

PGPLS14

60Hz/1800 r.p.m-P.F.0.8					Prime Power	Standby Power	Rated Current
Genset	Engine	Alternator	Voltage (V)	PH	kW/kVA	kW/kVA	Amps
FC16X-P	403D-15G	LSA40M5 PI144E TPA184M6	240 (220-240)	1	13/16	14/17	66.7
		LSA40S4 PI044G TPA164S4	380/220	3	13/16	14/17	24.7
		LSA40S3 PI044G TPA164S4	208/120	3	13/16	14/17	45.1
		LSA40S3 PI044G TPA164VS3	220/127	3	13/16	14/17	42.6
		LSA40S3 PI044G TPA164VS3	230/132	3	13/16	14/17	40.8
		LSA40VS2 PI044F TPA164VS3	480/277	3	13/16	14/17	19.5

Ratings: All three Phase generator sets are rated at 0.8 power factor. All single-phase generator sets are rated at 0.8 or 1.0 power factor. POWERGEN reserves the right to change the design or specifications without notice and without any obligation or liability whatsoever.

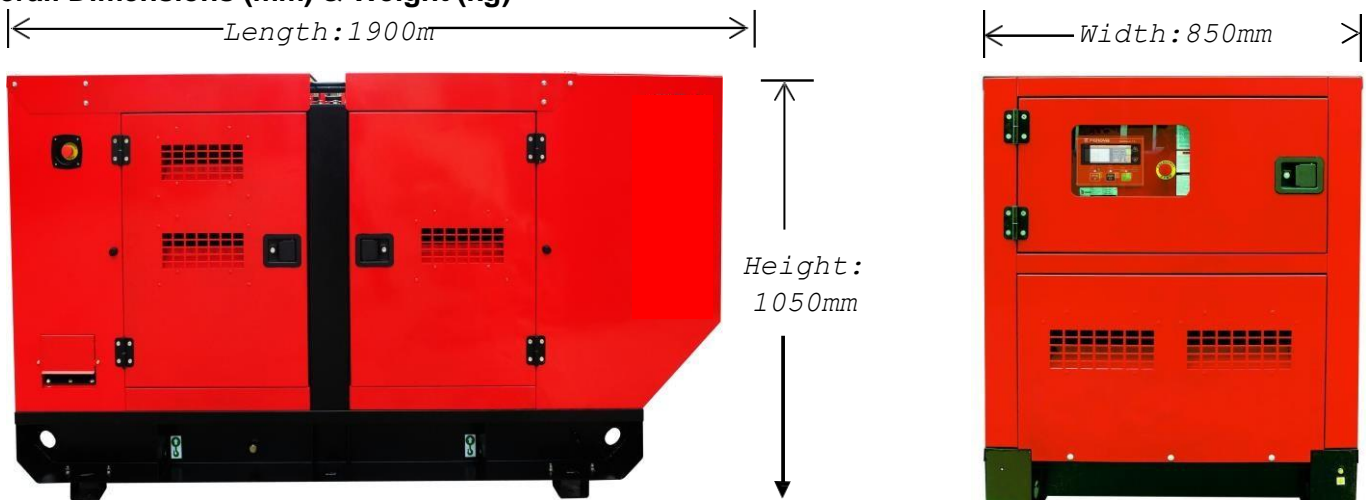
Prime Power:

Available continuously at variable load in lieu of commercially purchased power for an unlimited number of hours per year in accordance with ISO8528-1, and an overload of 10% permitted for one hour in every twelve hours of operation in accordance with ISO 3046-1.

Standby Power:

Emergency Standby Power in variable load applications in accordance with ISO8528-1 in the event of a utility power failure. No overload available for this service as relevant alternators are peak continuous rated at 27°C.

Overall Dimensions (mm) & Weight (kg)



