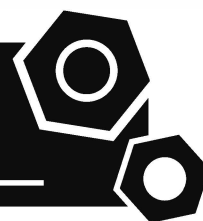


Generator set
Sound-proof type
A500S

SPECIFICATIONS



T4F series

A500S, Tier 4 Final

60 Hz @ 1800rpm, 3-phase/4-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.

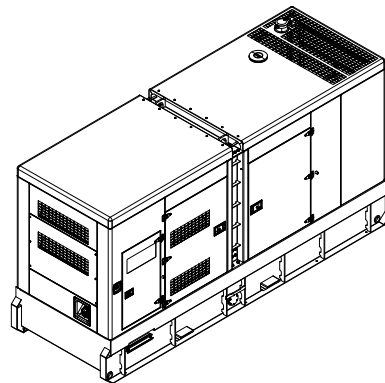
2 General Features

- Scania engine DC16 084A
- Close coupled to Leroy Somer alternator LSA47.2S5
- Intelligent control module PLC-7420
- ABB main circuit breaker: 630A
- Rotate speed governor: ECU
- Exhaust gas purification system with DOC and SCR
- Excitation system: Self excited, SHUNT
- Key switch

- Emergency stop switch
- ATS (automatic transfer switch) receptacle
- 2x12V/150AH 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 10 hours running
- Drain points for fuel tank
- Operation Manual / Specifications

3 Equipment Specification

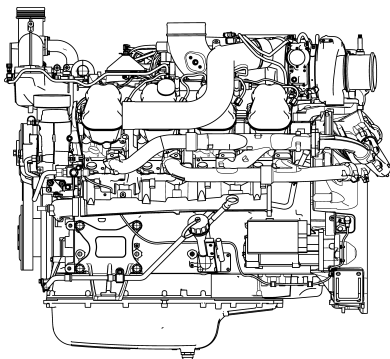
General technical data



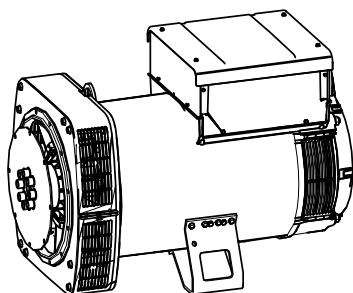
Model..... A500S
Structure type R
Tank capacity..... 1020L
Dry weight..... 5426kg
Sound pressure level @7m78.1dBA
Dimensions L×W×H.....4592x1563x2560mm
Prime Power 500kVA/400kW
Standby Power 550kVA/440kW

Voltage	416V	440V	460V	480V	
Ampere	694.0A	656.1A	627.6A	601.4A	
Genset Fuel Consumption					
Frequency/Load	25%	50%	75%	100%	110%
60Hz (L/h)	26.0	51.2	75.0	99.1	110.6

Power System

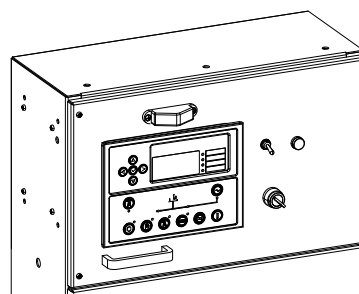


Engine Manufacturer/Brand.....	Scania
Engine Model.....	DC16 084A
Dimensions L×W×H.....	1325×1199×1289mm
Dry Weigh (approx.)	1375Kg
Number of Cylinders.....	8
Bore.....	130mm
Stroke	154mm
Displacement.....	16.4L
Compression Ratio	17.4
Type of injection.....	High pressure common rail
Intake System.....	Turbocharged
Intake Resistance	≤3.0kPa
Cooling System	Water cooled
Fan	Pusher
Battery Voltage	24V
Type of Fuel.....	Ultra Low Sulfur Fuel Only
Type of Oil	Class CJ-4/CK-4 oil as per API classification
Oil Capacity	48.0L
Type of Coolant	Glycol mixture
Coolant Capacity	26.0L
Back Pressure	≤10.0kPa
Prime Power.....	405kW
Fuel Consumption(100%load).....	99.1L/h



Alternator Manufacturer/Brand	Leroy Somer
Alternator Model	LSA47.2S5
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.....	0.514m³/s(50HZ),0.617m³/s(60HZ)
Voltage Regulation	±1.0%
Total harmonic TGH / THCat no load < 1.5 % - on load < 5%	
Telephone Interference.....	THF<2%;TIF<50

