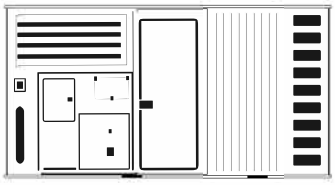
POWERLINK
Power Systems



Generator set

Containerized type

WCS1000S

SPECIFICATIONS

www.powerlinkworld.com

WCS series
WCS1000S
50 Hz @ 1500rpm,3-phase/4-wiring

1 Standards & Conditions

Design Standards

The designs and the productions are in conformity with:

- Conformite Europeenne (CE)
- ISO8528-5:2005
- GB/T2820.5-2009

Environmental Operating Conditions

- Installation place: Outdoors or indoors (well ventilated).
- Ambient temperature: -25℃ to 50℃.The coolant heater is needed when the temperature is below 5℃
- 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

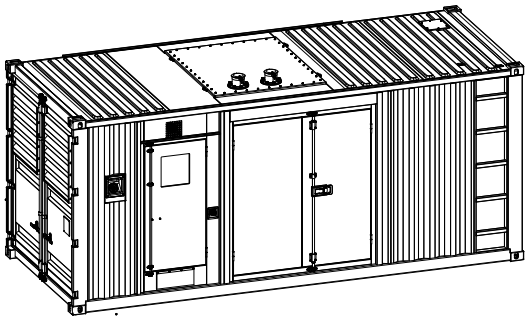
- Painting process specifications and colors are based on the manufacturer's standard.
- The customer could also choose the color which the manufacturer offers.

2 General Features

- Cummins engine QST30-G3
- Close coupled to Stamford alternator S6L1D-D4
- Microprocessor control module PLC-7420
- ABB main circuit breaker: 1600A
- Rotate speed governor: Electronic governor
- Excitation System: SHUNT
- Key switch
- Emergency stop switch
- ATS (automatic transfer switch) receptacle
- 2x12V/200AH sealed for life maintenance free battery
- Lockable battery isolator switch
- Powder coated canopy
- 50℃ radiator
- Oil pump on the engine
- Steel base frame with forkslots
- Vibration isolators between the engine/alternator and base frame
- Dry type air filter
- Daily fuel tank
- Drain points for fuel tank
- Operation Manual / Specifications

3 Equipment

General technical data

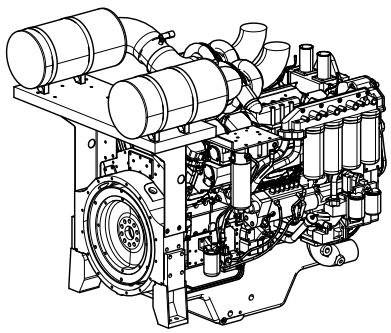


Model..... WCS1000S
Structure type C
Tank capacity.....1450L
Dry weight..... 12940kg
Noise level @7m .....N/A
Dimensions L×W×H..... 6058x2438x2795mm
Standby Power 1000kVA/800kW
Prime Power 910kVA/728kW

Voltage	380V	400V	415V	440V
Ampere	1383A	1314A	1266A	1194A

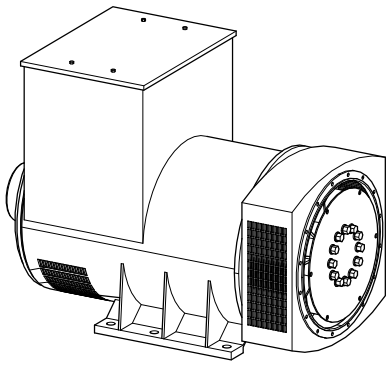
Genset Fuel Consumption					
Frequency/Load	25%	50%	75%	100%	110%
50Hz (L/h)	51	94	139	184	204

