



SMART RANGE

1 MAIN FEATURES

T Triphasic	 Diesel fuel	 Baudouin / 4M06G50/5	 Grupel / 224GB50	 / 4520
--------------------	---	--	--	--

Hz 50Hz	 1500 r.p.m.	V 400V	cos φ 0,8
----------------	---	---------------	------------------

Standby power (STP)	52 kVA	41 kW
Prime Power (PRP)	47 kVA	38 kW
Power Continuous (COP)	- kVA	- kW

OPEN SKID

Length (L)	1700 mm
Height (H)	1110 mm
Width(W)	960 mm
Weight	665 kg
Daily tank	150 L

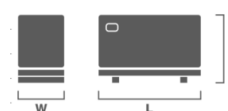


50Hz

Acoustic pressure level @1m	-
Acoustic pressure level @7m	-

SOUNDPROOF

Length (L)	1950 mm
Height (H)	1110 mm
Width (W)	800 mm
Weight	865 kg
Daily tank	40 L



50Hz

Acoustic pressure level @1m	74 dB(A)
Acoustic pressure level @7m	61 dB(A)

AVAILABLE VOLTAGES - 50Hz

FP (cos Ø)	Phase	Voltage	COP (kVA/kW)	PRP (kVA/kW)	STP (kVA/kW)	Circuit breaker (A)
0,8	Three-phase	440	- / -	48 / 38	52 / 42	63
0,8	Three-phase	415	- / -	48 / 38	52 / 42	80
0,8	Three-phase	400	- / -	47 / 38	52 / 41	80
0,8	Three-phase	380	- / -	47 / 38	52 / 41	80
0,8	Three-phase	240	- / -	48 / 38	52 / 42	125
0,8	Three-phase	230	- / -	47 / 38	52 / 41	125
0,8	Three-phase	220	- / -	48 / 38	52 / 42	125
0,8	Single phase	240	- / -	30 / 24	33 / 26	125
1	Single phase	240	- / -	24 / 24	26 / 26	100
0,8	Single phase	230	- / -	30 / 24	33 / 26	160
1	Single phase	230	- / -	24 / 24	26 / 26	125
0,8	Single phase	220	- / -	30 / 24	33 / 26	160
1	Single phase	220	- / -	24 / 24	26 / 26	125

2 ROOM INSTALLATION

EXHAUST SYSTEM	50 Hz		
	COP	PRP	STP
Exhaust gas temperature (°C)	-	-	650
Exhaust gas flow (m³/min)	-	8,82	9,42
Evacuated Heat (kW)	-	27	30,4
Maximum back pressure (kPa)		8	
Exhaust silencer attenuation (dB)		30	
Output Diameter (mm)		65	

VENTILATION SYSTEMS	50 Hz		
	COP	PRP	STP
Combustion air flow (m³/min)	-	2,6	2,7
Cooling airflow (m³/min)		102	
Maximum load losses (Pa)		120	
RADIATION	50 Hz		
	COP	PRP	STP
Engine (kW)	-	-	-
Alternator (kW) 50	4,7	4,7	5,2

3 ENGINE SPECIFICATIONS

GENERAL SPECIFICATIONS	50 Hz
Model	4M06G50/5
Emissions	Not satisfy 97/68/EC
Performance grade	G2
Operating method	Four stroke
Fuel type	Diesel fuel
Refrigeration system	Water/antifreeze Closed Circuit
Aspiration system	Turbocharged
Injection system	Direct
No. and Cylinder arrangement	4 In-Line
Displacement (L)	2,3
Cylinder bore (mm)	89
Cylinder stroke (mm)	92
Compression Ratio	17,5:1
Regulation	Electronic
Rotation speed	1500
Piston Speed (m/s)	4,6
Gross power COP (kWm)	-
Gross power PRP (kWm)	44
Gross power STP (kWm)	48
Fan power (kWm)	1
Net Power COP (kWm)	-
Net Power PRP (kWm)	43
Net Power STP (kWm)	47
BMEP COP (kPa)	-
BMEP PRP (kPa)	1530
BMEP STP (kPa)	1670



