

M96 Plasma Module Specifications

Model: M96

Version: V1.0

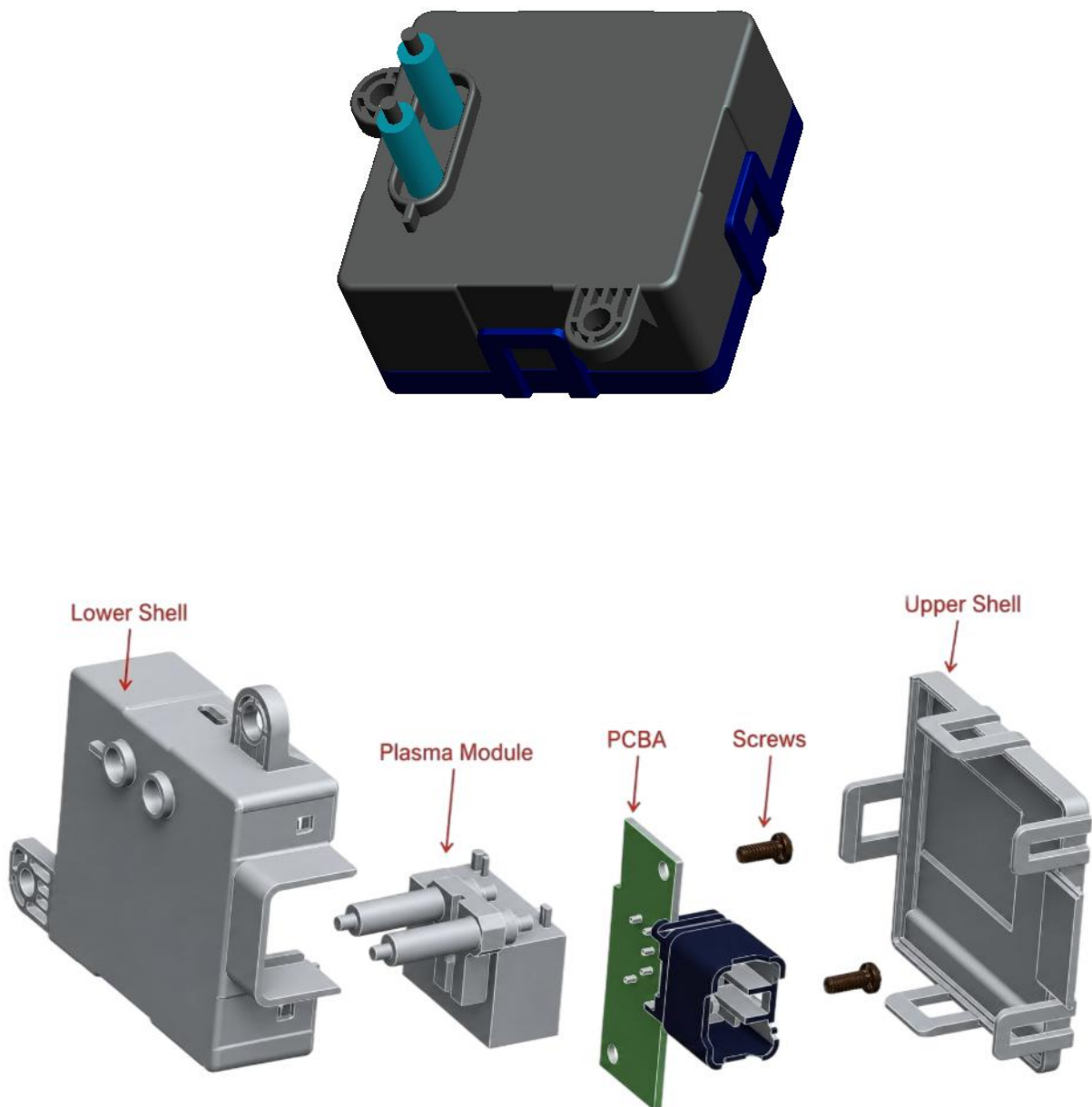
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1 Structural Diagram



