





Emergency Standby Power (ESP):

Applicable for supplying power to varying electrical load for the duration of power interruption of a reliable utili ty source. Emergency Standby Power (ESP) is in accordance with ISO 8528. Fuel Stop power in accordance with ISO 3046, AS 2789, DIN 6271 and BS 5514.

Prime Power (PRP):

Applicable for supplying power to varying electrical load for unlimited hours. Prime Power (PRP) is in accordance with ISO 8528. Ten percent overload capabili ty is available in accordance with ISO 3046, AS 2789, DIN 6271 and BS 5514.

Continuous Power (COP):

Applicable for supplying power continuously to a constant electrical load for unlimi ted hours. Continuous Power (COP) in accordance wi th ISO 8528, ISO 3046, AS 2789, DIN6271 and BS 5514.

Powerzoo generators are CE certified and conform to the following Directives:

- •EN 12100: 2010, EN ISO 8528-13: 2016, EN 60204-1: 2018,
- •EN 61000-6-2: 2019, 2006/42/CE Machinery safety
- $\bullet 2014/35/\text{EU}$  Low voltage
- •2014/30/EU Electromagnetic compatibility
- •Power according to ISO 8528 and ISO 3046
- Ambient reference conditions 1000 mbar, 25° C, 30% relative humidity.
   Information based on standard specification equipment unless otherwise stated.

	GENERATOR MODEL			D160P5		
	Generator specificationsl		PRP	ESP		
•	Power	kW/kVA	128/160 140/17			
<b>(2)</b>	Rated speed	r.p.m.	1500			
<b>w</b>	Available voltages	V	380~415			
50 60 HZ	Frequency	Hz	50			
3 pH	Phase		3-PH			
	Power factor	Cos $\Phi$	0.8			
	Fuel cons 100%	L/H	35.9			
	Starting power	kW	6			
êrb.	Recommended battery	Ah	1	00		
	Number of batteries		2			
	Auxiliary voltage	VDC	2	24V		









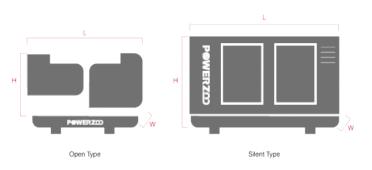








# Dimension and Weight



	DIMENSION		OPEN TYPE	SILENT TYPE
0 円	Length (L)	mm	2550	3200
公田	Width (W)	mm	1100	1100
	Height (H)	mm	1620	1650
Kg	Dry weight	kg	TBD	TBD
	Fuel tank	L	TBD	TBD

Powerzoo has the right to modify any feature without prior notice. Weights and dimensions based on standard products. Illustrations may include optional equipment. Technical data described in this catalogue correspond to the available information at the moment of printing. The illustrations and images are indicative and may not coincide in their entirety with the product. Industrial design under patent.









# **Engine Specifications**

ENGINE	DEUTZ <sup>®</sup>	
Engine model	BF6M1013EC G1	
Number of cylinders	6	
Cylinder arrangement	Vertical in-line	
Cycle	Four stroke	
Aspiration	Turbocharged	
Bore × Stroke	108*130 mm	
Displacement	7.15 L	
Compression ratio	19:1	
Prime power/Speed	146/1500 (kW/rpm)	
Standby power/Speed	153/1500 (kW/rpm)	
Speed governor	ECU	
Cooling system (open type)	40°C tropical radiator	
Cooling system (silent type)	50°C tropical radiator	

ENGINE	DEUTZ®	
Total lubrication system capacity	20 L	
Coolant capacity (with radiator)	9.8 L	
Speed stability (%)	≤±5%	
Start type	Electrical	
Maximum exhaust temperature	535°C	
Exhaust gas flow	1799 m³/h	
Maximum allowed back pressure	30 mbar	
Intake air flow	639.3 m³/h	
Cooling air flow	10800 m <sup>3</sup> /h	
Consumption @ 100% load ESP	TBD	
Consumption @ 100% load PRP	35.9 L/H	
Consumption @ 75% load PRP	26.9 L/H	
Consumption @ 50% load PRP	18.3 L/H	



#### Features:

- •Diesel engine
- •4-stroke cycle
- •Water-cooled

- •Dry air filter
- •Radiator with pusher fan
- •Moving parts protection
- •Radiator water level sensor (Optional)
- •55 degree radiator (Optional)

- Jacket coolant heater (Optional)
- •Lube oil heater (Optional)
- •Engine filter heater (Optional)
- •Fuel inlet line heater (Optional)
- •Heavy duty air filter (Optional)



# **Alternator Specification**

ALTERNATOR	
Exciter type	Brushless, self-excited
Power factor	0.8
Voltage adjust range	≥5%

ALTERNATOR	
Voltage regulation NL-FL	≤±1.0%
Insulation grade	Н
Protection grade	IP23