CONSUMPTION	50 Hz		
Fuel consumption	LOAD	lt/h	g/kWh
STP	100%	11,8	205
	100%	10,7	204,3
PRP	75%	7,8	203,3
	50%	5,4	206,6
	100%	-	-
COP	75%	-	-
	50%	-	-
Oil consumption	< 0,4% of fuel consumption		
REFERENCE CONDITIONS			
Temperature (°C)	25		
Atmospheric pressure (kPa)	100		
CAPACITY			
Coolant (L)	12,9		
Oil (L)	11,5		
STARTING SYSTEM			
Voltage (V)	12		
Power (kW)	3.7		
Battery (Ah)	60		

4 ALTERNATOR SPECIFICATIONS

GENERAL SPECIFICATIONS	
Model	224GB50
Phases No.	Triphasic
Protection	IP23
Insulation	H
Temperature Rise	H
50Hz R.F.I. telephone interference	THF<2%
60Hz R.F.I. telephone interference	TIF<50
R.F.I. Suppression	BS EN 61000-6-2 / 6-4, VDE 0875G, VDE 0875N.
Coupling	Semi-Flexible
Support	Single bearing



Wave form distortion with no load	< 1,5%
Wave form distortion with balanced linear load	< 5%
Winding Leads	12
Excitation (standard / option)	Self-excited / PMG
AVR Model (standard / option)	SX460/ MX341
Voltage Regulation (standard / option)	± 1,0%/ ± 0,5%



SMART RANGE

RATED POWER - 50Hz

FP (cos Ø)	Phase	Voltage (V)	Power	Efficiency	Xd	X'd	X''d
			PRP/STP (kVA)	PRP/STP (%)			
0,8	Three-phase	440	48 / 53	89,0 / 89,0	2,100	0,160	0,110
0,8	Three-phase	415	50 / 55	88,5 / 88,5	2,100	0,160	0,110
0,8	Three-phase	400	50 / 55	88,2 / 88,2	2,100	0,160	0,110
0,8	Three-phase	380	50 / 55	87,8 / 87,8	2,100	0,160	0,110
0,8	Three-phase	240	50 / 55	88,5 / 88,5	2,100	0,160	0,110
0,8	Three-phase	230	50 / 55	88,2 / 88,2	2,100	0,160	0,110
0,8	Three-phase	220	48 / 53	89,0 / 89,0	2,100	0,160	0,110
0,8	Single phase	240	30 / 33	88,2 / 88,2	2,100	0,160	0,110
1	Single phase	240	30 / 33	88,2 / 88,2	2,100	0,160	0,110
0,8	Single phase	230	30 / 33	88,2 / 88,2	2,100	0,160	0,110
1	Single phase	230	30 / 33	88,2 / 88,2	2,100	0,160	0,110
0,8	Single phase	220	30 / 33	88,2 / 88,2	2,100	0,160	0,110
1	Single phase	220	30 / 33	88,2 / 88,2	2,100	0,160	0,110

5

CONTROL PANEL



GENSET	DEEPSEA 4520	OPTIONAL
Voltage (Ph-Ph / Ph-N)	• / •	• / •
Current intensity	•	•
Frequency	•	•
RMS values	•	•
Generator phase sequence	-	0
Generator earth current [a]	-	0
No. of registers events	15	250
Real time clock	•	•
PIN protection	•	•
kWh, kVAr, kVAh, kVArh, cos Ø	•	•
Synchroscope (m)	-	0
Nº of available outputs [b]	2	6
Engine run hours	•	•
Indication of alarms on LCD	•	•
Total no. of LED indicators	3	12
No. of LED alarms	-	4
Sound signalling alarms	•	•
Scheduler	•	•
Fuel Level	•	•

Electrical network	DEEPSEA 4520	OPTIONAL
Voltage (Ph-Ph / Ph-N)	• / •	• / •
Current intensity [a]	-	0
Frequency	•	•
kVA, kW, cos Ø (a)	-	0
Inversion control between main-group	-	0
Protections and Alarms	DEEPSEA 4520	OPTIONAL
High / low battery voltage	A	0
Failure in Battery Charge Alternator	A	0
Failure to stop	A/S	A/S
Failure to start	A/S	A/S
Low fuel level	A/S	A/S
Overload	A/S	A/S
Earth leakage	-	0
Asymmetry between phases	-	0
Maintenance	A/S	A/S
High / Low generator frequency	A/S	A/S
Engine overspeed	A/S	A/S
Engine underspeed	A/S	A/S
Generator overvoltage	A/S	A/S
Generator undervoltage	A/S	A/S
ECU Alert (if applicable)	A/S	A/S
Low oil pressure	A/S	A/S
Low level of radiator water [f]	A/S	A/S
Engine high temperature	A/S	A/S
Fuel leakage/ theft	-	0

