PGCLS80

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**
FC90X-C	4BTA3.9-G11	LSA 44.3 M6 UCI274D FPA22-7510	240 （220-240）	1	72/90	80/100	375.0
		LSA44.3S4 UCI224G FPA22-689	380/220	3	72/90	80/100	136.7
		LSA44.3S4 UCI224G FPA22-648	208/120	3	72/90	80/100	249.8
		LSA44.3S3 UCI224G FPA22-648	220/127	3	72/90	80/100	236.2
		LSA44.3S3 UCI224G FPA22-648	230/132	3	72/90	80/100	225.9
		LSA44.3S2 UCI224F FPA22-648	480/277	3	72/90	80/100	108.3

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.

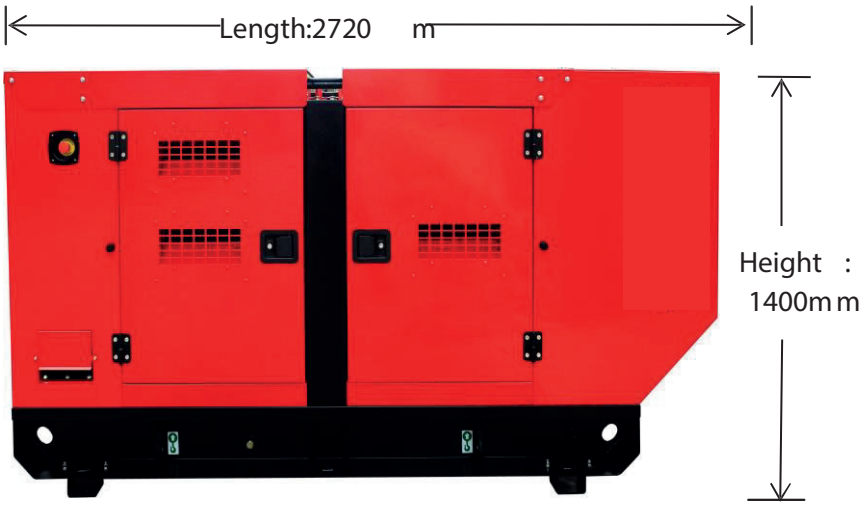
Prime Power:

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℃.

Overall Dimensions (mm) & Weight (kg)



Weight (kg)：1300

Standard and optional accessories

System	Standard ●	Optional ○
Air Intake System	● Standard air filter ● Air filter overload alarm	○ Air prefilter ○ Heavy air filter
Cooling System	● 50℃ radiator ● Low water level alarm ● Fan and belt guard ● Discharge valve	○ Antifreeze ○ Water jacket heater
Exhaust System	● Stainless steel bellow ● Residential silencer ● Complete exhaust pipe ● Rain cap	○ Stainless steel silencer ○ Stainless steel exhaust pipe
Fuel System	● 8 Hours integrated base fuel tank ● Standard fuel filter ● Fuel level gauge ● Fuel filling cap ● Fuel hose	○ 6 Hours double wall base fuel tank ○ Fuel-water separator ○ Oil level sensor ① ② ○ Automatic fuel top up system ①
Lubrication System	● Standard oil filter ● Manual oil pump and drain	○ Oil heater ○ Lube oil level indicator ○ Oil temperature indicator ①
Alternator and Electric Switch	● Shunt or self excited ● Class H insulation ● H class temperature rise ● DELIXI MCCB ● Terminal connection lugs (L1, L2, L3, LN)	○ 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	● Comap Nano Plus for 4 cylinders engine ● Comap InteliLite AMF20 for 6 cylinders or ECU engine	○ Panel lighting
Silent / Base	● 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	○ Forklift holes ○ Enclosure color: ○ Trailer for off road or on road
Start / Charge	● Battery with bracket and cables ● Engine battery charger ● 3A Mains charger	Low temperature starting batteries Battery swtich High current charger（10A，20A）

Remark:① When you need the automatic oil top up system, you have to use the electrical oil level sensor.

② You can choose either electrical oil level sensor or oil temperature sensor.

Engine

Engine specifications	
Manufacture	DCEC Cummins
Engine model	4BTA3.9-G11
Engine type	4 cycle, in-line
Engine speed	1800 r.p.m
Prime power	70kW/93hp
Standby power	80kW/107hp
Governor type	Electronic
Governor make / model	BYC PB
Aspiration:	Turbochanger& Aftercooler
Displacement	3.9 L
Bore * Stroke	102mm × 120mm
NO. of cylinders	4
Compression ratio	17.3:1
Engine idle speed	950-1050 rpm
Piston speed	7.2 m/s
Noise level @7m	67 dBA

Exhaust System	
Maximum back pressure	10 kPa
Exhaust pipe size normally acceptable	75 mm
Exhaust gas temperature	393-405 ℃
Exhaust gas flow	188 Litres/sec.

