

Plasma Spray Coating System

www.powerconversions.net

High Frequency IGBT Power Supply

Electrical Characteristics		
AC Input	Voltage	3Ph 380Vac, 440Vac ±10%, 50/60Hz
	Power Factor	Over 90%
DC Output	Wattage	100kW
	Voltage	100Vdc, Open Voltage: 150Vdc
	Current	1000Adc
	Efficiency	Over 90%
Control	Mode	CC : Constant Current Control CV : Constant Voltage Control CW : Constant Wattage (Max75kW Limit)
Stability	CC Stability	Below 1% at Full Load Current, Long Time Scale
	Current Ripple	Below 1% at Full Load Current, Long Time Scale
Ignition	Voltage	Peak 15kV
	Condition	Torch Flow Gas: Argon Gas
External Interface		Analog In/Out : Output adjustment. Digital In/Out : Remote Operation. Communication : Modbus RTU
Protection		Over voltage, Over current, Over load, Over Temperature, Input Fuse, Output short circuit, Open circuit, Water flow



Physical Characteristics	
Dimension	Power Supply : 554 (W) * 803 (D) * 1595 (H)
Cooling	Water Cooling
Front Panel	MCCB
Environment	Location : Indoor Temperature : +5°C ~ 40°C Humidity : Less than 80% Pressure : Less than 1000m from sea



시스템 특징 Features

- 독립된 3채널의 출력 컨버터를 Phase Shift 방식으로 병렬 운전하여 단일컨버터 구성대비 출력전류의 리플이 90% 이상 감소하여 고 정밀 Coating 가능하다.
- 컨버터 모듈형 구조로 용량증가를 위한 병렬운전이 가능하며, 일부 모듈의 고장시 나머지 모듈로 연속운전이 가능하다.

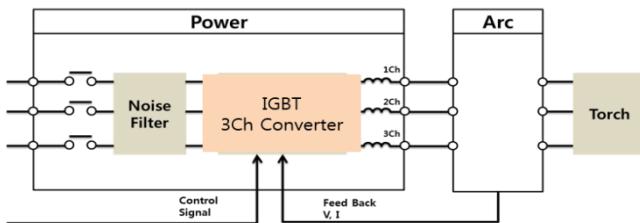
플라즈마 스프레이 코팅 응용분야 Application

- 내마모, 내열, 내부식, 전기적 특성 등 다양한 용도의 코팅분야
- 항공기 제트엔진, 발전설비, 자동차, 철도차량, 선박, 전기, 전자부품, OA기기부품, 의료기기, 제철, 제지, 인쇄, 섬유, 화학설비, 유리초자, 시멘트설비, 레저가구, 주방가구 등 산업에서 생활용품등 폭넓게 적용 가능

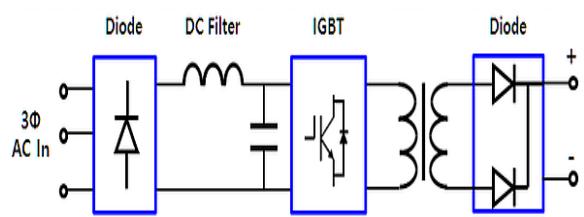
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Configuration

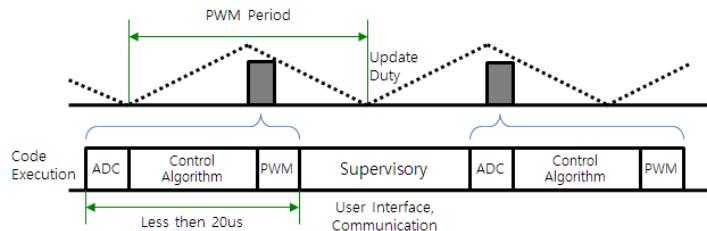


3Ch Configuration

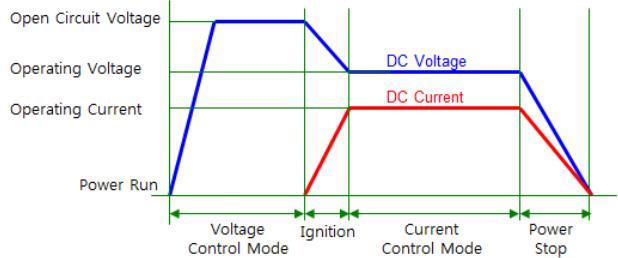


1Ch DC/DC Convertor

Control Algorithm



DSP Program Scheme



Torch Operating Sequence

Dimension

