



TECHNICAL MANUAL

7320MKII

Generator Control Module

<https://gensetpart.com/generator-controller/>

COMPATIBLE REPLACEMENT PART

POPULACE has manufactured generator electronic parts in Xiamen, China since 2006.
1000+ SKUs in stock, 1-5 day dispatch, every unit burn-in tested before shipment.

Document contents

- Specification and technical characteristics
- Terminal assignment and wiring diagram
- Installation, adjustment and settings
- Troubleshooting table

This document is supplied by POPULACE Electronic Co., Ltd. as an installation and operating guide for a POPULACE compatible replacement part. It is not an original equipment manufacturer (OEM) document. Any brand names or part numbers mentioned are for cross-reference and identification purposes only and do not indicate affiliation with, or endorsement by, the respective manufacturers.

Why source this part from POPULACE

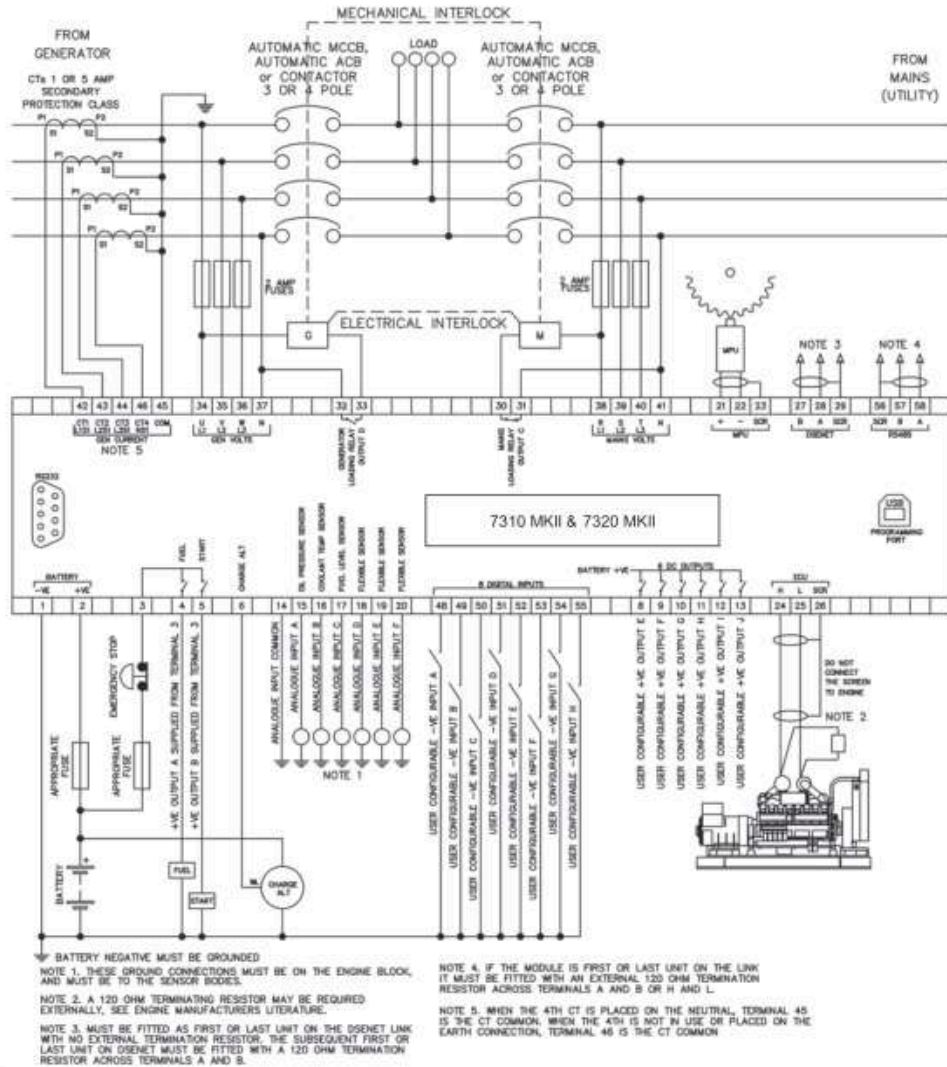
- Factory in Xiamen, China - operating since 2006 (20 years)
- Over 1000 SKUs held in stock; dispatch within 1-5 days
- Every unit burn-in tested at 65 C before shipment
- CE and ISO 9001 production system; full batch traceability
- Free technical support for wiring, settings and fault diagnosis

Get a quote / technical support

Web: <https://gensetpart.com>
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Phone / WhatsApp: +86-138-5038-3550

No.702 Xiniya Building, No.90 Anling Second Road, XIAMEN, FUJIAN, China

TYPICAL WIRING DIAGRAM



NOTE: Terminals 38, 39, 40 & 41 are not fitted to the 7310 MKII.