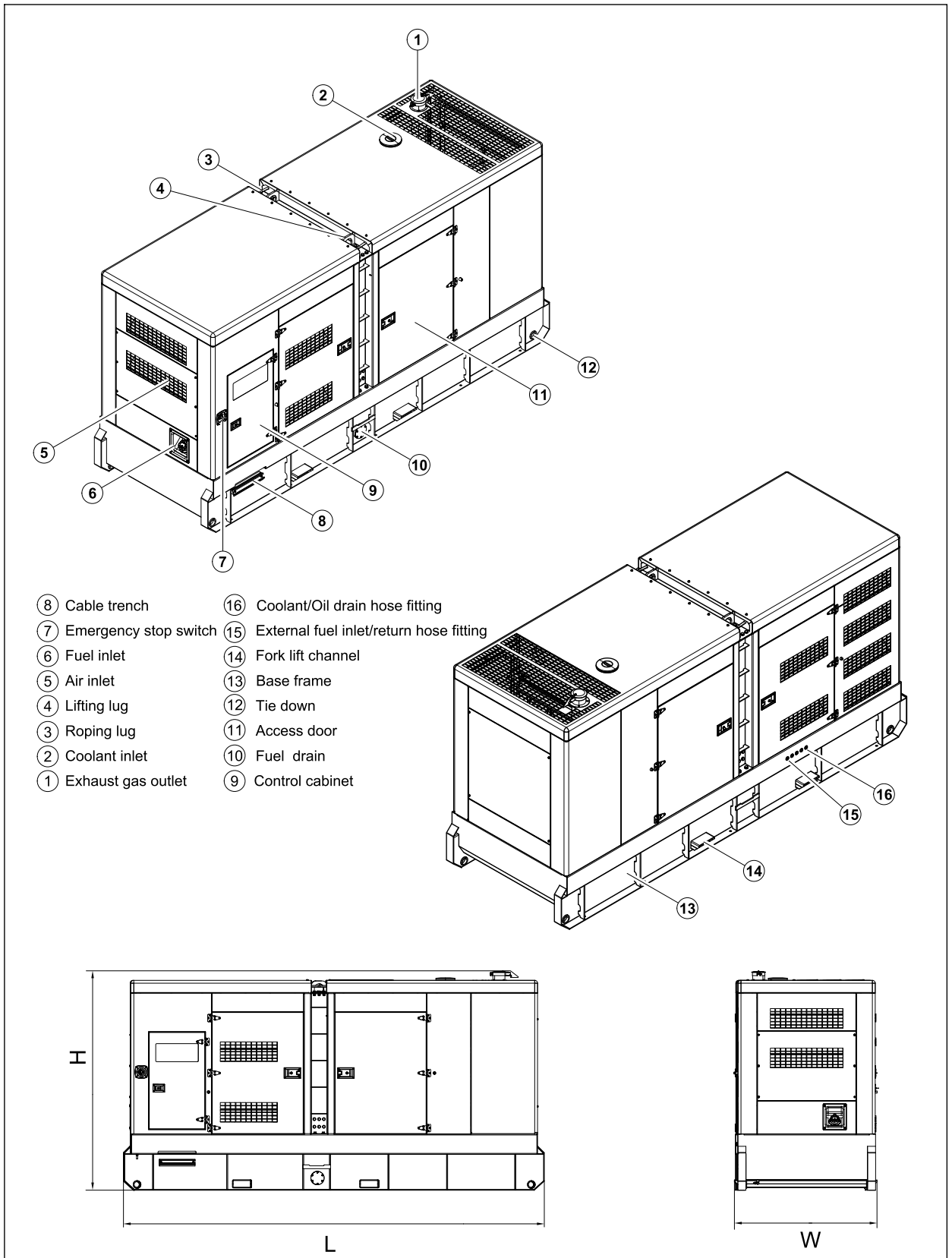
PLC-7420 Control System



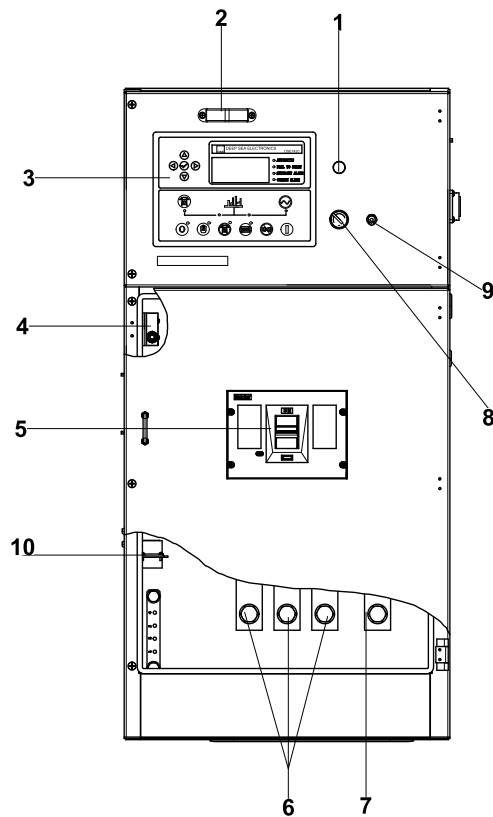
PLC-7420 is an advanced control module based on micro-processor, containing all necessary functions for protection of the genset and the breaker control. It can monitor the mains supply, and automatically start the engine when the mains is abnormal. Accurately measure various operational parameters and 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

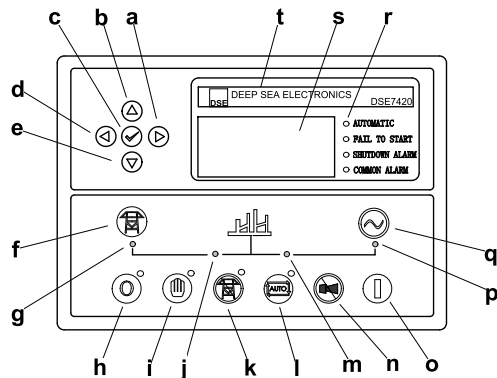
4 Overall Dimensions



5 Control System



Control & field wiring cabinet



Control Panel

Ref.	Description
1	Charge indicator
2	Control cabinet lamp
3	Control module
4	Limit switch
5	Main circuit breaker
6	Live wire terminals
7	Neutral wire terminal
8	Key switch
9	Control cabinet lamp switch
10	Mains input/remote/AMF communication connector

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