

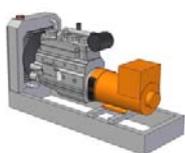


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Via Dimo Vioni , n.5 - Frazione S. Rocco  
42016 Guastalla (RE) ITALY Tel.0522-832004 fax 832012  
Internet:www.tecnoelettra.it E-mail:info@tecnoelettra.it



**TECNO ELETTRA**



**TRANSFER SWITCH PANELS FOR  
GENERATING SETS**

# TE805 AUTOMATIC CONTROL PANEL WITH POWER SWITCHING FROM 19 TO 2180kVA



## STANDARD COMPOSITION

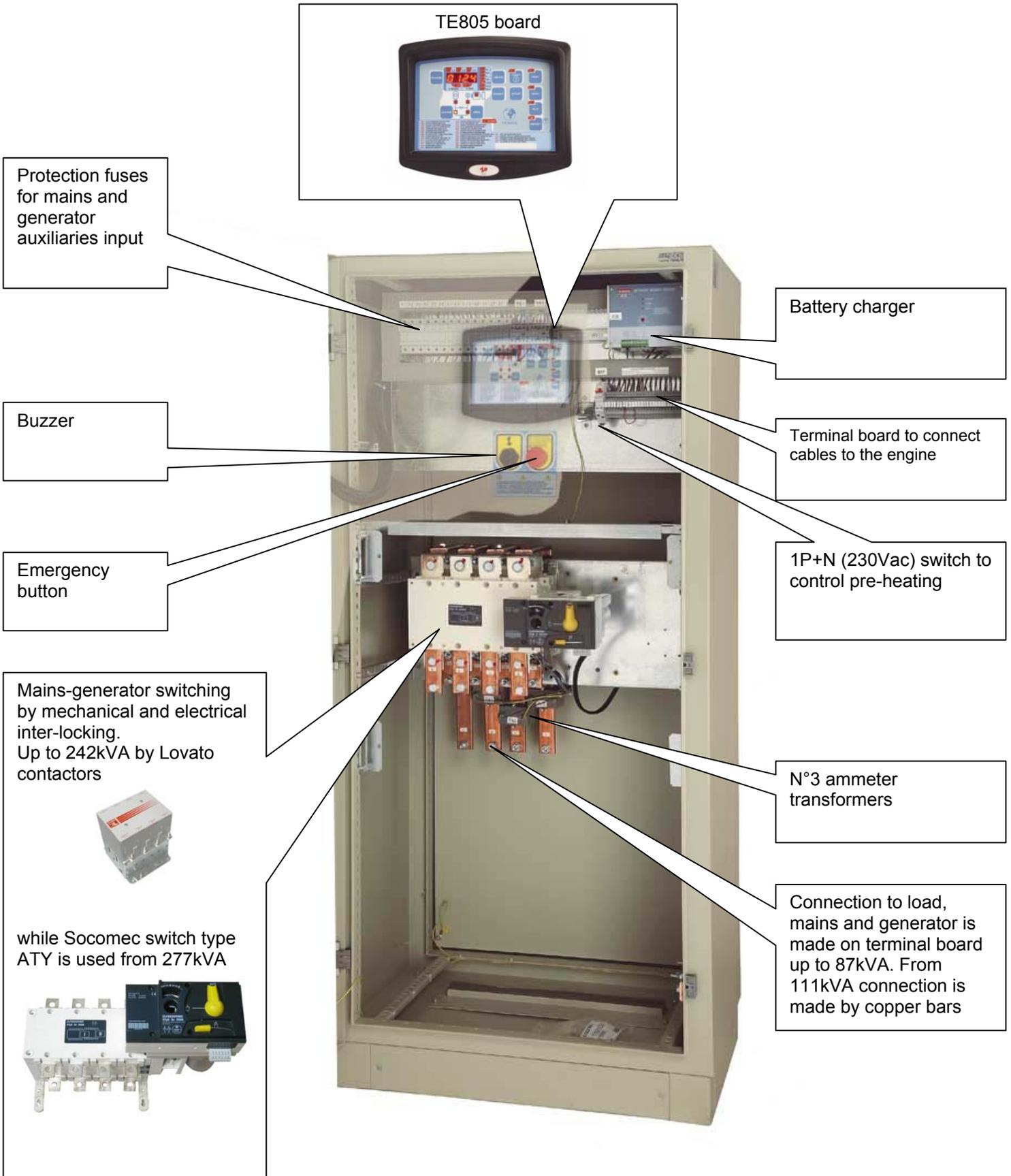
- 1 Metal casing IP54 RAL 7032
- 1 1P+N engine pre-heating circuit breaker
- 1 Buzzer alarm
- 1 Emergency stop button
- 1 Three-pole or 4 pole mains-generator power switching
- 1 Auxiliary terminal board
- 1 Power terminal board up to 87kVA (copper bars > 88kVA)
- 1 Automatic battery charger
- 10 Auxiliary protection fuses
- 3 Current transformers
- **1 Electronic board TE805**