NOTE: A larger version of the Typical Wiring Diagram is available in the product's operator manual, refer to DSE Publication: 057-253 7310 MKII & 7320 MKII Operator Manual available.

Auto Start Controller Unit

7310 MKII & 7320 MKII
Installation Instructions

ACCESSING THE MAIN CONFIGURATION EDITOR

- Ensure the engine is at rest and the module is in STOP mode by pressing the (Stop/Reset) button.
- Press the (Stop/Reset) and (Tick) buttons simultaneously.
- If a module security PIN has been set, the PIN number request is then shown:
- The first '#' changes to '0'. Press the (Up) or (Down) button to adjust it to the correct value.
- Press the (Right) button when the first digit is correctly entered. The digit previously entered now shows '#' for security.
- Repeat this process for the other digits of the PIN number. Press the (Left) button to move back to adjust one of the previous digits.
- When the (Tick) button is pressed after editing the final PIN digit, the PIN is checked for validity. If the number is not correct, the PIN must be re-entered.
- If the PIN has been successfully entered (or the module PIN has not been enabled), the editor is displayed:

EDITING A PARAMETER

- Enter the editor as described above.
- Press the (Right) or (Left) buttons to cycle to the section to view/change.
- Press the (Up) or (Down) buttons to select the parameter to view/change within the currently selected section.
- To edit the parameter, press the (Tick) button to enter edit mode. The parameter begins to flash to indicate editing.
- Press the (Up) or (Down) buttons to change the parameter to the required value.
- Press the (Tick) button to save the value. The parameter ceases flashing to indicate that it has been saved.
- To exit the editor and save the changes, press and hold the (Tick) button.
- To exit the editor and not save the changes, press and hold the (Stop/Reset) button.

NOTE: If the editor is left inactive for the duration of the LCD Page Timer, it is automatically exited to ensure security.

NOTE: The PIN number is automatically reset when the editor is exited (manually or automatically) to ensure security.

NOTE: Comprehensive module configuration is possible using the Configuration Suite PC Software, refer to publication 057-243 7310 MKII & 7320 MKII Configuration Suite PC Software Manual

