



Power Generator

FD 450 B-Q

Article: 49488

Code: F.0450.BSC2-Q4495T990-02



Picture for reference only

Main Features

- Digital voltage regulation +/-0,25 %
- Three phase voltage control
- Low disturbance level THD < 2%
- Alternator short circuit capacity 300% I_n 10s
- Class H insulation
- Protection index IP23
- Performance class G3 (acc. ISO 8528-5)
- Ready to load just after start
- AMF and MRS functionality and protection
- Autonomy 13,4 h with 75 % load

General Data

Maximum power ESP	495,0 kVA / 396,0 kW
Nominal power PRP	450,0 kVA / 360,0 kW
Nominal Current PRP	650,0 A
Frequency	50 Hz
Voltage	400 V
Emission standard	fuel optimized
Fuel	Diesel (EN 590)
Fuel tank capacity	990 l
Fuel consumption @ 50% / 75% / 100% / 110% PRP	46,4 / 66,1 / 94,7 / 109 l/h
Autonomy @ 75% / 100% load	13,4 / 9,4 h
Weight without fuel	~3650 kg
Dimensions L x W x H	4495 x 1600 x 2500 mm
Guaranteed noise power L_{wa}	98 dBA
Acoustic pressure @7mL_{pa}	69,5 ± 1 dBA

Main Components & Equipment

- Baudouin 6M21G500/5 engine
- Sincro SK 315 SL alternator
- Brushless alternator
- Digital AVR
- ComAp IL4-AMF25 Controller
- Schneider NS800 3P + Micrologic 2.0 type generator circuit breaker
- GCB shunt release coil
- Linear automatic battery charger
- Engine heater
- ECU speed governor
- Fuel system Common rail
- Welded frame with 990 l fuel tank, spill containment and noise insulation
- Two fuel inlets
- Four lifting eyes
- Extended forklift skids for easy attachment to the ground

For details see page 3

Definitions

Nominal Power PRP:

Prime power available in variable load application in accordance with ISO 8528, 10% overload capacity is available for a period of 1 hour within a 12-hour period of operation. Average power consumption should not exceed 70% PRP for each 24h of operation.

Maximum power ESP:

Standby power rating is applicable for supplying emergency power for the duration of a utility power interruption. No overload allowed, average power consumption should not exceed 70% ESP. Limited to 500h of operation per year including 25 hours with ESP.

Norms and Directives

- Machinery directive 2006/42/EC
- Low voltage directive 2014/35/EU
- EMC directive 2014/30/EU
- Noise directive 2000/14/EC
- ISO 8528-1/2018, ISO 8528-5/2022
- ISO 8528-13:2016
- IEC 60204-1

Contact data

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Engine

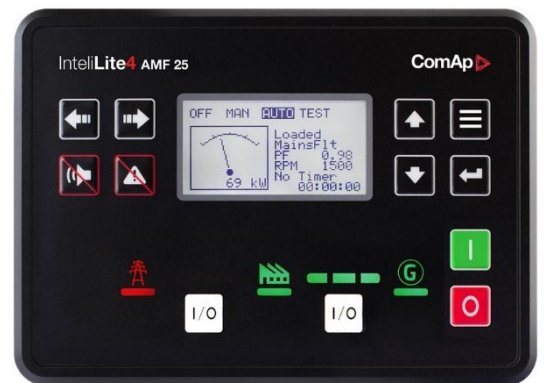
Manufacturer	Baudouin
Type	6M21G500/5
Made in	China
Engine power	389,0 kW
Emission standard	fuel optimized
Rotation per minute	1500 rpm
Engine governor	ECU
Governor class	G3 (ISO 8528-5)
Displacement	12,5 l
No of cylinder	6
Fuel system	Common rail
Electrical system	24 V
Cooling system capacity	47,0 l
Oil pan capacity	34,0 l
Fuel type	Diesel (EN 590)

