

# Grand Mate Co., Ltd

No.30, Lugong S. 2nd Rd., Lukang Township, Changhua County 505, Taiwan

Date: **December 22, 2022**

Dear Sir or Madam,

Due to the business consideration, we hereby declare that our product of **Automatic Burner control**

Model: **GM9K3A-C-120VAC** and as following is difference

Serial model: **GM9K3A-A-120VAC, GM9K3B-A-120VAC, GM9K3C-A-120VAC, GM9K3D-A-120VAC, GM9K3B-C-120VAC, GM9K3C-C-120VAC, GM9K3D-C-120VAC, GM9K3A-E-120VAC, GM9K3B-E-120VAC, GM9K3C-E-120VAC, GM9K3D-E-120VAC, GM9K3A-G-120VAC, GM9K3B-G-120VAC, GM9K3C-G-120VAC, GM9K3D-G-120VAC, GM9K3A-I-120VAC, GM9K3B-I-120VAC, GM9K3C-I-120VAC, GM9K3D-I-120VAC, GM9K3A-K-120VAC, GM9K3B-K-120VAC, GM9K3C-K-120VAC, GM9K3D-K-120VAC, GM9K3E, GM9K3F**

The model differences shall refer to attachment below.

Any questions regarding this declaration, please don't hesitate to contact us.

Sincerely,

Name: **Sarah Huang**

Title: **Sales assistant**

Company Name: **Grand Mate Co., Ltd**

Tel: **886-4-22757317**

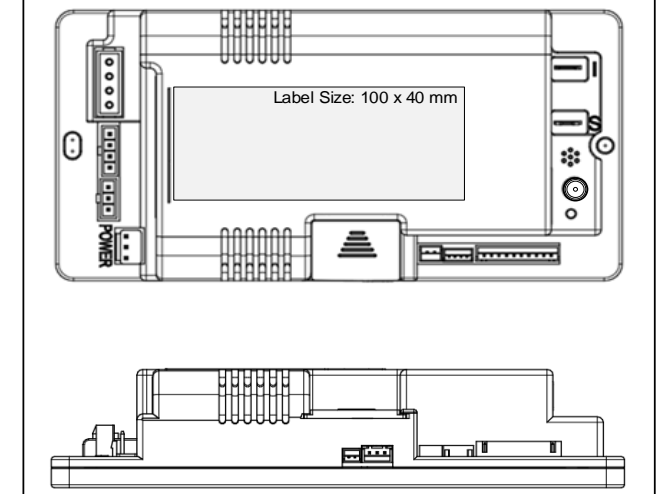
E-mail: **sarahhuang@grandmate.com.tw**

Signature:

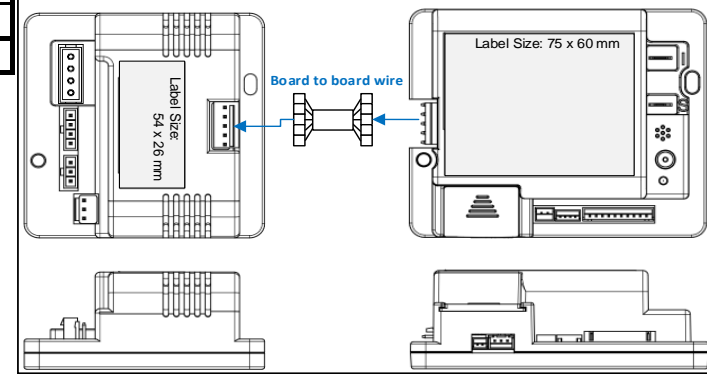


Cert	Remote Module	Series Name	Connection	Main Model	Serial Application Model	Remark
FCC	Bluetooth (2.4 GHz)	GM9K3 Series	B to B	GM9K3A-C-120VAC	GM9K3A-A-120VAC	
					GM9K3B-A-120VAC	
					GM9K3C-A-120VAC	
					GM9K3D-A-120VAC	
					GM9K3B-C-120VAC	
					GM9K3C-C-120VAC	
					GM9K3D-C-120VAC	
					GM9K3A-E-120VAC	
					GM9K3B-E-120VAC	
					GM9K3C-E-120VAC	
					GM9K3D-E-120VAC	
					GM9K3A-G-120VAC	
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					GM9K3A-I-120VAC	
					GM9K3B-I-120VAC	
					GM9K3C-I-120VAC	
					GM9K3D-I-120VAC	
					GM9K3A-K-120VAC	
GM9K3B-K-120VAC						
GM9K3C-K-120VAC						
GM9K3D-K-120VAC						
			W to B	GM9K3E	GM9K3F	

**Connection of board to board(B to B)**



**Connection of wire to board(W to B)**



This control module applied in gas burner control systems. The fire control function built in in Control Board (CB). The CB can work independent by adapter, but normally used combination of CB and PB (the power supply by PB). The Power Board (PB) can output voltage of AC or DC to control loads.