MAIN CONFIGURATION EDITOR PARAMETERS

Section	Parameter As Shown On Display	Value
Display	Contrast	0 %
	Language	English
	Current Date and Time	dd:mm:yyyy, hh:mm:ss
	Dual Mutual Mode	Set Priority / Run Time / Engine Hours
	Dual Mutual Priority	0
Alt Config	Dual Mutual Duty Time	0 h 0 m 0 s
	Config To Edit	Main Configuration / Alt Config 1,2,3,4 or 5
Engine	Default Configuration	Main Configuration / Alt Config 1,2,3,4 or 5
	Oil Pressure Low Shutdown	0.00 bar 0 psi 0 kPa
Engine	Oil Pressure Low Pre Alarm	0.00 bar 0 psi 0 kPa
	Coolant Temperature Low Warning	0 °C 0 °F
Engine	Coolant Temperature High Pre Alarm	0 °C 0 °F
	Coolant Temperature High Electrical Trip	0 °C 0 °F
Engine	Coolant Temperature High Shutdown	0 °C 0 °F
	Fuel Usage Running Rate	0 %
Engine	Fuel Usage Stopped Rate	0 %
	Specific Gravity	0.00
Engine	Pre Heat Temp	0 °C 0 °F
	Pre Heat Timer	0 h 0 m 0 s
Engine	Post Heat Temp	0 °C 0 °F
	Post Heat Timer	0 h 0 m 0 s
Engine	Droop Control	Active / Inactive
	Droop Control	0.0 %
Engine	Crank Disconnect Oil Pressure Delay	0.0 s
	Crank Disconnect	0 V
Engine	Under Speed Shutdown	Active / Inactive
	Under Speed Shutdown	0 RPM
Engine	Under Speed Warning	Active / Inactive
	Under Speed Warning	0 RPM
Engine	Over Speed Warning	Active / Inactive
	Over Speed Warning	0 RPM
Engine	Over Speed Shutdown	Active / Inactive
	Over Speed Shutdown	0 RPM
Engine	Over Speed Delay	0.0 s
	Over Speed Delay	0.0 s
Engine	Overspeed Overshoot	0 %
	Overspeed Overshoot Delay	0 m 0.0 s
Engine	Battery Under Voltage Warning	Active / Inactive
	Battery Under Voltage Warning	0.0 V
Engine	Battery Under Voltage Warning Delay	0 h 0 m 0 s
	Battery Under Voltage Warning Delay	0 h 0 m 0 s
Engine	Battery Over Voltage Warning	Active / Inactive
	Battery Over Voltage Warning	0.0 V
Engine	Battery Over Voltage Warning Delay	0 h 0 m 0 s
	Battery Over Voltage Warning Delay	0 h 0 m 0 s
Engine	Charge Alternator Failure Warning	Active / Inactive
	Charge Alternator Failure Warning	0.0 V
Engine	Charge Alternator Failure Shutdown	Active / Inactive
	Charge Alternator Failure Shutdown	0.0 V
Engine	Charge Alternator Shutdown Delay	0 h 0 m 0 s
	Charge Alternator Shutdown Delay	0 h 0 m 0 s
Engine	Inlet Temperature Shutdown	0 °C 0 °F
	Inlet Temperature Pre-Alarm	0 °C 0 °F
Generator	AC System	3 Phase, 4 Wire
	Under Voltage Shutdown	0 V
Generator	Under Voltage Pre Alarm	0 V
	Under Voltage Delay	0.0 s
Generator	Nominal Voltage	0 V
	Over Voltage Pre Alarm	0 V
Generator	Over Voltage Shutdown	0 V
	Over Voltage Delay	0.0 s
Generator	Under Frequency Shutdown	0.0 Hz
	Under Frequency Pre Alarm	0.0 Hz
Generator	Under Frequency Delay	0.0 s
	Under Frequency Delay	0.0 s

MAIN CONFIGURATION EDITOR PARAMETERS (CONTINUED)

Section	Parameter As Shown On Display	Value
Generator (Continued)	Nominal Frequency	0.0 Hz
	Over Frequency Pre Alarm	0.0 Hz
	Over Frequency Shutdown	0.0 Hz
	Over Frequency Delay	0.0 s
	Frequency Overshoot	0 %
Generator (Continued)	Frequency Overshoot Delay	0.0 s
	CT Primary	0 A
Generator (Continued)	CT Secondary	0 A
	Earth CT Primary	0 A
Generator (Continued)	Full Load Rating	0 A
	Delayed Over Current	Active / Inactive
Generator (Continued)	Delayed Over Current	0 %
	Earth Fault Trip	Active / Inactive
Generator (Continued)	Earth Fault Trip	0 %
	kW Overload Trip	0 %
Mains 7320 MKII Only	AC System	3 Phase, 4 Wire
	Under Voltage Trip	0 V
Mains 7320 MKII Only	Over Voltage Trip	0 V
	Under Frequency Trip	0.0 Hz
Mains 7320 MKII Only	Over Frequency Trip	0.0 Hz
	Start Delay Off Load	0 h 0 m 0 s
Mains 7320 MKII Only	Start Delay On Load	0 h 0 m 0 s
	Start Delay Mains Fail	0 h 0 m 0 s
Mains 7320 MKII Only	Start Delay Telemetry	0 h 0 m 0 s
	Mains Transient Delay	0 m 0 s
Mains 7320 MKII Only	Engine Cranking	0 m 0 s
	Engine Cranking Rest	0 m 0 s
Mains 7320 MKII Only	Engine Smoke Limiting	0 m 0 s
	Engine Smoke Limiting Off	0 m 0 s
Mains 7320 MKII Only	Engine Safety On Delay	0 m 0 s
	Engine Warning	0 h 0 m 0 s
Mains 7320 MKII Only	ECU Override	0 m 0 s
	Mains Transfer Time	0 m 0.0 s
Mains 7320 MKII Only	Return Delay	0 h 0 m 0 s
	Engine Cooling	0 h 0 m 0 s
Mains 7320 MKII Only	Engine Fail To Stop Delay	0 m 0 s
	LCD Page Delay	0 h 0 m 0 s
Mains 7320 MKII Only	LCD Scroll Delay	0 h 0 m 0 s
	Sleep Timer	0 h 0 m 0 s
Mains 7320 MKII Only	Backlight Timer	0 h 0 m 0 s
	Schedule	Active / Inactive
Mains 7320 MKII Only	Schedule Bank 1 Period	Weekly / Monthly
	On Load / Off Load / Auto Start Inhibit, Week, Start Time, Run Time and Day Selection (1 to 8)	Press Tick to begin editing then up or down when selecting the different parameters in the scheduler.
Mains 7320 MKII Only	Schedule Bank 2 Period	Weekly / Monthly
	On Load / Off Load / Auto Start Inhibit, Week, Start Time, Run Time and Day Selection (1 to 8)	Press Tick to begin editing then up or down when selecting the different parameters in the scheduler.

