ALMAR-500

This diesel generator set is engineered for applications requiring reliable standby or prime power in fixed installations.

It is designed with a focus on power continuity, operational safety, and optimized fuel efficiency, ensuring stable and consistent performance across varying load conditions.



Visual representation only.

Operating Mode		Prime	Standby
Power	**kVA**		
Power	**kW**		

PRIME POWER

Valid for unlimited operation under variable load conditions. A 10% overload is permitted for up to one hour within any 12-hour operating period.

STANDBY POWER

Intended for limited-duration operation under variable load as a standby power source. Overloading is not permitted.

General Specifications

Generator Model		
Engine Model		
Fuel Type		Diesel
Frequency	*Hz*	
Voltage	*V*	
Power Factor	*CosΦ*	

Dimensions		Canopy Type	Open Type
Length	*mm*	4100	3350
Height	*mm*	2570	2250
Width	*mm*	1660	1600
Weight	*kg*	4244	3442
Fuel Tank Capacity	*L*	955	955

H: External K: Container TBA: To be added

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Engine Specifications

Engine Brand		Alimar
Engine Model		AYDS6TI128
Engine Type		4 Stroke Diesel Engine
Number of Cylinders / Configuration		6L
Total Displacement	*L*	12,94
Bore x Stroke	*mm*	129 x 165
Compression Ratio		17.5:1
Engine Speed / Frequency	*rpm/Hz*	1500 / 50
Engine Standby Power	*kWm*	441
Engine Prime Power	*kWm*	401
Aspiration System		Turbocharge, Intercooler
Injection System		Direct
Governor Type		Electronic
Cooling System		Water
Coolant Capacity	*L*	63
Cooling Air Flow	*m^3/min*	516
Lubricating Oil Capacity	*L*	32
Electrical System	*VDC*	24
Battery Capacity	*Qty x Ah*	2 x 180
Charging Alternator Output	*A*	27
Jacket Water Heater	*Qty x W*	TBA
Combustion Air Flow	*m^3/min*	29,3
Exhaust Gas Flow	*m^3/min*	87,8
Exhaust Gas Temperature	*°C*	≤ 545°
Fuel Consumption at 100% Load	*L/h*	84,1
Fuel Consumption at 75% Load	*L/h*	62,7
Fuel Consumption at 50% Load	*L/h*	41,4

Alternator Specifications

Number of Phase / Poles		3 / 4
Excitation System		Self Excited
Voltage Regulator		Automatic
Voltage Regulation		1%
Insulation Class		H
Protection Class		IP23
Connection Type		Star
Frequency	*Hz*	50
Power Factor	*CosΦ*	0,8
Total Harmonic Distortion (No Load)		<%3,5
Output Voltage	*VAC*	231 / 400

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Standard Equipment

Engine

Alimar Generator sets are equipped with state-of-the-art, water-cooled, four-stroke diesel engines. The engines are configured to deliver balanced fuel consumption, reliable operation, and stable performance under varying load conditions. Both electronic and mechanical governor options are available to meet different operational requirements.

Alternator

The alternators used in Alimar Generator sets are validated and tested in accordance with applicable international and national technical standards. They are configured with electronic voltage regulation to ensure stable voltage performance, along with long-life bearing systems for extended durability. All components are selected based on strict performance, efficiency, and reliability criteria.

Control Panel

The standard control panels used in Alimar Generator sets are designed to provide safe and user-friendly operation through comprehensive measurement, monitoring, warning, and alarm functions. The robust steel enclosure with electrostatic powder coating ensures long-term durability in demanding operating environments.

Base Frame & Fuel System

The base frame and fuel system are engineered as a high-strength steel construction designed to safely support the full load of the generator set. Anti-vibration mounts minimize operational vibrations, while integrated lifting points enable safe handling and installation. Depending on the model and application requirements, the fuel tank can be configured as either base-mounted or external.

Cooling System

The cooling system consists of an industrial-grade radiator, expansion tank, and cooling fan. It is engineered to maintain optimal operating temperatures and ensure reliable performance under continuous and demanding operating conditions.



Visual representation only.

