# ATP Baudouin - Leroy Somer Series

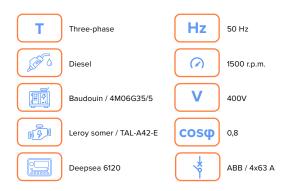
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# ATP35-BDN/LS

#### **Main Features**



Standby Power (STP)	35 kVA	28 kW
Continuous Power (PRP)	33 kVA	26 kW
Continuous Power (COP)	- kVA	- kW

#### Soundproof

Length (L)	2050 mm	
Height (H)	1250 mm	
Width (W)	960 mm	
Weight	1070 kg	
Daily deposit	61 L	WL
	50Hz	
Sound pressure I	84 dB(A)	
Sound pressure level @7m		71 dB(A)

#### Installation in room

Exhaust System		50Hz	
	COP	PRP	STP
Max. temperature of exhaust after turbocharger (°C)	-	-	≤650
Exhaust gas flow (m³/min)	-	6	6,48
Max. exhaust back pressure (mBar)		80	
Max. bending moment of exhaust outlet flange (Nm)		10	
Outlet diameter (mm)		65	

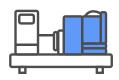
Ventilation System	50Hz		
	COP	PRP	STP
Recommended Airflow (m <sup>3</sup> /min)	-	1.92	1.98
Min. Intake Pipe Diameter (mm)			50
Intake Air Temperature Rise (°C)			≤5

Radiation Heat	50Hz		
	COP	PRP	STP
Total Heat Dissipation (kJ/s)	-	-	44.1
Heat Radiated to the Environment (kJ/s)	-	-	-



### **Engine specifications**

General specifications	50 Hz
Model	4M06G35/5
Emissions	Not applicable
Performance Grade	G3
Operating Method	Four-stroke
Fuel Type	Diesel
Cooling System	Liquid (water + 50% antifreeze)
Aspiration System	Turbocharged
Injection System	Direct
Number and Arrangement of Cylinders	V4
Displacement (L)	12,54
Displacement (I)	2.3
Cylinder diameter (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)	30
Gross power STP (kWm)	33
Fan power supply (kW)	0.5
Net power COP (kWm)	-
Net power PRP (kWm)	29
Net power STP (kWm)	32



Consumptions		50Hz	
Fuel consumption	Burden	lt/h	g/kWh
STP	100%	8.4	212.9
	100%	7.6	211,7
PRP	75%	5.7	212.2
	50%	4	221.9
	-	-	-
COP	-	-	-
	-	-	-
Fuel Consumption To	lerance	+3%	
Reference conditions			
Temperature (°C)		25	
Atmospheric temperature (kPa)		100	
Capacity			
Coolant Capacity (L)		16	
Low / high oil capacity (L)		7.1/9.5	
Starting system			
Voltage (V)		12	
Power (kW)		3,7	
Battery (Ah)		80	

### Alternator specifications

General specifications	
Model	TAL-A42-E
Number of Phases	Three-phase
Protection	IP23
Insulation	н
Heating	Н
Telephone R.F.I interference 50 Hz	THF<2%
Telephone R.F.I interference 60 Hz	TIF<50
R.F.I interference suppression	CEM 2014/30/UE
Coupling	Semi-flexible
Support	Monopalier



No-load waveform distortion	< 2%
Load waveform distortion	< 5%
Number of windings	6
Excitation (standard / option)	SHUNT / AREP
AVR Model (standard / option)	R120 / R180
Voltage Regulation (standard / option)	± 1 % / ± 1 %

## Starter Battery

<b>.</b>	Battery voltage	12V
+ -	Battery Capacity	80aH
	Amount	2 pieces
	Battery type	Maintenance-free, sealed lead-acid type