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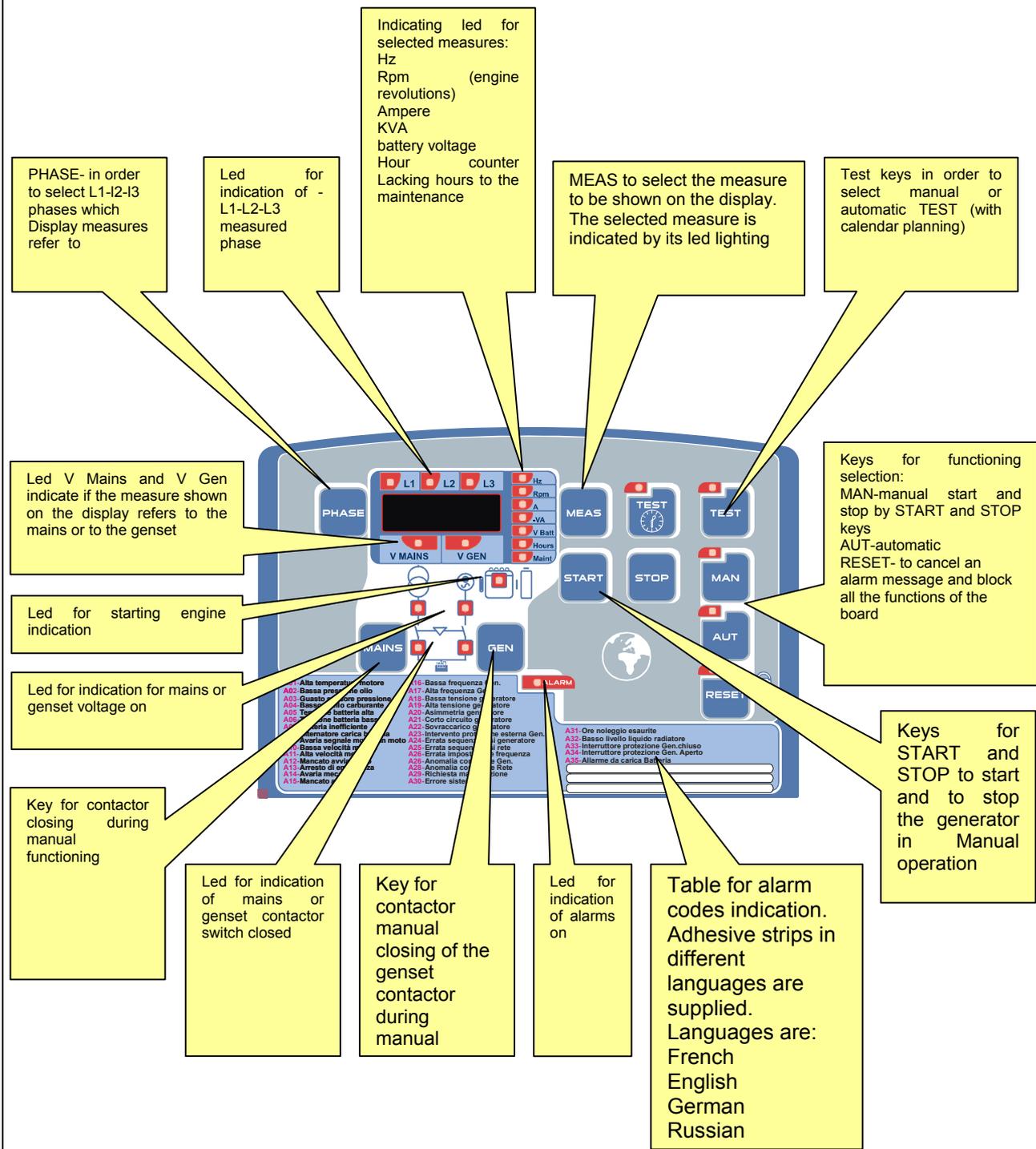
# PANEL VIEW



