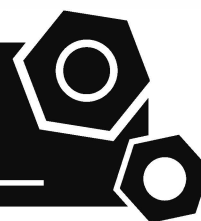


Generator set
Sound-proof type
E28KS

SPECIFICATIONS



T5F series
E28KS, Tier 5 Final
60 Hz @ 1800rpm,3-phase/5-wiring

1 Standards & Conditions

Design Standards

The designs and the productions are in conformity with:

- Conformance Européenne (CE)
- ISO8528-5:2005
- GB/T2820.5-2009

Electrical devices have obtained the certification of:

- CSA
- UL

Environmental Operating Conditions

- Installation place: Outdoors or indoors (well ventilated).
- Ambient temperature: -25°C to 50°C. The coolant heater is needed when the temperature is below 5°C
- Humidity: Less than 80%.
- Altitude: Below one thousand (1000) meters.

Factory Inspection

- Inspection items.
- Protection devices working test.
- Starting ability in normal temperature.
- 50% rated power load moment capability.
- Voltage deviation and speed variation: 0%, 25%, 50%, 75%, 100%, 110% Load.

Painting Process

- Painting process specifications and colors are based on the manufacturer's standard.
- The customer could also choose the color which the manufacturer offers.

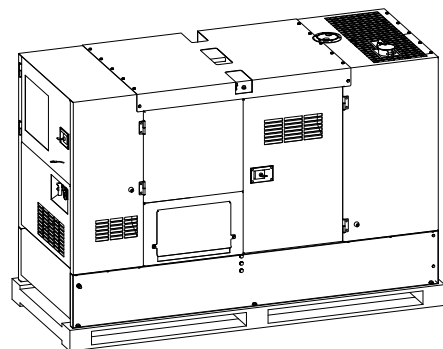
2 General Features

- Kubota engine V2403-CR-TE5BG2
- Close coupled to Leroy Somer alternator LSA42.3VS3
- Intelligent control module PLC-7420
- ABB main circuit breaker: 63A
- Rotate speed governor: ECU
- Exhaust gas purification system with EGR and DOC
- Excitation system: Self excited, SHUNT
- Key switch

- Emergency stop switch
- ATS (automatic transfer switch) receptacle
- 1x12V/72AH battery and charger
- Lockable battery isolator switch
- Power coated canopy
- 50°C radiator
- Oil pump on the engine
- Steel base frame
- Vibration isolators between the engine/alternator and base frame
- Dry type air filter
- Base fuel tank for 25 hours running
- Drain points for fuel tank
- Operation Manual / Specifications

3 Equipment Specification

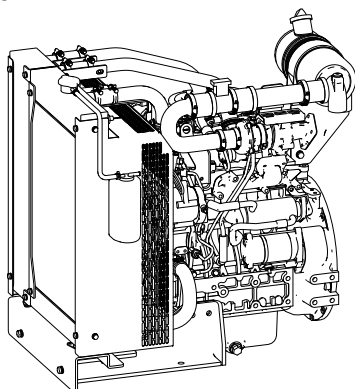
General technical data



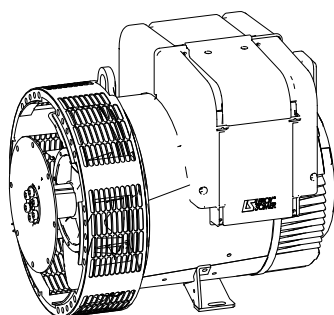
Model.....	E28KS
Structure type	RS
Tank capacity.....	165L
Dry weight.....	1175kg
Sound pressure level @7m	66dBA
Dimensions L×W×H.....	2338x1115x1555mm
Prime Power	28kVA/22kW
Standby Power	30kVA/24kW

Voltage	208V	220V	230V	240V	
Ampere	83.3A	78.7A	75.3A	72.2A	
Genset Fuel Consumption					
Frequency/Load	25%	50%	75%	100%	110%
60Hz (L/h)	N/A	4.3	6.4	8.5	9.2