Canopy Features

Alimar Generator canopies are designed in compliance with Directive 2000/14/EC. As standard, they feature flame-retardant internal lining for sound and thermal insulation, a corrosion-resistant coating system, and lockable service doors for ease of maintenance. The modular design enables efficient servicing and simplified access. The canopy structure is optimized in accordance with the engine and exhaust system to ensure effective airflow without compromising cooling performance. The base structure is equipped with lifting lugs and anti-vibration mounts to ensure safe handling and stable operation.

Optional Accessories

The listed equipment and features represent a selection of solutions that may be available depending on the product group and configuration.

- Automatic Transfer Switch (ATS)
- Thermal Magnetic Circuit Breaker (motorized / manual)
- PMG / AMEP-supported Electronic Voltage Regulation
- Winding and Bearing Temperature Monitoring Sensors
- Remote Alarm / Monitoring Panel
- Critical Silencer
- Spring-Type Seismic Isolators
- Stainless and Insulated Main Fuel Tank
- Oil and Fuel Tank Heaters
- Anti-Condensation Heater for Windings
- Water Level Monitoring Sensor
- Multiple Voltage / Frequency Options
- Trailer

Standards

Alimar Generator products are designed, manufactured, and tested in compliance with applicable EU Directives/Regulations and the international and national standards listed below.

- **TS ISO 8528-4**
- **TS ISO 8528-5/TS EN ISO 8528-13**
- **TS ISO 8528-8/TS EN ISO 8528-13**
- **TS 12650 Service Qualification Certificate**

- **2006/42/EC – Machinery Safety Directive**
- **2014/30/EU – Electromagnetic Compatibility (EMC) Directive**
- **2014/35/EU – Low Voltage Directive (LVD)**
- **2000/14/EC – Noise Emission in the Environment by Equipment for Use Outdoors Directive**

- **ISO 9001:2015 – Quality Management System**
- **ISO 14001:2015 – Environmental Management System**
- **ISO 45001:2018 – Occupational Health and Safety Management System**
- **ISO 10002:2018 – Customer Satisfaction Management System**

Applied directives and standards may vary depending on configuration. Please contact the manufacturer for details.

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Control Panel

The automatic control module is designed to perform Automatic Mains Failure (AMF) functions for single genset applications. It continuously monitors the operating status of the utility mains and the generator, ensuring power continuity and safe operation.

With its backlit display, the user can clearly and easily monitor the generator's real-time operating status, measured parameters, and alarm information. The control module is programmable via the front panel or through optional external communication interfaces, and is suitable for integration with remote monitoring and centralized control systems.



Measurement & Monitoring Features

Electrical Measurements

- Generator and utility voltages (3-phase – phase – neutral)
- Generator and utility frequency
- Generator phase currents
- Active power (kW), apparent power (kVA), reactive power (kVAr)
- Power factor (Cosφ)

Engine & System Parameters

- Engine speed
- Battery voltage
- Engine operating states and alarms
- Total running hours counter

Control & Operating Functions

- Utility monitoring and automatic transfer functions (AMF – Automatic Mains Failure, MRS – Remote Start)
- Generator circuit breaker control
- Manual and automatic operating modes
- Engine start / stop control
- Test run functions
- Suitable for remote monitoring and control infrastructures (optional)

Communication & Integration

- USB connection (for configuration and service purposes)
- CANBUS (J1939) communication
- RS232 / RS485 communication (with optional plug-in modules)
- Modbus RTU / Modbus TCP support (optional)
- SNMP v1 / v2c / v3 protocol support (optional)
- Multiple generator sets can be monitored and managed via centralized monitoring software and SCADA systems.

Protection & Safety Functions

Electrical Protection

- Over / Under Voltage Protection (ANSI 59 / 27)
- Over / Under Frequency Protection (ANSI 81O / 81U)
- Overcurrent Protection (ANSI 50 / 51)
- Negative Phase Sequence and Phase Unbalance Protection (ANSI 46)
- Overload (Active Power) Protection (ANSI 32)

Engine Protection

- Overspeed / Underspeed
- Engine faults and warnings via ECU
- Engine protection functions via external sensor inputs

Panel & Mechanical Features

- Monochrome LCD display (3.2")
- User-friendly front panel interface
- Fault and event log memory
- Password-protected settings and service menu
- Manual control via front panel
- Front panel protection class: IP65

Environmental Durability

- Operating temperature: -20 °C to +70 °C
- Storage temperature: -30 °C to +80 °C
- Industrial design suitable for high vibration and harsh site conditions

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