Diesel engine



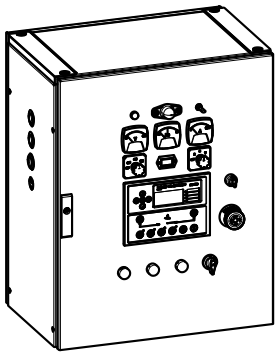
Engine Manufacturer/Brand.....Cummins
Engine Model..... QST30-G3
Dimensions L×W×H.....2621×1448×2021mm
Dry Weigh (approx.) 3437kg
Number of Cylinders.....12
Bore 140mm
Stroke 165mm
Displacement.....30.48L
Compression Ratio 14
Type of injection..... Direct Injection
Intake System..... Turbocharged,air-to-air charged cooled
Intake Resistance .....≤6.22kPa
Cooling System .....Water cooled
Fan ..... Pusher
Battery Voltage 24V
Type of Fuel..... No.2 or ASTM D975
Type of Oil ..... API CD/SE or CCMCD4
Oil Capacity 154L
Type of Coolant ..... Glycol mixture
Coolant Capacity(engine only) 85L
Back Pressure .....≤10.1kPa
Standby Power 800kW
Prime Power.....728kW
Fuel Consumption(100%load).....184L/h

Alternator



Alternator Manufacturer/Brand ..... Stamford
Alternator Model S6L1D-D4
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 2250rpm
Air Flow..... 2.18m³/s(50Hz),2.63m³/s(60Hz)
Voltage Regulation .....±0.5%
Total Harmonic TGH / THCat no load < 1.5 % - on load < 5%
Telephone Interference..... THF<2%;TIF<50

