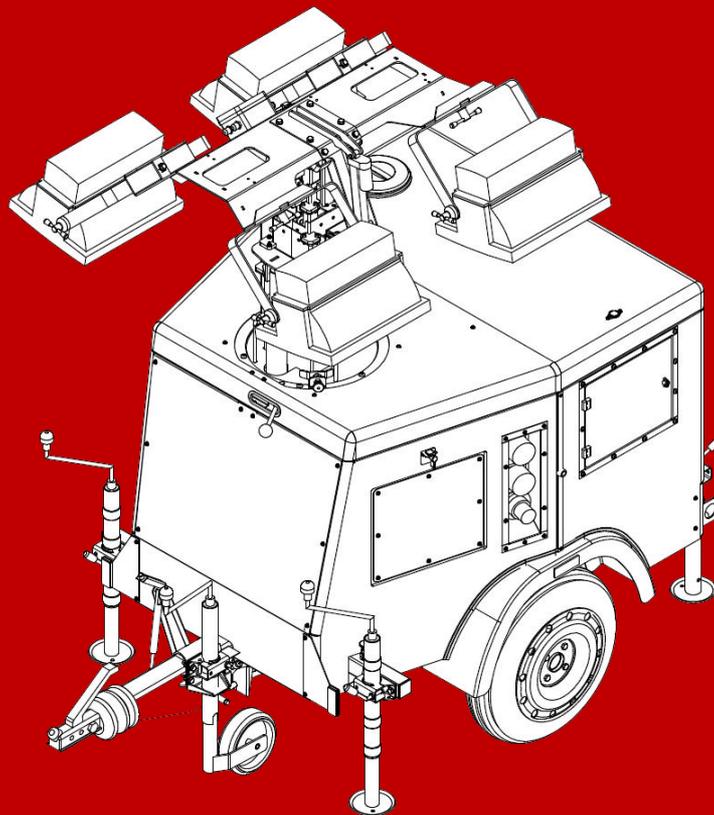


OPERATING AND MAINTENANCE MANUAL LIGHTING TOWER APOLO COMPACT



HIMOINSA[®]
THE ENERGY

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1. INTRODUCTION

It is our goal in this manual to provide you with basic information and instructions for proper installation and use of your lighting tower.

It is essential that you carefully read all the safety rules and warnings before, during and after you put your lighting tower into operation, as only in this way can we ensure you will have optimal normal service under ideal conditions for reliability and safety.

HIMOINSA S.L. considers itself obligated to warn you that the information in this manual can be considered valid only on its date of issue, since technological advances and updates of current regulations, may oblige us to make changes without prior notice.

This manual and the remaining reference documentation are part of the lighting tower you have acquired and should be kept and protected from anything that might damage them during the life of the tower. This documentation should accompany the equipment when it is transferred to another user or owner.

The manual should always be kept close by, so that it can be consulted when needed. Although the information given in this manual has been checked in detail, HIMOINSA can accept no responsibility for any writing, typing or transcription errors.

In accordance with Directive CEE 85/4374 and its subsequent modification 99/34, HIMOINSA is free of any responsibility resulting from defective installation, improper use of the machine, and noncompliance with the rules contained in this manual.

2. SAFETY RULES



Before working with the machine, carefully read the safety rules given and become informed regarding local safety requirements.

Installation, operation, maintenance and repair are to be carried out only by authorized, competent personnel.

The owner is responsible for maintaining the lighting tower in a safe condition. Parts and accessories should be replaced when they are not in proper working order.

As a preface to the contents of this manual, we will next detail the basic criteria that you should meet with special attention to your own safety and that of others:

General safety precautions

- Before operation, it is necessary to know how to stop the equipment quickly in the event of an emergency and fully understand the operation of all the lighting tower controls.
- Perform the relevant checks of the genset and the tower before putting them into operation, in order to avoid possible accidents affecting personnel or the equipment itself.
- Never allow other persons to use the lighting tower without previously having given them the instructions required for its proper and safe use.
- Do not allow minors to use it without the supervision of an adult familiar with the use of the lighting tower.
- Prevent access to the tower operation area by children and domestic animals in order to protect them, to the extent possible, from being injured by any part of the equipment.



- Stop and disconnect the genset immediately should any abnormal situation arise during operation. Locate and correct the problem before starting it back up again.
- Make sure that the lighting tower is properly located on a completely level firm surface to ensure that it operates properly and remains completely stable in unexpected winds.
- Lower the mast when wind speed exceeds 80 km/h.
- Do not tow the lighting tower on the highway at speeds exceeding 90 km/h.

IMPORTANT: To make the lighting tower safe and completely stable, always position the jack legs with the bubble or spirit level.

Safety against danger of electrocution

- Never handle the lighting tower, and the generator set that is part of it, when you have wet hands or feet.
- Never touch bare or disconnected wires. Maintain all electrical wires and connections in good condition.
- Always use appropriate plugs for the outlet receptacles on the generator set, never use zinc or wires without a plug or with bare ends. The use of these wires directly in the plugs can create a high risk of electrocution.
- Whenever wires are observed to be in poor condition, replace them and make sure they are installed correctly before restarting the lighting tower.
- Metal parts of installations which are exposed to human contact, and due to an insulation flaw or other reasons, may get in contact with voltage, must be connected to land-dispersion device. The lighting tower and the panel have been equipped with their respective grounding terminals.

The connection of these to the land-dispersion must be made with bare copper wires conductors with a minimum section of 16mm², or if not available, galvanized iron with a 50 mm² section. The resistance of such conductor, including the contact resistance, must not exceed 0.15 Ohm.

Fire safety

- Always refill the generator set fuel tank in a ventilated area with the engine completely off.
- Do not fill the generator set fuel tank while it is running or when the engine is hot.
- Do not fill the fuel tank to more than 90% of its capacity. Check that the tank cap is completely closed.
- Check to make sure that no fuel has spilled onto the set. Should this occur, it must be cleaned off and dried well before starting up the equipment. Residual fuel could cause a fire.
- Gasoline is flammable and its vapors are explosive. It is forbidden to smoke, have any flame present or cause sparks during fuelling or normal equipment operation.
- Keep flammable materials and objects away when operating or refueling.
- Do not place objects near air intakes, breathers, or the engine exhaust, because doing so could cause overheating of the genset and consequently a fire hazard.
- Do not place any object on the lamp bulbs immediately after they have been in use because they reach very high temperatures.

Safety from burns

- Never touch the engine or the genset exhaust pipe when it is running or for several minutes after it stops, as this can cause serious burns. Before handling and maintaining it, allow the engine to cool.
- Never touch the halogen bulbs for 10 minutes after use, as they can cause serious burns.



3. GENERAL DESCRIPTION

3.1. Composition of the lighting tower

HIMOINSA lighting towers are built by our technical and production team using the highest quality materials, sparing no expenses to achieve high performance, operationally versatile lighting towers.

They include a tower kit and a generator set, put together as a compact and balanced piece of mobile equipment.

- The **Tower Elevation Kit** consists of:

1. A hydraulic, telescopic vertical elevation mast with 9 sections, which reaches a total working height of 9 meters and has a light beam that can be manually oriented through 360° by manual rotation. Raising time: 13 seconds. Retraction time to the locked position: 25 seconds.

2. Supporting bracket for 4 IP65 flood lights, each with a 1,000 watt 90,000 lumen metal halide bulb. Bulbs rated to operate at ambient temperatures from -20 to 45°C.

- Noteworthy in the **rest of the tower assembly**:
3. Sound proofed generator set powered by the reliable, water cooled and fuel efficient YANMAR model 3TNV76 diesel engine .

4. A water-tight control, protection and management panel. The control and protection panel incorporates the M6 controller, an hour meter, siren, fuel level gauge, voltmeter, ammeter and thermal-magnetic circuit breakers for protecting lamps and auxiliary outlets

and the operating buttons; the mast is operated by two buttons that allow the mast to be controlled safely. The upper button controls vertical raising of the mast up to 9 m in 13 seconds and the lower button controls lowering of the mast to its final locked position in 25 seconds. Raising and lowering of the mast is powered solely by 12 volt DC coming from the battery so that this operation is independent of auxiliary power input.

5. 2 Auxiliary power outlets. The tower has two 16 amp auxiliary outlets, to provide power to auxiliary equipment.

6. 1 Auxiliary power input connection (male receptacle, 2L + N, 230V, 23A) that enables supplying current to the lamps (and/or the auxiliary receptacles) from an external source (mains, i.e. a power grid or another generator set). The tower can operate if we power it externally, even with the engine off.

7. Double safety lock on the mast. This locks the mast locking and prevents unwanted rotation during transport. To be able to rotate the mast and orient the light beam it has to be unlocked.

8. Handle for locking-unlocking the mast in the operating position. This handle enables locking down the mast orientation when in use.

9. Fluid retention tray (retention of 120% of the fluids of the engine and tank).

10. External fuel tank filler. Fuel tank cap with safety lock.

11. Emergency stop.

12. Ample accesses for maintenance and inspection.

13. 4 Leveling legs, two of them extendible to ensure perfect tower stability on any working surface. Eliminates the risk of tipping over under adverse environmental conditions.