#### Options:

- •AREP/PMG/EBS
- •Air inlet filter (5% deration)
- •louver (5% deration)
- •Space heater
- •Digital AVR
- •Severe environmental impregnation
- •Stator sensor
- •PT100

- •Rotor sensor
- Double bearing
- •Drip proof cover
- •Terminal box IP44



E-mail: info@powerzoos.com Tel: +86 13358296663





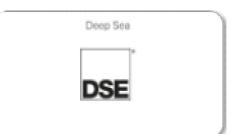


### **Controller Brands**

















# **Controller Functions**

OPTIONAL CONFIGURATION	Stand-alone Basic	Stand-alone Advanced	Synchronization Basic	Synchronization Advanced
Voltage between phases	•	•	•	•
Voltage between neutral and phase	•	•	•	•
Current intensities	•	•	•	•
Frequency	•	•	•	•
Apparent power (kVA)	•	•	•	•
Active power (kW)	•	•	•	•
Reactive power (kVAr)	•	•	•	•
Power factor	•	•	•	•
Coolant temperature	•	•	•	•
Oil pressure	•	•	•	•
Battery voltage	•	•	•	•
R.P.M.	•	•	•	•
Battery charge alternator voltage	•	•	•	•
High water temperature by sensor	•	•	•	•
Low oil pressure by sensor	•	•	•	•
Unexpected shutdown	•	•	•	•
Fuel storage by sensor	•	•	•	•
Stop failure/Start failure	•	•	•	•
Overspeed/Underspeed	•	•	•	•

