

AEM™ DA16/OPEN

Data Sheet

Certified company:



16 KVA
1800 RPM
480/277-440/254-380/220V.
60 HZ.



ROBUST &
RELIABLE



360°
SERVICE



PREMIUM
EQUIPMENT



TAILORED
MANUFACTURING



FRIENDLY
USE

INDUSTRIAL RANGE POWER, RELIABILITY AND WARRANTY

PURE INNOVATION ENERGY

Industrial Range Mod. DA16/OPEN

Open Series

Engine
Deutz F2L2011

Alternators Available
Mecc Alte
Stamford
Leroy Somer



Power

	PRP	LTP
Power in KVA	16	17
Power in KW	12,8	13,6

General Specifications

Revolutions [RPM]	1800
Voltage(s) [V]	480/277-440/254-380/220
Frequency [Hz]	60
Cos (Ø) [0-1]	0,8

Legend

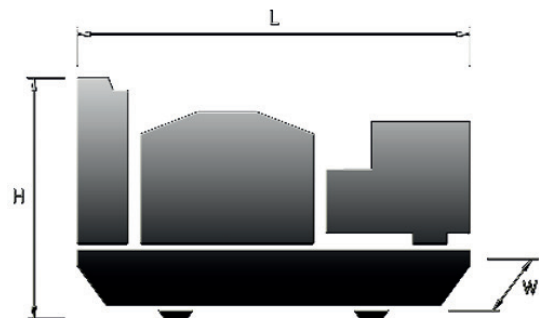
- **PRP (Prime Power):** Maximum power supplied by the generating set for continuous periods of time and with variable loads.
- **LTP (Limited Time running Power):** Maximum power supplied by the generator for short and punctual emergency use periods. Generally about 10% more power of the PRP.
- **KVA (Kilovolt-ampere):** The most common unit for measuring the power of a generator. 1 KVA is equivalent to approximately 0.8 kilowatts power.

Consumption

	litres/hour
25%	-
50%	2,8
75%	3,3
100%	4,1

Measurements and weight

Length (L) [mm]	1500
Width (W) [mm]	800
Height (H) [mm]	1230
Volume [m ³]	1,5
Weight [KG.]	390
Fuel tank [L]	80
Autonomy 75% [h]	24,2



Engine features

Brand - Model
Deutz - F2L2011
Refrigeration
Air

The engine provides the necessary mechanical energy source to turn the alternator and generate electricity. The diesel engines are the most use in the AEM generators due to its reliability and its mechanical, ecological and economic benefits.



Engine data

	PRP	LTP
Power in KW	13,7	15,1
Engine type	4-stroke	
Number of cylinders	2	
Displacement [L]	-	
Oil capacity [L]	6	
Oil consumption (100%) [% Comb.]	0,3	
Fuel consumption (100%)	-	
Bore / Stroke [mm]	94/112	
Compression	19	
Aspiration	Natural	
Start-up System	Electric	
Type of regulation	Mechanic	
Starter [KW]	3	
Battery [Ah]	55	

Remarks: The powers of diesel engines for stationary applications make reference to the following environmental conditions according to ISO 3046/1:

- Ambient temperature: 25°C
- Atmospheric pressure: 1000 mbar (750 mm/Hg)
- Relative humidity: 30%

Additional information will be included in the Engine Manual supplied with the AEM generating set. For further information please do not hesitate to contact us without any obligation.

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Flow - Installation

Refrigeration airflow [m ³ /h]	1275
Combustion air volume [m ³ /h]	68
Exhaust gas flow [m ³ /h]	199
Exhaust gas temperature [°C]	510

Alternator features

Alternators available

Mecc Alte
Stamford
Leroy Somer

The alternator is responsible for transforming the mechanical energy provided from the engine to electrical energy, generating an alternating current using electromagnetic induction.