14. Bubble or spirit leveler, located on the upper part of the genset to ensure precise tower leveling.



15. Automatic on/off programmer for the lamps, located on the back of the generator set with easy access and simple programming. Light sensor on the outside on the genset cover (OPTIONAL).

16. Engine exhaust system.

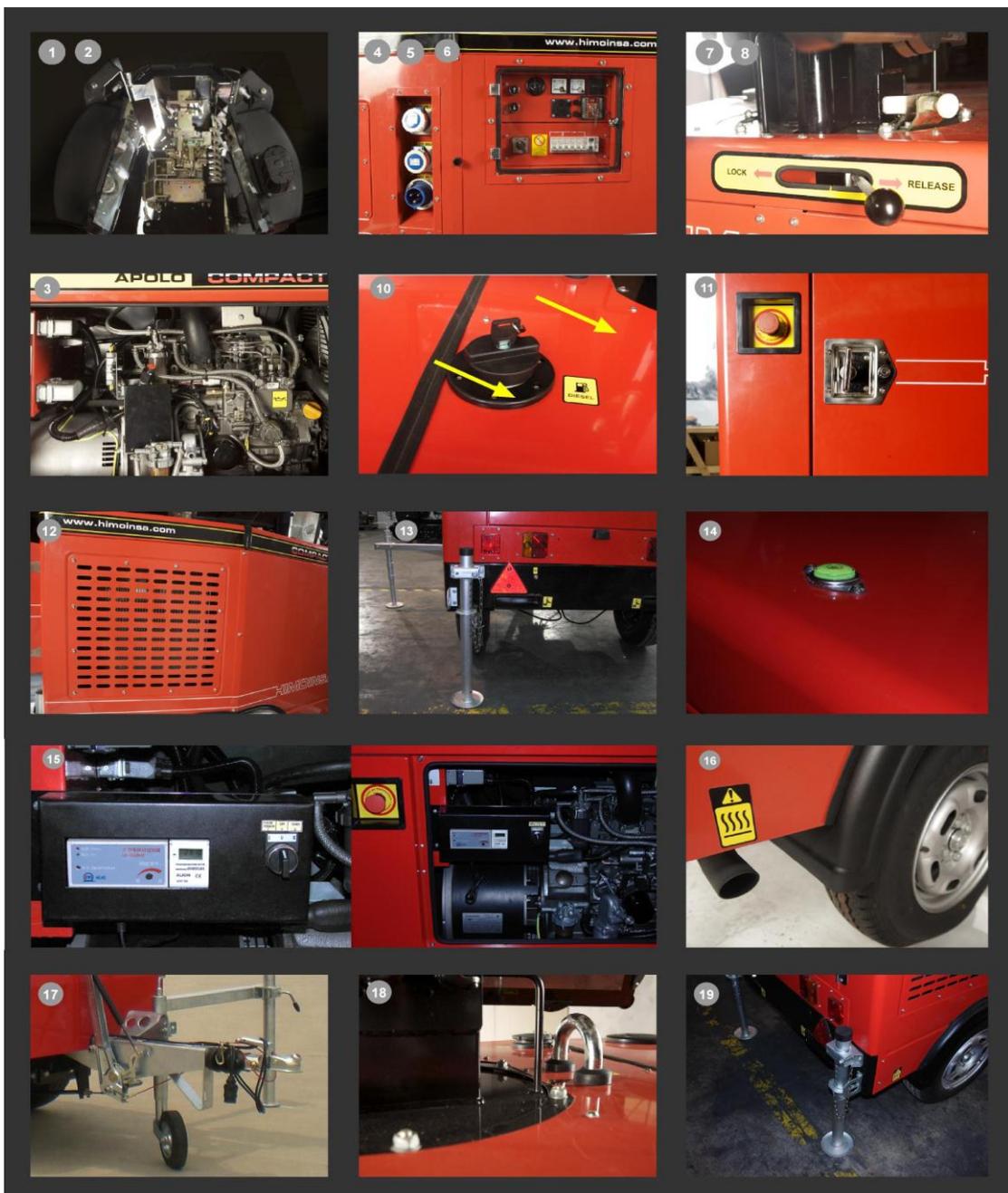
- **Mobile equipment:**

17. Transport kit: The tower is designed to be relocated on the highway, and includes jockey wheel, tongue with ball coupler and connections

for signal lights (brake and flashing lights) as well as marker reflectors and hand brake.

18. Includes eye hook and forklift slots on the rear enabling transport by forklift.

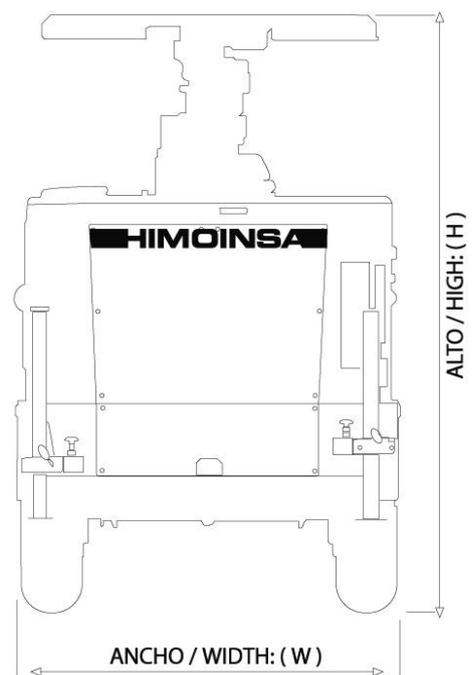
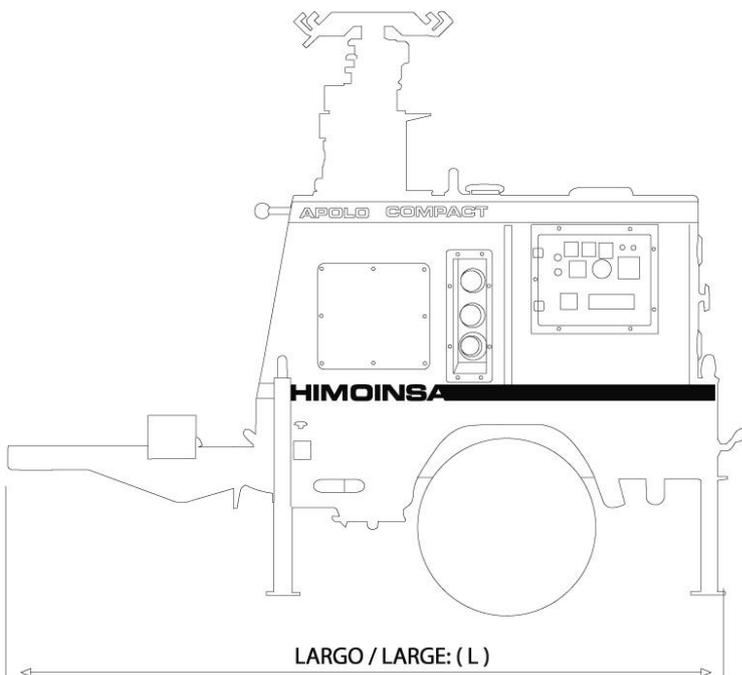
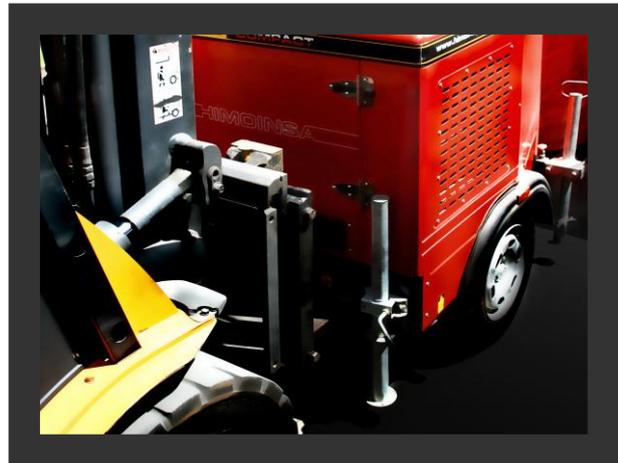
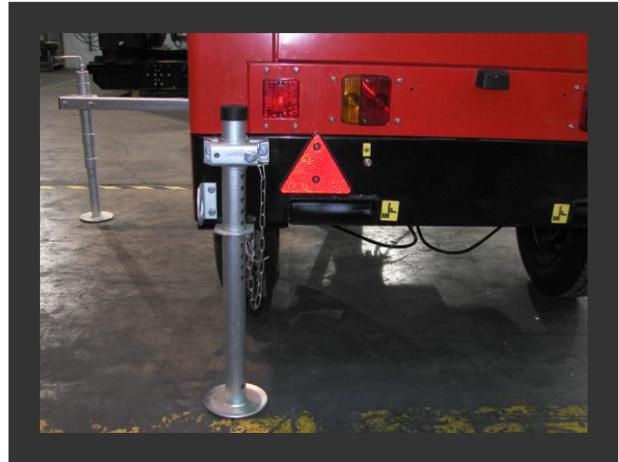
19. Tie down rings for fastening during transport to ensure complete immobilization to prevent possible damage during transport.