2 System Parameters

Table 1-1 Plasma Module System Parameters Table

Item	Parameter
Operating Voltage	DC 9 – 16 V
Operating Current	≤ 40 mA
Standby Current	≤ 0.1 mA
Communication	Wired Communication
Positive and Negative Ion Concentration	>5 million PCS/cm ³ (at a distance of 20 cm from the carbon brush, with an airflow velocity of 3 m/s)
Ozone Concentration	<0.05 ppm. Based on national standard testing methods
Operating Temperature	-40 to 85° C
Storage Temperature	-40 to 90° C
Operating Humidity	35%–85% RH

3 System Functional Block Diagram

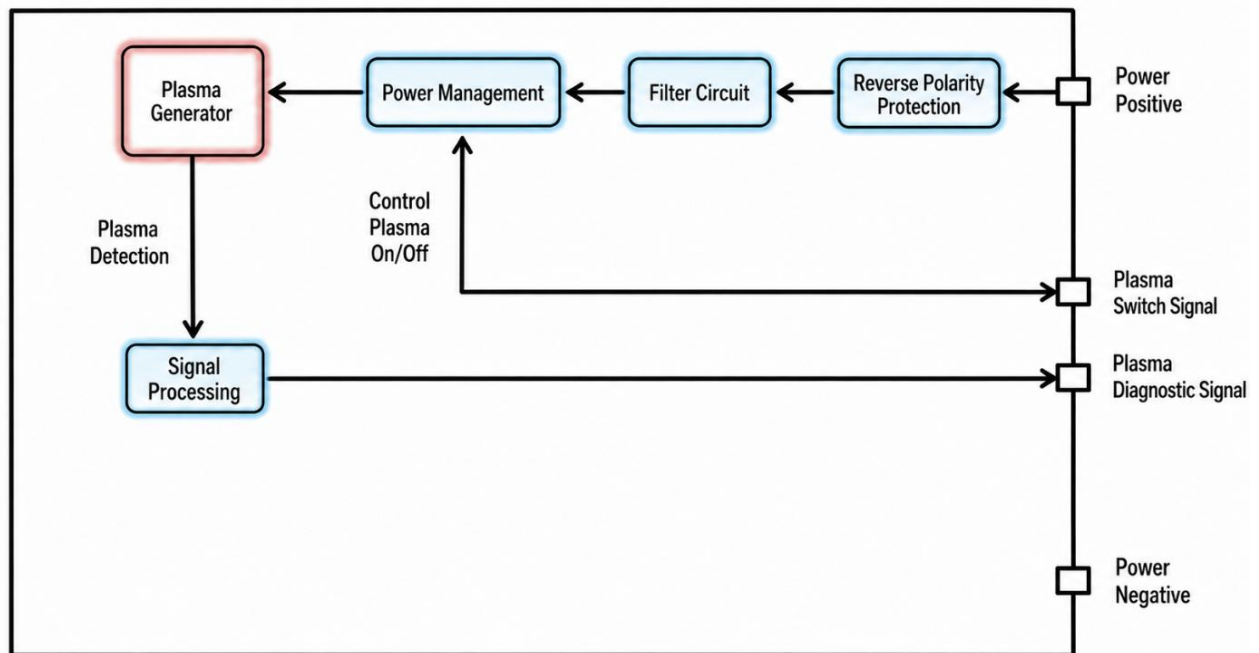


Figure 3-1 Module Functional Block Diagram

3.1 Power Supply Circuit

Provides a stable voltage to the main controller and various functional modules, and meets electrical performance and EMC-related test requirements.