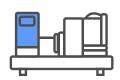
### Certifications





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#### **Control Panel**





Generator	DSE6110/20
Tension (F-F / F-N)	*/*
Intensity	*
Frequency	*
RMS values	*
Generator phase sequence	*
Generator ground current [1]	
Number of events registered	250
Integrated clock	*
PIN protection	*
kWh, kVAr, kVAh, kVArh, cos Ø	*
Synchronoscope (m)	*
Number of available departures [2]	6
Engine running hours	*
Alarm i ndication on LCD	*
Total number of LED indicators	8
No. of LED alarms	X
Acoustic alarm signaling	
Programmer	*
Fuel level	*
Engine	DSE6110/20
Engine speed	*
Low oil pressure protection	*
Oil pressure reading [3]	
High engine temperature protection	*
Engine temperature reading[3]	
Battery voltage	*
Battery Intensification [4]	-
Fuel consumption [5]	*
Low water level in radiator [6]	
Scheduled maintenance for engine	*
Communication	DSE6110/20
USB Type B Female Port (Max. 6m)	*
[7] USB Type A Female Port (n)	X
	*
[7] USB Type A Female Port (n)	

GridDSEG110/20Tension (F-F / F-N)★Intensity [1]☑Frequency★kVA,kW, cos Ø (a)☑Network-group switching control★Protections and alarmsDSEG110/20High/low battery voltage♀Battery charging alternator failure♀Stop failure♀/.Boot failure♀/.Low fuel level♀/.Overload♀/.Asymmetry between phases♀/.High/Low Generator Frequency♀/.High/Low Generator Frequency♀/.Engine overspeed♀/.Low voltage in generator♀/.Storge♀/.Low voltage in generator♀/.Low voltage in generator♀/.Storge♀/.Low voltage in generator♀/.ECU Alert (if applicable)♀/.Low oil pressure♀/.Low oil pressure♀/.
Intensity [1]       ⊠         Frequency       ★         kVA,kW, cos Ø (a)       ⊠         Network-group switching control       ★         Protections and alarms       DSE6110/20         High/low battery voltage       ↓         Battery charging alternator failure       ↓         Stop failure       ↓/ ③         Boot failure       ↓/ ③         Overload       ↓/ ③         Ground fault       ↓ / ③         Asymmetry between phases       ↓ / ③         High/Low Generator Frequency       ↓ / ③         Low engine speed       ↓ / ③         Low voltage in generator       ↓ / ③         Stop failure       ↓ / ③         Deterspeed       ↓ / ③         Ground fault       ↓ / ③         Low voltage in generator       ↓ / ③         Engine overspeed       ↓ / ③         Low voltage in generator       ↓ / ③         Low voltage in generator       ↓ / ③         ECU Alert (if applicable)       ↓ / ③
Frequency       ★         kVA,kW, cos Ø (a)       ☑         Network-group switching control       ★         Protections and alarms       DSE6110/20         High/low battery voltage       ♀         Battery charging alternator failure       ♀         Stop failure       ♀/○         Boot failure       ♀/○         Low fuel level       ♀/○         Overload       ♀/○         Asymmetry between phases       ♀/○         Maintenance       ♀/○         High/Low Generator Frequency       ♀/○         Low engine speed       ♀/○         Storge       ♀/○         Low voltage in generator       ♀/○         ECU Alert (if applicable)       ♀/○
kVA,kW, cos Ø (a)       Image: Comparison of
Network-group switching control     ★       Protections and alarms     DSE6110/20       High/low battery voltage     ↓       Battery charging alternator failure     ↓       Stop failure     ↓/.       Boot failure     ↓/.       Low fuel level     ↓/.       Overload     ↓/.       Ground fault     ↓/.       Asymmetry between phases     ↓/.       High/Low Generator Frequency     ↓/.       Engine overspeed     ↓/.       Low engine speed     ↓/.       Surge     ↓/.       Low voltage in generator     ↓/.       ECU Alert (if applicable)     ↓/.
Protections and alarms     DSE6110/20       High/low battery voltage     Q       Battery charging alternator failure     Q       Stop failure     Q/③       Boot failure     Q/③       Low fuel level     Q/③       Overload     Q/③       Ground fault     Q/③       Asymmetry between phases     Q/③       High/Low Generator Frequency     Q/③       Engine overspeed     Q/③       Low voltage in generator     Q/③       ECU Alert (if applicable)     Q/③
High/low battery voltage     Q       Battery charging alternator failure     Q       Stop failure     Q/0       Boot failure     Q/0       Low fuel level     Q/0       Overload     Q/0       Ground fault     Q/0       Asymmetry between phases     Q/0       High/Low Generator Frequency     Q/0       Engine overspeed     Q/0       Low engine speed     Q/0       Strage     Q/0       Eucy voltage in generator     Q/0       ECU Alert (if applicable)     Q/0