3.2. Technical information

Características técnicas		Technical data	
Modelo TORRE APOLO COMPACT	Mobile lighting tower model		HTYW 7 M5
Potencia (P.R.P)	Power (P.R.P)	kVA /kW	6.4 / 6.4
Frecuencia	Frequency	Hz	50
Voltaje	Voltage	V	230
Dimensiones máximas (en posición de trabajo)	Maximum dimensions (working position)	L x W x H	2.33 x 2.45 x 9.00m.
Dimensiones mínimas (en modo transporte)	Minimum dimensions (transport mode)	L x W x H	2.33 x 1.27 x 2.28m.
Peso en seco	Dry weight (unfuelled)		950 Kg.
Combustible	Fuel		Diesel
Capacidad del tanque	Fuel tank capacity		95 L.
Llenado del tanque	Tank refilling		externo/external
Autonomía	Autonomy		48
Nivel de ruido	Sound level		90LWA - 65dB(A) @ 7m
MOTOR		ENGINE	
Modelo	Model		YANMAR - 3TNV76
Nº cilindros y ubicación	Cylinders nº & position		3 L
Aspiración	Aspiration		Natural
Régimen de funcionamiento	Rated speed		1.500 r.p.m
Sistema de refrigeración	Cooling system		Líquido refrigerante / Cooling system
Consumo de combustible	Fuel consumption		2.62 l/hr
Regulador	Speed governor		Mecánico / Mechanical
ALTERNADOR		ALTERNATOR	
Nº Polos	Poles nº		4 Pol., 230V, 50Hz
Grado protección	Enclosure		IP21
MASTIL		MAST	
Tipo	Type		Hidráulico / Hydraulic
Secciones	Sections		9
Tiempo de subida / bajada	Erecting / Collapsing time		13 sec. / 25 sec.
Rotación	Rotation		360º (manual)
Doble bloque de seguridad	Double safety block		Standard
Nº de focos	Spotlights nº		4 x 1000 W
Tipo de focos	Spotlights type		Halogenuro metálico / Metal halide
Lúmenes totales	Total lumens		4 x 90.000 = 360.000
CARROCERÍA		CANOPY	
Capot insonorizado	Soundproof canopy		Standard
Bandeja de retención	Liquids retention basin		120% Líquidos motor y depósito 120% Liquids retention (engine&tank)
Enchufes auxiliares	Auxiliary sockets		2 x 16Amp. 230V
Entrada auxiliar de alimentación	Auxiliary input supply socket		1 x 32 Amp. 230V
Gancho de izado	Lifting eye		Standard
CHASIS		CHASSIS	
Kit de tracción	Traction kit		Standard
Pilotos de señalización	Roads lights and reflectors		Standard
Ruedas	Wheels		2 x 165R 13
Estabilizadores	Stabilisers		4
Porta-horquillas	Forklifts pockets		Standard
CUADRO		CONTROL PANEL	
Central de control y protección	Control and protection controller		Central manual M6 / M6 manual controller
Cuenta-horas, sirena, reloj de nivel de combustible, voltímetro, amperímetro e interruptores magnetotérmicos para protección de focos y enchufes auxiliares	Hour meter, siren, fuel level gauge, voltmeter, amps meter, thermal magnetic switches for the spotlights and auxiliary sockets		Estándar / standard
Pulsadores de maniobra	Maneuvering push buttons		2 (1xascenso, 1xdescenso) (1x rising, 1x descending)





4. PUTTING INTO SERVICE

Before putting the lighting tower into service, make sure that it is properly located on completely level ground to ensure proper operation and secure it against unexpected winds.

Note: Do not raise the mast at wind speeds exceeding 80 km/h

4.1. Checking equipment fluid levels

Check the various equipment fluid levels:

For the genset oil and gasoline level and air filter (See generator set manual).

For the hydraulic fluid level (See 6. Maintenance)

4.2. Anchoring

Once these simple, essential checks have been performed, which ensure optimal tower and generator set operation, we next anchor the APOLO COMPACT lighting tower properly. To do this, the following steps need to be followed precisely:

- Remove the lock pins, pull out the legs and align the holes, then reinsert the lock pins. **F. 1**
- Turn the handle on top the telescoping leg jack until resistance is felt, in this way the tower can be levelled and secured on the ground in the work area designated. **F. 2 -3**
- Only the front legs can be screwed out as the back ones are fixed and are adjustable only with their pins. **F. 4**
- Once the leveling legs are adjusted and the lighting tower is correctly leveled using the bubble or spirit level, the jockey wheel is lowered so it is supported on the ground in the work area. **F. 5**



F.1



F.2



F.3



F.4

4.3. Lamp Orientation

The lamps come already installed in the tower and we can orient them simply using small levers that allow them to be easily moved over 180°. **F. 5**



F.5

4.4. Connection between genset and lighting tower

The tower is built as a compact tower directly connected to the set. It is not necessary to make any kind of special connection.

4.5 Operating the lighting tower mast

IMPORTANT: In order to raise the mast, it is essential to have already set the hand brake. For safety reasons, if the hand brake is not set, the mast will not raise. **F. 6**



Operating the tower is very simple, by using the raising and lowering buttons located on the genset control panel and following these simple instructions:

1. Make sure the mast is in the locked position. **F. 7**
2. Raise the mast by pressing the lift button located on the control panel. **F. 8 – 9**



F.6



F.7

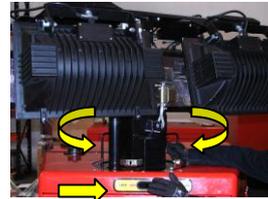


F.8

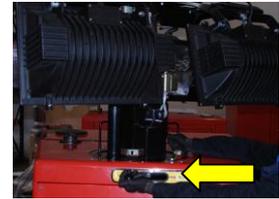


F.9

IMPORTANT NOTE: For safety reasons, whenever the brake is released, the mast will automatically descend.



F.10



F.11



F.12



F.13

4.6. Starting up the generator set

VERY IMPORTANT: Do not start the genset under a load, that is, make sure that the thermal-magnetic circuit breakers are off. **F. 14**

Turn the starter key, located on the side panel on the generator set, following the start up procedure given in the generator set instructions. **F. 15**

The mast has a lock which locks in lamp orientation. To change the orientation, the lock must be released by bringing the lever to the RELEASE position, turning the mast to the desired position and then locking it down with the lever by bringing it to the LOCK position. **F. 10 – 11**

In order to return the mast to the original position, the lever must be put in the RELEASE position and then it will be possible to rotate the mast to the original position. Once this is done, lock it down with the mast lock. **F. 12** For safety reasons, once a job is completed, it is recommended that the mast stay in the original, locked position that it comes in from the factory to prevent damage to the machine. **F. 13**



F.14



F.15

4.7. Turning on the lamps

Finally, in order to turn on the lamps, the Apollo Compact lighting tower includes 3 different modes for turning on the lamps using the automatic on/off programmer installed on the inside **F. 16**, which are:



- a) By means of the light sensor (Selector Position I)
- b) Manually (Selector Position 0)
- c) With the programmable timer (Selector Position II)

NOTE: To use the programmable timer, see the programmable timer user's manual.

It is only necessary to turn on the switches located on the generator set panel. **F. 17**



F.16



F.17

VERY IMPORTANT: In order to perform any raising/lowering or orientation operation, the lamps always must be turned off.

5. OPERATIONS TO PERFORM ONCE ITS USE IS COMPLETED

5.1. Disconnecting the flood lights

- a) Selector in Position 0: Manual Mode

Flip off the flood light switches and stop the generator set. **F. 18 – 19**



F.18



F.19

- b) Selector in Position I: Using the light sensor
- c) Selector in Position II: Using the programmable timer

5.2. Folding the mast

We recommend that you wait 10-15 minutes before performing this operation, due to the high temperatures reached by the flood light filaments, since it makes them quite vulnerable to small vibrations that are unavoidably generated when taking down the mast.

5.2.1 Lowering the telescopic mast

By pressing the lowering button installed on the genset control panel. **F. 20**



F.20

5.3 Retracting the telescoping jack legs

IMPORTANT: Before retracting the jack legs it's necessary to first make sure to lower and set the jockey wheel firmly on the ground. **F. 21 – 22**



F.21



F.22

Once this operation is finished, retract the telescoping jack legs and put the legs in the transport position, that is, with the fastening supports up. **F. 23 – 24**



F.23



F.24



5.4. Relocation on the highway.

In the event that it is desired to relocate the tower on the highway, the jockey wheel will need to be retracted.

NOTE: When raising the wheel, always make sure that it fits in properly, to keep it from spinning during transport and damaging the machine. **F. 25 – 26**



F.25



F.26

Place the ball coupler in position on the vehicle and when we see a green area appear on the safety button we can be sure it is locked in properly **F. 27**



F.27

IMPORTANT: If the green area on the button is not visible, it is not connected securely.