● Standard ○ Optional



E-mail: info@powerzoos.com Tel: +86 13358296663

# D160P5 Powered by DEUTZ®





Emergency stop  High/Low frequency  High/Low voltage  Short-circuit  Incorrect phase sequence  Inverse power  Overload  Total hour counter  Kilowett meter  Starts valid counters  Maintenance  USB  Software for PC  Alarm history  Starten start  Start Inhibition  Mains failure start  Pre-heating angine control  Engine temperature control  Engine temperature control  Programmable alarms  Genset start function in test mode  Programmable outputs  Modbus IP  J1939  Synchronization  Mains synchronization  Fuel level (%)  Low water level  GSMY GPPS modem  Remote screen  A	OPTIONAL CONFIGURATION	Stand-alone Basic	Stand-alone Advanced	Synchronization Basic	Synchronization Advanced
High/Low voltage Short-circuit Incorrect phase sequence Inverse power Overload Total hour counter Kilowatt meter Starts valid counters Maintenance ISS Software for PC Alarm history External start Start inhibition Mains failure start Pre-heating engine control Fuel transfer control Fuel transfer control Fuel gename be a sequence ISS Sansa Sansa ISS Modus IP J1939 Synchronization Mains synchronization Fuel level (%) Low water level GSMC PRS modem ISS INCORRES	Emergency stop	•	•	•	•
Short-circuit	High/Low frequency	•	•	•	•
Incorrect phase sequence Inverse power Overload	High/Low voltage	•	•	•	•
Inverse power	Short-circuit	•	•	•	•
Overload         •<	Incorrect phase sequence	•	•	•	•
Total hour counter	Inverse power	•	•	•	•
Kilowatt meter       •       •       •         Starts valid counters       •       •       •         Maintenance       •       •       •         USB       •       •       •         Software for PC       •       •       •         Alarm history       •       •       •         External start       •       •       •         Start inhibition       •       •       •         Mains failure start       •       •       •         Pre-heating engine control       •       •       •         Fuel transfer control       •       •       •         Engine temperature control       •       •       •         Engine temperature control       •       •       •         Programmable alarms       •       •       •         Genset start function in test mode       •       •       •         Programmable outputs       •       •       •         Multilingual       •       •       •         RS485       •       •       •         Modbus IP       •       •       •         J1939       •       •       •<	Overload	•	•	•	•
Starts valid counters         •	Total hour counter	•	•	•	•
Maintenance	Kilowatt meter	•	•	•	•
USB	Starts valid counters	•	•	•	•
Software for PC         •	Maintenance	•	•	•	•
Alarm history  External start  Start inhibition  Mains failure start  Pre-heating engine control  Fuel transfer control  Engine temperature control  Programmable alarms  Genset start function in test mode  Programmable outputs  Multilingual  RS485  Modbus IP  J1938  Synchronization  Mains synchronization  Fuel level (%)  Low water level  GSM/GPRS modem	USB	•	•	•	•
External start       •       •       •       •         Start inhibition       •       •       •       •         Mains failure start       •       •       •       •         Pre-heating engine control       •       •       •       •         Fuel transfer control       •       •       •       •         Engine temperature control       •       •       •       •         Programmable alarms       •       •       •       •         Genset start function in test mode       •       •       •       •         Programmable outputs       •       •       •       •         Multilingual       •       •       •       •         RS485       •       •       •       •         Modbus IP       •       •       •       •         J1939       •       •       •       •         Synchronization       •       •       •       •         Mains synchronization       •       •       •       •         Fuel level (%)       •       •       •       •         Low water level       •       •       •       •	Software for PC	•	•	•	•
Start inhibition         •         •         •           Mains failure start         •         •         •           Pre-heating engine control         •         •         •           Fuel transfer control         •         •         •           Engine temperature control         •         •         •           Programmable alarms         •         •         •           Genset start function in test mode         •         •         •           Programmable outputs         •         •         •           Multilingual         •         •         •           RS485         •         •         •           Modbus IP         •         •         •           J1939         •         •         •           Synchronization         •         •         •           Mains synchronization         •         •         •           Fuel level (%)         •         •         •           Low water level         •         •         •           GSM/GPRS modem         •         •         •	Alarm history	•	•	•	•
Mains failure start         •	External start	•	•	•	•
Pre-heating engine control         • </td <td>Start inhibition</td> <td>•</td> <td>•</td> <td>•</td> <td>•</td>	Start inhibition	•	•	•	•
Fuel transfer control  Engine temperature control  Programmable alarms  Genset start function in test mode  Programmable outputs  Multilingual  RS485  Modbus IP  J1939  Synchronization  Mains synchronization  Fuel level (%)  Low water level  GSM/GPRS modem	Mains failure start	•	•	•	•
Engine temperature control         • </td <td>Pre-heating engine control</td> <td>•</td> <td>•</td> <td>•</td> <td>•</td>	Pre-heating engine control	•	•	•	•
Programmable alarms         •	Fuel transfer control	•	•	•	•
Genset start function in test mode       ●       ●       ●         Programmable outputs       ●       ●       ●         Multilingual       ●       ●       ●         RS485       ●       ●       ●         Modbus IP       ●       ●       ●         J1939       ●       ●       ●         Synchronization       ●       ●       ●         Mains synchronization       ●       ●       ●         Fuel level (%)       ●       ●       ●         Low water level       ●       ●       ●         GSM/GPRS modem       ●       ●       ●	Engine temperature control	•	•	•	•
Programmable outputs       ●       ●       ●         Multilingual       ●       ●       ●         RS485       ●       ●       ●         Modbus IP       ●       ●       ●         J1939       ●       ●       ●         Synchronization       ●       ●       ●         Mains synchronization       ●       ●       ●         Fuel level (%)       ●       ●       ●         Low water level       ●       ●       ●         GSM/GPRS modem       ●       ●       ●	Programmable alarms	•	•	•	•
Multilingual       •       •       •       •         RS485       •       •       •       •         Modbus IP       •       •       •       •         J1939       •       •       •       •         Synchronization       •       •       •       •         Mains synchronization       •       •       •       •         Fuel level (%)       •       •       •       •         Low water level       •       •       •       •         GSM/GPRS modem       •       •       •       •	Genset start function in test mode	•	•	•	•
RS485       •       •       •         Modbus IP       •       •       •         J1939       •       •       •         Synchronization       •       •       •         Mains synchronization       •       •       •         Fuel level (%)       •       •       •       •         Low water level       •       •       •       •         GSM/GPRS modem       •       •       •       •	Programmable outputs	•	•	•	•
Modbus IP       ●       ●         J1939       ●       ●         Synchronization       ●       ●         Mains synchronization       ●       ●         Fuel level (%)       ○       ○       ○         Low water level       ○       ○       ○         GSM/GPRS modem       ○       ○       ○	Multilingual	•	•	•	•
J1939       •       •       •         Synchronization       •       •       •         Mains synchronization       •       •       •         Fuel level (%)       •       •       •       •         Low water level       •       •       •       •       •         GSM/GPRS modem       •       •       •       •       •	RS485		•	•	•
Synchronization         •         •           Mains synchronization         •         •           Fuel level (%)         •         •         •           Low water level         •         •         •         •           GSM/GPRS modem         •         •         •         •	Modbus IP		•	•	•
Mains synchronization         ●           Fuel level (%)         ○         ○         ○         ○           Low water level         ○         ○         ○         ○           GSM/GPRS modem         ○         ○         ○         ○	J1939		•	•	•
Fuel level (%)       0       0       0         Low water level       0       0       0         GSM/GPRS modem       0       0       0	Synchronization			•	•
Low water level         0         0         0           GSM/GPRS modem         0         0         0	Mains synchronization				•
GSM/GPRS modem	Fuel level (%)	0	0	0	0
	Low water level	0	0	0	0
Remote screen o o o	GSM/GPRS modem	0	0	0	0
	Remote screen	0	0	0	0

● Standard ○ Optional



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