Battery charging alternator failure <ul> <li></li></ul>
Stop failure     \$\overline\$/\$\overline\$       Boot failure     \$\overline\$/\$\overline\$       Low fuel level     \$\overline\$/\$\overline\$       Overload     \$\overline\$/\$\overline\$       Ground fault     \$\overline\$/\$\overline\$       Asymmetry between phases     \$\overline\$/\$\overline\$       Maintenance     \$\overline\$/\$\overline\$       High/Low Generator Frequency     \$\overline\$/\$\overline\$       Low engine speed     \$\overline\$/\$\overline\$       Surge     \$\overline\$/\$\overline\$       Low voltage in generator     \$\overline\$/\$\overline\$       ECU Alert (if applicable)     \$\overline\$
Boot failure     Q/O       Boot failure     Q/O       Low fuel level     Q/O       Overload     Q/O       Ground fault     Q/O       Asymmetry between phases     Q/O       Maintenance     Q/O       High/Low Generator Frequency     Q/O       Engine overspeed     Q/O       Low engine speed     Q/O       Surge     Q/O       Low voltage in generator     Q/O       ECU Alert (if applicable)     Q/O
Low fuel level     \$\bar{\overline{\phi}}\$       Overload     \$\bar{\overline{\phi}}\$       Ground fault     \$\bar{\overline{\phi}}\$       Asymmetry between phases     \$\bar{\overline{\phi}}\$       Maintenance     \$\bar{\overline{\phi}}\$       High/Low Generator Frequency     \$\bar{\overline{\phi}}\$       Engine overspeed     \$\bar{\overline{\phi}}\$       Low engine speed     \$\bar{\overline{\phi}}\$       Surge     \$\bar{\overline{\phi}}\$       Low voltage in generator     \$\bar{\overline{\phi}}\$       ECU Alert (if applicable)     \$\bar{\overline{\phi}}\$
Overload     Q/0       Ground fault     Q/0       Asymmetry between phases     Q/0       Maintenance     Q/0       High/Low Generator Frequency     Q/0       Engine overspeed     Q/0       Low engine speed     Q/0       Surge     Q/0       Low voltage in generator     Q/0       ECU Alert (if applicable)     Q/0
Ground fault     \$\overline\$/\$\overline\$       Asymmetry between phases     \$\overline\$/\$\overline\$       Maintenance     \$\overline\$/\$\overline\$       High/Low Generator Frequency     \$\overline\$/\$\overline\$       Engine overspeed     \$\overline\$/\$\overline\$       Low engine speed     \$\overline\$/\$\overline\$       Surge     \$\overline\$/\$\overline\$       Low voltage in generator     \$\overline\$/\$\overline\$       ECU Alert (if applicable)     \$\overline\$/\$\overline\$
Asymmetry between phases     Q/③       Maintenance     Q/③       High/Low Generator Frequency     Q/③       Engine overspeed     Q/⑥       Low engine speed     Q/⑥       Surge     Q/⑥       Low voltage in generator     Q/⑥       ECU Alert (if applicable)     Q/⑧
Maintenance     ♀/⊗       High/Low Generator Frequency     ♀/⊗       Engine overspeed     ♀/⊗       Low engine speed     ♀/⊗       Surge     ♀/⊗       Low voltage in generator     ♀/⊗       ECU Alert (if applicable)     ♀/⊗
High/Low Generator Frequency     ↓/☉       Engine overspeed     ↓/☉       Low engine speed     ↓/☉       Surge     ↓/☉       Low voltage in generator     ↓/☉       ECU Alert (if applicable)     ↓/☉
Engine overspeed     ↓/⊗       Low engine speed     ↓/⊗       Surge     ↓/⊗       Low voltage in generator     ↓/⊗       ECU Alert (if applicable)     ↓/⊗
Low engine speed ♀/⊙ Surge ♀/⊙ Low voltage in generator ♀/⊙ ECU Alert (if applicable) ♀/⊙
Surge     ↓/⊗       Low voltage in generator     ↓/⊙       ECU Alert (if applicable)     ↓/⊗
Low voltage in generator     ♀/⊗       ECU Alert (if applicable)     ♀/⊗
ECU Alert (if applicable) ♀/⊗
Low oil pressure Q / ③
Low water I evel in radiator [f] $\bigcirc$ / $\otimes$
High engine temperature ♀/⊗
Fuel leak/theft Q
Aplications DSE6110/20
Automatic or manual start *
Remote start by dry contact NA *
Automatic due to network failure
Alternation with distributed time
Multi-generators in synchronism with load (Max 32 generators) (m)
Generator-grid i n synchronism and with load sharing (1 generator and 1 grid) (m)
Optional Expansions DSE6110/20
DSE2130 (8 digital inputs)   I G-IOM (8 digital inputs/outputs + 4 analog inputs)I G-08 ( 8 ent. dig.)
DSE2157   I -RB8   G-06 (8 relay outputs)
DSE2548   IGL-RA15   - (expansion with 8 Additional LEDs *
DSE2510/20 (mirror controller, max distance 1km) *
Rules
Working temperature -30 -> 70°C
Protection index (when mounted with sealing gasket) IP65
Maximum humidity level (for 48 h) 93% / 40°C