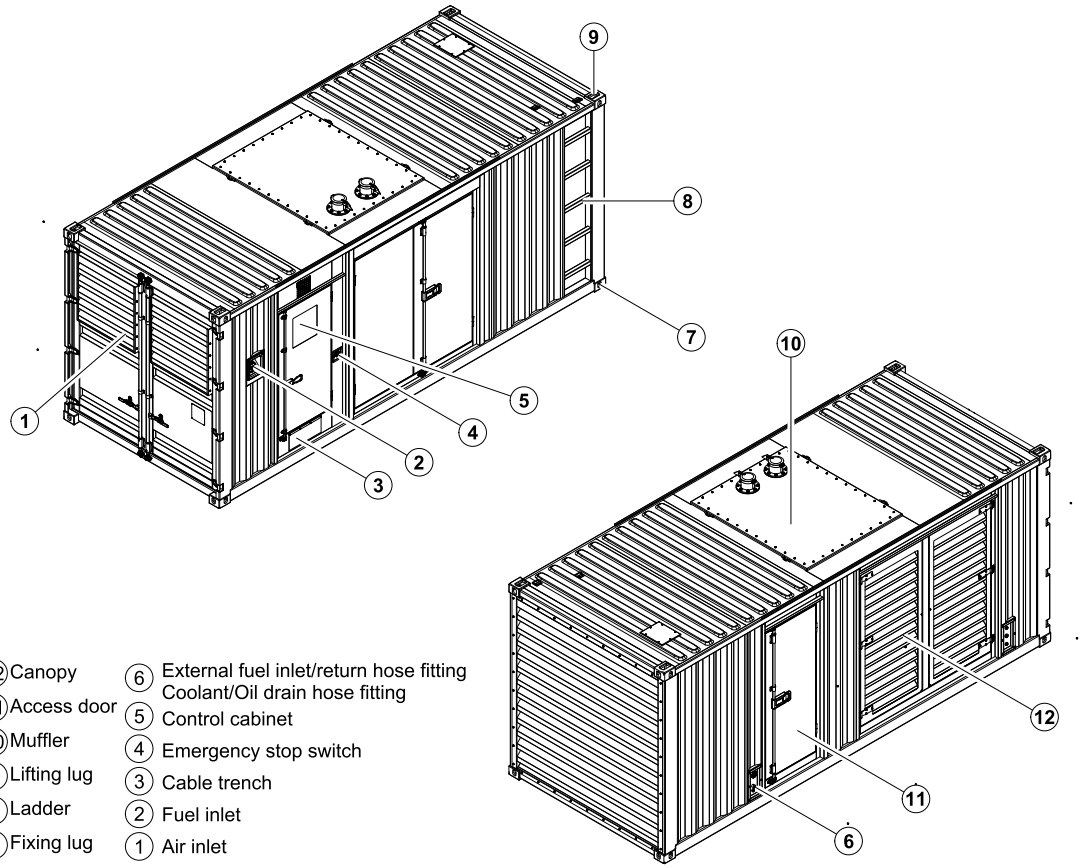
PLC-7420 Control System



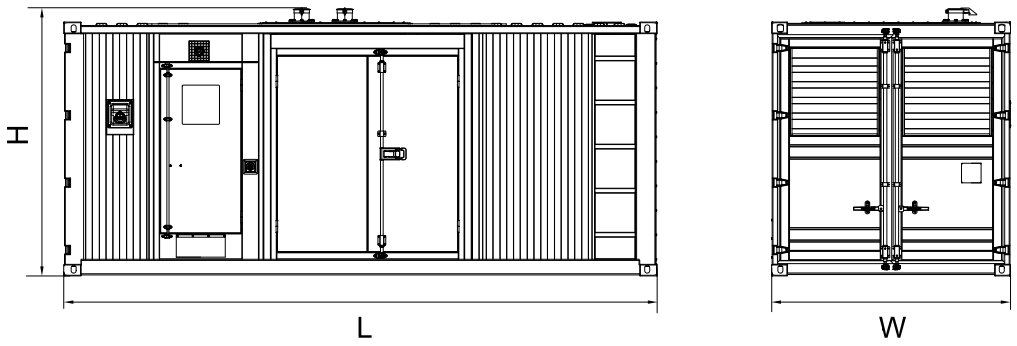
PLC-7420 is an advanced control module based on micro-processor, containing all necessary functions for protection of the genset and the breaker control. It can monitor the mains supply, and automatically start the engine when the mains is abnormal. Accurately measure various operational parameters and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

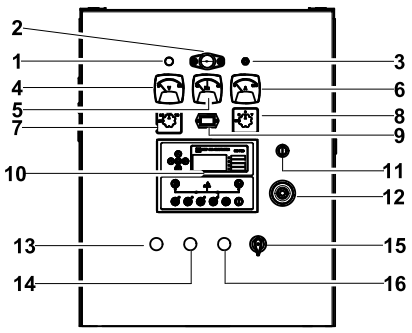
4 Overall Dimensions



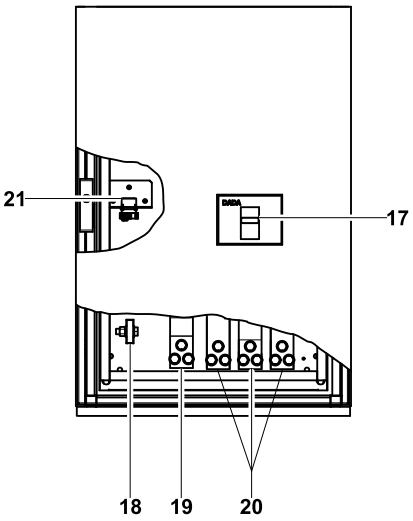
12	Canopy	6	External fuel inlet/return hose fitting Coolant/Oil drain hose fitting
11	Access door	5	Control cabinet
10	Muffler	4	Emergency stop switch
9	Lifting lug	3	Cable trench
8	Ladder	2	Fuel inlet
7	Fixing lug	1	Air inlet



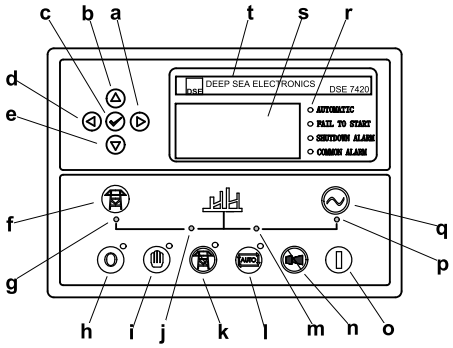
5 Control System



Control cabinet



Field wiring cabinet



Control module

Ref.	Description
1	Charge indicator
2	Control cabinet lamp
3	Control cabinet lamp switch
4	Voltage meter
5	Frequency meter
6	Current meter
7	Changerover switch-Voltage
8	Changerover switch-Current
9	Time counter
10	Control module
11	Key switch
12	Emergency stop switch
13	Fuel leak indicator
14	Running button with indicator
15	Oil drain switch
16	Stop button with indicator
17	Main circuit breaker
18	Ground wire terminal
19	Neutral wire terminal
20	Live wire terminals
21	Mains input/Remote control/ ATS 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

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