

INDEX:

1 - General	23
1.1 - Introduction	23
1.2 - General warning	23
1.3 - Symbols in the manual	24
1.4 - Important tips	25
1.5 - Cautions	25
1.6 - Noise	25
1.7 - Cautions levels	25
1.8 - Temporary Storage	25
1.9 - Transporting	26
1.10 - Overall size	26
1.11 - Disposal	26
1.12 - Assistance center	26
1.13 - Repairs and spare parts	26
1.15 - Ordering spare parts	26
2- AT206 panel description	27
2.1 – How is the package and what is included	27
2.2 - Product external and internal view with description	28
2.3 - Panel wall mounting instructions	29
3 - First starting of the product, use and description	30
3.1 - Operation to do during the first starting of the AT206 panel	30
3.2 - AT206 panel; LED indication decription	31
3.3 - AT206 panel; command buttons decription	31
3.4 - AT206 panel; function description	32
4 - AT206 connection and electrical drawings	33
4.1 - Power connection	33
4.2 - Panel electrical drawing	36
4.3 - Diesel engine auxiliary connection	37
4.4 - Gasoline engine auxiliary connection	38
5 - AT206 panel programmation instruction	39
5.1 - Programmation menu access description	39
5.2 - Parameters modification instructions	39
5.3 - User menu parameters	39
5.4 - Advanced menu parameters	39
6 - General sales conditions and warranty	Errore. Il segnalibro non è definito.

1 - GENERAL



The Instruction for Use are integral part of the machine and must accompany it for all its useful life until its demolition.

For every operation one must always apply to what is prescribed in the Instructions.

Follow scrupulously all indication reported in the Instructions

Prevent from making use of the machine operators not knowing the prescription based on the Instructions

Keep complete and legible Instructions in a place accessible to operators.

Hand over the manual to any other user or successive owner of the machine.



Verify if the registration number reproduced on the technical card of the acquired model agrees with that one cut with the label of the "Marking CE"

The Firm "**PRAMAC s.r.l.**" will not think he is responsible for difficulties, breaks, accidents etc. due to the no knowledge or at any rate to the no application of the rules held in this manual.

The same is told for the execution of changes and variants or for the installation of accessory not previously authorized.

1.1 - Introduction

Dear Customer,

We would like to thank you for your attention and for purchasing a "**PRAMAC**" high-quality "Electric Panel."

Our Technical Service and Spare Parts departments will do their utmost to help you should you need it.

To this regard, for all control and overhaul operations, please call "**PRAMAC**" who will provide you with specialized, prompt action.

If you have had parts replaced, ask and make sure that only genuine "**PRAMAC**" spare parts are used in order to assure you that the initial performance and safety required by current standards are restored.



Use of **non-genuine spare parts shall immediately forfeit all right to warranty** and Technical Service by "**PRAMAC**".

The special composition and design of this panel enables satisfying the most restrictive operator safety standards.

To use "**PRAMAC Electric Panels**" in the best way, below we give the most important rules to be followed.



1.2 - General warning

- This manual has been drawn up for the **USER**, the **MAINTENANCE TECHNICIAN**, the **REPAIRS TECHNICIAN**.
- Read this manual carefully since it server as a guide to the way the electric control board is designed to be used, to its technical features, to supply the instructions for installation, assembly, regulation and use. It is also useful for personnel training, to indicate the maintenance operations, for ordering spare parts and to give indications of the outstanding hazards.
- It is wise to remember that should any difficulty arise in its use, installation or whatever, our Technical Service is always at your disposal for any explanations or action.
- The instruction manual should be considered as part of the equipment and must be "**KEPT FOR FUTURE REFERENCE**" as long as the equipment is assembled.
- The manual must always be available for consultation near the electric control board and kept in a suitable manner (in protected, dry places, away from direct sunlight, etc.).
- It should be borne in mind that some diagrams it contains have only the purpose of identifying the parts described and therefore might not correspond to your machine.

- After opening the package, check the entire unit in case of problems with this unit do not use it until you have consulted an the **Retailer or Manufacturer** otherwise all warranty rights will be voided.
- This electric panel has only to be used for the purpose for which it was specifically designed. Any other use shall be considered improper and, therefore, dangerous.
- Our products are made in conformity with current safety standards so it is recommended to use all these devices and take care that their use causes no injury or damage.
- All operations concerning the installation of the control panel should be carried out by skilled personnel in conformity with present regulations.
- During work it is recommended to keep to the current personal safety rules in force in the country the product is destined for (clothing, work tools, etc.).
- When the unit is working do not use the electric control board parts.
- Never for any reason modify any part of the electric panel (connections, holes, electrical or mechanical devices, etc.) unless duly authorized to do so in writing by **"PRAMAC"**: the responsibility deriving from any such action shall fall on the person doing it since he then in fact becomes its manufacturer.
- Before doing any cleaning or maintenance, **de-energise** and switch off the machine it is connected to.
- De-energise and disconnect the equipment in the event of breakdown or malfunction. If any repairs is needed contact an **Authorized Retailer only and ask that only original spare parts are used**. Failing to observe the above instructions may put the safety of the electric control board at risk and the warranty will immediately decline.
- When installing the control panel comply with the IP protection seal indicated on the identification plate. If the IP protection seal is not indicated and for different kinds of "IP" protections diverse contact one of our service centres or contact our technical office directly.
- Make sure that earthing complies with the standards in force in the country in which the appliance is used.
- Check that control panels that are installed on the machine are not subjected to vibrations that could damage the parts.

N.B.: The panel size depends on an ambient temperature of 35 degrees Centigrade.

- As a consequence, please make sure that these levels are complied with. As concerns atmospheric conditions, the prescriptions contained in the CEI EN 60439-1 (6.1.2) have to be complied with.
- Check that the information on the control panel identification plate is compatible with appliance ratings such as voltage, current, frequency, etc.
- If the control panel can be locked, make sure that only authorised personnel can use the key to open the control panel.
- For the protection of inlet lines are not protected comply strictly with the regulations in force in the country in which the control panel is used.
- If the control panel is fitted with guards that need to be removed to wire up the control panel, make sure that they are refitted after the control panel has been wired up. Make sure that the control panel is disconnected and locked out during these operations and that no parts carry residual current.
- Strictly follow the wiring diagram that accompanies the control panel.
- The manufacturer declines any responsibility in to following cases:
 - a) misuse of the machine or use by persons not trained for its operation.
 - b) incorrect installation.
 - c) operating faults machine is applied who to electric control board.
 - d) serious lack of due maintenance.
 - e) unauthorized modifications or servicing.
 - f) use of non-original or non-specific spare parts for the model.
 - g) total or partial failure to follow the instruction.
 - h) **unforeseen events ect.**



The instruction manual can never substitute a sufficiently experienced user.

The panels' interruption power is 10 kA. For more powerful systems, please make sure that the right protection levels in the panel inlet lines are supplied.



Warning: This booklet is not binding. **"PRAMAC"** reserves the right, without prejudice to the essential features of the model herein described and illustrated, to make improvements and modifications to parts and accessories without moreover undertaking to update this manual in time.

1.3 - Symbols in the manual

The symbols contained in this manual have the purpose of drawing the user's attention in order to prevent trouble or danger both for persons and objects or the equipment.

These symbols moreover have the purpose of drawing your attention in order to indicate correct use and obtain good operation from your electric panel.

1.4 - Important tips

User tips on safety:



N.B. The information contained in this manual may be changed without notice.
Any damage caused in relation to the use of these instructions shall not be considered since they are **only guidelines**.
We remind you that failure to observe the instructions we give could cause injury or damage.
It is anyhow understood that current local regulations and/or laws must be observed.

1.5 - Cautions



Hazardous situations - safety for persons and objects.
USE ONLY WITH SAFE INSTALLATIONS

It is prohibited to fail to comply with, take away or put out of service the instructions, safety and supervision functions.

USE ONLY IN PERFECT TECHNICAL CONDITIONS



The electric panels must be used in perfect technical conditions. Any defects that may alter safety must immediately be eliminated.
Never install the electric panels close to sources of heat, in areas where there is a risk of explosion or fire hazard.
Where possible, repair the electric panels in a dry place far from water, protecting them against moisture.



1.6 - Noise



This appliance is in conformity with the provisions of EEC Directive 86/594 since the level of sound pressure is “**irrelevant**” (it is not perceptible by the hearing of a human being) since its operation is given by the flow of energy passing through the control components and by the management of the electric control panel.



1.7 - Cautions levels

Below we give the symbols used in the manual to draw the reader's attention to the different levels of danger in the “Use and Maintenance” of the electric panel.