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# Keyboard description



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# TE805 BOARD DESCRIPTION

On the frontal part we find the following commands and indications:

**Display at 4 digit to have a look at some codes and alarm names, measures and parameters for setup**

## CODES AND ALARMS NAMES VISUALIZATION

- **A01**-high engine temperature
- **A02**-low oil pressure (digital sensor)
- **A03**-pressure digital sensor failure
- **A04**-low fuel level (digital sensor)
- **A05**-high battery voltage
- **A06**-low battery voltage
- **A07**-inefficient battery
- **A08**-battery charger alternator failure
- **A09**- failure on signal for rev-counter survey
- **A10**-low engine speed
- **A11**-high engine speed
- **A12**-starting failure
- **A13**-emergency stop
- **A14**-unexpected stop (it means that the card having given the stop command does not survey the starting engine and therefore the stop is surely due to a mechanical problem)
- **A15**-stop failure
- **A16**-low generator frequency
- **A17**-high generator frequency
- **A18**-low generator voltage
- **A19**-high generator voltage
- **A20**-generator asymmetry
- **A21**-short circuit
- **A22**-generator overload
- Protection A21 and A22 take part according to some parameters set up in an proper Menu in which the following parameters are set up: rated current for generator; limit of maximum current in %; limit of current for immediate intervention in %; delay of the maximum current in seconds ;time for protection restoration in seconds
- **A23**-external generator protection intervention
- **A24**-incorrect generator phases sequence
- **A25**-incorrect mains phases sequence
- **A26**-wrong frequency system setup
- **A27**-generator contactor failure
- **A28**-mains contactor failure
- **A29**-request for maintenance
- **A30**-system error (it is a self-checking of the operating system of the card)
- **A31**-rent hours exhausted
- **A32**-low radiator liquid level
- **A33**- magnetothermic switch for closed genset protection
- **A34**-magnetothermic switch for open genset protection
- this function is important both in the manual and automatic functioning since it guarantee that switch is in the right position in both functioning systems
- **A35**-alarm from battery charger
- **UA1**-adjustable users alarm
- **UA2**- adjustable users alarm
- **UA3**- adjustable users alarm
- **UA4**- adjustable users alarm

## ELECTRICAL MEASURES VISUALIZATION

- Generator and mains voltage phases on L1-L2-L3
- Generator and mains frequency
- Generator rev-counter
- Ampere for every phase of Generator and Mains on L1-L2-L3
- kVA
- battery volt
- Hourcounter
- hours to the maintenance

**Visualization of all the set up parameters through access with password to the following menu:**

**Menu 01**- Usefulness contains the parameters that refer to the calendar, the month and the year

**Menu 02**- General contains all the parameters that refer to the electrical parameters (TA; type of line L-L/L-n/L-L+L-N; frequency;ect

**Menu 03**- Battery to be used to set up all the parameters for battery control

**Menu 04**- motor starter allows to set up all the parameters that refer to engine starting both for diesel engines and petrol engines provided with compressed air systems

**Menu 05**-engine control are parameters that refer to all engine functioning limitssuch as minimum and maximum limit of speed, etc...

**Menu 06**- mains control to be used in order to set up all parameters for mains control like minimal and maximum voltage limit, maximum voltage, asymmetry, frequency etc...

**Menu 07**- generator control to be used to set up all the parameters of alternator control like minimal and maximum voltage, asimmetry, frequency, etc...

**Menu 08**- generator protection, to be used to set up all parameters for loading limits control for generator functioning, like rated current, minimum and maximum level, etc...

**Menu 09**- test and maintenance to be used to set up all parameters for test and maintenance of generator, like test qualification, test break, days where test is excluded, beginning time, test period with and without load, break for maintenance time, etc...

**Menu 10**- door and communication are parameters that refer to RS232 and RS485 utilization

**Menu 11**- several in this menu all standard and custom fuctions are provided (realized on specific customer's request) like generator threshold for starting and stopping according to mains kw; dummy load command with on/off treshold;rent hours; choosing functioning way (EjP;SCR etc);automatic block and test; Starter of the generator in case mains switch failure.