Power System

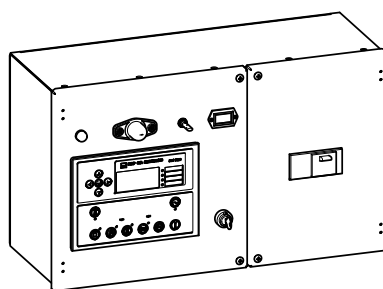


Engine Manufacturer/Brand.....	Kubota
Engine Model.....	V2403-CR-TE5BG2
Dimensions L×W×H.....	842×549×745mm
Dry Weigh (approx.)	250Kg
Number of Cylinders.....	4
Bore.....	87mm
Stroke	102.4mm
Displacement.....	2.434L
Compression Ratio	16.0
Type of injection.....	High pressure common rail
Intake System.....	Turbocharged
Intake Resistance	≤ 4.9kPa
Cooling System	Water cooled
Fan	Pusher
Battery Voltage	12V
Type of Fuel.....	No.2-D S15, Ultra Low Sulfur Fuel Only
Type of Oil	Class CJ-4/CK-4 oil as per API classification
Oil Capacity	9.5L
Type of Coolant	Glycol mixture
Coolant Capacity	10.5L
Back Pressure(after the exit of DOC)	≤5.3kPa
Prime Power	30.6kW
Fuel Consumption(100%load)	8.5L/h



Alternator Manufacturer/Brand	Leroy Somer
Alternator Model	LSA42.3VS3
Exciter.....	Brushless
Cooling Fan	Cast alloy aluminum
Windings.....	100% copper
Insulation Class	H
Winding Pitch.....	2/3
Terminals	12
Drip Proof	IP23
Altitude.....	≤1000m
Overspeed	2250 rpm
Air Flow.....	0.10m³/s(50HZ),0.13m³/s(60HZ)
Voltage Regulation	±0.5%
Total harmonic TGH / THCat no load < 3 % - on load < 2%	
Telephone Interference.....	THF<2%;TIF<50

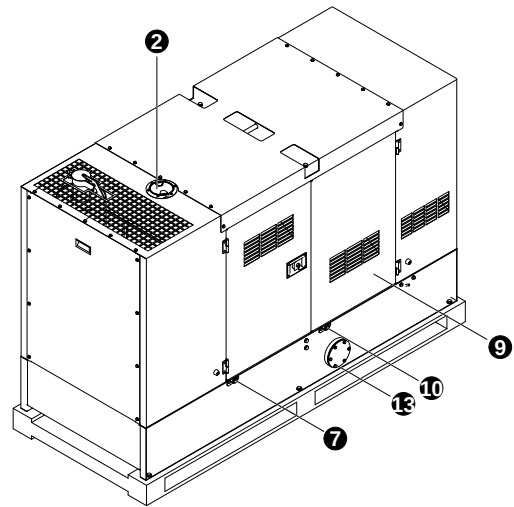
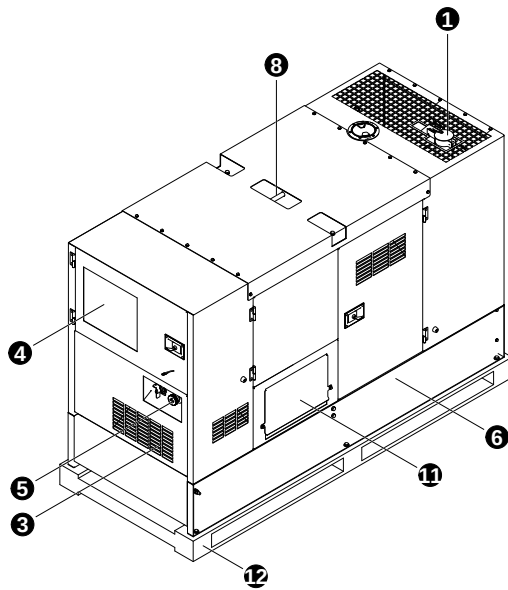
PLC-7420 Control System