#### Legend

*	Available	[4]	Needs an additional ammeter
-	Optional	[5]	If the information is provided by the engine ECU
X	Not available	[6]	Requires an additional sensor
Q	Warning alarm	[7]	Need to include an additional IL-NT-S-USB module
⊗	Stop alarm	[8]	Need to include an additional IL-NT-RS232-485 module
[1]	Need an additional IT	[9]	DeepSea: Needs to include an additional DSE891 module/ComAp: Needs to include an additional IB-LITE module
[2]	Number of outputs available for standard configuration. Outputs do not include relays or additional wiring to terminals.	[10]	DeepSea: Needs to include an additional DSE890 module/ComAp: Needs to include an additional IL-NT-GPRS module
[3]	If the information is not provided by the engine ECU, an additional sensor needs to be included.	[11]	DeepSea: Needs to include an additional DSE892 module/ComAp: Needs to include an additional IB-LITE module

#### Emergency Standby Power (ESP)

Emergency standby power is the maximum power available to a variable load during a main power grid failure. The average load factor over 24 hours of operation must not exceed 70% of the motor's ESP rated power. Typical motor operating hours are 200 hours per year, with a maximum usage of 500 hours per year.

This includes an annual maximum of 25 hours per year at the ESP power rating. Overload capability is not permitted. The motor must not be used for sustained utility parallel applications.

#### Main Power (PRP)

Prime Power is the maximum power available for unlimited hours of use in a variable load application. The average load factor must not exceed 70% of the motor's PRP rating during any 24-hour period. A 10% overload capability is available; however, it is limited to 1 hour within each 12-hour period.

- 1. All ratings are based on operating conditions according to ISO 8528-1, ISO 3046, DIN6271. Performance tolerance ±5%.
- 2. Test conditions: 100 kPa, 25°C air inlet temperature, 30% relative humidity, with fuel density of 0.84 kg/L. Derating may be required for conditions outside these, contact factory for details.
- 3. Power output curves are based on engine operation with fuel system, water pump and lubricating oil pump; battery charging alternator, fan and optional equipment are not included.