The CB's code is 9K3X (X=A to G); PB's code is -Y (Y= A to J); Their combination code is GM9K3X-Y-ZVAC (Z= 120 or 240. They represent criterions of markets, 120=CSA and 240=CE )

**TABLE1. CONTROL BOARD COMBINATION LIST**

Control Board PCB NO.	9K3 CB					
Features \ Module Name (New)	9K3A	9K3B	9K3C	9K3D	9K3E	9K3F
1. Remote Module	Bluetooth (2.4GHz)					
2. Connection Method	B to B (JP3)			W to B (CON7)		
3. Control Board Firmware	Firmware 1					
4. Second Burner ( Related Circuit )	●	●			●	
5. DC JACK (DC1)	●		●		●	●

Tables of CB and PB are optional features list of control board and power board. (●: Selected feature)

PB table is default AC output definitions of power board as below, all AC output load definitions could modified by firmware for variety applications.

**TABLE2. POWER BOARD COMBINATION LIST**

Power Board PCB NO.	AM-70A						AM-70B				Pitch (mm)	PIN	AM-70C		Pitch (mm)	PIN
	-A	-B	-C	-D	-E	-F	-G	-H	-I	-J			-K	-L		
1. Connection method	B to B (O/P)	W to B (CON8)	B to B (O/P)	W to B (CON8)	B to B (O/P)	W to B (CON8)	B to B (O/P)	W to B (CON8)	B to B (O/P)	W to B (CON8)	3.96	5P	B to B (O/P)	W to B (CON8)	3.96	5P
2. [CON3]	AC - FAN						DC - LIGHT		DC - AUX		5.08	4P	DC - RGB LED		2.54	7P
3. [CON2]	AC - LIGHT				AC - AUX		AC - FAN				4.2	4P	AC - FAN		4.2	4P
4. [CON1]	N.A.		AC - AUX		AC - LIGHT		AC - AUX		AC - LIGHT		4.2	3P	AC - AUX		4.2	3P
5. Mounted resistance					R51											
6. Power Board Firmware	Firmware 1				Firmware 2		Firmware 3		Firmware 4				Firmware 5			

**TABLE3. POWER BOARD OUTPUT / INPUT DEFINITION**

PIN \ CON PORT	CON1			CON2			CON3			PIN \ CON PORT	JP1		
PB PIN (OUTPUT)	AC ( 120 / 240 VAC )			AC ( 120 / 240 VAC )			AC	DC(7V)	DC(7V)	PB PIN (INPUT)	AC ( 120 / 240 VAC )		
PB PCB NO.	AM-70A	AM-70B	AM-70C	AM-70A	AM-70B	AM-70C	AM-70A	AM-70B	AM-70C	PB PCB NO.	AM-70A	AM-70B	AM-70C
<b>MAX POWER</b>	150 W			150 W			150 W	3.5 W	6.3 W	<b>MAX POWER</b>	600 W		
<b>PIN 1</b>	AC-L			AC-L			AC-L	M1	Output 5	<b>PIN 1</b>	AC-L		
<b>PIN 2</b>	EARTH			AC-N			AC-N	M2	Output 4	<b>PIN 2</b>	AC-N		
<b>PIN 3</b>	AC-N			EARTH			EARTH	V+	I/O 2	<b>PIN 3</b>	EARTH		
<b>PIN 4</b>				N.A.			N.A.	GND	GND				
<b>PIN 5</b>									Output 3				
<b>PIN 6</b>									I/O 1				
<b>PIN 7</b>									V+				