 **DANGER!!**  Information or procedures that, unless carried out meticulously, cause death or serious injury.

 **CAUTION!!**  Information or procedures that, unless carried out meticulously, could cause death or serious injury.

 **PRUDENCE!!**  Information or procedures that, unless carried out meticulously, could cause slight injury or damage to the electric panel.

 **WARNING**  Information or procedures that advise the operator on the optimum use of the electric panel to extend its service life and prevent damage.

 **NOTE**  Important information and procedures.

1.8 - Temporary Storage

In the case of temporary storage of the electric panel, before final installation it is necessary to take some precautions so as not to damage the external structure and internal electric and electronic devices.

Store the electric panel packed in a closed, covered place.



Position it in a stable manner with no risk of it accidentally falling.

- Position the electric panel in a place protected against atmospheric agents with a humidity level between 30 and 75% and a temperature between -25°C and +55°C with short times not exceeding 24 hours, up to +70°C.
- Stack the electric panels without stacking too many one on top of another.

1.9 - Transporting

Transportation of the electric panel must be done so as not to jeopardize its structure.

On receiving the panel, inspect it for any damage suffered in transit and that the data given on the rating plate correspond to what you requested. Any damage must be reported in writing to the carrier directly when the goods are received. Compensation for damage will be paid in accordance with current legislation on carriage.

In the event of damage due to transportation or delivery of the wrong model, call the firm that carried out the service and "PRAMAC".

Before removing the packing from the electric panel, carefully read the user warnings given in this handbook.

All the packing material of the electric panel must be disposed of in accordance with current regulations.

1.10 - Overall size

The size of the control panels is suited to meet customer requirements and their dimensions are therefore shown on the "Technical Data" identification plate.

1.11 - Disposal

After use or in the case of demolition, the appliance must be disposed of according to the legislative provisions in force in the country it is destined for.

CAUTION!

In addition, it is wise to destroy the machine's identification plate and any other documents.

1.12 - Assistance center

All maintenance work and technical service must be performed by "Specialized personnel" authorized by "PRAMAC" who will arrange for a technician to step in after the customer's call.

1.13 - Repairs and spare parts

For any further inconveniences, not mentioned in this booklet or any damages of the machine, we suggest you to go to the **Retailer or Manufacturer** for the repair or possible replacement of any original spare parts.

When requesting spare parts, always:

- Quote serial number.

Identification abbreviation that is stamped onto the part.



Do not wait for the components to be worn out.

Replacing a component at the right moment means to improve the electric control board operation and at the same time avoid greater damages.

1.15 - Ordering spare parts

The spare parts orders must be accompanied with following indications:

- Serial number of the board.

- Letter/code stamped on the component to be replaced.

Due to the different types of product, it is not possible to enclose drawings of spare parts. They need to be requested with the serial number of the board and the code of each single component.

2- AT206 PANEL DESCRIPTION

This product permit to control all the functions about a generator

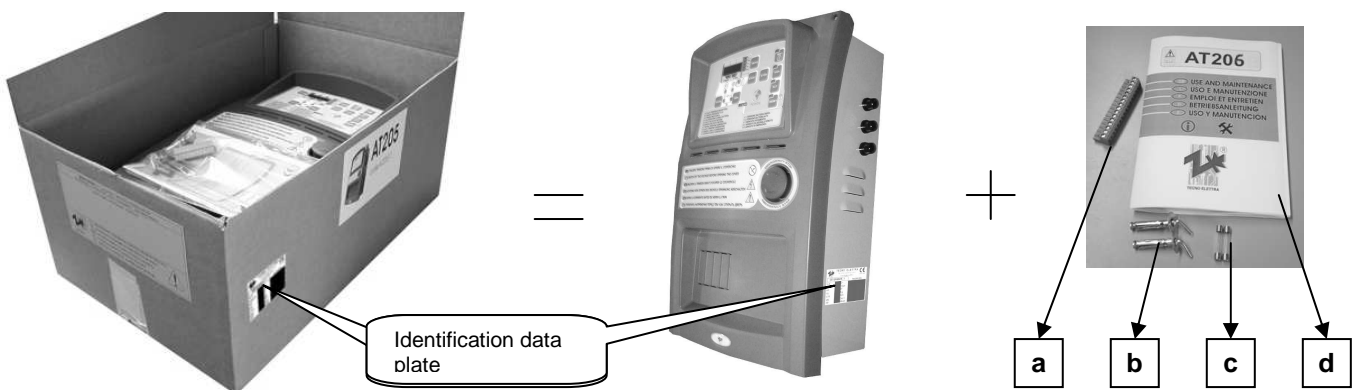
- Engine command and protection module for diesel or gasoline generators
- Measurement system for main electric values
- Automatic control module for two different supply sources (Automatic Mains Failure)
- Automatic changeover switch from two different supply sources (Automatic Transfer Switch)

It's builded to monitor monophas, triphase or triphase with neutral systems in alternate current; it permit to transfer the user's load on generator when the mains voltage is faulty.

2.1 – How is the package and what is included

The packing must be completely closed and it must be in good conditions.

In the package, there is the panel but there are also a pocket with a couple of connectors for auxiliary connections (a), a couple of fixing hooks (b), a couple of spare fuses (c) and the instruction manual (d).





The identification plate data give all the informations about the product; you can found it on the package and on a side of the panel



WARNING: check if the product received is in accordance to the product ordered.

2.1.1 - Identification data plate

 TECNO ELETTRA Tel. 033-522-832004 Fax. 832012 Email info@tecnoelettra.it made in Italy		
CEI EN60439 - 1	Date 20/07/2006	
In A	V~	
I _{max} A	V _{aux}	
kA	IP	
Hz	Kg	
kVA	Dim.	
kW	Ser.n.	
HP	Model	

The technical plate is secured on the outside of the electric panel, it gives the main particulars and certifies its conformity with the EEC machine directive 89/392 (attachment H). Therefore its CE marking is valid only when mounted with machines made in accordance with the provisions of the EEC machine directive 89/392 and subsequent amendments introduced 91/368 EEC, 83/44 EEC, 93/68 EEC.