Weight(kg) : 650

Standard and Optional Accessories

System	Standard ●	Optional ○
Air Intake System	<ul style="list-style-type: none"> ● Standard air filter ● Air filter overload alarm 	<ul style="list-style-type: none"> ○ Air prefilter ○ Heavy air filter
Cooling System	<ul style="list-style-type: none"> ● 50°C radiator ● Low water level alarm ① ● Fan and belt guard ● Discharge valve 	<ul style="list-style-type: none"> ○ Antifreeze ○ Water jacket heater
Exhaust System	<ul style="list-style-type: none"> ● Stainless steel bellow ● Residential silencer ● Complete exhaust pipe ● Rain cap 	<ul style="list-style-type: none"> ○ Stainless steel silencer ○ Stainless steel exhaust pipe
Fuel System	<ul style="list-style-type: none"> ● 8 Hours integrated base fuel tank ● Standard fuel filter ● Fuel level gauge ● Fuel filling cap ● Fuel hose 	<ul style="list-style-type: none"> ○ 6 Hours double wall base fuel tank ○ Fuel-water separator ○ Oil level sensor ②③ ○ Automatic fuel top up system ②
Lubrication System	<ul style="list-style-type: none"> ● Standard oil filter ● Manual oil pump and drain 	<ul style="list-style-type: none"> ○ Oil heater ○ Lube oil level indicator ○ Oil temperature indicator ②
Alternator and Electric Switch	<ul style="list-style-type: none"> ● Shunt or self excited ● Class H insulation ● H class temperature rise ● DELIXI MCCB ● Terminal connection lugs (L1, L2, L3, LN) 	<ul style="list-style-type: none"> ○ PMG or AREP (Leroy-somer only) ○ Alternator space heaters ○ PT100 winding temperature sensors ○ Weaver AVR ○ Weaver prolapse transformer ○ F class temperature rise ○ 4 Pole circuit breaker with leakage protection ○ Circuit breaker - 4 pole ○ ABB MCCB ○ MCCB auxiliary contact and shunt tripping device
Control System	<ul style="list-style-type: none"> ● Intelligent 1.0 for 4 cylinders engine ● Intelligent 3.0 for 6 cylinders engine ● Intelligent 5.0 for ECU engine 	<ul style="list-style-type: none"> ○ Panel lighting
Silent / Base	<ul style="list-style-type: none"> ● 67-72 db(A) @ 3 meters ● 4mm -6mm Steel base ● Transportation support leg ● Single hook ● Power coating enclosure ● Anti-vibration mounting between engine /alternator and baseframe ● Emergency stop mounted outside the canopy ● Standard color: Ral 3020 	<ul style="list-style-type: none"> ○ Forklift holes ○ Enclosure color: ○ Trailer for off road or on road
Start / Charge	<ul style="list-style-type: none"> ● Battery with bracket and cables ● Engine battery charger ● 3A Mains charger 	<ul style="list-style-type: none"> ○ Low temperature starting batteries ○ Battery switch ○ High current charger (10A, 20A)

Remark:

① Not available for Perkins 400 series engines

② When you need the automatic oil top up system, you have to use the electrical oil level sensor.

③ You can choose either electrical oil level sensor or oil temperature sensor.

Engine

Engine specifications		Lubrication system	
Manufacture	Perkins	Maximum sump capacity	4.5 Litre
Engine model	403D-15G	Total lubrication system capacity	6.0 Litre
Engine type	4 stroke, Vertical in-line, 3-cylinder	Normal oil temperature	125°C
Engine speed	1800 r.p.m	Lubricating oil pressure-relief valve opens	262-359 kPa
Prime power	14 kW	Fuel system	
Standby power	16 kW	Type of injection	Direct injection
Governor type	Mechanical	Fuel lift pump-flow/hour	63 Litres/hour
Air intake way	Naturally aspirated	Fuel consumption at 100% standby power	4.7 Litres/hour
Displacement	1.496 L	Fuel consumption at 100% prime power	4.2 Litres/hour
Cylinder bore * stroke	84mm x 90mm	Fuel consumption at 75% prime power	3.2 Litres/hour
NO. of cylinders	3	Fuel consumption at 50% prime power	2.3 Litres/hour
Compression ratio	22.5:1	Fuel tank capacity	8-12 hours
Brake mean effective pressure	649.7-721.9kPa	Cooling system	
Mean piston speed	N/A	Total system capacity	
Combustion air flow	1.23 m ³ /min	- With radiator	6.0 Litres
Engine coolant flow	45.4 L/min	- Without radiator	2.6 Litre
Exhaust system		Thermostat operation range	82-95 °C
Exhaust gas flow	3.14 m ³ /min	Maximum top tank temperature	112°C
Exhaust gas temperature	455 - 505°C	Electric system	
Maximum back pressure	10.2 kPa	Electrical system voltage	12V
Exhaust outlet size	42 mm	Battery	Maintenance-free
Air intake system		Connecting cables	Available
Air intake restriction		Energy balance	
Alternator		60Hz/1800R.P.M	
Clean filter	3.0 kPa	Energy to coolant and lubricating oil	13.6-15.2 kW
Dirty filter	6.4 kPa	Insulation class	Insulation class
Power factor	cos φ = 0.8	Energy to exhaust	10.3-11.8 kW
Air filter type	Dry	Bearing	Single
Excitation	Shunt / Brushless	Energy to radiation	3.9-4.3 kW
		Altitude	< 1000 m