6. Maintenance

- **GENERATOR SET:** General maintenance (See generator set manual)
- **LIGHTING TOWER:** It suffices to say that the tower itself does not require extensive maintenance, since the simplicity of the system and the quality of the materials used to build it ensure that. However, we should know about the following operations:
 - **In the event of burnt out halogen bulbs,** it is advisable to use gloves or a protective cloth as a substitute.
 - **Do not touch the bulbs** directly with your fingers.
 - **If we are operating the lighting tower in a moist, dusty place,** we need to clean and dry it frequently.
 - **To change or check the battery,** the access is on the right side of the lighting tower. **F. 28**



F.28

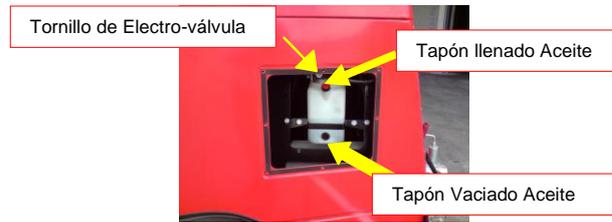
- **Steel cables and pulley assemblies:**
 - Periodically inspect the condition of cables every 100 hours or once a month.
 - When the nominal diameter of the steel cable has decreased 10% from corrosion or abrasion, it should be replaced immediately.
 - Inspect the wire stands and, in the event that one has broken, replace the steel cable as soon as possible.



- If there is any kind of deformation: kink, knot or crushed spot, replace the cable immediately.
- Important: Always use steel cables specified by the lighting tower manufacturer (the 6 × 37 + 1 type)
- When operating under highly corrosive conditions, coat the galvanized cables with oil every 300 hours or 3 months of operation.

● **Hydraulic system: F. 29**

- Inspect the hydraulic system and the level of hydraulic fluid every 300 hours or 3 months of operation. Add hydraulic fluid if needed, always eliminating any hydraulic fluid leak that might exist.
- In the event that the hydraulic cylinder raises with difficulty or intermittently, check the hydraulic fluid level.
- Change the hydraulic fluid every 2400 hours or 2 years of operation or when it has degraded or if it becomes contaminated by another product.
- Whenever changing the hydraulic fluid, change the filter and clean the tank.
- In the event of solenoid valve failure or some other problem that keeps the mast from descending automatically, this operation can be carried out by loosening the solenoid valve bypass screw. To raise the mast it is important that the solenoid valve bypass screw be fully tightened.
- Inspect the hydraulic system if hydraulic fluid is noticed on the ground.



F.29

If you have any questions, however, contact our technical department.

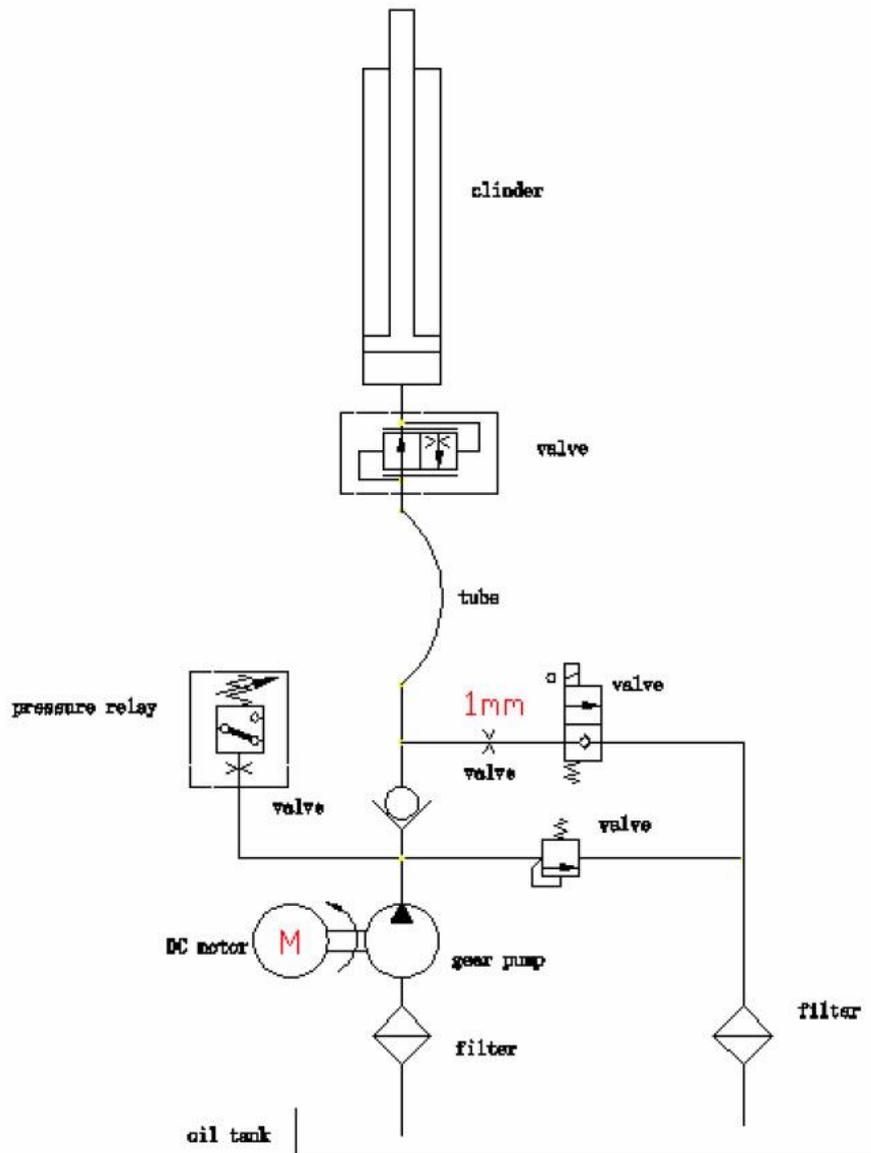
- **MOBILE EQUIPMENT:** Maintenance (See manual on the hitch coupler, inertia brake system and axle of the mobile kit)

7. TROUBLESHOOTING

Given the systems' simplicity, equipment failures are virtually nonexistent. However, if there are any problems, contact our technical department.



8. HYDRAULIC DIAGRAM





9. ELECTRICAL DIAGRAM

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
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CUADRO MANUAL PARA TORRE DE ILUMINACION
ESQUEMA ELÉCTRICO DE CONTROL "M6"
Y PROTECCIÓN MAGNETOTÉRMICA
DE 16 A 63 AMPERIOS
PARA SINCR0 ALTERNATOR

LIGHTING TOWER MANUAL START CONTROL PANEL
"M6" CONTROL AND THERMAL MAGNETIC
PROTECTION ELECTRIC DIAGRAM
FROM 16 TO 63AMPERES
FOR SINCR0 ALTERNATOR

WARNING
MAKE SURE ALL THE POWER UNITS ARE OFF
BEFORE START THE GENSET!!

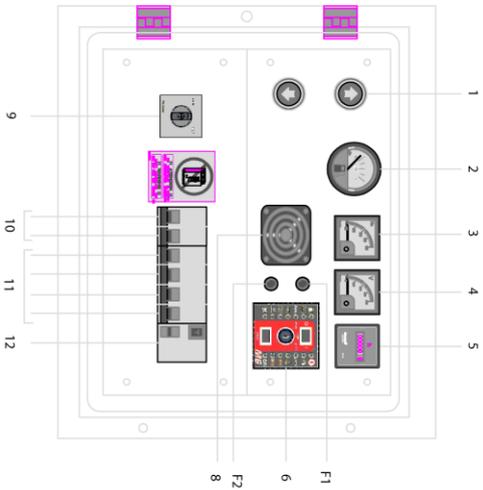
	DESIGN: _____ DATE: _____ NAME: Liu Xiang Xiang REVISED: _____ DATE: _____ NAME: _____ APPROVED: _____ DATE: 09/09/2010 SIGNATURE: <i>Cheng Peng</i> OLD CODE: _____ NEW CODE: _____ HIMOINSA GROUP SINGAPORE 51, Prasadai Street, District 05, Pasir Ris, Singapore 519090. No Power Seen Utilizado Para La Construcción Del Objeto Representado. Reproducto o Comunicado a Terceros Sin Autorización Previa De Esta Sociedad.	DESCRIPTION: CUADRO MANUAL DIGITAL TIPO CAC16 ESQUEMA ELECTRICO DE CONTROL "M6" Y PROTECCION MAGNETOTERMICA CON RELE DIFERENCIAL
HIMOINSA	MANUAL DIGITAL START CONTROL PANEL TYPE CAC16 "M6" CONTROL AND THERMAL MAGNETIC PROTECTION ELECTRIC DIAGRAM WITH DIFFERENTIAL RELAY	Nº P.L.: HC-CAC16-D0001 CODE: 1.1/09 PERIOD: _____ RES. UNIT: _____ mm SCALE: _____ SE: 00