Alternator

Manufacturer	Sincro
Type	SK 315 SL
Made in	Croatia
Nominal Voltage	400 V
Nominal power factor (cos φ)	0,8
Ambient temperature, altitude	40 °C, 1000 m a.s.l.
Nominal Power	450,0 kVA
Protection index	IP 23
No of bearing	Single bearing
Coupling	Direct
Technology	Brushless
Short circuit maintaining capacity	300% 10s
Efficiency	93,8 %
Insulation class	H
Total harmonic content THD	< 2 %
Reactance Xd''	13,9 %
Voltage regulator type	Digital AVR
Voltage measurement	3 phase
Voltage accuracy	+/- 0,25 %
AVR supply system	Auxiliary winding
AVR supply optional	PMG

Controller

- Controller type: ComAp IntelliLite 4 AMF 25
- Support of Dual AMF/MRS applications
- Direct communication with EFI engines
- Total remote monitoring and control
- Intuitive operator interface, adjustable Main Screen
- Real time clock with battery back-up
- Comprehensive history log with up to 350 events
- 3 phase true RMS current and voltage measurement
- Both mains and generator voltage detection
- Active/Reactive Power and Power Factor per phase measurement
- Run Hours counter with source selector
- 3 maintenance timers (counting even under zero)
- Multipurpose flexible timers (also for rental)
- Battery voltage measurement
- Complete engine and alternator protection
- CAN modules support
- USB port on-board
- Inbuild RS485
- 2 slots for plug-in modules
- Full remote communications support (AirGate 2.0)
- Plug-in module concept for more remote communication capabilities (Ethernet /4G, Modbus TCP/RTU, SNMP v1/v2c.)
- Cloud-based monitoring and control via WebSupervisor (optional module required)
- Geofencing and tracking based on GPS position (optional module required)
- Active SMS and emails
- 3 levels of password protection
- Cyber security improvement
- In-built PLC, complemented with a monitoring/debugging tool, for additional functionality, if required
- Spare inputs and outputs available by default: binary input – 1, binary output – 1, analogue input – 1,
- A version for low temperature is also available





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Standard equipment

- Baudouin 6M21G500/5 engine
- Electronic engine speed governor
- Oil low pressure switch
- Oil pressure sensor
- Engine high temperature switch
- Engine high temperature sensor
- Engine preheating with thermostat
- Engine oil Titan Cargo 15W40
- Fuel filter with water separator
- Coolant Fuchs Maintain Fuchs Maintain Fricofin DP
- Coolant inlet outside, on the top of the canopy
- Starting batteries 2x180Ah
- Linear automatic battery charger
- Sincro SK 315 SL alternator
- Digital AVR
- GCB Schneider NS800 3P + Micrologic 2.0
- GCB shunt release coil
- Busbar power output
- ComAp IL4-AMF25 controller
- Acoustic alarm
- Emergency stop button
- Silenced canopy, RAL 7024
- Fuel tank integrated with a frame and spill containment
- Two fuel inlets inside the canopy
- Fuel level indicator
- Engine and alternator anti vibration mounts
- Exhaust silencer with compensator
- Forklift supports and lifting eyes

Optional equipment

- Oil draining hand pump
- Battery disconnecter
- 4P Schneider NS Micrologic 2.0 GCB
- Power Lock type power output
- Power sockets box
- Transfer switch controlled by generator controller
- Transfer switch with ATS controller
- ATS accessories for outdoor application
- GPRS communication card
- Ethernet card
- RS 485, RS 232 card
- Remote display
- Fuel inlet outside of the canopy with lock
- Generator spill containment level detector
- External, double wall fuel tank 1 000 – 10 000 l
- Fuel tank filling pump and shut-off valve

Maintenance guidelines

Fuel filters replacement	500 h / 1 year
Oil replacement	After first 100h, then every 500 h / 1 year
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Coolant replacement	4000 h / 2 years
Air filter replacement	1000 h
Battery replacement	2 years
Electrical installation	According to local requirements, at least once per year

Installation guidelines

Power terminal	GCB terminal
Recommended cable for up to 30m power cable way	Flexible 2x5x185 mm ²
Recommended cable for do 30m generator heater supply	Flexible 3x2,5 mm ²
Exhaust pipe min diameter (max. 7 m, 4 bends)	133 mm
Exhaust pipe min diameter (max. 15 m, 4 bends)	133 mm

*For additional cable connection with FOGO ATS see ATS wiring diagram

Warranty

Continuous operation generators	12 months up to 1000 working hours
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