### SPECIAL FUNCTIONS ( page 7)

- generator Start/Stop on mains kW threshold
- Dummy load Command
- Renting hours
- Block for automatic and test ways
- Engine Starting for TLGR failure
- Ways of functioning
- Remote start
- SCR
- EJP



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## OPTIONALS FOR TE805 PANELS



Battery charger 12Vcc-3Ampere	1570401
Battery charger 24Vcc-3Ampere	1570402
Battery charger 12Vcc-6Ampere	1570403
Battery charger 24Vcc-6Ampere	1570404
Battery charger 12Vcc-12Ampere	1570405
Battery charger 24Vcc-12Ampere	1570406

### MAGNETIC CIRCUIT BREAKERS AND DIFFERENTIAL BREAKERS



Ampere	Magnetic circuit breakers		Differential block In-0,03 to be added to the switch	
	3P	4P	3P	4P
				
				
10	157150010	157150010B	15717040-3P	15717040
16	157150016	157150016B	15717040-3P	15717040
20	157150020	157150020B	15717040-3P	15717040
25	157150025	157150025B	15717040-3P	15717040
32	157150032	157150032B	15717040-3P	15717040
40	157150040	157150040B	15717040-3P	15717040
50	157150050	157150050B	15717063-3P	15717063
63	157150063	157150063B	15717063-3P	15717063
80	157150080	157150080B	In all these version it is necessary to add differential kit provided with garter spring:15717125R	
100	157150100	157150100B		
125	157150125	157150125B		



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# OPTIONALS FOR TE805 PANELS

## MAGNETIC CIRCUIT BREAKERS



Ampere	3poles	4poles
160	157150160	157150160B
200	157150200	157150200B
250	157150250	157150250B
320	157150320	157150320B
400	157150400	157150400B
500	157150500	157150500B
630	157150630	157150630B
800	157150800	157150800B
1000	157151000	157151000B
1250	157151250	157151250B
1600	157151600	157151600B
2000	157152000	157152000B
2500	157152500	157152500B
3200	157153200	157153200B

## DIFFERENTIAL PROTECTION KIT



Differential kit with garter spring -35mm	15717010
Differential kit with garter spring -80mm	15717011
Differential kit with garter spring -110mm	15717012
Differential kit with garter spring -160mm	15717013

## PREARRANGEMENT KIT TO CONTROL DIESEL ENGINE REGULATORS

GAC pre-arrangement (Iveco)	1571210GAC
EMC pre-arrangement (Perkins)	1571210EMC
EMR pre-arrangement (Deutz)	1571210EMR
MTU pre-arrangement	1571210MTU

## KIT WITH METAL CONNECTORS FOR CONNECTION TO ENGINE CABLE



ILME metal socket 16 poles	1570810F
ILME metal socket 24 poles	1570811F



ILME metal plug 16 poles	1570810M
ILME metal plug 24 poles	1570811M



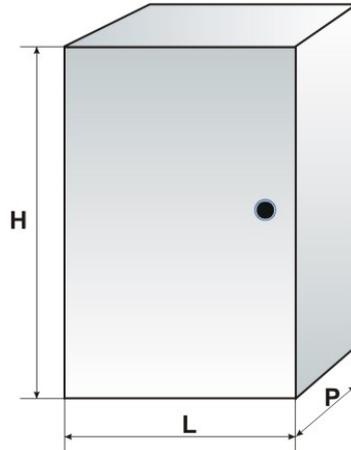
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# General features

Protection degree for metal box	IP-54
Inner protection degree	IPXXB
Board protection degree	IP-64
Total degree protection for complete panel	IP-54
<b>Standard references</b>	<b>CE</b>

## Dimensions



Ith contactors with temperature <math>\leq 40^{\circ}\text{C}</math>	KVA/400V-3Ph	Code 4 poles	Dimensions			Weight
			H	L	P	Kg
<b>With contactors</b>						
28	19	8054019	600	400	250	22
45	31	8054031	600	400	250	22
63	42	8054042	600	400	250	25
90	62	8054062	750	500	250	31
110	76	8054076	750	500	250	31
125	87	8054087	750	500	250	32
160	111	8054111	1200	320	320	65
250	173	8054173	1200	320	320	65
350	242	8054242	1600	700	400	130
<b>With Socomec -ATY switch</b>						
400	277	805SATY40277	1600	600	500	125
630	436	805SATY40436	1600	600	500	135
800	554	805SATY40554	1600	800	500	135
1250	865	805SATY40865	1800	800	600	220
1600	1107	805SATY41107	1800	1000	800	350
2500	1730	805SATY41730	2100	800	1000	380
3150	2180	805SATY42180	2100	800	1000	430

