

High-Current Driver Astatine and Beryllium

up to 500 A pulse current
50 μ s – 5 ms pulse length
up to 40 V clamp voltage
rise time 40 μ s (20 μ s)
air- or water cooled
19 inch enclosure



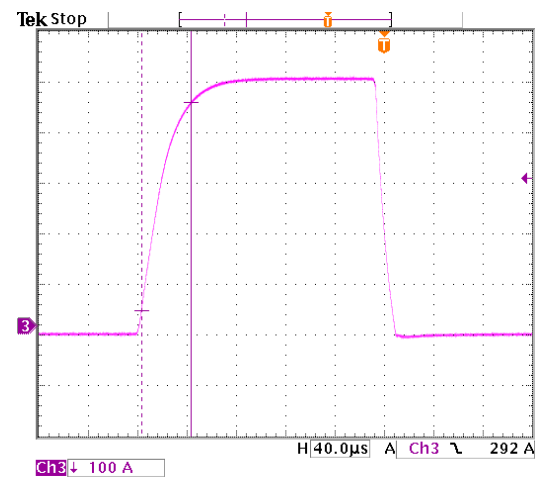
Devices of series Astatine or Beryllium are QCW pulse current sources (CW capable) to operate single diodes, bars or arrays. Pulse currents up to 500 A at pulse durations from 50 μ s to 5 ms and up to 40 V clamp voltage are available. The rise time is below 40 μ s (20 μ s), the fall time below 20 μ s.

Due to the linear concept ripple current is very low in comparison with true switching regulators.

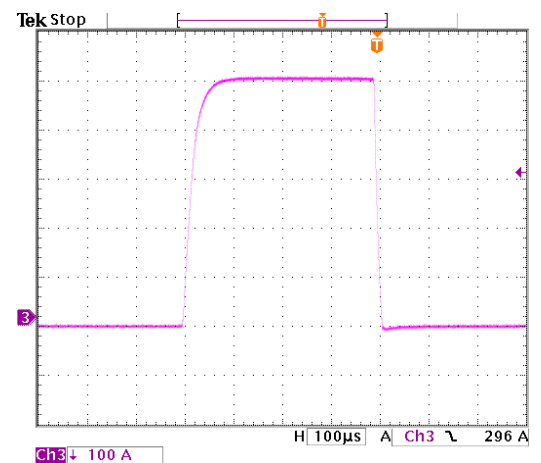
The device is short circuit proof and adapt the load automatically. They can be controlled via an optional front panel and via EIA-232, USB and CAN-Bus and Ethernet.

A multiplicity of security loops and interfaces makes the integration in your environment easy.

The devices are build in a modular way and can be customized to your requirements.



Picture 1: rise- and falltime of a pulse



Picture 2: Pulse 400 μ s / 500 A



Picture 3: Backview

Output current resolution	0,1 A up to 300 A; 0,2 A from 300 A - 500 A
Accuracy (current > 20% of end of range)	2 %
Pulse rise time (10% - 90%)	< 40 μ s (20 μ s)
Pulse fall time (90% - 10%)	< 20 μ s
Pulse width	50 μ s – 5 ms (depending on device) Longer pulses with smaller current possible – automatically adaption of the range
Input AC power	90 – 240 VAC / 50 – 60 Hz
Dimension	19 inch, HU and depth depending on device
Weigth	Between 12 and 18 Kg, depending on device
Emergency Stop	Potential free, dual
Interlock	2x dual, 1x single, potential free
Current Monitor	Analog 0V - 4V
External Trigger	5V over Optocoupler
Shutter control	2 relay outputs
Outputs	Relay Output Laser ON (1 A, 30 V) Relay Output ERROR (1A, 30 V)
24 V Inputs	customable
3 Outputs TTL 50 Ohm	customable, e.g. Pockels Cell Trigger
1 TTL Input	customable
Emergency Stop Button, Keyswitch	optional

Measurement module 0801

The measurement module 0801 measures two galvanic free voltages. They can be read by one of the digitally interfaces.

It is, for example, possible to measure two voltages of different diodes inside a stack.

The voltage is only measured during a pulse. In the pulse pause the measurement is deactivated.

Trigger module 0712

The trigger module 0712 provides three independently configurable TTL trigger outputs. The length, polarity and location can be chosen arbitrary.

With the Trigger module complicated Laser Systems can be operated without an additional signal generator.

An additional output shows the pulse as TTL signal.