Alternator data

Poles	4
Standard type of connection	Star
Type of coupling	S.A.E.
Insulation	Type H
Cos (Ø) [0-1]	0,8
Excitation	Self-excited brushless
Regulation	Electronic (A.V.R.)
Coupling system	Flexible Disc



Remarks: The environmental conditions reference for alternators, for stationary applications according to IEC 34-1, ISO 8528-3 and CEI 2-3 are:

- Ambient temperature: 40°C (30° NEMA)
- Altitude: 1000m. above sea level (674 mm/Hg)

Specific data according to model and voltage

480/277 V.		Power [KVA]				Performance				
	Mod.	PRP	LTP	Short circuit capacity	Protec.	25%	50%	75%	100%	
Mecc Alte	ECP3-2LN/4	16	18	300% (20s)	IP21	-	86,1	88	87,9	
Stamford	PI044G	19	21	-	IP23	76,6	82,6	82,9	82,3	
Leroy Somer	TAL040D	19	21	-	IP23	78,4	83,8	84,6	84,2	

440/254 V.		Power [KVA]				Performance				
	Mod.	PRP	LTP	Short circuit capacity	Protec.	25%	50%	75%	100%	
Mecc Alte	ECP3-2LN/4	16	18	300% (20s)	IP21	-	86,1	88	87,9	
Stamford	PI044G	18	20	-	IP23	76,7	82,6	82,8	82,2	
Leroy Somer	TAL040D	17,5	19	-	IP23	-	-	-	-	

380/220 V.		Power [KVA]				Performance				
	Mod.	PRP	LTP	Short circuit capacity	Protec.	25%	50%	75%	100%	
Mecc Alte	ECP28-S/4	17	19	300% (20s)	IP21	-	86,2	88,6	88,7	
Stamford	PI044G	18,8	21	-	IP23	-	-	-	-	
Leroy Somer	TAL040E	17,5	19	-	IP23	-	-	-	-	

Additional information will be included in the Alternator Manual supplied with the AEM generating set. For further information please do not hesitate to contact us without any obligation.

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Control panels

The electrical panels are responsible for monitoring and controlling the machine operation. Each generator is supplied with comprehensive documentation including several manuals and relevant recommendations.



InteliNANO



DSE3110



InteliLite AMF25



DSE6020

Manual & Start-up/Stop signal Control Panels (InteliNANO or DSE3110)

- Manual Mode: The user is in charge of start and stop the machine depending on his needs. It is usually installed where there is no electric grid.
- Start-up / Stop Signal Mode: An external signal is the responsible for sending the order to start or stop the genset. It is often used with level sensors pumps, irrigation control, timers, etc. that automating the start-up/ stop process.
- The control panel is usually built in the machine.
- The kit with InteliNANO switchboard includes at least the installation of ammeters.
- The kit with switchboard DSE3110 series includes ammeters, voltmeter and fuel gauge.
- Relevant instrumentation will be installed in case oil pressure and temperature measurements are necessary.
- Main engine integrated protections: Low battery level, fuel reserve, low oil pressure and high engine temperature.
- Main alternator integrated protections: the switchboard InteliNANO adds over and low voltage protection.
- Other protections: Differential protection and circuit breaker protection.

Automatic Panels (InteliLite AMF25 or DSE6020)

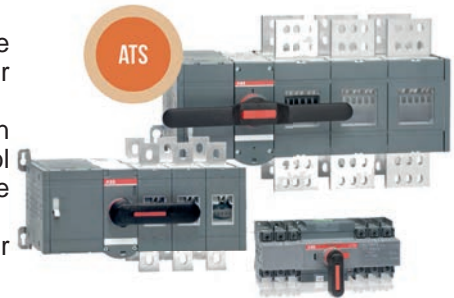
- It is installed on generators that operate in emergency mode of the grid. Designed to control an external change-over-switch. The switchboards work in manual, start-up/stop signal and automatic mode and can take control of the generating set and the power grip.
- In automatic mode the switchboard is monitoring constantly the state of the grid. In case of failure of the grid the generator will start-up as the main source of power.
- The control panel is usually built in the machine.
- The control panel equips the controller InteliLite AMF25 or DSE6020 able to read voltages, frequencies, intensities, active-reactive-apparent power, power factor, fuel level, oil pressure, engine temperature, battery voltage and hour-counter. Includes battery charger.
- Main engine integrated protections: Low battery level, over and low speed, fuel reserve, low oil pressure, high engine temperature, start-up and stop failure.
- Main alternator integrated protections: Over and low voltage, over and low frequency, direction of rotation, power imbalance between phases.
- Other protections: Differential protection and circuit breaker protection.

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Data Sheet

Automatic Transfer Switch Panels – ATS (Switchboard IntelliATS optional)

- The change-over-switch is the responsible for alternating automatically the supplying source of energy between the grid and an emergency generator or between two electrical networks.
- This control panel is not embedded into the machine, it is installed in an independent control cabinet. If the generating set is not able to control the change-over-switch then the switchboard IntelliATS can optionally be installed to take over the genset and the grid.
- Main protections: Over and low voltage, over and low frequency, over intensity, short-circuit and power imbalance between phases.