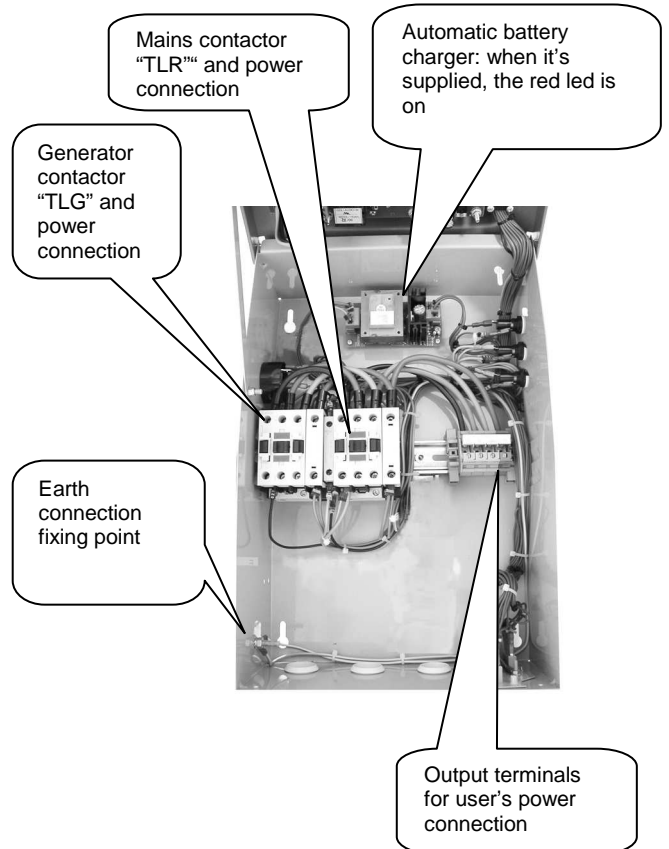
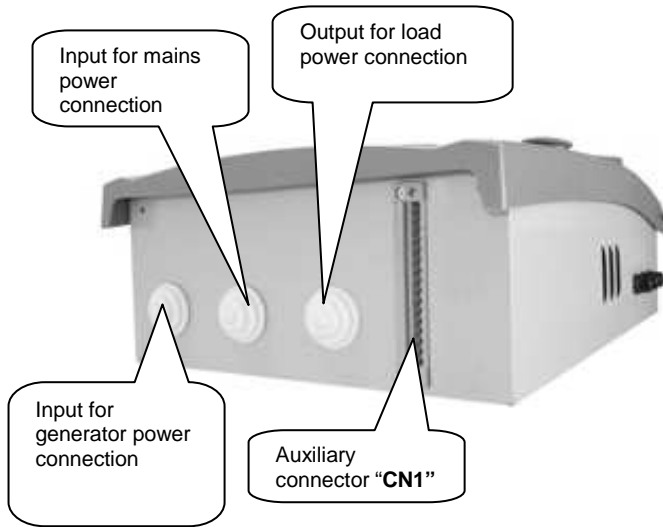
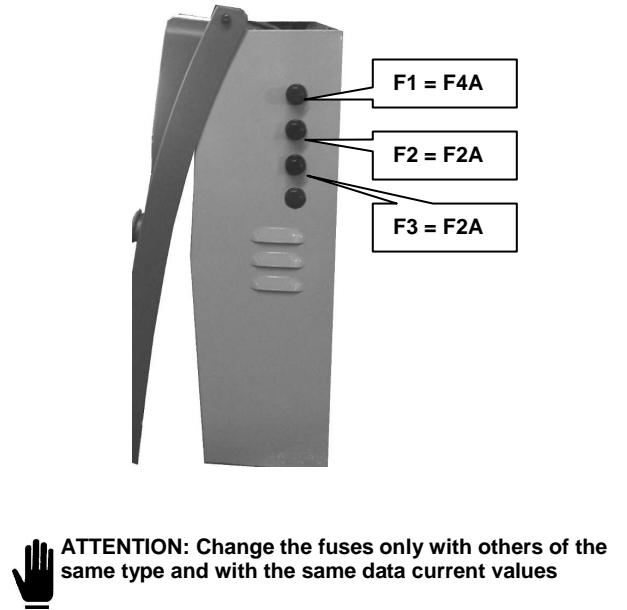
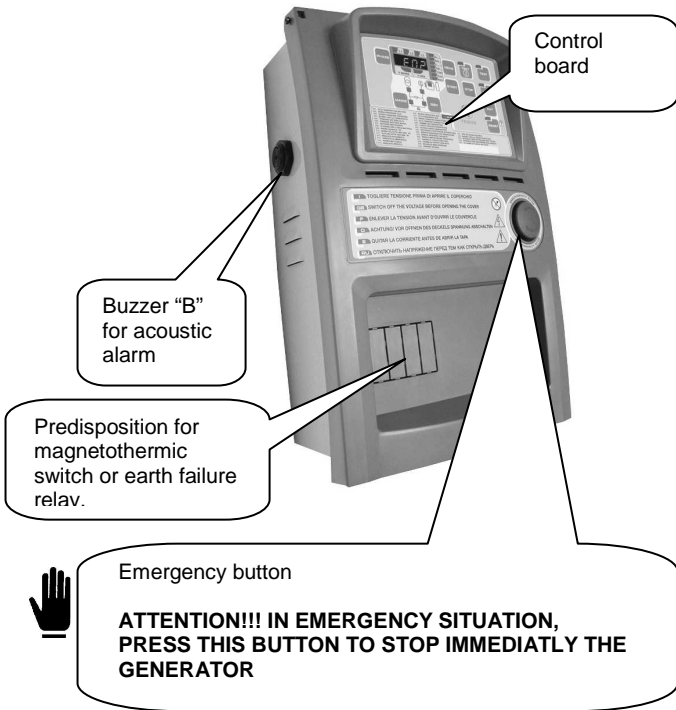
Every time you need to carry out special maintenance, repairs or to request spare parts it is necessary to call the Manufacturer or Dealer, always quote the serial number.

2.1.2 - Identification plate data specifics

In =	Nominal current
I_{max} =	Maximum permitted current
KA =	Maximum current that is safe from short circuits
Hz =	Frequency
KVA =	Apparent power (calculated at a 0,8 m cos)
KW =	Active power
HP =	Horsepower

V =	Maximum voltage used on main circuits
Vaux =	Maximum voltage on auxiliary circuits (Warning!!! Depending on machine type voltage may be direct current or alternating current. The cable of the auxiliary circuit is red if the voltage is ac and brown if the voltage is dc)
IP =	The protection seal is IP 20 for both external and internal agents
Kg =	Weight (only approximate and is subject to variation)
Dim =	Sizes (refer to dimensions of the box and do not consider any components whose installation might modify base dimensions). The measurements are expressed as "heightxwidthxdepth".
Ser.n =	Indicate the serial number required to identify the product. This number must always be quoted in requests for spare parts.
Model =	Indicates the code of the control panel that enables the type to be identified.

2.2 - Product external and internal view with description

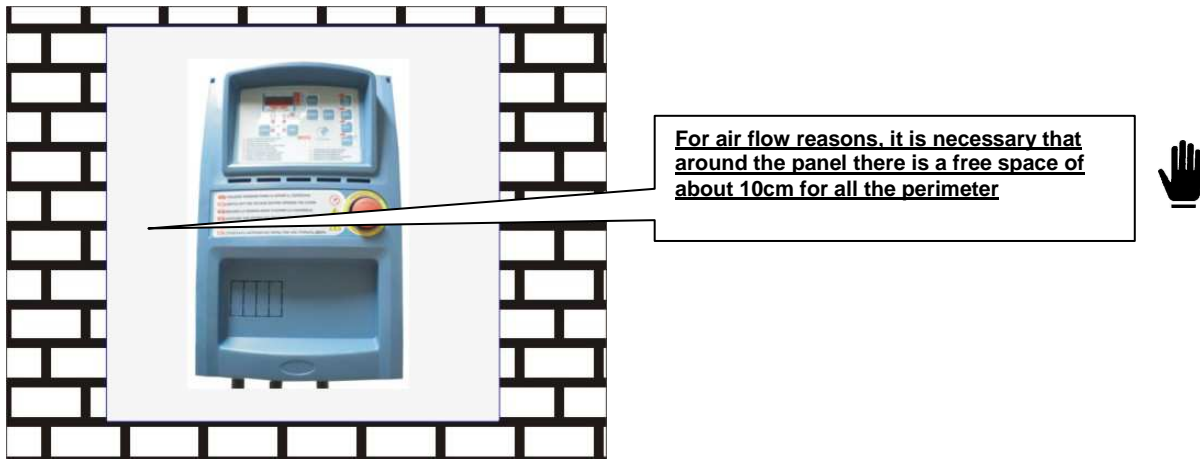
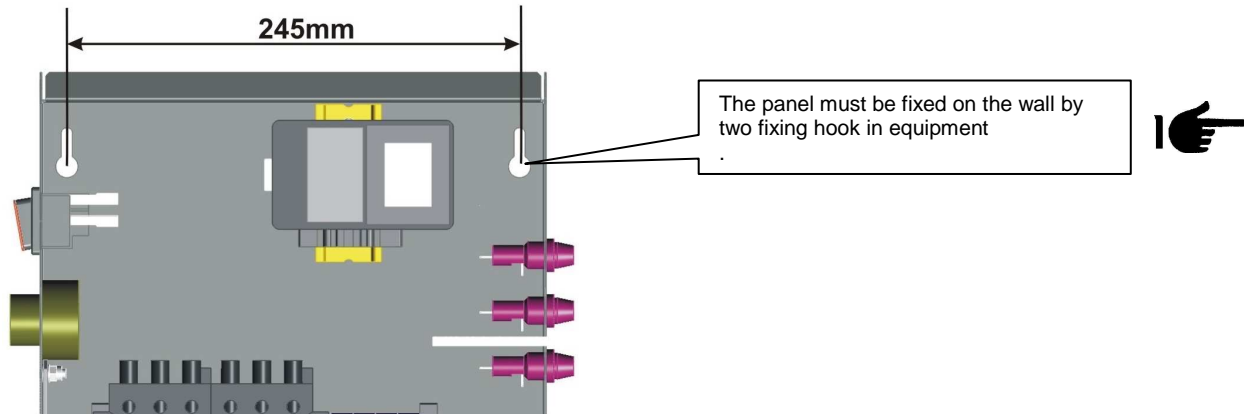


ATTENTION:

The panel in the pictures is only an example and it's one of the model in production; for this reason, the current transformers, the power circuit and the contactors in the panel must be different from the components in the image.

2.3 - Panel wall mounting instructions

 **WARNING: THE INSTALLATION OF THE PANEL MUST BE MADE ONLY BY SKILLED PEOPLE**



3 - FIRST STARTING OF THE PRODUCT, USE AND DESCRIPTION

3.1 - Operation to do during the first starting of the AT206 panel

When you supply for the first time the panel, the board is setted in RESET mode.



The non observance of the indications given about the first starting of the product, can cause faulty situations on the same product



Before the first starting of the panel, check that the indications on the "Identification data plate" (par. 2.1.1) are in accordance with the characteristics of the present electrical system.



