

Product Data Sheet Metco CPI-500 Ignition Control Unit

The Metco™ CPI-500 Ignition Control Unit is designed to ensure the correct ignition sequence and power levels for a cascading arc plasma spray gun, regardless of the power source or plasma controller used. Thus, the spray gun will ignite reliably and safely.

The CPI-500 is an ignition control device designed for use with cascaded arc plasma spray guns to ensure safe, reliable gun ignition. It aids in the integration of plasma spray guns such as the SinplexPro™ series guns into existing plasma spray systems.

1. General Description

The CPI-500 is a wall-mountable unit that is connected, via cables, to the plasma system power distribution unit and the plasma spray gun.

The CPI-500 operates independently and in parallel with the plasma control unit and power distribution unit or JAMBox. The normal plasma ignition sequence is unchanged and unaffected by the CPI-500.

The CPI-500 monitors the voltage at the gun supply cables connected to the power distribution unit. During the automatic ignition sequence, after cooling water and gas are flowing, the CPI-500 detects the power supply's open circuit voltage. At this point in the sequence, the CPI-500's READY light turns on. After a short delay, IGNITION light turns on and the CPI-500 sends a positive pulse to the ignition circuit of the spray gun.

The spray gun's ignition circuit is connected directly to the rear neutrode of the neutrode stack. When the ignition pulse is generated by the CPI-500, an ignition spark is created across the electrode and rear neutrode. Once plasma ignition has occurred, the READY and IGNITION lights turn off and the energy from the plasma extends the arc from the electrode across the neutrode stack to the nozzle. The neutrodes are then electrically isolated from the power supply and the CPI-500.

1.1 Connection to the System

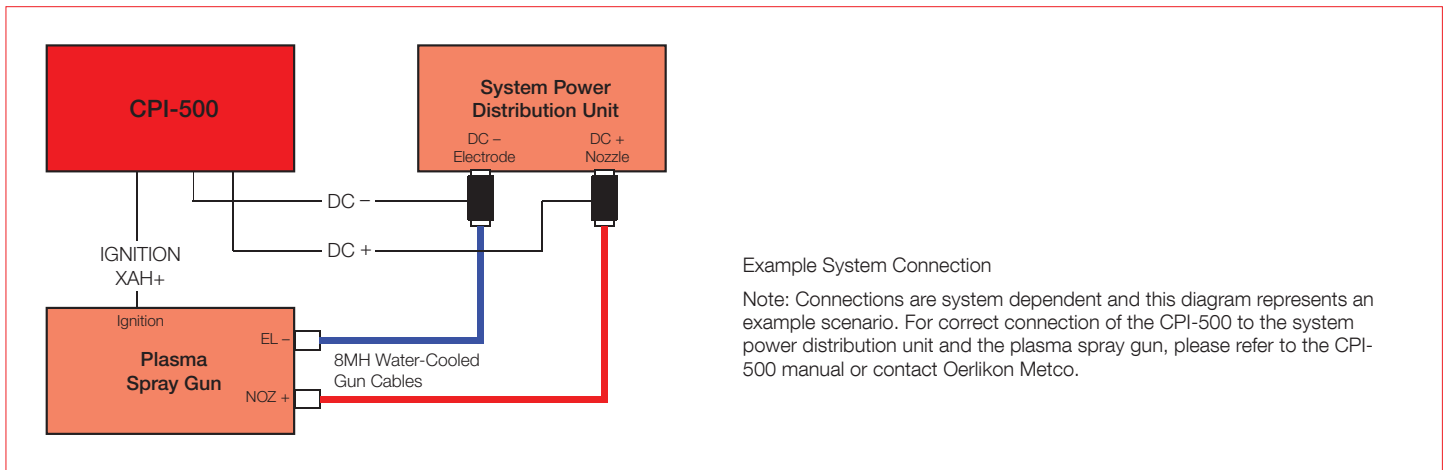
Connection of the CPI-500 Ignition Control Unit depends on the type of system. There are no changes to the standard system connections except for the additional connections for the CPI-500.

The ignition cable of the CPI-500 (labeled IGNITION XAH+) plugs directly into the ignition connector of the spray gun.

Connection of the CPI-500 voltage sensing cables (labeled DC+ and DC-) to the system power distribution unit depend on the type and configuration of the power distribution unit. Please refer to the CPI-500 manual for further details.