Commutator

Synchronized/Parallel Panels (IntelligentNT/InteliMains o DSE8610)

- These control panels are able to synchronize one or several machines among themselves or with an existing grid to work together and to provide energy in unison.
- It is installed in allocations where the business continuity is essential like: Hospitals, refrigeration facilities, power plants, support to the mains, ...
- The control can be built in the machine or in an independent cabinet or can be designed in a tailored solution for the project.
- Switchboards included are able to monitor: Voltages, frequencies, intensities, active-reactive-apparent powers, power factor, fuel level, oil pressure, engine temperature, battery voltage, hour-counter... The generator includes motorized circuit breakers.
- Main engine integrated protections: Low battery level, over and low speed, fuel reserve, low oil pressure, high engine temperature, start-up and stop failure.
- Main alternator integrated protections: Over and low voltage, over and low frequency, direction of rotation, power imbalance between phases.
- Other protections: Differential protection.
- Tailored solutions to meet the requirements of each project (Wide possibilities).



IntelligentNT/ InteliMains



DSE8610



IntelliLite AMF25



DSE6020

FTR Control Panels (IntelliLite AMF25 or DSE6020)

- It is installed in generators that operate as emergency of the Grid, supports manual mode, start-up/stop signal mode and automatic mode. The panel is able to carry out the control of the generator and the network.
- The principal mode is the automatic mode in which the switchboard is constantly monitoring the Grid, when a failure is detected the genset start-up and it is established as a main source power.
- It is not embedded in the machine. This panel includes both the switchboard and the change-over-switch required to automate the process. Also supports manual and start-up/stop mode. This panel is suitable when the installation is near.
- The type of the assembled switchboards are able to read: Voltages, frequencies, intensities, active-reactive-apparent powers, power factor, fuel level, oil pressure, engine temperature, battery voltage, hour-counter, among other measures. Equipped with battery charger.
- Main engine integrated protections: Low battery level, over and low speed, fuel reserve, low oil pressure, high engine temperature, start-up and stop failure.
- Main alternator integrated protections: Over and low voltage, over and low frequency, direction of rotation, power imbalance between phases.
- Integrated protections for the Grid: Over and low voltage, over and low frequency.
- Other protections: Differential protection. Circuit breaker protection depending on the machine power.

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Premium standard equipment

The AEM Industrial Range has the most comprehensive equipment of the market.

Scope of standard supply

- Diesel engine.
- Electronic Alternator Regulator - AVR.
- Silent Blocks for engine and alternator (non-guillotining elastic anti-vibration fasteners).
- Engine/Alternator wiring.
- Control panel.
- Differential and circuit breaker protections.
- Emergency stop.
- Steel base plate.
- Fuel tank.
- Externally accessible fuel filler neck & lockable cap.
- Sealed frame with draining liquids screwed caps.
- Fuel level sensor.
- Battery.
- Exhaust pipe.
- Residential exhausts installed inside the framework.
- Oil drainage Kit.*
- Soundproofed canopy/framework.*
- Security key locks.*
- Lifting hooks.*
- Powder paint.
- Busbar/Terminal block.
- Hazard signalization stickers.
- Electrical grounding.
- Identification plate.
- Generating Set documentation.

Extra equipment (Optional)

In addition to the standard scope, our skill to manufacture special solutions allows us to offer a wide range of customization options:

- Tropicalized alternator.
- Oil drainage Kit.*
- Engine water heater.
- Engine oil heater.
- Alternator heater.
- Battery disconnecter.
- Water temperature gauge.
- Oil temperature gauge.
- Fuel filter separator.
- Cyclonic air filters.
- Oil microfiltration.
- Centrifuge oil filters.
- Automatic fuel transfer system.
- Fuel quick plugs.
- Door safety micro-switch for disconnecting general circuit breaker when opening.
- Special painting treatments.
- Heat/Thermal-insulated exhaust pipes.
- Electrical box
- Powerlock box
- Built-in trailer
- Approved trailer
- Perforated sheet throughout the interior of the framework
- Full-Connected Inside (Monitoring and remote control).

(* Standard supply for soundproofed 'SP' models.

For any other tailored options and requirements please contact us.