DIMENSIONS AND MOUNTING

Parameter	Specification
Dimensions	245 mm x 184 mm x 51 mm (9.6" x 7.2" x 2.0")
Panel Cut-out	220 mm x 160 mm (8.7" x 6.3")
Weight	0.98 kg (2.16 lb)
Operating Temperature With Standard Display	-30 °C to +70 °C (-22 °F to +158 °F)
Operating Temperature With Heated Display	-40 °C to +70 °C (-40 °F to +158 °F)
Storage Temperature	-40 °C to +80 °C (-40 °F to +176 °F)

ACCESSING THE 'RUNNING' CONFIGURATION EDITOR

- The 'running' editor can be entered while the engine is running. All protections remain active if the engine is running while the running editor is entered.
- Press and hold the (Tick) button to enter the running editor.

RUNNING CONFIGURATION EDITOR PARAMETERS

Section	Parameter As Shown On Display	Values
Display	Contrast	0 %
	Language	English
	Dual Mutual Status	Set Priority (1 to 8)
Engine	Manual Frequency Trim	0.0 Hz
	Speed Bias	0.0
	Governor Gain	0
	Frequency Adjust	0.0 %
	DPF Auto Regen Inhibit	Active / Inactive
Engine	DPF Manual Regeneration Request	Active / Inactive
	ECU Service Mode	Active / Inactive
AVR	Droop (% of Set Point)	0.0
	Proportional Set Point	0.0
AVR	Integral Set Point	0.0
	Derivative Set Point	0.0
AVR	Off Load Duty Cycle	0.0
	Maximum Duty Cycle	0.0
AVR	Soft Start Ramp Start Point	0.0
	Soft Start Ramp Rate (%Hz)	0.0
AVR	Alternative Configuration	0
	Stability Selection	0

REQUIREMENTS FOR UL CERTIFICATION

WARNING! More than one live circuit exists, see diagram overleaf for further information.

Specification	Description
Screw Terminal Tightening Torque	4.5 lb-in (0.5 Nm)
Conductors	- Terminals suitable for connection of conductor size 13 AWG to 20 AWG (0.5 mm² to 2.5 mm²). - Conductor protection must be provided in accordance with NFPA 70, Article 240. - Low voltage circuits (35 V or less) must be supplied from the engine starting battery or an isolated secondary circuit. - The communication, sensor, and/or battery derived circuit conductors shall be separated and secured to maintain at least 1/4" (6 mm) separation from the generator and mains connected circuit conductors unless all conductors are rated 600 V or greater.
Current Inputs	Must be connected through UL Listed or Recognized isolating current transformers with the secondary rating of 5 A max.
Communication Circuits	Must be connected to communication circuits of UL Listed equipment
DC Output Pilot Duty	0.5 A
Mounting	- Suitable for flat surface mounting in Type 1 Enclosure Type rating with surrounding air temperature -22 °F to +122 °F (-30 °C to +50 °C). - Suitable for pollution degree 3 environments when voltage sensing inputs do not exceed 300 V. When used to monitor voltages over 300 V device to be installed in an unventilated or filtered ventilation enclosure to maintain a pollution degree 2 environment.
Operating Temperature	-22 °F to +122 °F (-30 °C to +50 °C)