6 CONTROL PANEL

Engine	DEEPSEA 4520	OPTIONAL	Applications	DEEPSEA 4520	OPTIONAL
Engine Speed	•	•	Automatic or manual starting	•	•
Low oil pressure protection	•	•	Remote start by NO dry contact	•	•
Oil pressure reading [c]	0	0	Automatic by mains failure	•	•
High temperature engine protection	•	•	Alternating with timesharing	-	0
Engine temperature reading [c]	0	0	Multi-generators synchronization and load sharing (Max. 32 generators) (m)	-	0
Engine battery voltage	•	•	Generator-Main in synchronism and load sharing (1 generator and 1 main) (m)	-	0
Intensity of the engine battery [d]	0	0			
Fuel Consumption [e]	•	•			
Low level of radiator water [f]	0	0			
Engine maintenance scheduled	•	•			
Communication	DEEPSEA 4520	OPTIONAL	Optional expansions	DEEPSEA 4520	OPTIONAL
USB female type B plug (Max. 6m) [g]	•	•	DSE2130 (8 inputs dig.) IG-IOM (8 in/outputs dig. + 4 inputs anal.) G-08 (8 inputs dig.)	-	0
USB female type A plug (n)	-	0	DSE2157 I-RB8 G-06 (8 relay outputs)	-	0
RS232 port (Max. 15m) (n)	-	0	DSE890 IL-NT-GPRS G-GSM (GSM and/or GPS)	•	•
RS485 port (Max. 1,2Km) [h]	-	0	DSE891 IB-LITE G-ETH (ethernet module)	•	•
Ethernet port RJ45 [i]	0	0	DSE892 IB-LITE - (ethernet module according SNMP protocol)	•	•
GSM and/or GPS [j]	0	0	DSE2548 IGL-RA15 - (expansion with 8 additional LEDs)	-	0
ModBus RTU protocol [h]	-	0	DSE2510 / 20 (mirror controller, maximum distance 1km)	-	0
ModBus TCP protocol [i]	-	0			
SNMP protocol [l]	0	0			
CAN port (Max. 40m)	•	•			
MSC port (Max. 240m) (m)	-	0			
PLC functionality	-	0			

Legend			
•	Available	[d]	Needs additional ammeter
o	Optional	[e]	If information provided by the engine ECU
-	Not available	[f]	Required additional sensor
A	Warning Alarm	[g]	Requires the addition of the IL-NT-S-USB module
S	Stop alarm	[h]	Requires the addition of the IL-NT-RS232-485 module
[a]	Need additional CT	[i]	DeepSea: Requires the addition of the DSE891 module/ ComAp: Requires the addition of the IB-LITE module
[b]	No. of outputs available for standard configuration. The outputs do not include relays and additional terminal connections.	[j]	DeepSea: Requires the addition of the DSE890 module/ ComAp: Requires the addition of the IL-NT-GPRS module
[c]	If the information is not provided by the engine-ECU, you need an additional sensor	[l]	DeepSea: Requires the addition of the DSE892 module/ ComAp: Requires the addition of the IB-LITE module

Indicative weights and dimensions. Reference ambient conditions: 100kPa, 25°C, 30% relative humidity and fuel temperature below 40°C. Power in accordance with ISO 8528: Continuous power (PRP): Maximum available power to feed a variable electrical load for an unlimited period. The average of load factor in 24h of operation, shall not exceed 70% of the PRP. Admits 10% of overload during the maximum period of 1h every 12h of operation. The operation under overload shall not exceed 25h/year. Emergency Power (STP): Maximum available power to feed variable electrical load for a maximum period of 200h/year. The average of load factor in 24h of operation shall not exceed 70% of the STP. No overload. These specifications are subject to change without notice.

Distribuidor