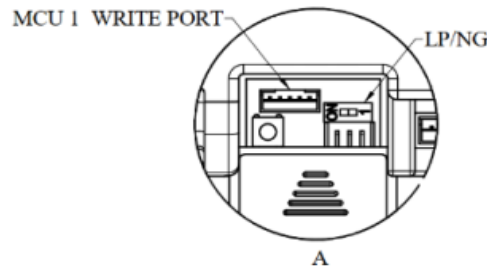
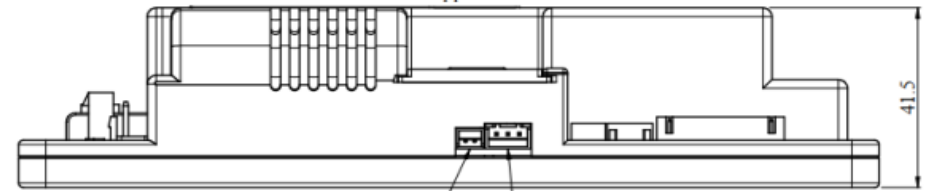
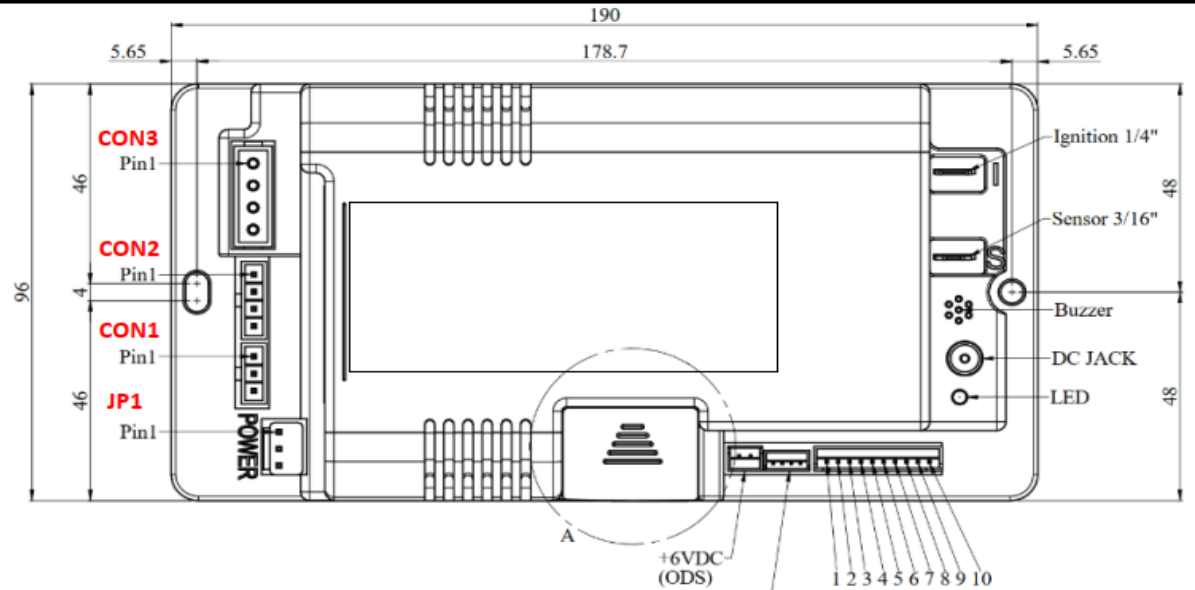
**TABLE 4a. TERMINALS DESCRIPTION 01**

PB PIN (OUTPUT)	AC (120 / 240 VAC)			DC (6VDC)
	PIN \ CON PORT	CON1	CON2	CON3
PIN 1	AC-L	AC-L	AC-L	M1
PIN 2	EARTH	AC-N	AC-N	M2
PIN 3	AC-N	EARTH	EARTH	V+
PIN 4		N.C.	N.C.	GND

PB PIN (INPUT)	AC (120 / 240 VAC)
PIN \ CON PORT	JP1
PIN 1	AC-L
PIN 2	AC-N
PIN 3	EARTH

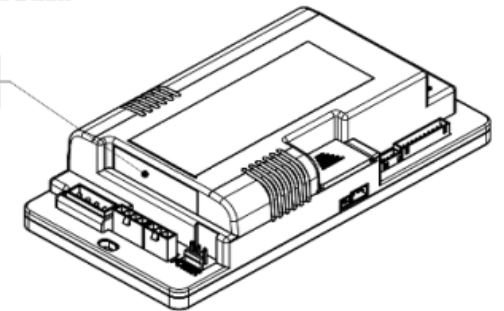
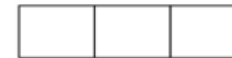
CB PIN	DC PIN
PIN \ CON PORT	DESCRIPTION
PIN 1	REMOTE
PIN 2	COM (OFF)
PIN 3	MANUAL (ON)
PIN 4	BATTERY- (GND)
PIN 5	BATTERY+
PIN 6	MAIN VALVE
PIN 7	GND (PILOT/MAIN)
PIN 8	PILOT VALVE
PIN 9	GND (BODY)
PIN 10	PVI (FOR POWER VENT UNIT ONLY)

**N.C. = Not Connection**  
**N.A. = Not Available**



RF Learning  
 Rear Burner

Label Size : 50×13mm



**TABLE 4b. TERMINALS DESCRIPTION 02**

PB PIN (OUTPUT)		AC (120 / 240 VAC)		DC
PIN \ CON PORT	CON1	CON2	CON3	
PIN 1	AC-L	AC-L		Output 5
PIN 2	EARTH	AC-N		Output 4
PIN 3	AC-N	EARTH		I/O 2
PIN 4		N.C.		GND
PIN 5				Output 3
PIN 6				I/O 1
PIN 7				V+

PB PIN (INPUT)		AC (120 / 240 VAC)
PIN \ CON PORT		JP1
PIN 1		AC-L
PIN 2		AC-N
PIN 3		EARTH

CB PIN	DC PIN
PIN \ CON PORT	DESCRIPTION
PIN 1	REMOTE
PIN 2	COM (OFF)
PIN 3	MANUAL (ON)
PIN 4	BATTERY- (GND)
PIN 5	BATTERY+
PIN 6	MAIN VALVE
PIN 7	GND (PILOT/MAIN)
PIN 8	PILOT VALVE
PIN 9	GND (BODY)
PIN 10	PVI (FOR POWER VENT UNIT ONLY)

**N.C. = Not Connection**  
**N.A. = Not Available**