The programming of Hour and Date are needed

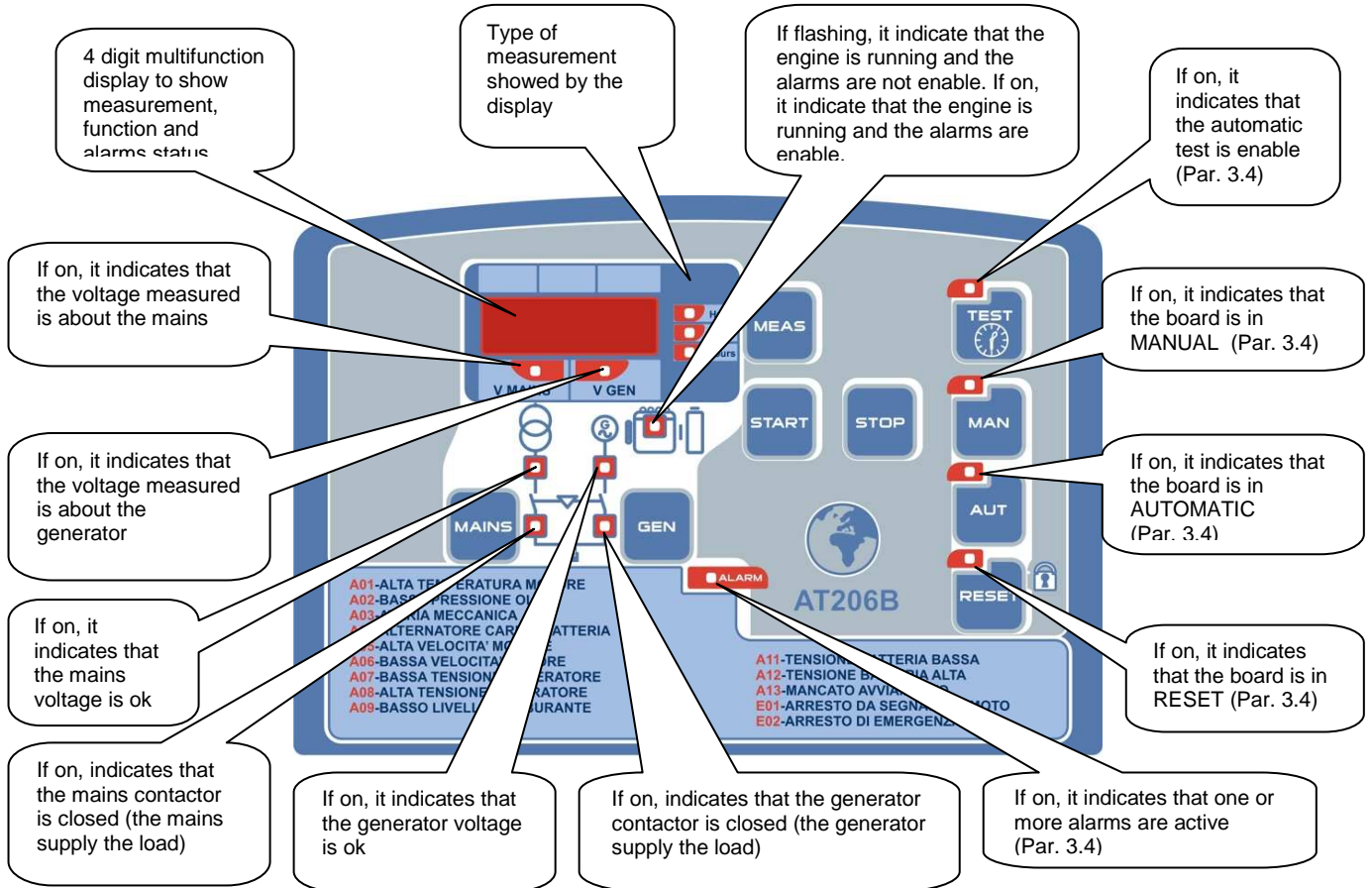
3.1.1 - How programming the Date and time on the panel

To program the Date and time, follow the procedure described below:

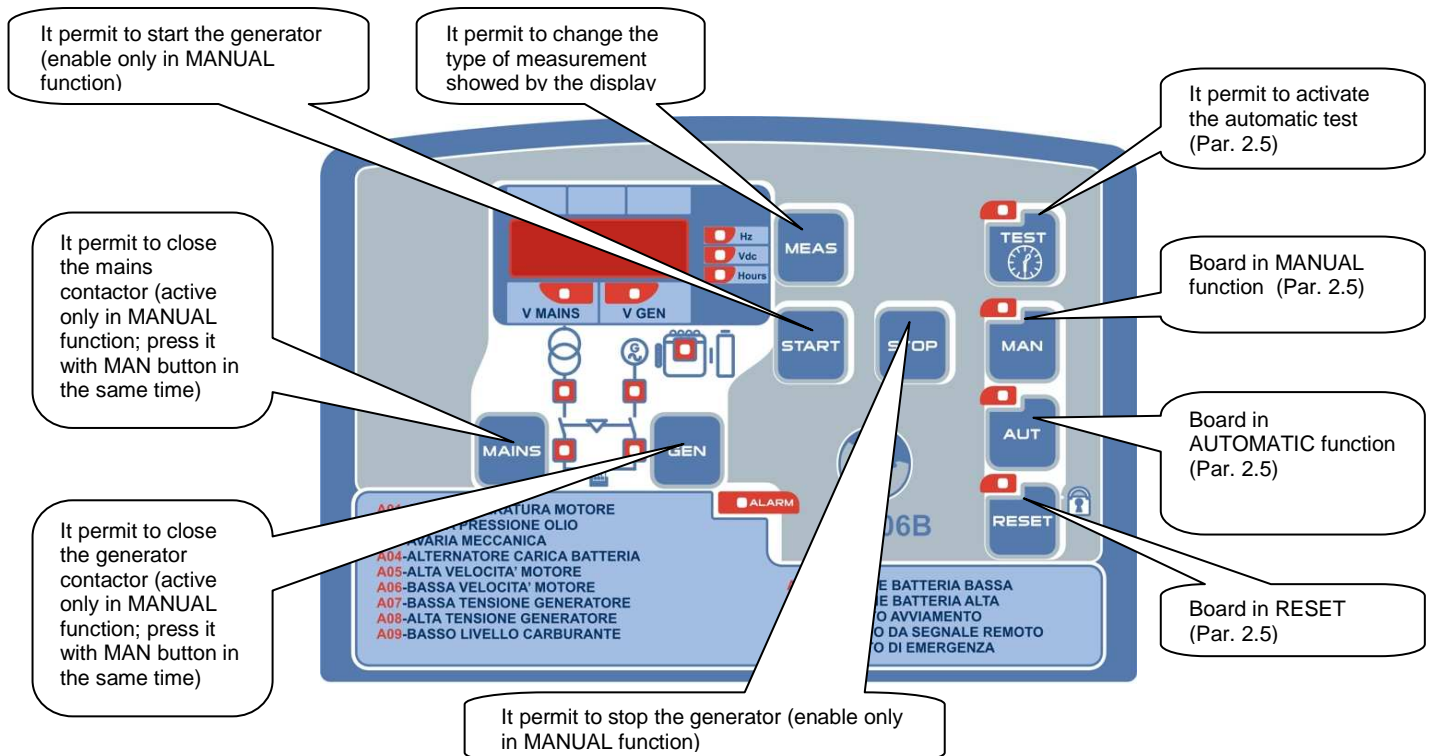
- Press RESET button
- With the board in RESET position, press TEST button for 5 seconds; after that the enter in the menu is showed by the display with the first code of the parameter "U.01 – Automatic test delay time". To see all the parameters, please check the following table
- By continuously pressing of MEAS button, reach parameter "U.11" showed on the display. This parameter is about the actual time.
- Press TEST button to see the value stored now.
- Press START button to increase this value or press STOP button to decrease this value
- When the value is correct, press RESET button to save the modification and return on the parameter code (the display shows U.11)
- By pressing MEAS button, go to paramter "U.12" showed on the display. This parameter is about the actual day.
- Press TEST button to see the value stored now.
- Press START button to increase this value or press STOP button to decrease this value
- Premere il pulsante START per aumentare tale valore o il pulsante STOP per diminuirlo
- When the value is correct, press RESET button to save the modification and return on the parameter code (the display shows U.12)
- Press RESET button than AUT button to exit from menu and return to the normal function mode.