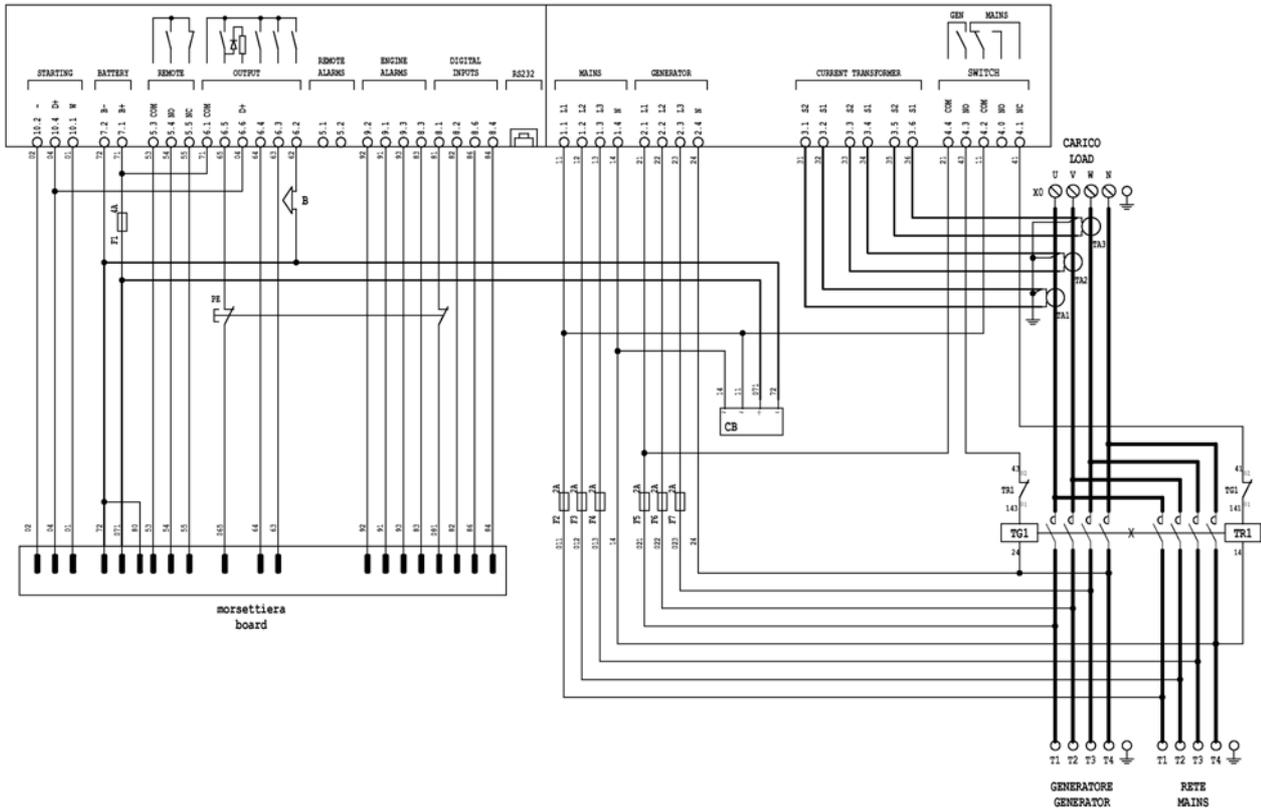


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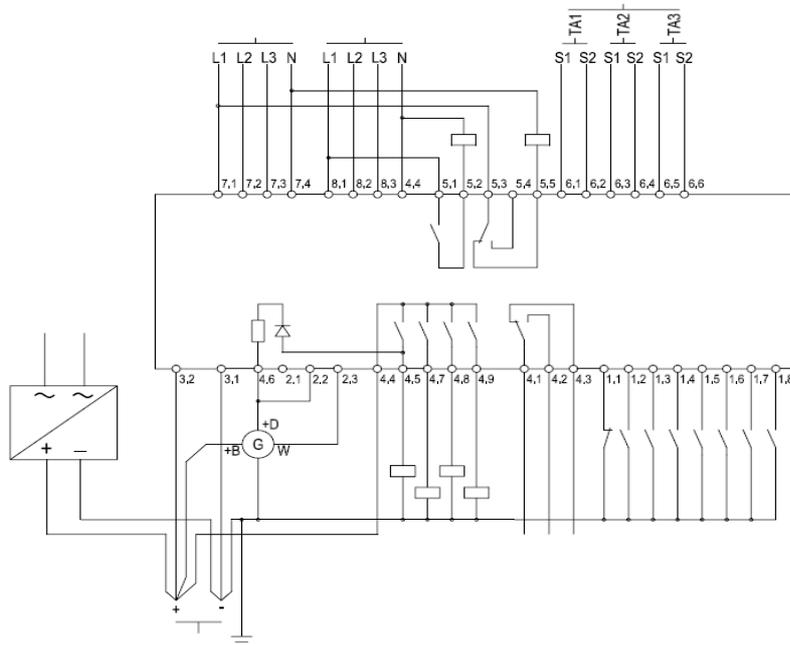
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## Scheme Panel

AT205



## Board TE805



- 7.1 ... 7.4 MAINS VOLTAGE
- 8.1 ... 8.4 GENERATOR VOLTAGE
- 5.1 - 5.2 GENERATOR CONTACTOR
- 5.3 ... 5.5 MAINS CONTACTOR
- 6.1 ... 6.6 CURRENT INPUTS
- 3.2 - 3.1 BATTERY 12 OR 24 VDC
- 4.6 - 2.2 - 2.3 ALTERNATOR TYPE BOSH, MARELLI...
- 4.5 FUEL SOLENOID VALVE
- 4.7 STARTING
- 4.8 THROTTLING DOWN DEVICE

- 4.9 BUZZER
- 4.1 ... 4.3 GENERAL ALARM
- 1.1 OIL PRESSURE
- 1.2 ENGINE TEMPERATURE
- 1.3 FUEL LEVEL
- 1.4 GENERATOR PROTECTION
- 1.5 EMERGENCY
- 1.6 EXTERNAL START
- 1.7 EXTERNAL STOP
- 1.8 RESERVE 1



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## TECNOELETTRA GENERAL SALES CONDITIONS

### QUOTATIONS

Any offer issued by the Seller remains valid for 30 days from the date of the quotation, unless stated otherwise, and is automatically void at the lasting date.

### PRICES

The prices are those specifically valid of the ruling price list, VAT excluded. Furthermore, they do not cover the costs of packing, carriage, delivery, custom duties and/or any other charges, unless stated otherwise. Except when agreed with **TECNOELETTRA** in writing, the ruling prices shall be applied to all deliveries beginning from January 1. Furthermore, the prices are not binding and for general guidance only: the Seller shall have the right to increase or decrease prices for eventual variations occurring in the cost of raw materials.

### MODIFICATIONS TO PRODUCTS

The Seller reserves the right and the faculty, without previous warning, to make any modification for improvement of the products, including constructive ones without however altering the overall structure or dimensions but assuring a total interchangeability at all times.