3.2 Fault Detection

Used to detect whether the ion module has failed. When the module is operating normally, the output is $3\text{ V} < V_{\text{dig}} < 5\text{ V}$ (approximately 4.8 V under normal operating conditions); when the module malfunctions, the output is $V_{\text{dig}} < 3\text{ V}$ (0 V under normal operating conditions).

3.3 Control Circuit

Used to control the activation and deactivation of the ion module. A 9 – 16 V signal level activates the ion module; grounding deactivates the ion module.

4 Interface Information

Connector Housing Model:

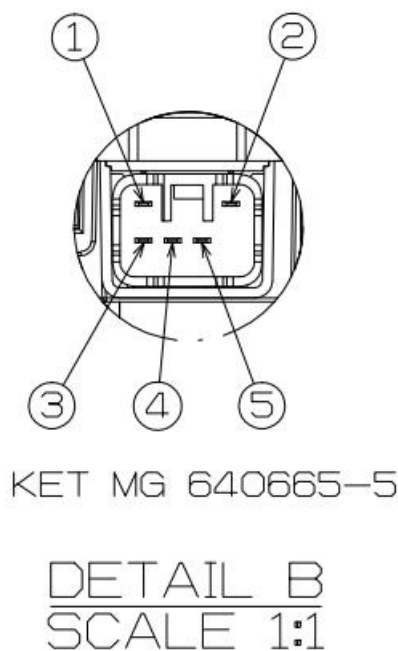


Figure 4-1: Appearance of Communication Connector Terminals

See Table 4-1 for the connector interface definitions.

Table 4-1 Connector Interface Definitions

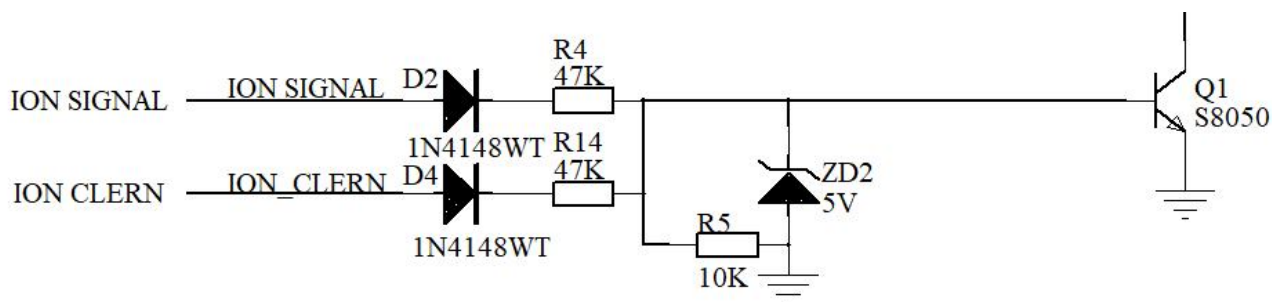
No.	Symbol	Function Definition
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1	GND	Negative power supply terminal	
2	VCC	Power Supply Positive Terminal	
3	Plasma Signal	Input a 9 – 16 V signal to turn on the plasma	Ground simultaneously to turn off the plasma
4	Plasma Signal	Input a 9 – 16 V signal to turn on the plasma	
5	Diagnostic signal	It is recommended to connect an external load of 1M or higher	

PS: Connect GND to the negative terminal of the power supply, and VCC to the positive terminal

No.	Signal State	Operating Mode
3	Input 9–16 V signal	Ion output present
4	Input 9–16 V signal	
5	3 V < Vdig < 5 V	
3	Input 9–16 V signal	Ion output present
4	Left floating (not connected) or grounded	
5	3V < Vdig < 5V	
3	Left floating (not connected) or grounded	Ion output present
4	Input 9–16 V signal	
5	3V < Vdig < 5V	
3	Left floating (not connected) or grounded	No ion output
4	Left floating (not connected) or grounded	
5	Output less than 3V	

PS: Input Interface Circuit



PS: Output Interface Circuit (Diagnostic Signals)