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AEM Satisfaction

The AEM generators are designed keeping in mind the robustness, versatility and reliability. Made of high quality components and cutting edge technologies that allow us to offer a premium product close to zero failures. Each generator is monitored throughout all manufacturing processes, tested and submitted to intense trials to ensure that the customers receive their machine in perfect conditions and ready to work immediately after the installation.

Tailored solutions

AEM is specialized in customized solutions. Our engineers, in permanent contact with the sales department, study and design the most advanced systems solutions based on power generators.

We are the most efficient in these tasks.

We meet whatever requirements providing feasible solutions for your projects.

Assembly

The assembly between engine and alternator is executed by means of disks. For powers up to 150 kVA we mount a 4 mm cold laminated steel frame, and from 150 kVA we mount a skid-shape frame made up of UPN-260 or UPN-300 sections. The monoblock is attached to the frame by means of non guillotining elastic anti-vibration fasteners. It includes a fuel tank and an exhaust muffler.

Soundproofing

The SP Soundproofed Series is available as a variation of all Open Series models. It is made up of a bodywork of 2 mm thick plate. Punched, folded, electrowelded and bolted in essential sections for a better maintenance and access to the machine's interior, and suitably scoured to proceed to its subsequent painting in the polymerization oven.

Guarantee



AEM generators include a standard guarantee against any manufacturing defects which is valid for 1 year or 2000 operating hours and it expires once any of the two previous conditions is met. For further information please contact us.

Tailored Guarantee

In addition to the AEM global standard guarantee we can offer a customized guarantee extension to meet your requirements, a guarantee focused in your specific generators. We study the needs of your project and offer you the best conditions and solutions.

Quality Control Systems and Regulations

AEM SPAIN manufactures its standard ranges of products implementing the following rules.

- UNE ISO 9001
- CE Marking
- 2006/42/CE – Machinery Safety Directive
- 2006/95/CE – Low Voltage Directive, relating to electrical equipment designed for use within certain voltage limits.
- 2004/108/CE – Directive relating to Electromagnetic Compatibility (Repealing Directive 89/336/CEE).
- 2002/88/CE y 2004/26/CE – Relating to measures against the emission of gaseous and particulate pollutants from internal combustion engines to be installed in non-road mobile (Amending directive 97/68/CE).
- 2005/88/CE – Relating to the noise emission in the environment by equipment for use outdoors (Amending directive 2000/14/CE).
- EN 12100, EN13857, EN60204.

The power of the generators have been defined according to ISO 8528 and ISO 3046. Reference environmental conditions: Barometric pressure 100 KPa, 25°C and relative humidity of 30%.

Comprehensive Control System

The pillars of AEM's success are based on the continuous improvement and innovation efforts. Our facilities are steadily upgraded, including cutting-edge technology machinery. In addition, we enact our own end-to-end control system that allow us to offer vertical solutions, real-time monitoring and an optimal surveillance of manufacturing processes, as a result we get a high adaptability and versatility to cover the needs and requirements of the customers and it also enables us to shorten the delivery times. We are the most efficient in these tasks.

Direct Communication

The key feature that stands out AEM from of the remaining manufacturers is that you will find a close partner that will grant you a non barrier, clear, direct, natural and easy communication. Your Key Account Manager and the AEM workforce will be pleased to assist you through the whole processes (manufacturing, design and others), that involve your generator whether you are end customer or AEM partner.

Logistics

AEM headquarters are strategically located nearby conections to airports, seaports and intermodal logistic terminals. Providing maximum safety and reliability conditions in transport.

Full-connected Inside

Your generator always online. As an extra option the AEM telecommunication equipments are able to grant a remote and monitoring control access for surveillance the machine wherever it is located, via Internet, Ethernet, Wifi, RS458, RS232, Modem...



360° Service

AEM not only manufactures energy solutions, it also provides a wide range of services adapted to the needs of customers, distributors and partners. One of the most important features is our ability to provide a quick and effective response to any eventuality that may arise. Some of our services are:

- Commercial and Consulting Services.
- Before and After Sales Services.
- Technical Support Services (Telephone or In Situ).
- Maintenance Services.
- Engineering Services.
- Spare parts Services.
- Training Services (Both for customers and dealers).
- Customized Manufacturing of Electric Panels and Generating Sets.
- Custom Trials Services.
- R&D and Prototyping Services.
- Marketing Services (Exclusive for official partners and big accounts, for further information please contact us).



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Control panels.
Premium standard equipment.
AEM satisfaction.

About this document

This data sheet was updated on 11/03/2016



Contact us

For further information do not hesitate to contact our commercial or technical department, we will be pleased to help you without compromise.

