PGCLS40

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**
FC45X-C	4BT3.9-G2	LSA42.3L9 UCI224E TPA224M3	240 （220-240）	1	36/45	40/50	187.5
		LSA42.3M7 PI144J TPA224S1	380/220	3	36/45	40/50	68.4
		LSA42.3S5 PI144J TPA184L10	416/240	3	36/45	40/50	62.5
		LSA42.3S5 LSAP 43C PI144J TPA184L10	440-460	3	36/45	40/50	59.0 （440V） 56.5（460V）
		LSA42.3S5 LSAP 43C PI144J TPA184L10	480/277	3	36/45	40/50	54.1

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.

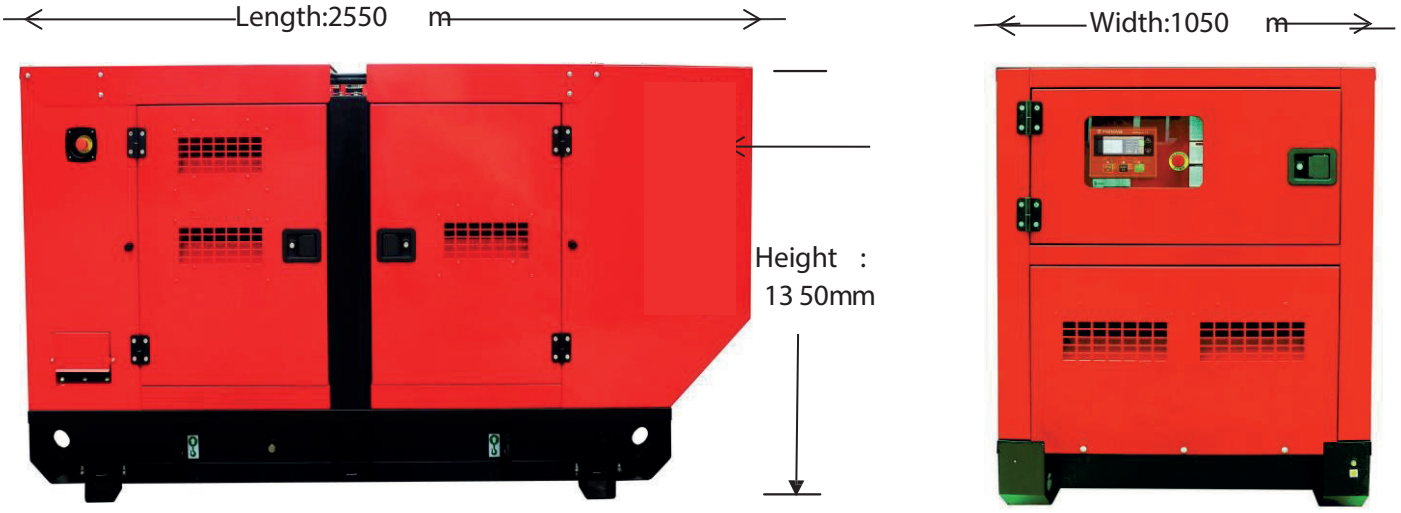
Prime Power:

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)：1260

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	● Intelligent 1.0 for 4 cylinders engine ● Intelligent 3.0 for 6 cylinders engine ● Intelligent 5.0 for 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	4BT3.9-G2
Engine type	4 cycle, in-line
Engine speed	1800 r.p.m
Prime power	40kW/54hp
Standby power	44kW/59hp
Governor type	Electronic
Governor make / model	BYC A
Aspiration:	Turbochanger
Displacement	3.9 L
Bore * Stroke	102mm × 120mm
NO. of cylinders	4
Compression ratio	18.0:1
Engine idle speed	950-1050 rpm
Piston speed	7.2 m/s
Air clearner type	Dry
Exhaust System	
Maximum back pressure	10 kPa
Exhaust pipe size normally acceptable	75 mm
Exhaust gas temperature	350-373 ℃
Exhaust gas flow	101 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	53.1 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 A direct injection
Total drain flow (constant for all loads)	30 Litres/hour
Fuel consumption at 100% standby power	11.7 Litres/hour
Fuel consumption at 100% prime power	10.7 Litres/hour
Fuel consumption at 75% prime power	8.4 Litres/hour
Fuel consumption at 50% prime power	6.2 Litres/hour
Fuel consumption at 25% prime power	4.2 Litres/hour
Fuel tank capacity	8-12 hours
Cooling System	
Coolant capacity - engine only	7.2 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	Available
Thermal Data	
Radiated heat to ambient	To be decided
Heat rejection to coolant	32-35 kW Heat rejection to
exhaust	To be decided

Alternator

60Hz/1800R.P.M

General Data	
Power factor	Cos ¢ = 0.8
Excitation	Shunt / Brushless

Insulation class	H
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	LSA42.3L9	12	R220	1	240 （220-240）	36/45	39.6/49.5
Stamford	UCI224E	12	AS440			36/45	N/A
Tide	TPA224M3	12	SX460			35.2/44	39.6/49.5
Leroy-somer	LSA42.3M7	12	R220	3	380/220	36.8/46	40.5/50.6
Stamford	PI144J	12	AS480			38/47.5	41.4/51.8
Tide	TPA224S1	12	SX460			38/47.5	42/52.5
Leroy-somer	LSA42.3S5	12	R220	3	416/240	36.8/46	40.5/50.6
Stamford	PI144J	12	AS480			35.2/44	39.6/49.5
Tide	TPA184L10	12	SX460			35/44	38/47.5
Leroy-somer	LSA42.3S5	12	R220	3	440-460	39.2/49	43.1/53.9
Leroy-somer	LSAP 43C	6	R201			37/46.6	41/51
Stamford	PI144J	12	AS480			37.6/47	42.3/52.9
Tide	TPA184L10	12	SX460			37.5/47	40/50
Leroy-somer	LSA42.3S5	12	R220	3	480/277	40/50	44/55
Leroy-somer	LSAP 43C	6	R201			40/50	47/59
Stamford	PI144J	12	AS480			40/50	45/56.3
Tide	TPA184L10	12	SX460			37.5/47	40/50

ControlSystem



		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	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 TIDE POWER 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 co
- 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