

Discharge Circuits

NBU-1012 is a series of discharge circuits. There are OEM devices for simplification of solid-state laser systems development. The modules form flashlamp pulses of quasi-rectangular shape using the energy stored in an external capacitors bank. The special feature of the NBU-1012 is the built-in simmer supply supplemented with a circuit for serial or external flashlamp triggering. Ignition circuits are also embedded into the module. The NBU-1012 is intended for capacitor charging / pulse discharging applications such as pulsed laser systems. By default the NBU-1012 is supplied in modification for serial triggering. Modification for external triggering is available on request. The module is cooled with embedded fan, no external cooling is required. The discharge circuit should be protected against simultaneous capacitor battery charging and discharging, too short pulses (50 μ s by default, other by request), and too long pulses (10ms by default, other by request).



Input	Voltage	+24VDC
	Current	4A max
Output	Voltage	up to 1000V
	Discharge current	up to 1000A for pulse width < 1ms up to 500A for pulse width > 1ms
	Flashlamp pulse width	up to 100 ms (on request)
	Average power	up to 3000W
	Min. pulse width	50 μ s (other on request)
	Max. pulse width	10ms (other on request)
	Repetition rate	up to 50Hz (up to 20Hz on request)
Recommended wires	For capacitor bank connections	LIFY 4 sq. mm (min)
	For flashlamp connections	LIFY 4 sq. mm (min)
Simmer parameters	Voltage	up to 200V (300V on request)
	Open circuit voltage	about 1500V
	Current	300...800mA (500mA by default)
	Power	up to 70W (100W on request)
Triggering parameters	Voltage	about 10kV negative pulse (serial flashlamp triggering) about 1kV negative pulse (parallel flashlamp triggering)
	Pulse width	about 1 μ s
	Restrike rate	1-30Hz (automatically adjusted)
Environment	Operation temperature	-20°C to +45°C
	Storage temperature	-40°C to +85°C
	Humidity	90%, non-condensing
Other	Size (L x W x H)	210x203x58mm
	Weight	3.0kg