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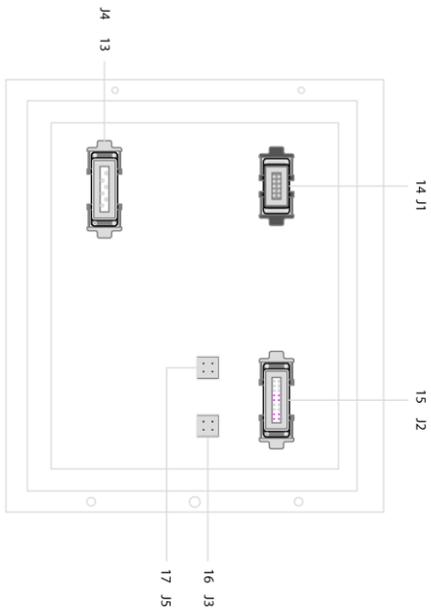


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FRONT VIEW



BACK VIEW



DISTRIBUCIÓN DE LOS PÓLOS EN EL FRONTAL DEL CUADRO

Nº DE PÓLOS EN FRONTAL PANEL	AMPEROS
F1 GENERAL POSITIVOS DE POTENCIA	20
F2 GENERAL POSITIVOS	
F3 PHASE U	2

Nº	DESCRIPCIÓN - DESCRIPTION	CODIGO CODE	Nº	DESCRIPCIÓN - DESCRIPTION	CODIGO CODE
1	ROTA BILTON	3000---	9	2 POSITION SWITCH	3000---
2	RELO NIVEL DE COMBUSTIBLE - FUEL LEVEL GAUGE (INC.)	3000---	10	CIRCUIT BREAKER CONTACTOR R10A FORBASE	3000---
3	FRECUENCIÓMETRO FREQUENCYMETER	3000---	11	CIRCUIT BREAKER CONTACTOR R10A FORBASE	3000---
4	VOLTIMETRO-VOLTMETER	3000---	12	EXHIBIT LEDS RELAY 02.5A 2P 300MA	3000---
5	CANTIDADIAS 230V - HOURS COUNTER 230V	3000---	13	CONECTOR MATE 6 PÓLOS - 6 PINS MATE CONNECTOR	3000---
6	TERMINAL MANUAL REARME GOVERNING	3000---	14	CONECTOR MATE 10 PÓLOS - 10 PINS MATE CONNECTOR	3000---
7	KEY START CONTROL PANEL GOVERNING (M5)	3000---	15	CONECTOR TERMINAL 16 PÓLOS - 16 PINS TERMINAL CONNECTOR	3000---
8	TERMINAL (NONI 1101)	3000---	16	CONECTOR TERMINAL 8 PÓLOS - 8 PINS TERMINAL CONNECTOR	3000---
			17	CONECTOR TERMINAL 4 PÓLOS - 4 PINS TERMINAL CONNECTOR	3000---



DESIGN:	DATE:	NAME:	SIGNATURE:	OLD CODE:	
REVISOR:	09/09/2010	Lu Wang Jiang			
APPROVED:	09/09/2010	Cheng Peng			

DESCRIPCIÓN:
CUADRO MANUAL DIGITAL TIPO CAC16 ESQUEMA ELÉCTRICO DE CONTROL "M6"
Y PROTECCIÓN MAGNETOTÉRMICA CON RELE DIFERENCIAL

MANUAL DIGITAL START CONTROL PANEL TYPE CAC16 "M6" CONTROL AND THERMAL MAGNETIC PROTECTION ELECTRO DIAGRAM WITH DIFFERENTIAL RELAY

HIMOINSA	
Nº P.:	HC-CAC16-D0001
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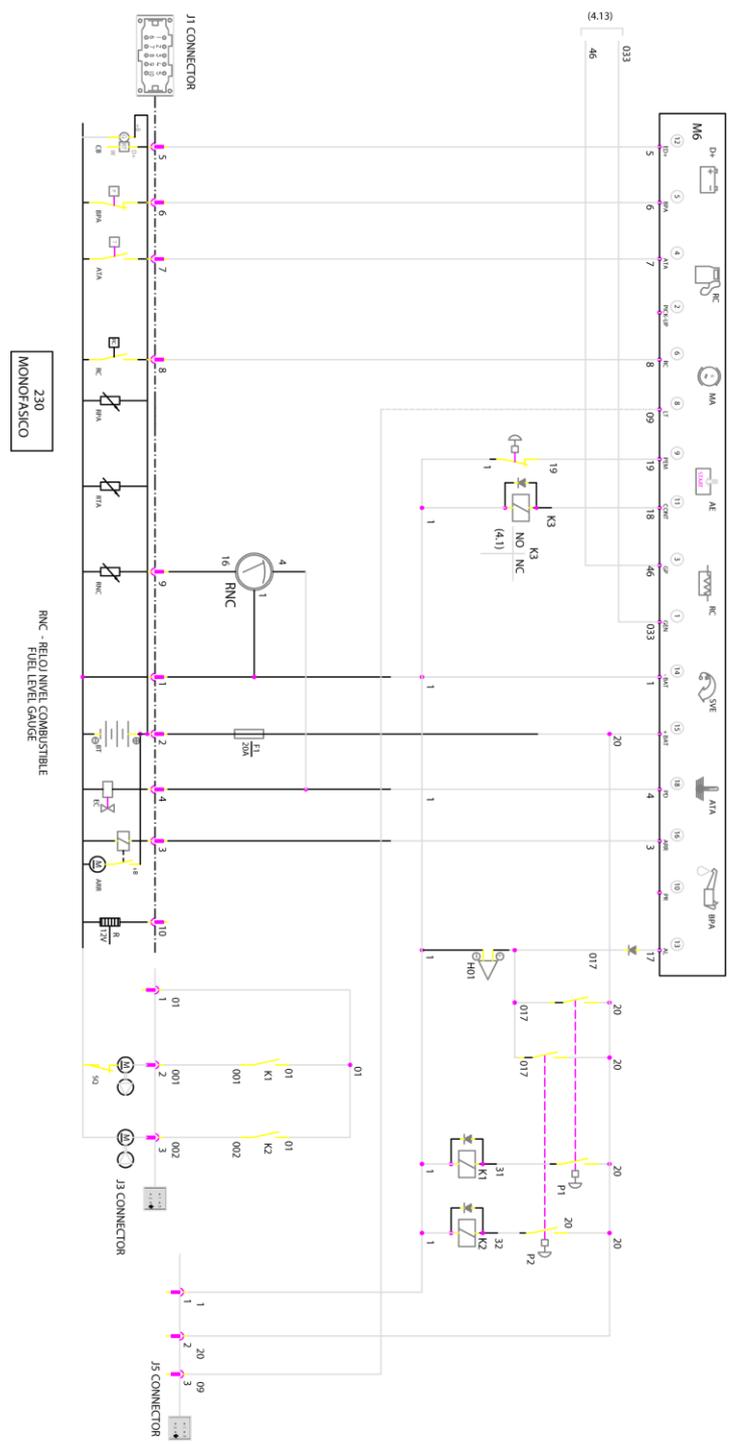
Tel: +34 968 191 128



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ITEM	DESCRIPCION	ESTADO	FECHA	REVISOR	PROYECTISTA	REVISOR	FECHA	REVISOR	PROYECTISTA	REVISOR	FECHA	REVISOR	PROYECTISTA	REVISOR	FECHA	REVISOR	PROYECTISTA	REVISOR	FECHA	REVISOR	PROYECTISTA	REVISOR	FECHA	
1	REVISION	REVISION	09/09/2010	Cheng peng																				
2	REVISION	REVISION	09/09/2010	Cheng peng																				

ITEM	DESCRIPCION	ESTADO	FECHA	REVISOR	PROYECTISTA	REVISOR	FECHA																	
12	MANOS CRIBA																							
13	UP CONTROL																							
14	MANOS CRIBA																							
15	MANOS CRIBA																							
16	UP CONTROL																							



230
MONOFASICO

RNC - RELOI NIVEL COMBUSTIBLE
FUEL LEVEL GAUGE

DESIGN:	DATE:	NAME:	SIGNATURE:	OLD CODE:
REVISOR/	APPROVED:	09/09/2010	Cheng peng	
HIMOINSA Ctra. Murcia - San Javier km 23,6 C.P. 30730 - Murcia - España				
EL PRESENTE DISEÑO ES PROPIEDAD DE HIMOINSA S.L. NO PODRA SER UTILIZADO PARA ALGUNA OBTENCION DE DISEÑO SIN LA AUTORIZACION PREVIA DE ESTA SOCIEDAD.				