Setup	Descrizione	Range	Default
Gruppo 1	Test		
U.01	Tempo intervallo test automatico	1 – 30gg / 1-4 settimane	3 gg
U.02	Durata test	1 – 30 min	15 min
U.03	Orario inizio test	00:00 – 23:59	10:00
U.04	Test con carico	0=carico 1=a vuoto	1
U.05	Orologio	0=no 1=si	0
U.06	settimanale / giorni	0=sett 1=giorni	0
U.07	giorno della settimana	1=lun 2=mar 3=mer ecc.	7
Gruppo2	Varie		
U.08	Tempo chiusura relais sirena	0 – 60 sec	20 sec
U.09	Ritardo partenza motore da start EJP	0 – 99 min	25 min
U.10	Ritardo commutazione per EJP/T(1 filo)	0 – 30 min	5 min
Gruppo3	Prog. orologio		
U.11	Orario	00:00 – 23:59	00:00
U.12	giorno della settimana	1=lun 2=mar 3=mer ecc.	7

3.2 - AT206 panel; LED indication description



3.3 - AT206 panel; command buttons description



3.4 - AT206 panel; function description

BOARD IN RESET

The generator can't work. If the mains is ok, the mains contactor is closed. If the generator is running, when you change to this function mode the engine is stopped immediately and the eventual alarms are resetted. The alarm can't be resetted if the cause of alarm still remain.

BOARD IN MANUAL

The generator can be started and stopped only manually by START and STOP buttons; also the changeover switch function work from mains to generator and viceversa by MAINS and GEN buttons

BOARD IN AUTOMATIC

The generator start automatically when there is a mains failure and stop automatically when the mains is ok.

AUTOMATIC TEST

Is enable only if the board is in automatic function. If enable, make a complete starting procedure in accordance to the programmation setted. If the mains is ok, this test is without changeover switch on the generator contactor; if during this test there is a mains failure, automatically the board close the generator contactor to supply the load by the generator. The stop procedure begin only when the mains come back to correct values.

ALARMS

When there is an alarm, the display show an identification code about the problem: after about 2 seconds the display show also a descriptive text about the alarm. By RESET button you can reset the alarms; if the alarm on the display doesn't disappear, you have to remove the cause of the alarm.

3.4.1 – Procedure to setting tha automatic test



It's strongly recommended the enabling of the automatic test to prevent problems caused by a long inactivity of the generator

To enable the automatic test, please follow the instruction below:

- Press RESET button
- With the board in RESET position, press TEST button for 5 seconds; after that the enter in the menu is showed by the display with the first code of the parameter "U.01 – Automatic test delay time". To see all the parameters, please check the following table
- Press TEST button to see the value stored now, then press START button to increase this value or STOP button to decrease it. When the value is correct, press RESET button to save the modification and return to the menu. This parameter specify the delay from one automatic test and the next one. (about days and weeks setting, check parameter U.06). If you press ENTER instead of RESET button to exit from parameter to menu, you loose the modification
- By pressing MEAS button, go to paramter "U.02" showed on the display. Press TEST button to see the value stored now, then by START button (increase) or STOP button (decrease) change the duration time of the automatic test. When the value is correct, exit and save by RESET button.
- By pressing MEAS button, go to paramter "U.03" showed on the display. Press TEST button to see the value stored now, then by START button (increase) or STOP button (decrease) change the starting time of the automatic test. When the value is correct, exit and save by RESET button.
- By pressing MEAS button, go to paramter "U.04" showed on the display. Press TEST button to see the value stored now, then by START button (increase) or STOP button (decrease) change if you want the automatic test with changeover switch (set it to "0") or without changeover switch (set it to "1"). When the value is correct, exit and save by RESET button.
- By pressing MEAS button, go to paramter "U.05" showed on the display. Press TEST button to see the value stored now, then by START button (increase) or STOP button (decrease) change if there is installed the "Clock" optional card (set it to "1") or if is not installed (set it to "0"). When the value is correct, exit and save by RESET button.
- By pressing MEAS button, go to paramter "U.06" showed on the display. Press TEST button to see the value stored now, then by START button (increase) or STOP button (decrease) change if the delay from one automatic test and the next one must be in "days" or "weeks"; by this you can also chose the day for starting the automatic test but the installation of the "Clock" optional board is needed. When the value is correct, exit and save by RESET button.
- By pressing MEAS button, go to paramter "U.07" showed on the display. Press TEST button to see the value stored now, then by START button (increase) or STOP button (decrease) change the automatic test starting day; available only if the "Clock" optional board is installed. When the value is correct, exit and save by RESET button.
- At the end, press RESET then AUT button to exit from menu and to return to the normal operating mode.

When the automatic test parameters are setted, you have to enable this test; with the board in automatic mode, keep pressed TEST button fo 5 seconds, then the display shows "On" and the test led turn ON. From this moment the board starts the counting of the time to make the first test. This test will begin after the set days in parameter "U.01", at the set time in parameter "U.03" and for a set duration in parameter "U.02". To disable the automatic test, keep pressed TEST button for 5 seconds, then the display shows "Off" and the test led turn off.

ESEMPIO:

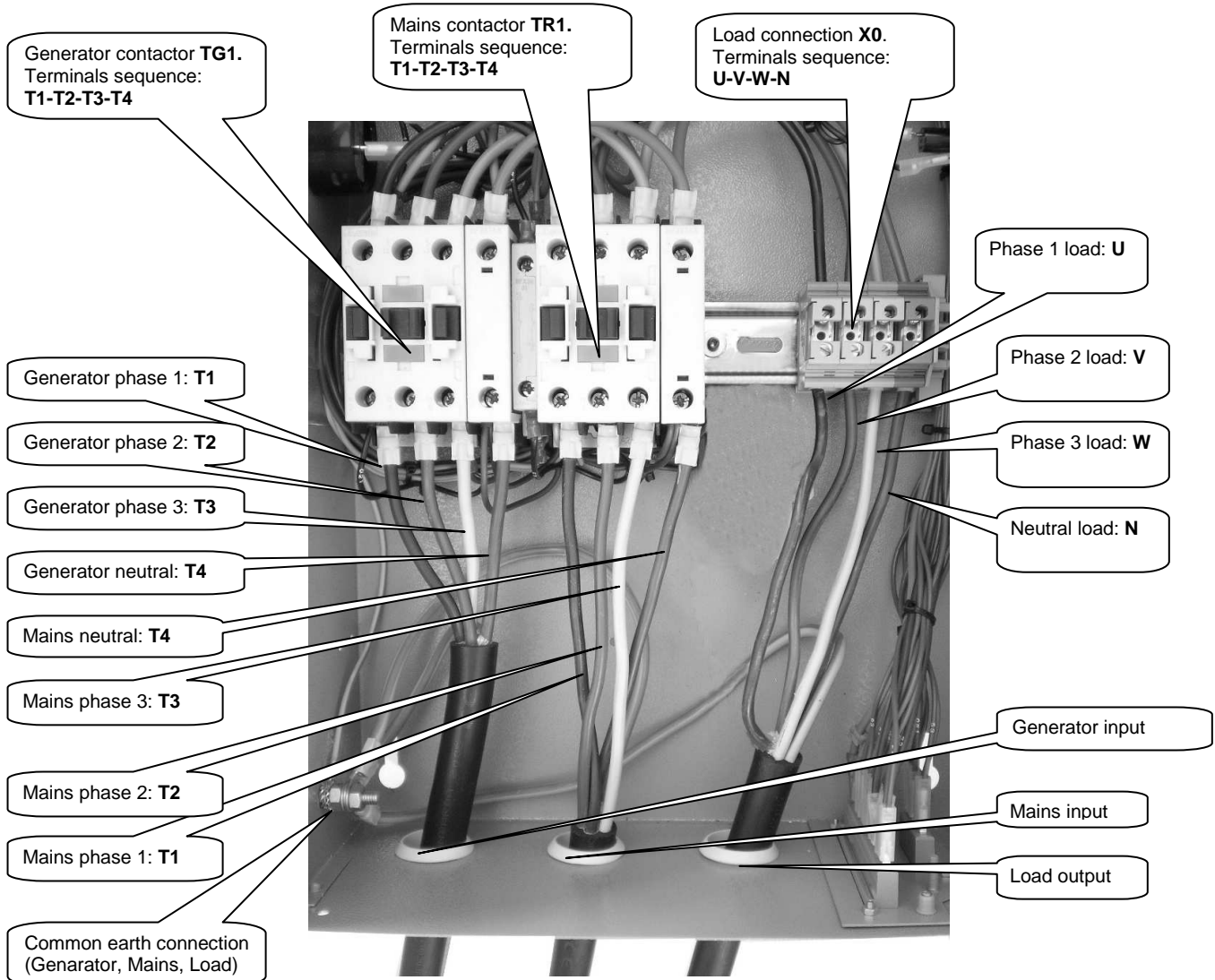
Setup	Description	Range	Default
Group 1	Test		
U.01	Automatic test interval time	1 – 30days / 1-4 week	3 days
U.02	Test duration	1 – 30 min	15 min
U.03	Test start time	00:00 – 23:59	10:00
U.04	Test with load	0=load 1=a vuoto	1
U.05	Clock	0=no 1=yes	0
U.06	weekly / days	0=week 1=days	0
U.07	day of the week	1=Mon 2=Tuesd 3=Wed. etc.	7