Ratings Prime Power Standby Power

Brand	Alternator	Number of wires	AVR Model	PH	Voltage (V)	kW /kVA	kW /kVA
Leroy-somer	LSA40M5	12	R220	1	240 (220-240)	12.8/16	14/17.5
Stamford	PI144E		AS480			13.2/16.5	14.6/18.2
Tide	TPA184M6		SX460			12.8/16	14/17.6
Leroy-somer	LSA40S4	12	R220	3	380/220	14/17.5	15.6/19.5
Stamford	PI044G		AS480			15/18.8	16.4/20.5
Tide	TPA164S4		SX460			13/16	14/17
Leroy-somer	LSA40S3	12	R220	3	208/120	13.2/16.5	14.8/18.5
Stamford	PI044G		AS480			13.2/16.5	14.6/18.2
Tide	TPA164S4		SX460			14/17	15.1/18.8
Leroy-somer	LSA40S3	12	R220	3	220/127	14/17.5	15.6/19.5
Stamford	PI044G		AS480			14.1/17.6	15.5/19.4
Tide	TPA164VS3		SX460			12.5/15.6	13.4/16.8
Leroy-somer	LSA40S3	12	R220	3	230/132	14.6/18.2	16/20
Stamford	PI044G		AS480			14.6/18.2	16/20
Tide	TPA164VS3		SX460			12.5/15.6	13.4/16.8
Leroy-somer	LSA40VS2	12	R220	3	480/277	12.4/15.5	13.6/17
Stamford	PI044F		AS480			15/18.8	16.5/20.6
Tide	TPA164VS3		SX460			12.5/15.6	13.4/16.8



Intelligent 1.0



Intelligent 3.0



Intelligent 5.0

Viewable parameters	Phase voltage	3	3	3
	Wire voltage	3	3	3
	Current	Instrument	3	3
	Frequency	●	●	●
	Active power	×	●	●
	Reactive power	×	●	●
	Apparent power	×	●	●
	Power factor	×	●	●
	Electric energy metering	×	×	●
Generator protection	Abnormal voltage	●	●	●
	Over-current warning	×	●	●
	Over current protection	×	●	●
	Over Frequency protection	●	●	●
	Short circuit protection	MCCB	MCCB+	MCCB+
Engine figure <i>Remark:</i> ● Standard	Oil pressure	●	●	●
	Water temperature	●	●	●
	Fuel level	○	○	○
	Speed	○ Optional	×	×
	Battery voltage	●	●	●
	Elapsed time	●	●	●
Engine protection	Low oil pressure warning	●	●	●
	Low oil pressure protection	●	●	●
	High temperature warning	●	●	●
	High temperature protection	●	●	●
	Overspeed warning	●	●	●
	Overspeed protection	●	●	●
	Charge fault	●	●	●
Function	Remote start-stop	●	●	●
	AMF	●	●	●
	Programmable input	3	7	7
	Programmable output	6	7	7
	Port extension	USB	○	○
	Remote monitoring	×	○	○
	Communication port	×	○	○
	CAN	●	○	●
	Start/Stop time control	×	×	●
	Maintenance tips	×	×	●
	Fault record	×	×	●
Multi-language function	×	●	●	

(Safety Installation: Detect - Control – Switch System)

POWERGEN offers not only a changeover switch but also an integrated mains detection and switch system for your 24 Hour Power Protection. The system enables automatic start-up and operation of the generating set in the event of a mains power failure, overvoltage or loss of phase; and also mains automatic re-transfer once it come back. The system has a wide application such as hospital, bank, telecom, air port, broadcasting station and hotels.

System Advantages

- Automatically transfer and re-transfer load from main power to gen-power without operator intervention.operation. (Both automatic and manual)
- ATS Controller (AMF function), seamless integration with Intelligent 5.0
- Available from 32 – 3200A, better protection for 4 pole switch.
- Available in standard, bypass isolation and service-entrance configurations.
- Configurable in open, closed and programmed transition operating modes.
- Designed to interface seamlessly with POWERGEN generators and switchgear.
- Drip Proof IP23 Enclosure.
- Easy Installation: W all-mounted & Floor standing
- Comes fully loaded with the technology to do the job.



Rated Current	Breaker Type			
	A	Chinese	ABB	Socomec
32	x		B	x
63	A		B	B
80	x		x	B
100	A		B	B
125	x		B	B
160	B		B	B
200	x		B	x
250	C		B	B
300	x		x	x
315	x		C	x
400	C		C	C
630	C		D	D
800	D		D	D
1000	D		D	D
1250	D		D	D
1600	D		D	E
2000	E		E	E
2500	E		E	E
3200	E		x	E

Dimensions : mm

A : 400x200x500
 C : 600x400x1200
 E : 1000x800x1600

B : 500x300x650
 D : 800x600x1400



Controller

StandardParameters

- Gen phase voltage
- Generator frequency
- Engine speed
- Battery voltage
- Engine running hours counter
- Engine temperature
- Oil pressure



WarningandShutdownAlarms

- Low oil pressure
- High engine temperature
- Over speed
- Under speed
- Start failure
- Stop failure
- Emergency stop
- High/low battery voltage
- Aux. shutdown alarm
- Aux. Warning