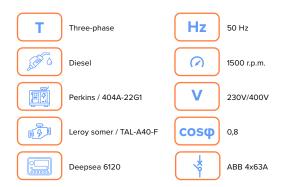
ATP Perkins - Leroy Somer Series

ATP22-PK/LS

Standby Power (STP)	22 kVA	18 kW

1

Main Features



Standby Power (STP)	22 kVA	18 kW
Continuous Power (PRP)	20 kVA	16 kW
Continuous Power (COP)	- kVA	- kW

Soundproof

Length (L)	2000 mm	
Height (H)	1000 mm	
Width (W)	1350 mm	F F
Weight	950 kg	
Daily deposit	90 Lts	WL
		50Hz
Medium sound pressure level for a bare engine (without intake or exhaust) at 1 meter.		76 dB(A)

Installation in room

Sistema de escape		50Hz	
	COP	PRP	STP
Maximum backpressure (kPa)		10,2	
Maximum static weight supported on the turbocharger outlet flange (N.m)		-	
Maximum intake air restriction with heavy-duty air filter	-		
Dirty Element (kPa) Clean Element (kPa)	-		
Max. exhaust pipe diameter (mm)	42		

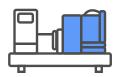
Fuel System		50Hz	
	COP	PRP	STP
Nozzle opening pressure (MPa)		14,7	
Fuel flow rate (L/hr)	63		
Pressure (kPa)	10		
Maximum static pressure height (m)		3	

Electric System		50Hz	
	COP	PRP	STP
Starter engine (Vdc)		12	
Battery charging system, negative ground (A)	15		
Maximum allowed resistance of the starting circuit $\left(\Omega\right)$	0,002		
Minimum recommended battery capacity — Cold soak @ 0 to 32°F (-18 to 0°C)	780		



Engine specifications

General specifications	50 Hz
Model	404A-22G1
Emissions	Not applicable
Operating Method	Four-stroke
Fuel Type	Diesel
Cooling System	Liquid (water + 50% antifreeze)
Aspiration System	Natural aspiration
Injection System	Indirect injection
Number and Arrangement of Cylinders	4 in-line
Displacement (L)	2,216
Cylinder Bore (mm)	84
Cylinder Stroke (mm)	100
Compression Ratio	23.3:1
Regulation	Mechanical
Rotational Speed	1500
Oil Capacity (L)	7
Gross Power COP (kWm)	-
Gross Power PRP (kWm)	18,7
Gross Power STP (kWm)	20,6
Coolant Capacity (L)	10,6
Net Power COP (kWm)	-
Net Power PRP (kWm)	-
Net Power STP (kWm)	-



Consu	Consumption 50Hz		Hz
Fuel consumption	Charge	lt/h	g/kWh
STP	100%	6,1	244
	100%	5,3	237
000	75%	4	238
PRP	50%	2,9	258
	25%	-	-
Fuel supply flow (L/h)		63	
Condiciones de referencia			
Temperature (°C)		25	
Atmospheric pressure (kPa)		100	
Sistema de arranque			
Voltage (V)		24	
Standard thermostat	Standard thermostat range (°C)		-95

Alternator specifications

General specifications	
Model	TAL-A40-F
Number of Phases	Three-phase
Protection	IP23
Insulation	Н
Heating	Н
Waveform IEC = THF:	THF<2%
Waveform NEMA = TIF:	TIF<50
Excitation system:	SHUNT/ AREP+/PMG
AVR model:	R150/R180



Overspeed: rpm	2250
Voltage regulation: (steady state)	+/- 1,0%
Air flow rate 50 Hz (m3/s)	0,08
Radio interference:	Deletion in accordance with the standard European EN61000-6
AREP+ Short circuit current	2.7 ln: 5 seg.

Starter Battery

- BB -	Battery voltage	
+ -	Battery Capacity	
	Amount	
	Battery type	Maintenance-free, sealed lead-acid type

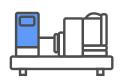
Certifications





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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
CAN port (Max. 40m)	*
PLC function	*

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
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.