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If you prefer you can request an electronic quotation through our website at the following link:

<http://www.aemspain.com/offer-request>



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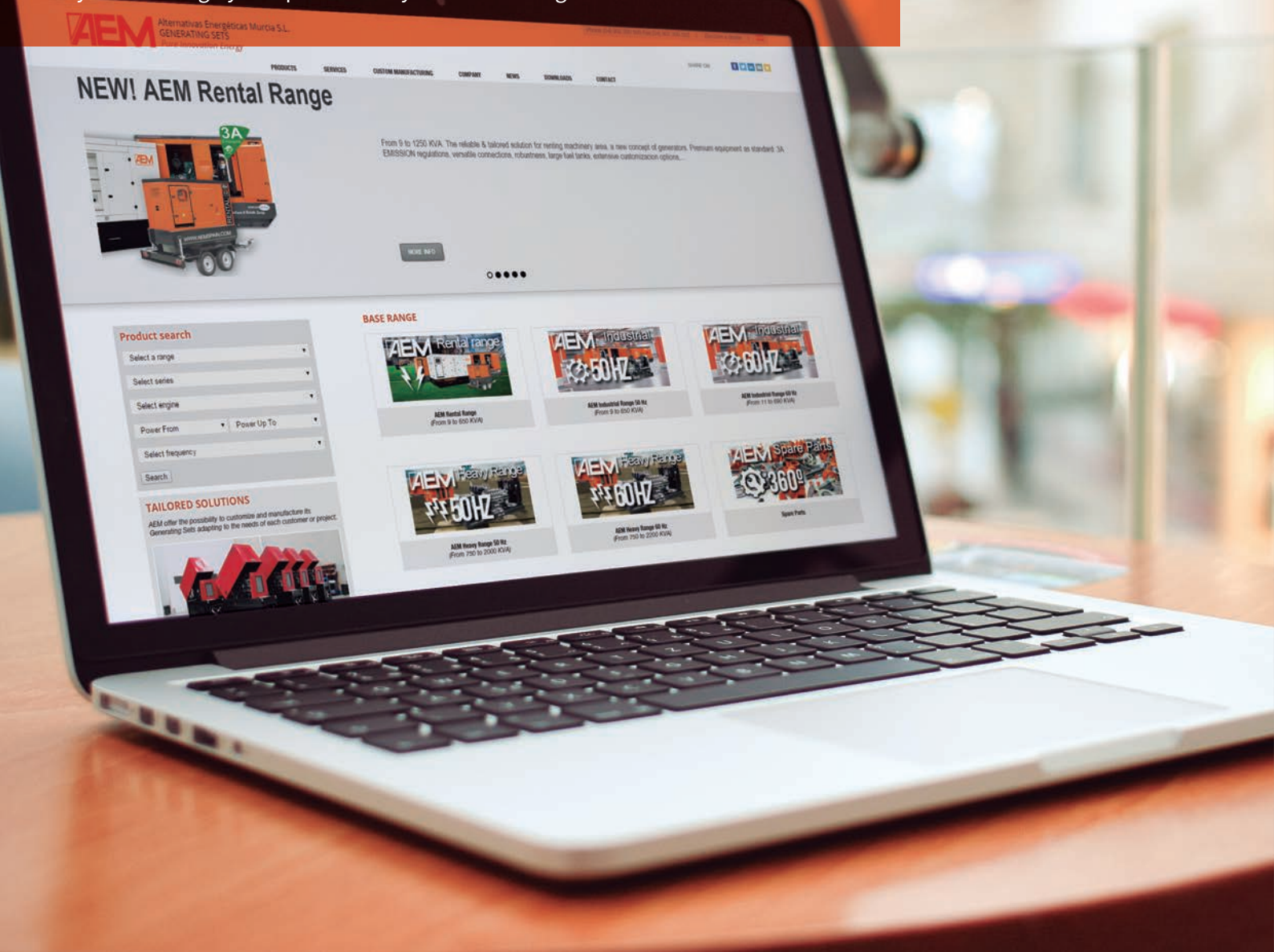
Industrial Range · Mod. DA16/OPEN · 16 KVA · 60 Hz.

Notes:

A large, empty rectangular box with a thin red border, intended for handwritten or printed notes.

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Call us on +34 902 300 500 or contact us at 'aem@aemspain.com'. We will call you and assign you a personal Key Account Manager.



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