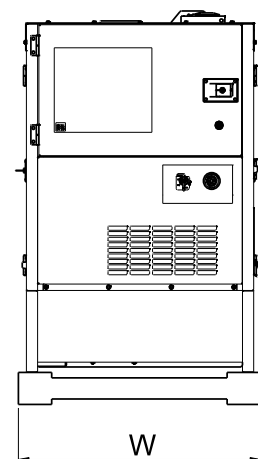
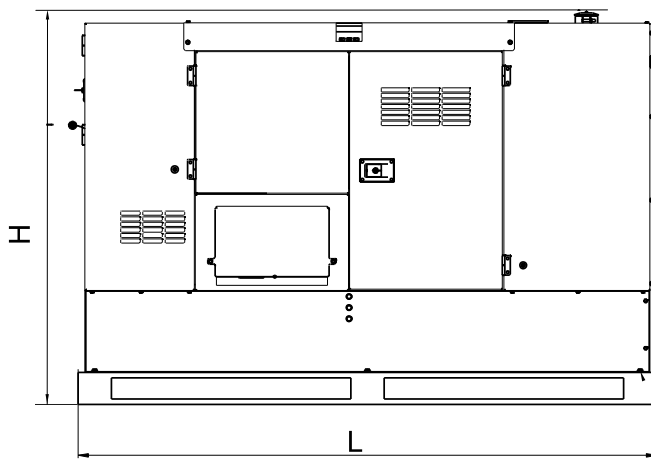
PLC-7420 is an advanced control module based on micro-processor, containing all necessary functions for protection of the genset and the breaker control. It can monitor the mains supply, and automatically start the engine when the mains is abnormal. Accurately measure various operational parameters and display all values and alarms information on the LCD. In addition, the control module can automatically shut down the engine and indicate the engine failure.

- Microprocessor control, with high stability and credibility
- Monitoring and measuring operational parameters of the mains supply and genset
- Indicating operation status, fault conditions, all parameters and alarms
- Multiple protections; multiple parameters display, like pressure, temp. etc.
- Manual, automatic and remote work mode selectable
- Real time clock for time and date display, overall runtime display, 250 log entries
- Overall power output display
- Integral speed/frequency detecting, telling status of start, rated operation, overspeed etc.
- Communication with PC via RS485 OR RS232 interface, using MODBUS protocol

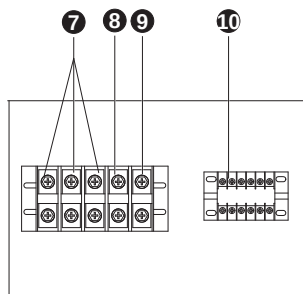
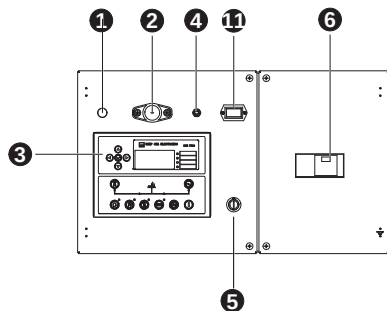
4 Overall Dimensions



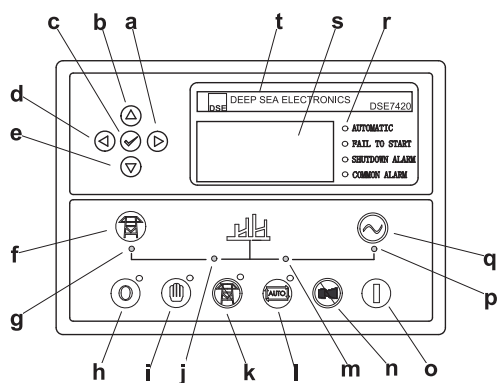
- | | |
|------------------------------|--------------------------|
| ⑧ Lifting lug | ⑬ Fuel drain |
| ⑦ Coolant drain hose fitting | ⑫ Wooden tray |
| ⑥ Base frame | ⑪ Cable trench |
| ⑤ Emergency stop switch | ⑩ Oil drain hose fitting |
| ④ Control cabinet | ⑨ Access door |
| ③ Air inlet | |
| ② Coolant inlet | |
| ① Exhaust gas outlet | |



5 Control System



Control & field wiring cabinet



Control module

Ref.	Description
1	Charge indicator
2	Control cabinet lamp
3	Control module
4	Control cabinet lamp switch
5	Key switch
6	Main circuit breaker
7	Live wire terminal
8	Neutral wire terminal
9	Ground wire terminal
10	Remote control/Mains input
11	Time counter

a	Button (next page)
b	Button (increase value / previous item)
c	Button (accept)
d	Button (previous page)
e	Button (decrease value / next item)
f	Button (transfer the load to the mains supply, when in Manual mode only)
g	Mains supply available LED
h	Stop / Reset button
i	Manual button (Manual control mode)
j	Mains supply on load LED
k	Test button (Test mode)
l	Auto button (Auto mode)
m	Genset on load LED
n	Mute/Lamp test button
o	Start button (Manual)
p	Genset available LED
q	Button (transfer the load to the genset, when in Manual mode only)
r	Alarm LED (4 alarm items)
s	LCD display
t	Control module name

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