If you enable the automatic test (TEST button for 5 seconds) on Monday afternoon at 15.00, first test will start 3 days after (on Thursday) from 10.00 to 10.15. Second test will start on next Sunday (3 more days later) always from 10.00 to 10.15

4 - AT206 CONNECTION AND ELECTRICAL DRAWINGS

4.1 - Power connection

4.1.1 - Triphase connection

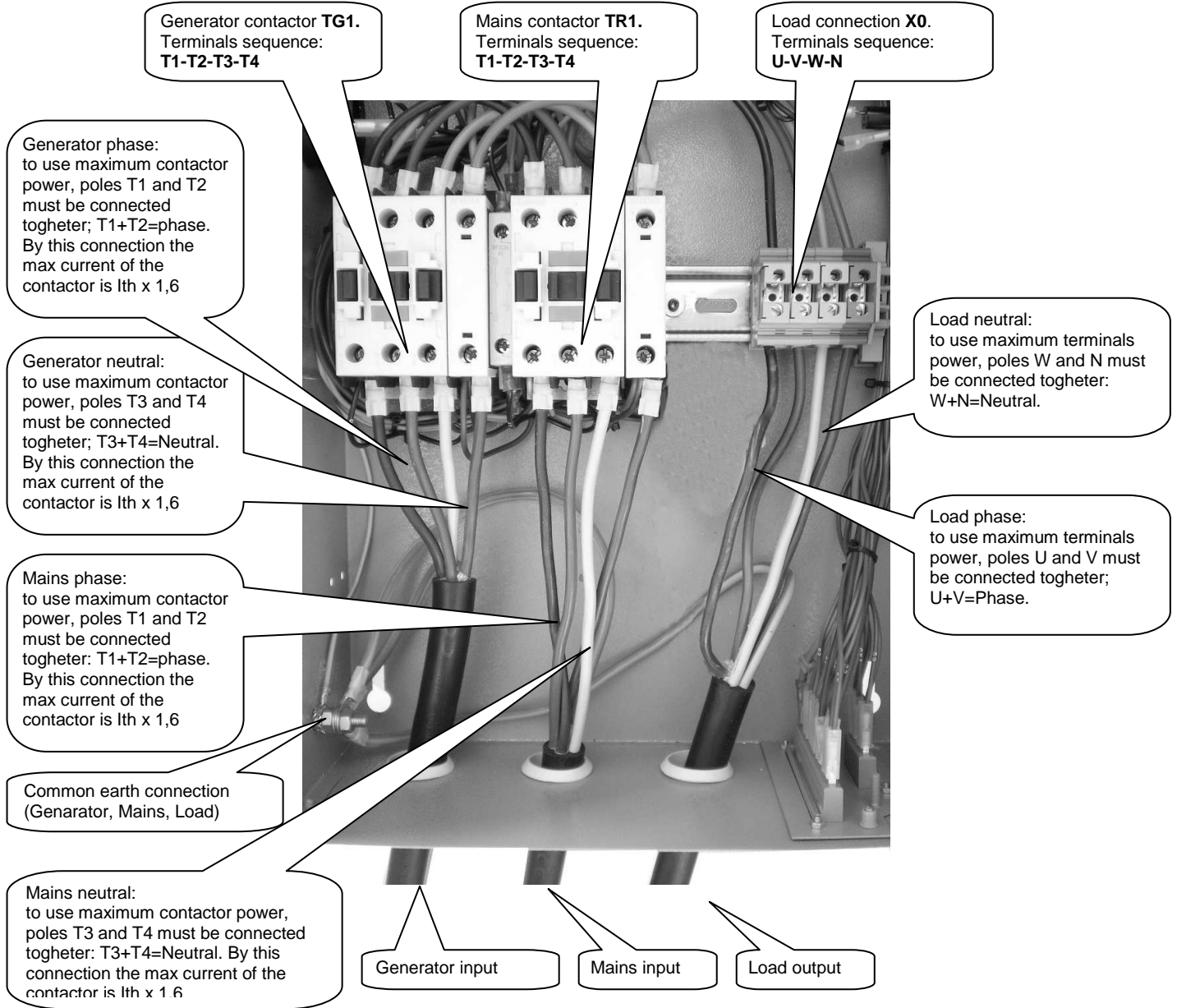


Il collegamento dei cavi ,e il serraggio dei morsetti ai contattori e alla morsettieria deve essere fatto in rispetto ai seguenti dati

Contattore(verificare il tipo montato nel quadro)	Sezione minima e massima del cavo flessibile collegato senza terminali	Coppia minima e massima di serraggio dei terminali.Attenzione!!! nel collegare i cavi di potenza fare attenzione a non rimuovere i cavi ausiliari e di accertarsi che siano ben stretti assieme al cavo di potenza	
		Nm	lbft
BF9T	1-6	1,5-1,8	1,1-1,5
BF12T	1-6	1,5-1,8	1,1-1,5
BF18T	1-6	1,5-1,8	1,1-1,5
BF26T	2,5-6	2,5-3	1,8-2,2
BF38T	2,5-16	2,5-3	1,8-2,2
BF40	2,5-16	2	2,24-2,88
BF50	4-50	4-5	2,95-3,69
BF65	4-50	4-5	2,95-3,69
BF80	6-50	4-5	2,95-3,69
CL04	2,5-16	1,4	1,02

WARNING !! If the installation of the product is not in accordance to the specifics described above, can cause problems in terms of functionality and can also compromises warranty conditions. Then PRAMAC srl won't be responsible for any direct or not direct damage due to wrong installation.

