



5.03. CURRENT CONTROLLER FOR POWERFUL PLASMATRON PT- 200

Current controllers PT- 200 are designed for control and power supply of electric arc plasmatoms of direct current with a rated power of 200 kW.

Main features. In the RT-200 controllers, electric power conversion takes place at a frequency of 20 kHz. A modular principle is used for their construction, and IGBT transistors are the basis of the power modules. An application of the modular principle made it possible to evenly distribute electrical and thermal loads between structural nodes and thereby reduce the energy density of heat release and simplify the regulator design. Due to the simultaneous use of synchronous out-of-phase control and high-frequency energy conversion, the parameters of the output filters are significantly reduced, a high response time of the tracking of management signals of controller and optimal transient processes with load disturbances are obtained.

Main technical specifications:

No-load voltage, not less than	1200 V
Maximum power selection point	400 A / 540 V
Rated power	200 kW
Output current ripple, no more than	1%
Accuracy of load current support, not worse than	1,5%
Rise time of the load current at the start of plasmatron, no more than	15 ms
Time of current downtime when disconnected	1-2 ms
Efficiency in rated mode, not less than	96%
Mode of operation	Continuous
Degree of housing protection	IP54
Dimensions WxDxH	600x600x2100 mm
Weight, no more than	222 kg
Control	Remote / external control
Resource, not less than	10,000 hours