### SUPPLY

The terms of the contract only include what is clearly and specifically described in the Seller's order. At any moment, the contract shall be suspended in case the Buyer's property conditions change as per the Italian Civil Code art.1461. Performance of the contract by the Seller is subject to availability of goods and material from time to time.

### DELIVERY

Unless otherwise agreed in writing, as a general rule, delivery shall be ex works Guastalla. All responsibility on the Seller's part shall cease when the goods subject of the contract are despatched from the Seller's premises; goods are consequently transported at the risk and danger of the Buyer.

### DELIVERY TIMES

The delivery times defined in the Seller's quotations and in any other document issued by the Seller, begin from the date of receipt of the Buyer's order and are an estimate only.

The Seller reserves the right to extend the delivery time whenever the Buyer delays to fulfil the contract obligations and in particular if:

- there is a breach of payment;
- the Buyer does not provide each necessary data on time or does not promptly communicate his approval for drawings or schematic diagrams, whenever requested;
- the Buyer requires modifications during the contract period;
- the Buyer does not supply the materials of his supply on time
- circumstance beyond the Seller's control; which circumstances shall include but not be limited to weather conditions, fire, breakdown in the Seller's plant or machinery, floods, earthquakes, war;
- immobilisation requisitions, embargo, insurrection, shortage or breakdown of transport materials or plant, restrictions on the use of power, lockout, strike, stoppages, industrial disputes or acts of terrorism, etc.