Air Intake System	
Maximum intake air restriction with heavy duty air cleaner	
- Dirty element	6.2 kPa
- Clean element	3.7 kPa
Recommended intake piping size	76 mm
Intake air flow	93 Litres/sec.

Lubrication System	
Oil capacity （high - low)	9.5 - 8.5 Litres
Maximum oil temperature	121℃
Minimum required lube system capacity	
- Sump plus filters	10.9 Litres

Fuel System	
Type injection system	BYC PB direct injection
Total drain flow (constant for all loads)	30 Litres/hour
Fuel consumption at 100% standby power	20 Litres/hour
Fuel consumption at 100% prime power	17.6 Litres/hour
Fuel consumption at 75% prime power	13.2 Litres/hour
Fuel consumption at 50% prime power	9.1 Litres/hour
Fuel consumption at 25% prime power	5.3 Litres/hour
Fuel tank capacity	16 hours

Cooling System	
Coolant capacity - engine only	8.3 Litres
Standard thermostat (modulating) range	83 - 95℃
Maximum top tank temperature	
- Standby power	104 ℃
- Prime power	100 ℃

Electric System	
Electrical system voltage	24V
Battery	Maintenance-free
Connecting cables	Auailable

Thermal Data	
Radiated heat to ambient	To be decided
Heat rejection to coolant	To be decided
Heat rejection to exhaust	To be decided

Alternator

60Hz/1800R.P.M

General Data			
Power factor	Cos ∅ = 0.8	Insulation class	H
Excitation	Shunt / Brushless	Bearing	Single
		Altitude	⩽ 1000 m

Ratings

						Prime Power	***Standby Power***
Brand	Alternator	Number of wires	AVR Model	PH	Voltage（V）	kW/kVA	kW/kVA
Leroy-Somer	LSA 44.3 M6	4	R250	1	240 （220-240）	78/98	86/108
Stamford	UCI274D		AS440			76.8/96	N/A
Tide	FPA22-7510		SX460			72/90	80/100
Leroy-Somer	LSA44.3S4	12	R250	3	380/220	71/89	78/98
Stamford	UCI224G		AS440			80/100	85/106.3
Tide	FPA22-689		SX460			75/94	82/102.5
Leroy-Somer	LSA44.3S4	12	R250	3	208/120	78/98	86/107
Stamford	UCI224G		AS440			75/93.8	81/101.3
Tide	FPA22-648		SX460			76/95	84/105
Leroy-Somer	LSA44.3S3	12	R220	3	220/127	74/92	81/101
Stamford	UCI224G		AS440			78/97.5	85/106.3
Tide	FPA22-648		SX460			76/95	84/105
Leroy-Somer	LSA44.3S3	12	R250	3	230/132	77/96	84/105
Stamford	UCI224G		AS440			80/100	85/106.3
Tide	FPA22-648		SX460			76/95	84/105
Leroy-Somer	LSA44.3S2	12	R250	3	480/277	70/88	77/96
Stamford	UCI224F		AS440			75/93.8	82/102.5
Tide	FPA22-648		SX460			76/95	84/105

ControlSystem



		Comap Nano Plus	Comap InteliLite	Comap InteliLite AMF25
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	Oil pressure	●	●	●
	Water temperature	●	●	●
	Fuel level	○	○	○
	Speed	●	●	●
	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	×	●	●

Remark: ● Standard ○ Optional × NA

Automatic Transfer Switch *A.T.S - 4 Poles*

(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: Wall-mounted & Floor standing
- Comes fully loaded with the technology to do the job.

Rated Current	Breaker Type		
A	Chinese	ABB	Socomec
32	×	B	×
63	A	B	B
80	×	×	B
100	A	B	B
125	×	B	B
160	B	B	B
200	×	B	×
250	C	B	B
300	×	×	×
315	×	C	×
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	×	E

Dimensions : mm

A：400×200×500　　B：500×300×650
C：600×400×1200　　D：800×600×1400
E：1000×800×1600

Controller

StandardParameters

- Gen phase voltage
- Generator frequency
- Engine speed
- Battery voltage
- Engine running hours cou
- 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