fully controlled from a PC or laptop via the USB interface. It contains a 16 bit DA converter and a calibrated, high quality reference measuring system (IRMS) for current, voltage and temperature. The precision current source can be set to any value between 0 and 500 A and regulates the output current for a given time to a constant value with very little ripple noise, an extremely low transient response time and a precise and low overshooting. Current and voltage can be delivered via the output terminals to the external DUT and are being measured at the same time by the IRMS with high quality.

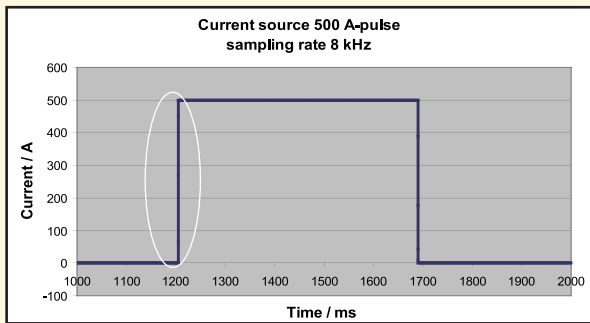
To avoid any interferences and ground loops, all internal circuits are optically decoupled from the USB. The high current source could be powered by a standard 6/12 V battery.

Triggering can be done with an internal software or, an external hardware trigger.

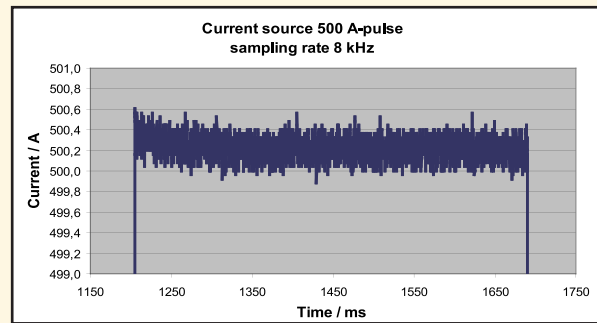
The system can be operated directly with any PC or laptop based on Windows® 2000/XP.

The ICS-A-I 500 is supplied with a complete Windows® software as well as Active X-DLL or LabView® drivers. This package makes it easy for the customer to develop specific test routines and to implement the device in complex test systems.

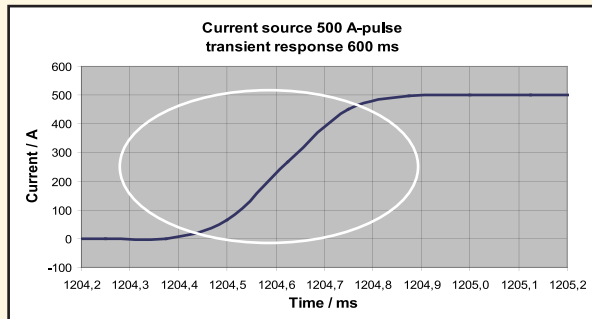
A perfect supplementation to the ICS-A-I 500 is our IUR-A-R0001 which is able to measure current up to 1500 A with a extremely high accuracy. For further information, please refer to the IUR information sheet.



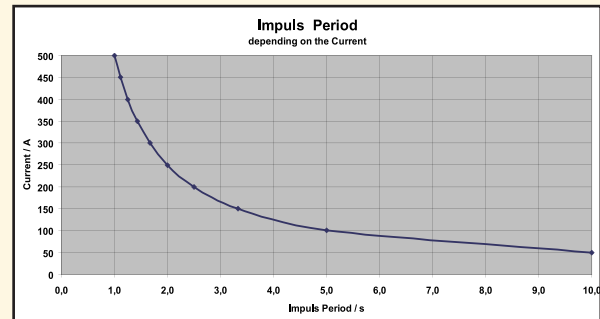
Current over time



Noise and overshooting of current source and measurement system



Extract from above of transient response time / ms



Current as function of time at 12 V external

	Range	Resolution	Abs. accuracy typical
Programmable current source (pulsed)	500 A	16 bit	0.1 %
Internal current measurement	0 A to +500 A	1 mA	20 mA
Internal temperature sensor	-40 to +140 °C	0.1 K	1 K
Transient response time	< 0.6 mS (0 - 500 A)		
Noise of supplied current	< 0.01 %		
Value of overshooting	< 0.1 %		
Trigger function	Internal software and external hardware trigger		
Interface	USB		
Operating temperature	0 to +45 °C		
Storing temperature	-10 to +50 °C		
Power supply	via USB, external +6/12 V power supply battery		
Protection class	IP52		
Dimension	300 x 200 x 150 mm		
Weight	7.5 kg		

Member of  
German  
Calibration  
Service



ISABELLENHÜTTE

Member of  
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Cooperation with  
German Commission for  
Electrical, Electronic &  
Information Technologies  
of DIN and VDE



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ISO/TS 16949:2002 and  
DIN EN ISO 9001:2000  
certified