### DELIVERY DELAYS

Eventual delivery delays do not give the Buyer the right to cancel the contract, totally or partially, and to receive damages, except when regularly stipulated in the contract.

### PACKING

It is always gratis.

### WARRANTY AND GUARANTEE

The Seller guarantees that the products the subject of the contract shall be free from defects including components and manufacture and specifications of the contract. The warranty period is 12 months from the date the goods the subject of the contract are despatched from the Seller's premises.

The warranty is applicable to the products supplied by the Seller and includes parts and components purchased from other suppliers of the Seller.

The guarantee does not cover:

- parts subject to normal wear
- parts damaged for improper usage
- parts damaged for inattentive and/or careless treatment
- parts damaged for improper assembly
- parts damaged for excessive stress imposed to materials
- parts damaged for negligence in the maintenance operations
- parts damaged for circumstances not subject to the Seller's control.

The Seller shall replace or repair all products or components which present proven manufacture defects on condition that they are claimed for in writing within the validity of the warranty period. Each repaired or replaced item is guaranteed for a period as the previous one.

The Buyer has no right to claim for damage or loss whatsoever kind arising out of the provision or performance. The guarantee is subject to the respect by the Buyer of the contract obligations, with particular respect of the terms of payment.

### PAYMENT

The payment of the Seller's invoice must be made in the form expressly specified in the contract.

The Buyer's takes upon himself all risks involved in the transfer of the sums, whichever the method used.

For the amounts which will not be received at the payment due date, the current bank interest of the Seller shall be applied.

Payment will not be withheld pending the settlement of eventual technical or commercial objections raised.

Eventual payment breaches give the Seller the right to suspend the outstanding contracts or to require their payment in advance.

### RETURN OF MATERIALS

The return of goods shall not be accepted unless previously agreed and authorized in a writing.

The acceptance of returned materials for causes not due to the Seller, depends only on the Seller's unquestionable discretion and at the conditions given herebelow:

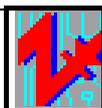
- standard material normally on stock
- original packing
- no visible damage
- indication of the purchase date, if possible, on the return documents
- validity of the product warranty
- 20% deduction for handling charges, VAT excluded
- return of material free of charge