DESCRIPTION:	
CUADRO TPO CAC16	ESQUEMA ELECTRICO DE CONTROL (M6)
CONTROL PANEL THE CAC16 ME ELECTRICAL CONTROL SYSTEM	
Nº P.:	HC-CAC16-D0001
CODE:	3.109
REVISION:	01
MEAS. INT:	mm SCALE: S/E

www.himoinsa.com

Tel: +34 968 191 128

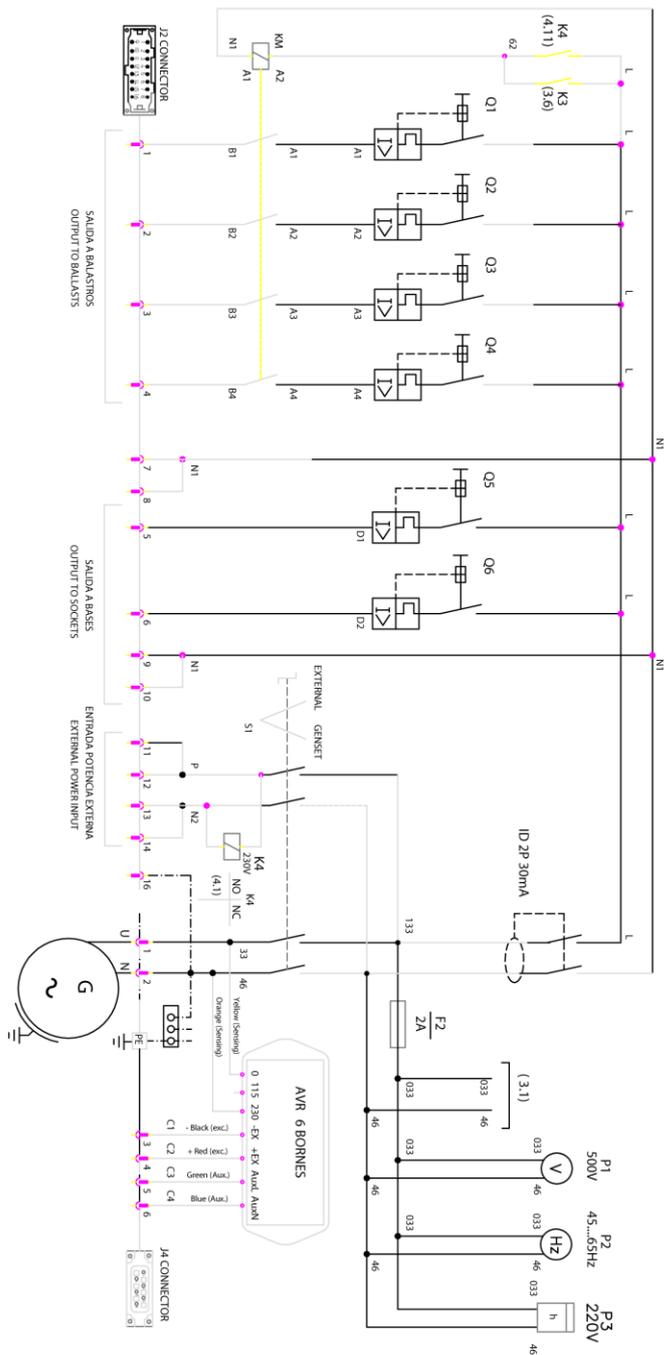


HC-CAC16-D0002-R0

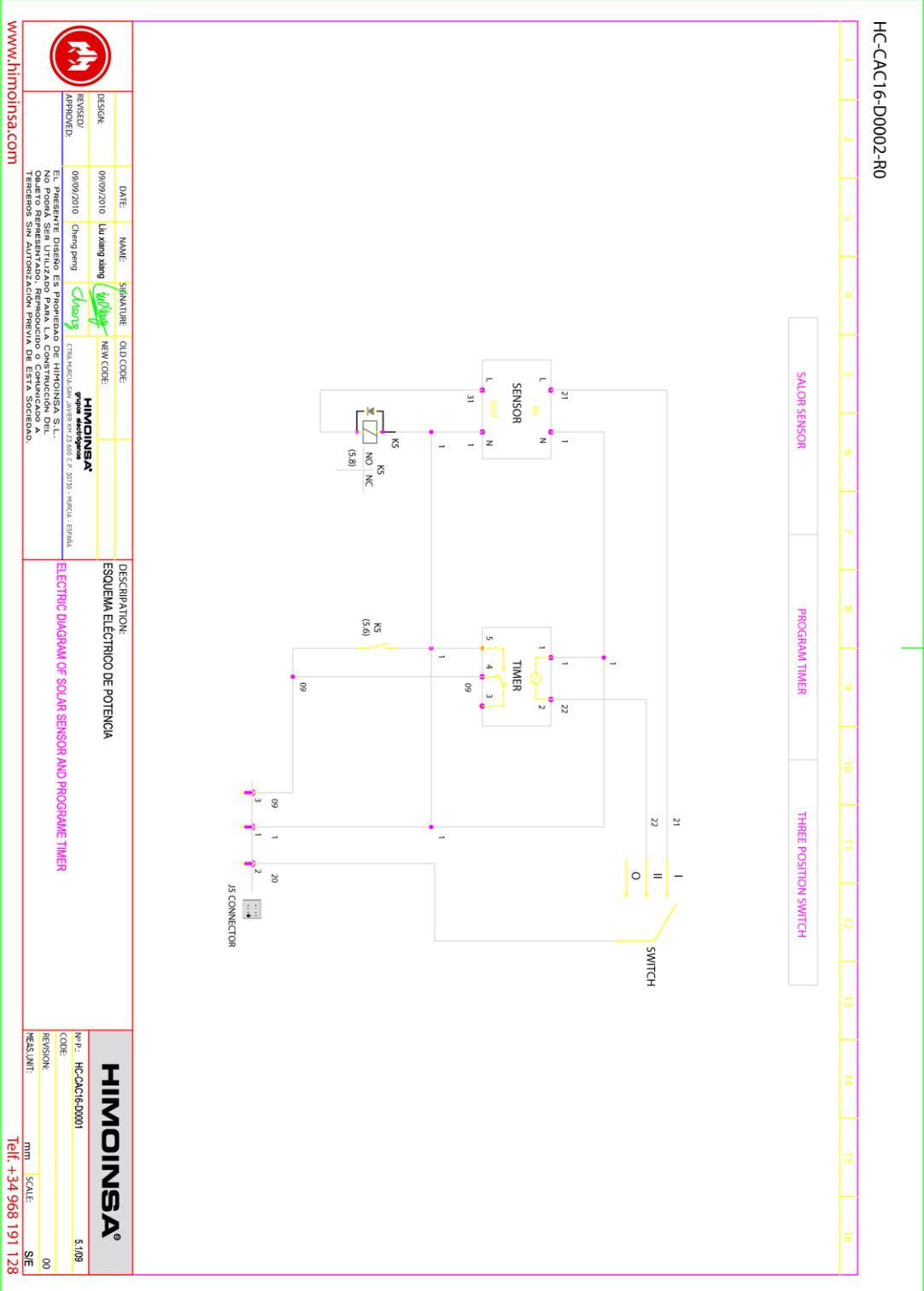
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
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ESQUEMA CORRESPONDIENTE A
LASTENSIONES DE
DIAGRAM FOR THE FOLLOWING
VOLTAGES:
220-230-240V
MONOFASICO
SINGLE PHASE

ESQUEMA DE FUERZA	BASES	PROTECCION DIFERENCIAL	CONTROL DE INSTRUMENTOS: VOLTIMETRO-FRECUENCIOMETRO Y CUENTAHORAS
LAMPARAS	PART OF POWER (EXTERNAL)	DIFERENCIAL PROTECTION	CONTROL INSTRUMENTS: VOLTMEETER-FREQUENCY METER & HOUR COUNTER
LAMPS	SOCKETS		

