

Switches

PPS-TH51

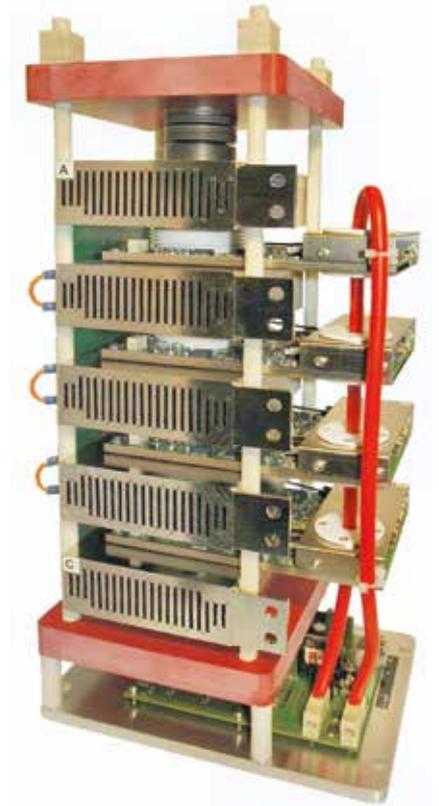
Solid state high voltage, high current switch for pulsed power applications

General Applications:

- Thyatron replacement
- Food sterilization
- Medical systems
- Radar power supplies
- Security systems
- High power lasers
- Beam accelerators
- Seismic research
- Environmental systems (De-NOx/SOx filters)

Features :

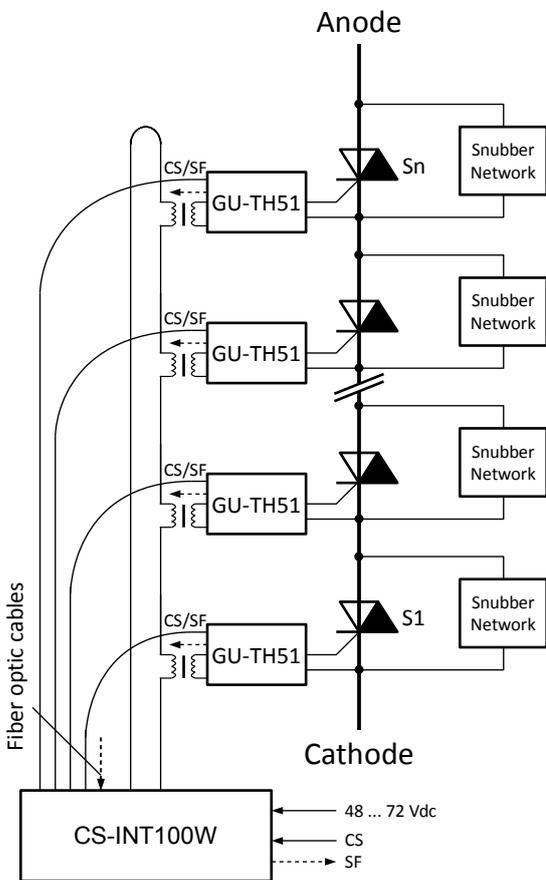
- DC voltage capability up to 30kV
- High non-repetitive pulse current up to 20kA
- High repetition rate up to 1300Hz
- High di/dt capability up to 10kA/ μ s
- Reverse conducting with monolithic integrated free wheel diode
- Immune to vibration as compared to thyatron
- Air or liquid cooling
- Ready to use with integrated power supply, monitor and driving system



Technical specification of 10.5kV switch AA-10368-004

Parameter	Symbol	Remarks	Min.	Typ.	Max.	Unit
Operating voltage	V	Working voltage for 100 FIT (Element)	-	-	10.5	kVDC
Pulse current	I	Single pulse (10 μ s)	-	-	20	kA
Current rise rate	di/dt		-	-	10	kA/ μ s
Repetition rate	f	Working current 1200A	-	-	1300	Hz
Reverse leakage current	I _{leak}		-	-	20	mA
Number of levels	n		-	4	-	pcs
Cooling system	-	forced air			4	m ³ /sec
Operating temperature			5	-	60	°C
Storage temperature			-25	-	85	°C
Logic power supply	V _{Logic}		48	-	72	VDC
Power consumption logic	P	4 Elements @1300Hz	-	-	80	W

Diagram



Details



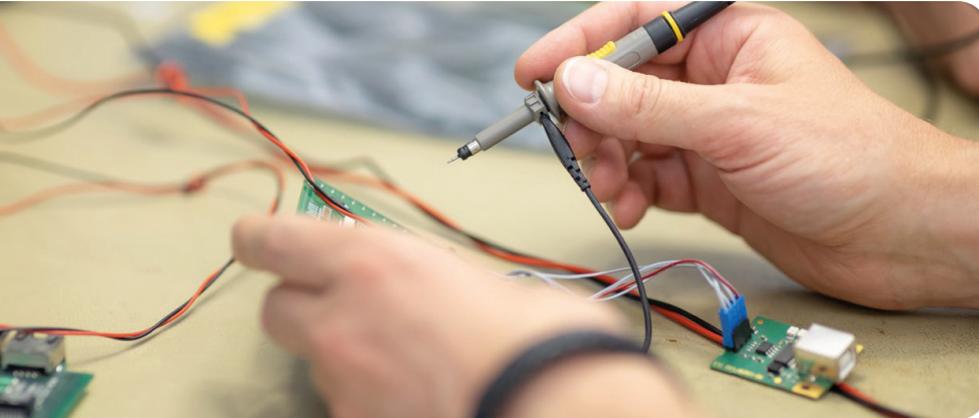
Power Supply / Light Interface: CS-INT100W



Gate Unit: GU-TH51

Order code	Description	Version
AA-10368-002	PPS-TH51-2-08F4599	PPS with AZ-51 element, 2-level
...
AA-10368-010	PPS-TH51-10-08F4599	PPS with AZ-51 element, 10-level
AA-10368-102	PPS-TH51-2-0845F0003	PPS with adapted standard element, 2-level
...
AA-10368-110	PPS-TH51-10-0845F0003	PPS with adapted standard element, 10-level

About Astrol



Technology leader in pulsed power switches and solid-state circuit breakers

Astrol is a Switzerland based innovator and manufacturer of state-of-the-art power control and switching solutions. We design and produce electronic parts for technical high demanding industries such as medical, energy distribution and pulsed power applications since 1996. In our 25-year history we have developed from a designer of custom-built electronics to a technology leader in pulsed power switches and solid-state circuit breakers with a wide range of products and a world-wide customer base consisting of operating companies and research institutes.

Our main focus lies on power switching in the medium voltage range, from optimized gate drive units to fully integrated solutions of up to 100kV. Our products are designed, manufactured and tested in our production location and high voltage test laboratory in Othmarsingen and therefore are able to withstand harsh environments, extended temperatures and have a long lifetime.

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