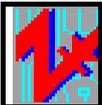
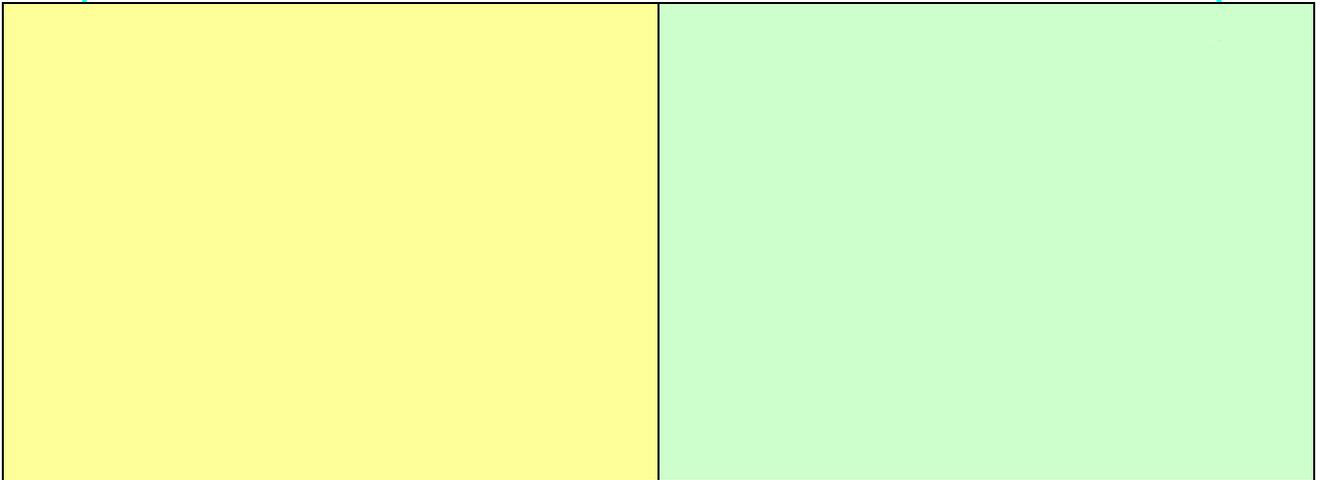
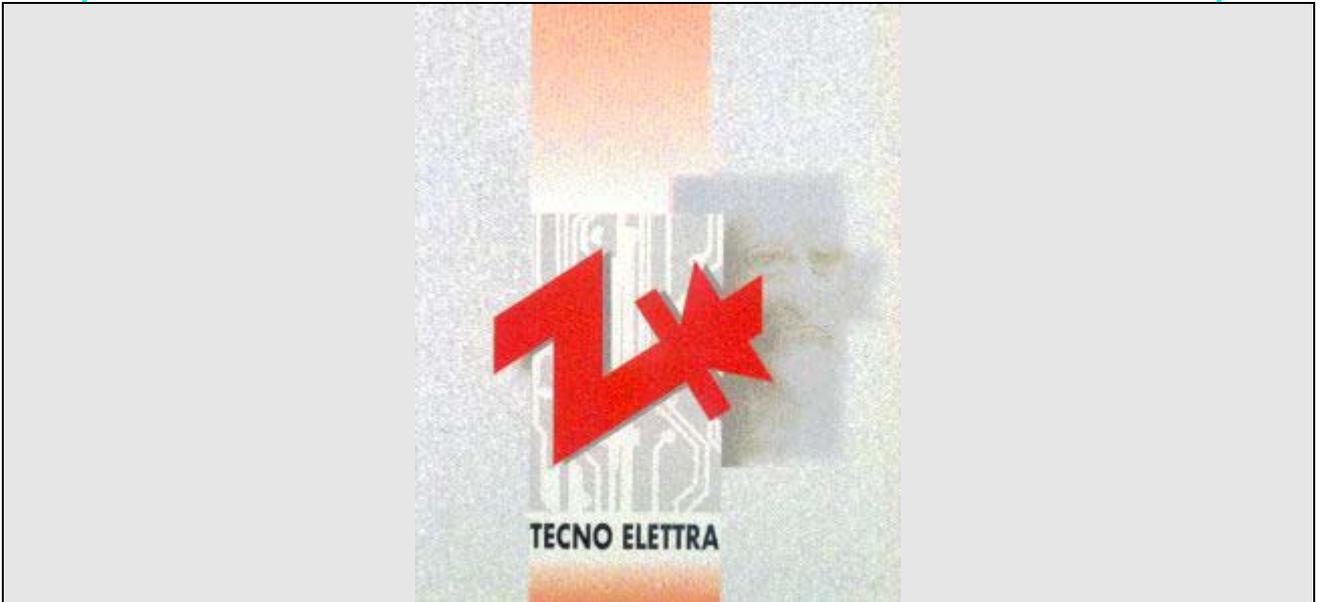
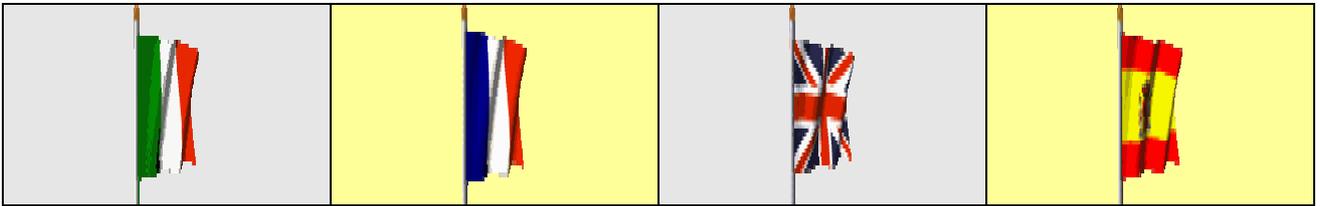
### PROPER LAW

For any dispute, the only competent court shall be Reggio Emilia. Whenever the Buyer intends to apply a penalty, it is to be notified by registered letter.

Retroactive effect to the date of letter receipt is not accepted. For all legal proceedings, our registered office at Via Dimo Vioni 5, Guastalla, Reggio Emilia, Italy is valid.

The proper law governing each contract is the Law of Italy. Conditions mentioned above cancel and substitute all previous ones.





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