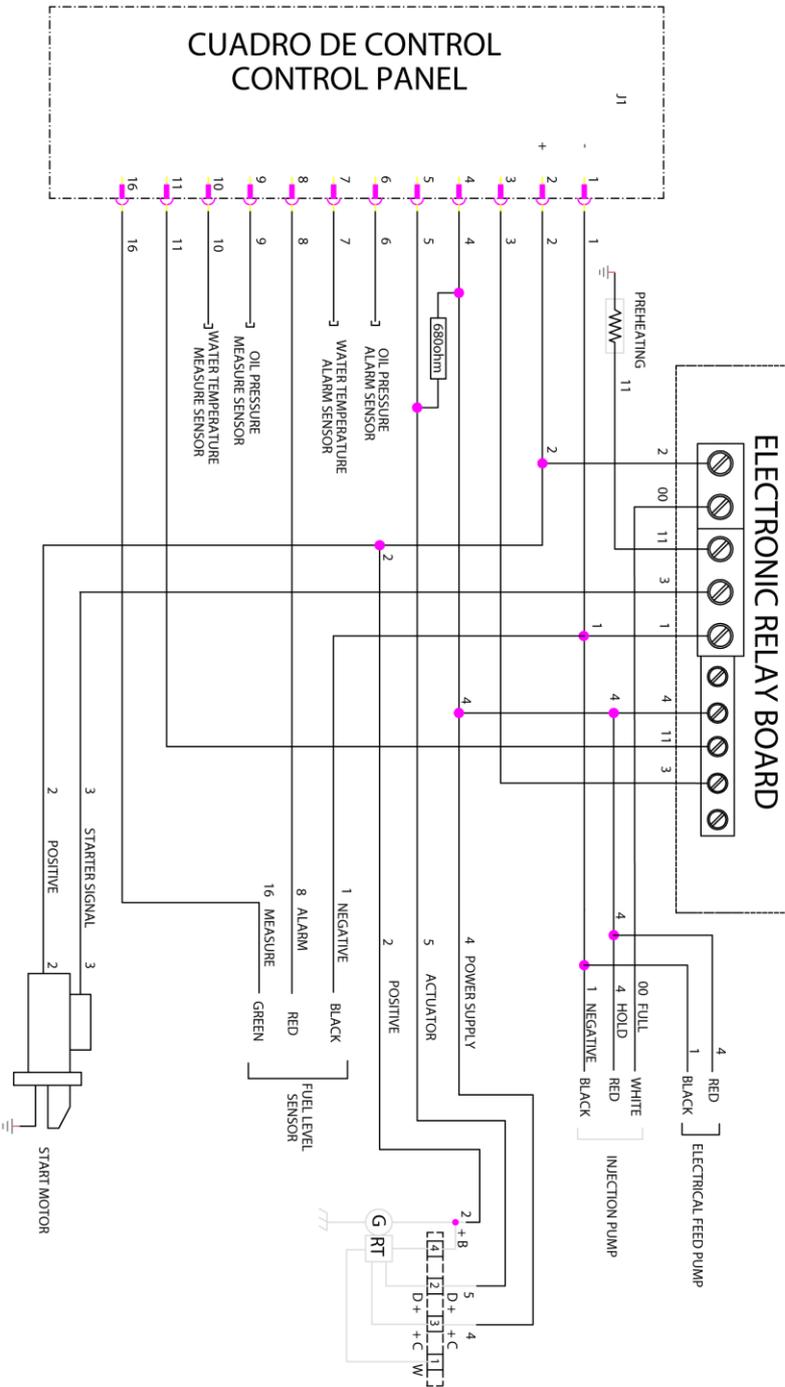


	DESIGN: 09/09/2010	NAME: Liu xiang xiang	SIGNATURE:	DATE: 09/09/2010	DESCRIPTION: ESQUEMA ELECTRICO DE POTENCIA
REVISION/REVIZIONES:	09/09/2010	Cheng peng	Cheng peng	09/09/2010	ELECTRICO DIAGRAM POWER CIRCUIT
<p>EL PRESENTE DIAGRAMA ES PREPARADO POR HIMOINSA S.L. PARA EL CLIENTE REPRESENTADO. REPRODUCCION O COMERCIALIZACION DE ESTE DIAGRAMA SIN AUTORIZACION PREVIA DE ESTA SOCIEDAD.</p>					
<p>HIMOINSA C/ San Juan, 10 - P. 3010 - Murcia - España C.I.F. B-12.160.542</p>			<p>HIMOINSA C/ San Juan, 10 - P. 3010 - Murcia - España C.I.F. B-12.160.542</p>		
<p>www.himoinsa.com</p>			<p>RESULT: mm SCALE: SE</p>		





HC-CAC16-D0002-R0

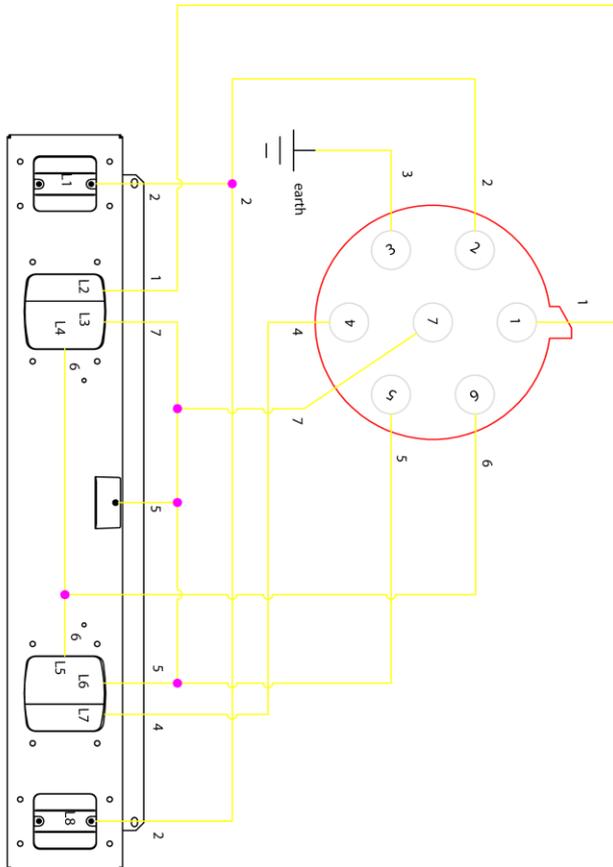


DESIGN:	DATE:	NAME:	SIGNATURE:	OLD CODE:	DESCRIPTION:
REVISION:	09/09/2010	Lu Xiang xiang	<i>Lu Xiang xiang</i>		ESQUEMA ELECTRICO CARGADOR BATERIA
APPROVED:	09/09/2010	Cheng peng	<i>Cheng peng</i>		YANMAR ENGINE WH ELECTRICAL DRAWING
<p>EL PRESENTE DISEÑO ES PREPARADO POR HIMOINSA S.L. NO PODRÁ SER UTILIZADO PARA LA CONSTRUCCIÓN DEL PRODUCTO SIN LA AUTORIZACIÓN PREVIA DE ESTA SOCIEDAD.</p>					
<p>HIMOINSA CENTRO DE INVESTIGACIÓN Y DESARROLLO S.A. C/ 30730 - HUELVA - ESPAÑA</p>					
<p>www.himoinsa.com</p>					
<p>HIMOINSA</p>					
Nº DE:	HC-CAC16-D0001	6/108			
CODE:					
REVISION:		00			
MEAS. UNIT:	mm	SCALE:			
		S/E			
<p>Tel. +34 968 191 128</p>					



HC-CAC16-D0002-R0

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16



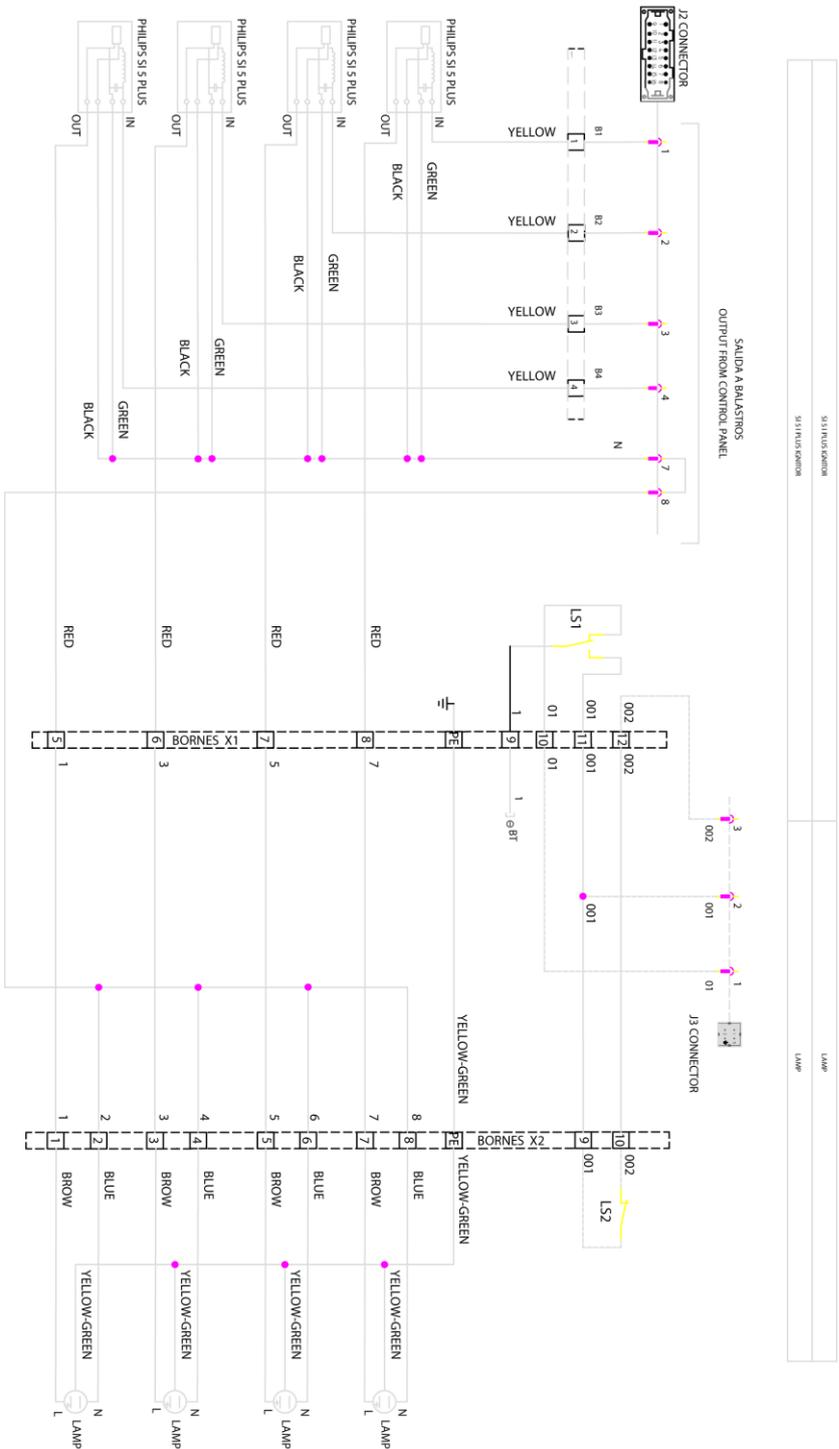
Pins 3,6 and 7 on
 socket are male.
 Pins 1,2,4 and 5 are female.