4.1.2 - Monophase connection

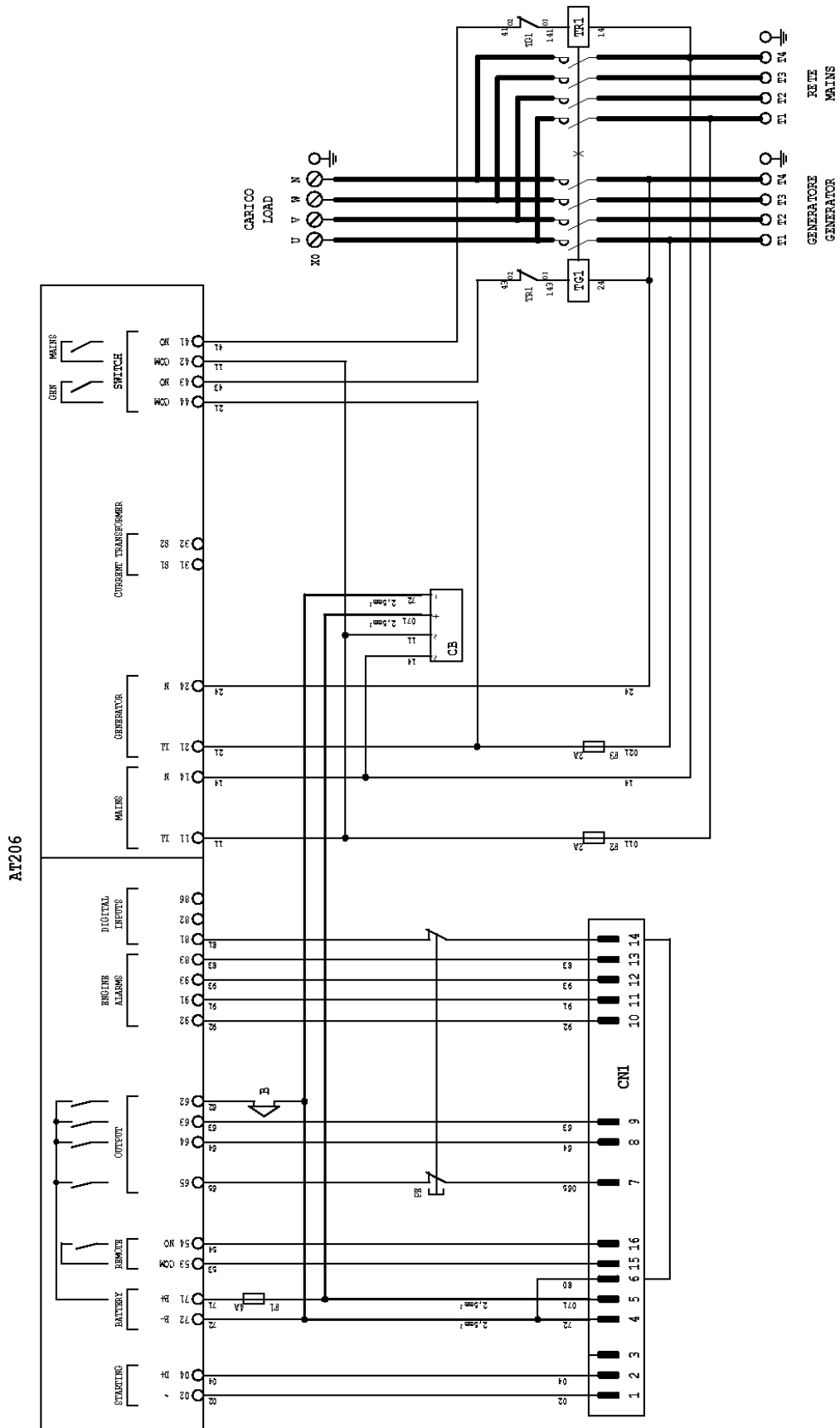


Cables connection and contactors terminals serration must be in accordance to the following specifics

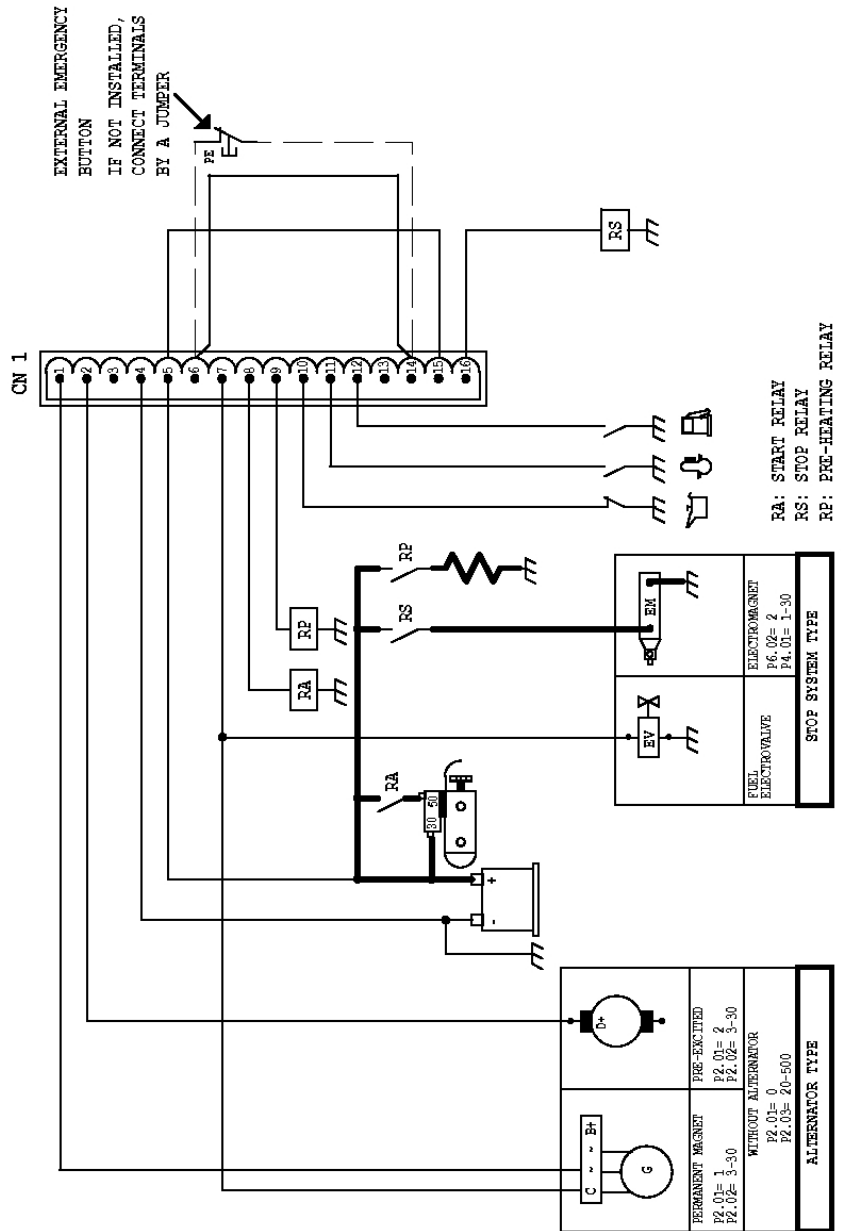
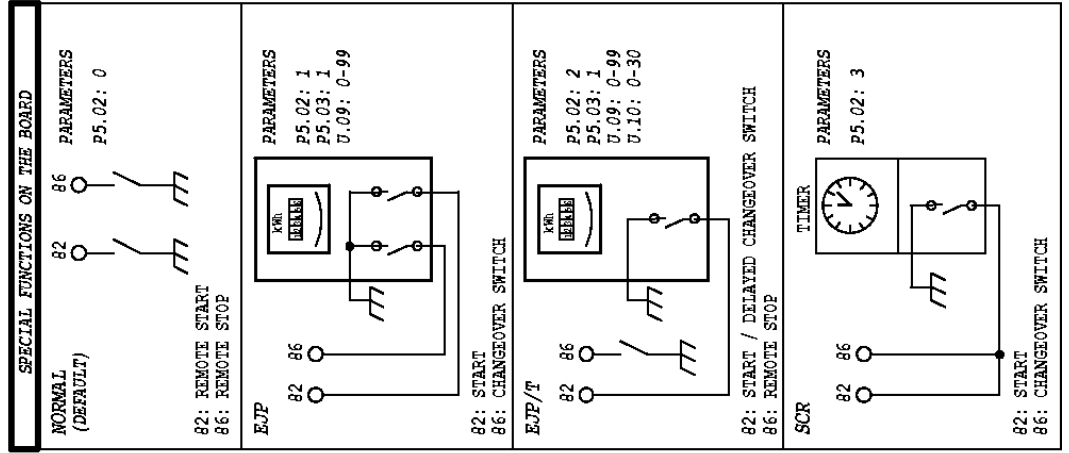
Contactor type (check the type installed in the panel.)	Minimum and maximum section of flexible wire connected without termination	Contactors terminals min and max tightening torque. Warning!!! Don't move auxiliary wires when you connect the power cables and check that are connected together both power and auxiliary wires.	
Tipo	mm	Nm	lbft
BF9T	1-6	1,5-1,8	1,1-1,5
BF12T	1-6	1,5-1,8	1,1-1,5
BF18T	1-6	1,5-1,8	1,1-1,5
BF26T	2,5-6	2,5-3	1,8-2,2
BF38T	2,5-16	2,5-3	1,8-2,2
BF40	2,5-16	2	2,24-2,88
BF50	4-50	4-5	2,95-3,69
BF65	4-50	4-5	2,95-3,69
BF80	6-50	4-5	2,95-3,69
CL04	2,5-16	1,4	1,02

WARNING !! If the installation of the product is not in accordance to the specifics described above, can cause problems in terms of functionality and can also compromises warranty conditions. Then PRAMAC srl won't be responsible for any direct or not direct damage due to wrong installation.

4.2 - Panel electrical drawing



4.3 - Diesel engine auxiliary connection



5 - AT206 PANEL PROGRAMMATION INSTRUCTION

5.1 - Programmation menu access description

With the board in RESET position, press TEST button for 5 seconds; after that, the entrance in the menu is showed by the display with the first code of the parameter "U.01".

This procedure permit to enter only in the "User menu"; the description of the parameters is at par 5.3.