CPI-500 Ignition Control Unit

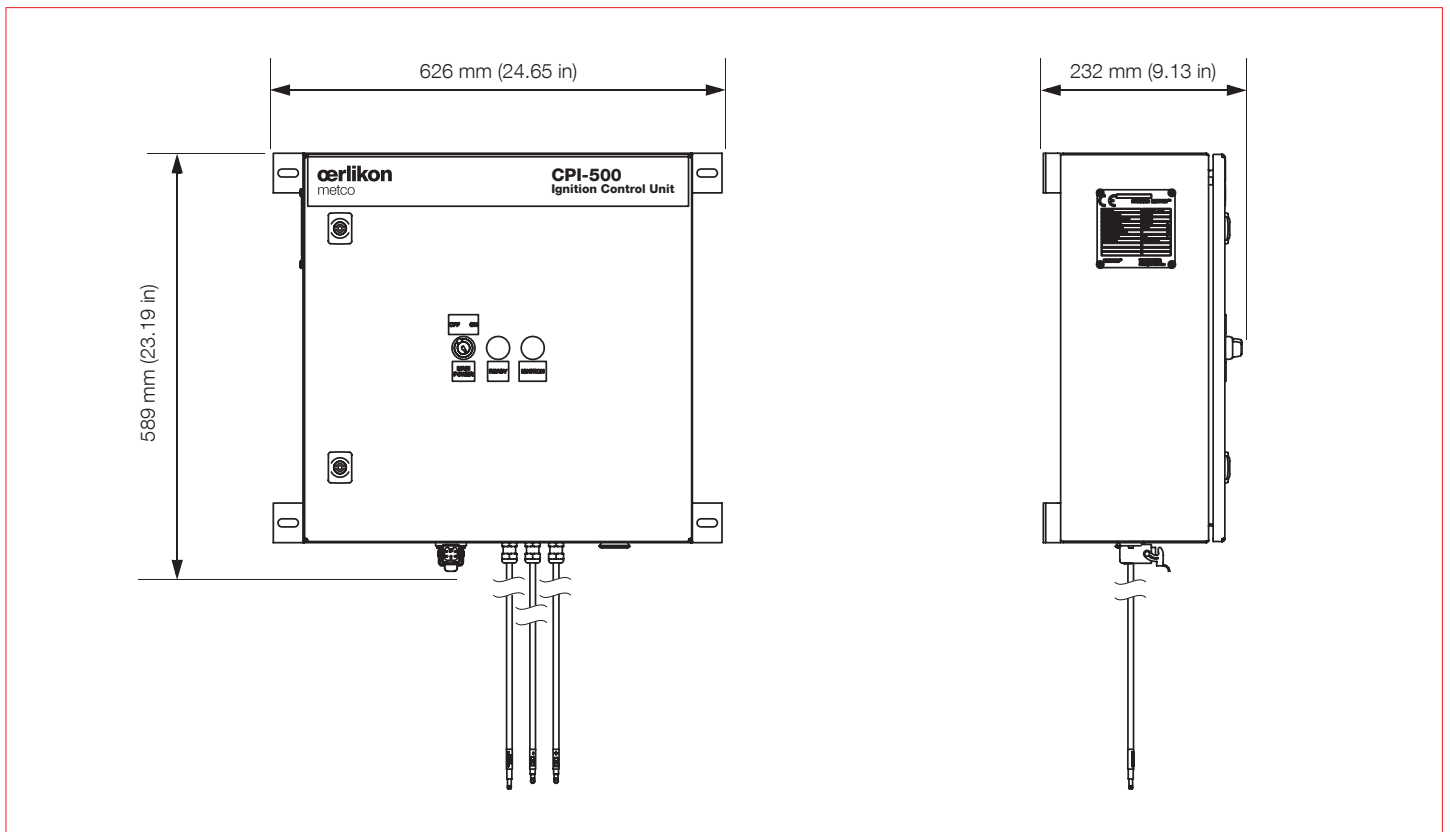


2 Benefits

- Ensures correct ignition sequence and power levels for a cascading arc plasma spray gun
- Allows integration of the cascading arc plasma gun into an existing system, regardless of the control unit and power supply used
- Easily integrated into the existing system
- Provides safe, reliable plasma gun ignition
- Does not affect or change the existing plasma gun ignition sequence

3 Technical Data

3.1 Dimensions



3.2 Specifications

Electrical Power Requirements

Voltage		115 / 230 VAC, single phase, 50/60 Hz
Amperage	@ 110 to 120 VAC	4 A
	@ 220 to 240 VAC	2 A

Operating Conditions

Temperature		10 to 40 °C	50 to 60 °F
Humidity	max.	75 %, non-condensing	

Weight

Approximate	excluding cables	34 kg	74 lb
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Compatibility

Spray Guns	SinplexPro series plasma spray guns
Controllers / Distribution Units ^a	9MC / 9MCD 9MCE / JAM-1010 UniCoat™ Plasma / JAM-1020 MultiCoat™ / JAM-1020

^a For other controllers and distribution units, please contact Oerlikon Metco.