L1,L8	Fog light
L2	Left-hand indicator
L3	Left-hand side and tail light
L4,L5	Stop light
L6	Right-hand side and tail light
L7	Rihte-hand indicator

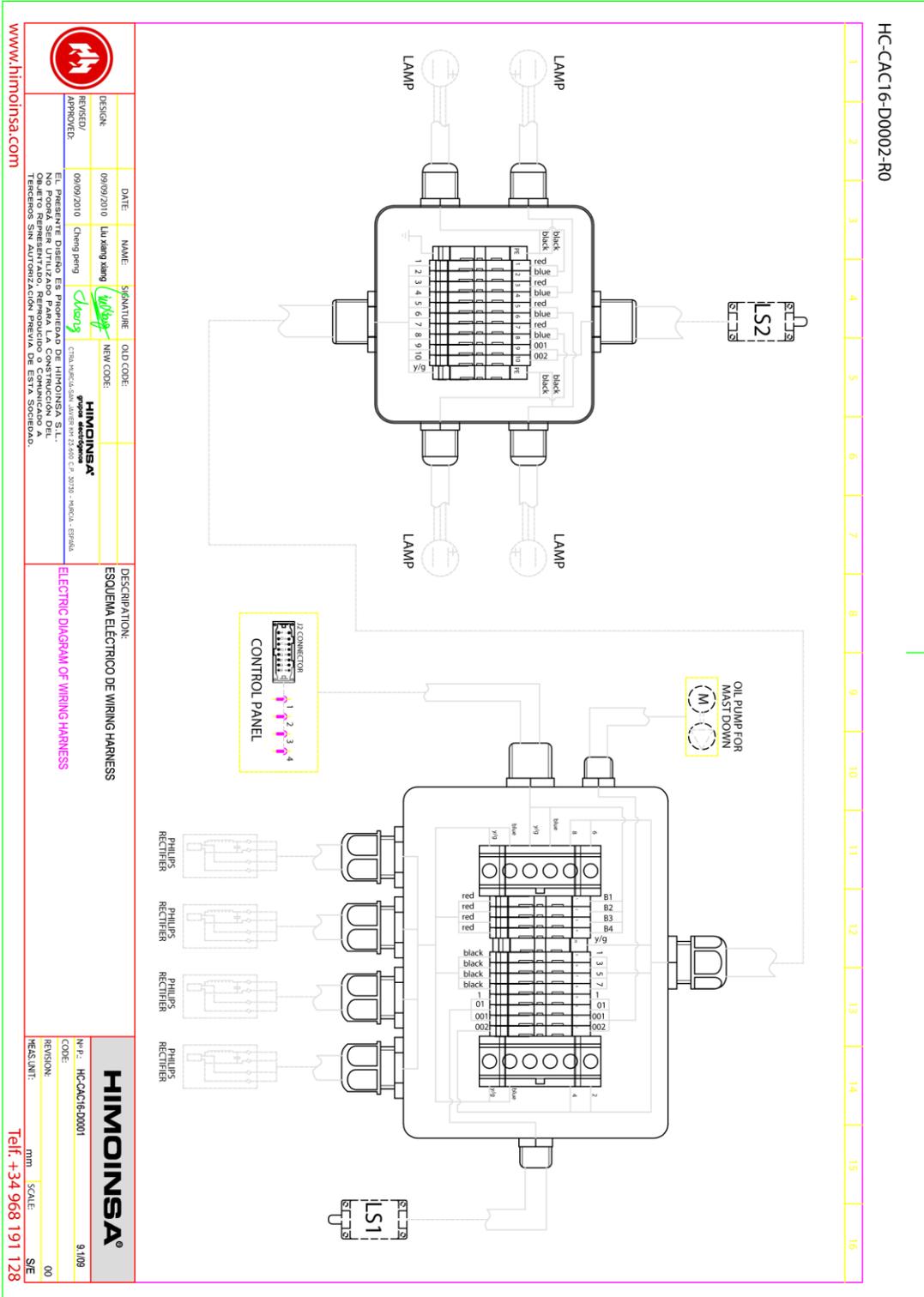
		DATE: 09/09/2010		NAME: Liu Xiang Wang		SIGNATURE: <i>Liu Xiang Wang</i>		OLD CODE:		DESCRIPTION: ESQUEMA ELECTRICO DE TAILLIGHT	
DESIGN: 09/09/2010		NAME: Liu Xiang Wang		SIGNATURE: <i>Liu Xiang Wang</i>		OLD CODE:		DESCRIPTION: ESQUEMA ELECTRICO DE TAILLIGHT		NEW CODE:	
REVISOR: CHENG PENG		DATE: 09/09/2010		NAME: CHENG PENG		SIGNATURE: <i>Cheng peng</i>		OLD CODE:		DESCRIPTION: ELECTRIC DIAGRAM OF TAILLIGHT	
APROBADO: CHENG PENG		DATE: 09/09/2010		NAME: CHENG PENG		SIGNATURE: <i>Cheng peng</i>		OLD CODE:		DESCRIPTION: ELECTRIC DIAGRAM OF TAILLIGHT	
<p>El presente diseño es propiedad de HIMOINSA S.L. No podrá ser utilizado para la construcción de un objeto representando, reproducción o comunicación a terceros sin autorización expresa de esta sociedad.</p>											
<p>HIMOINSA TRANSMISORES DE ENERGIA</p>				<p>www.himoinsa.com</p>							
<p>Nº P: HC-CAC16-D0001</p> <p>CODE: 7/109</p> <p>REVISION: 00</p> <p>MEAS. INT: mm SCALE: S/E</p>		<p>Tel: +34 968 191 128</p>									



HC-CAC16-D0002-R0



		DATE: 09/09/2010		NAME: Lu Xiang Xiang		SIGNATURE:		OLD CODE:		DESCRIPTION: ESQUEMA ELECTRICO DE POTENCIA	
DESIGN: 09/09/2010		REVISOR/ APPROVED: Cheng peng		NEW CODE: HIMOINSA grupo de ingenieros		S11 INFLUENCION		S12 INFLUENCION		ELECTRIC DIAGRAM OF LAMP	
<p>EL PRESIDENTE DENTRO DE SU PROPIEDAD DE HIMOINSA S.L. AUTORIZA A LOS INGENIEROS DE HIMOINSA S.L. PARA OBLIGAR REPRESENTADO, RECONOCIMIENTO O COMUNICADO A TERCEROS SIN AUTORIZACION PREVIA DE ESTA SOCIEDAD.</p>											
www.himoinsa.com		Nº P: HC-CAC16-D0001		CODE: 8.109		REVISION: 00		HEADLINE: mm SCALE: S/E		Telf: +34 968 191 128	





WARNING

WARNING COMMISSIONING

Model

Engine N°

Date

Client

Date

Client's signature

Stamp & Signature

Counterfoil to be returned to **HIMOINSA** signed and dated within 15 days of service missing.
(see address in back)

GUARANTEE CERTIFICATE

Ref. Generating set

Model

Engine N°

Delivery day:

Está garantizado a partir de esta fecha.

AGENT

Client

Date Client's signature

HIMOINSA, S.L.
N.I.F.P. 80540222
Fábrica: Ctra. Murcia - San Javier, Km. 23
Teléf. 968/19 128 • Fax 968/19 12 17
30730 SAN JAVIER (Murcia)

Stamp & Signature



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THE ENERGY



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HIMOINSA HEADQUARTERS:

Ctra. Murcia - San Javier, Km. 23,6 | 30730 SAN JAVIER (Murcia) Spain

Tel. +34 968 19 11 28 - +34 902 19 11 28 | Fax +34 968 19 12 17 Export Fax +34 968 33 43 03

Manufacture facilities:

SPAIN - FRANCE - INDIA - CHINA - USA

Subsidiaries:

ITALY | PORTUGAL | POLAND | GERMANY | SINGAPORE |

UAE | MEXICO | PANAMÁ | ARGENTINA