To have access to complete menu (advanced menu), you need a different password; please contact the dealer or the manufacturer. The complete description of all the parameters is in the par 5.4

5.2 - Parameters modification instructions

TEST button permit to see the value of the parameter
 START button permit to increase the value
 STOP button permit to decrease the value
 RESET button save the value of the parameter and exit from it
 MEAS button permit to change (increase) the number of the parameter in a menu
 MAN button permit to change (increase) the number of the menu
 To exit from programmation, press RESET than AUT buttons

5.3 - User menu parameters

Setup	Description	Range	Default
Group 1	Test		
U.01	Automatic test interval time	1 – 30days / 1-4 week	3 days / 1 week
U.02	Test duration	1 – 30 min	10 min
U.03	Test start time	00:00 – 23:59	10:00
U.04	Test with load	0=load 1=a vuoto	1
U.05	Clock	0=no 1=yes	0
U.06	weekly / days	0=week 1=days	0
U.07	day of the week	1=Mon 2=Tuesd 3=Wed. etc.	7
Group2	Various		
U.08	Siren relay closing time	0 – 60 sec	20 sec
U.09	Engine departure delay from EJP start	0 – 99 min	25 min
U.10	Switching delay for EJP/T(1 wire)	0 – 30 min	5 min
Group3	Clock setting		
U.08	Time	00:00 – 23:59	00:00
U.09	day of the week	1=Mon 2=Tuesd 3=Wed etc.	7

5.4 - Advanced menu parameters

Setup	Description	Range	Default
Group 1	Panel nominal data		
P1.01	Nominal frequency	50Hz= 0 60Hz=1	0
.02	TA report (2000 =10000/5)	1...2000	1
.03	System	0=220M 1=220T 2=380T	0
Group 2	Engine start-up		
P2.01	500 rpm signal from alternator or gen. (started engine)	1=altmm 0=gen 2=altes	2
.02	Started engine alternator voltage threshold	3-30V	10
.03	Started engine generator voltage threshold	20-500V	60

.04	Starting with power failure	On=1 Off=0	1
.05	Preheating time	1-60 sec	30
.06	Number of starting attempts	1-10	5
.07	Duration of starting attempts	1-30sec	5
.08	Pause time within starting attempts	1-20sec	10
.09	Not active		
.10	Alarm enabling delay at starting (oil/V/freq.)	1-60sec	10
.11	Air time	0-10 sec	5
.12	Air switch-off threshold	30-200V	100
Group 3 Motor stop			
P3.01	Stop times (electromagnet closing time)	1-30sec	15
.02	Decelerated funct. time	1-60 sec	30
.03	Cooling time	1 – 300sec	120
Group 4 Protections			
P4.01	Minimum frequency (50 Hz)	80 – 100 %	90%
.02	Maximum frequency (overspeed) (50 Hz)	100 – 120%	110%
.03	Maximum frequency al. tripping delay	0-15 sec	5 sec
.04	Battery minimum frequency	7-12V	9
.05	Battery maximum frequency	13 – 17V	15V
.06	Load maximum current	10 – 2550	50A
.07	Maximum current delay	0 – 600sec	10
.08	Tripping delay of “500rpm failure” (strap breaking)	0 –10 sec	5
.09	“Mechanical failure” tripping delay	0 - 10 sec	5
Group 5 Various			
		Range	Default
P5.01	Generator and network contactor closing delay	0,1 –5 sec	1
P5.02	Remote start input function	0=nor 1=ejp 2=ejpt 3=scr	0
P5.03	Re-commutation lock on network in case of alarm during EJP /EJPT / SCR	1 = on 0 = off	0
P5.04	Counter value	0 – 999.999	0
Group 6 Programmable outputs			
P6.01	Progr. Relay (terminal 63)	air 0 glow plugs 1 alarm 2	air
P6.02	Progr. relay (terminal 53 - 54)	alarm 0 decelerator 1 electromagnet 2	alarm
P6.03	Progr. relay (terminal 62)	siren 0 alarm 1	siren

Group 7	<u>Network parameters</u>		
P7.01	Mains voltage minimum threshold	160 – 230Vac	195Vac
.02	Mains voltage maximum threshold	253 – 345Vac	299Vac
.03	Mains voltage time out of the limits	1 – 9999 sec	5 sec
.04	Mains voltage return time within the limits	01– 9999 sec	10 sec
Group 8	<u>Group parameters</u>		
P8.01	Group voltage minimum threshold	160 – 230Vac	195Vac
.02	Group voltage maximum threshold	253 – 345Vac	299Vac
.03	Group voltage delay out of the limits	1 – 9999 sec	5 sec
.04	Group voltage time within the limits	1 – 9999 sec	20 sec



Note : Range P7.01, P7.02, P8.01 E P8.02 are in reference to 400V if P1.03 =2

Alarms			
Setup	Description	Range <i>0=no 1=yes</i>	Default
A1	Engine overtemperature	yes/no	yes
A1.01	Stop without cooling	yes/no	yes
A1.02	Stop with cooling	yes/no	no
A1.03	Siren relay	yes/no	yes
A1.04	Alarm relay (if enabled see P6.02)	yes/no	yes
A1.05	Not active	yes/no	yes
A2	Oil low pressure	yes/no	yes
A2.01	Stop without cooling	yes/no	yes
A2.02	Stop with cooling	yes/no	no
A2.03	Siren relay	yes/no	yes
A2.04	Alarm relay (if enabled)	yes/no	yes
A2.05	Not active	yes/no	yes
A3	Avaria meccanica	yes/no	yes
A3.01	Stop without cooling	yes/no	yes
A3.02	Stop with cooling	yes/no	no
A3.03	Siren relay	yes/no	yes
A3.04	Alarm relay (if enabled)	yes/no	yes
A3.05	Not active	yes/no	yes
A4	500 rpm failure (strap breaking)	yes/no	yes
A4.01	Stop without cooling	yes/no	yes
A4.02	Stop with cooling	yes/no	no
A4.03	Siren relay	yes/no	yes
A4.04	Alarm relay (if enabled)	yes/no	yes
A4.05	Not active	yes/no	yes
A5	Overspeed (maximum frequency)	yes/no	yes
A5.01	Stop without cooling	yes/no	yes
A5.02	Stop with cooling	yes/no	no
A5.03	Siren relay	yes/no	yes
A5.04	Alarm relay (if enabled)	yes/no	yes
A5.05	Not active	yes/no	yes
A6	Minimum frequency	yes/no	yes
A6.01	Stop without cooling	yes/no	yes
A6.02	Stop with cooling	yes/no	no
A6.03	Siren relay	yes/no	yes
A6.04	Alarm relay (if enabled)	yes/no	yes

A6.05	Not active	yes/no	no
A7	Generator minimum voltage	yes/no	yes
A7.01	Stop without cooling	yes/no	yes
A7.02	Stop with cooling	yes/no	no
A7.03	Siren relay	yes/no	yes
A7.04	Alarm relay (if enabled)	yes/no	yes
A7.05	Not active	yes/no	yes
A8	Generator maximum voltage	yes/no	yes
A8.01	Stop without cooling	yes/no	yes
A8.02	Stop with cooling	yes/no	no
A8.03	Siren relay	yes/no	yes
A8.04	Alarm relay (if enabled)	yes/no	yes
A8.05	Not active	yes/no	yes
A9	Fuel	yes/no	yes
A9.01	Stop without cooling	yes/no	yes
A9.02	Stop with cooling	yes/no	no
A9.03	Siren relay	yes/no	yes
A9.04	Alarm relay (if enabled)	yes/no	yes
A9.05	Not active	yes/no	no
A10	Maximum current	yes/no	yes
A10.01	Stop without cooling	yes/no	no
A10.02	Stop with cooling	yes/no	yes
A10.03	Siren relay	yes/no	yes
A10.04	Alarm relay (if enabled)	yes/no	yes
A10.05	Not active	yes/no	yes
A11	Battery minimum voltage	yes/no	yes
A11.01	Stop without cooling	yes/no	no
A11.02	Stop with cooling	yes/no	no
A11.03	Siren relay	yes/no	yes
A11.04	Alarm relay (if enabled)	yes/no	yes
A11.05	Not active	yes/no	no
A12	Battery maximum voltage	yes/no	yes
A12.01	Stop without cooling	yes/no	no
A12.02	Stop with cooling	yes/no	no
A12.03	Siren relay	yes/no	yes
A12.04	Alarm relay (if enabled)	yes/no	yes
A12.05	Not active	yes/no	no
A13	Starting failure	yes/no	yes
A13.01	Siren relay	yes/no	yes
A13.02	Alarm relay (if enabled)	yes/no	yes
A13.03	Not active	yes/no	no
E1	Remote stop	yes/no	yes
E1.01	Stop without cooling	yes/no	yes
E1.02	Stop with cooling	yes/no	yes
E1.03	Siren relay	yes/no	yes
E1.04	Alarm relay (if enabled)	yes/no	yes
E1.05	Not active	yes/no	yes
E2	Emergency stop	yes/no	yes
E2.01	Stop without cooling	yes/no	yes
E2.02	Siren relay	yes/no	yes
E2.03	Alarm relay (if enabled)	yes/no	yes
E2.04	Not active	yes/no	yes
E2.05	Not active	yes/no	yes