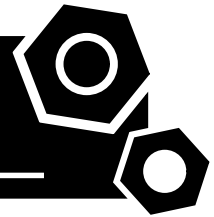


**Generator set**

**Containerized type**

**WCS1100S**

**SPECIFICATIONS**



# SCS series WCS1100S

50 Hz @ 1500rpm, 3-Phase/5-wiring

## 1 Standards & Conditions

### Design Standards

The designs and the productions are in conformity with:

- ISO8528
- GB/T2820
- YD/502-2007
- JB/T20136-2006

### 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 above sea Level.

### 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.

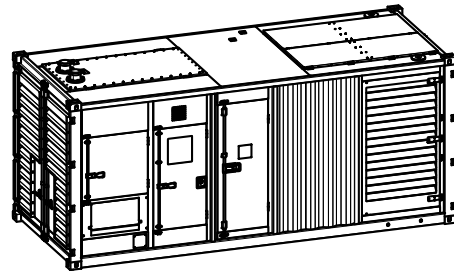
## 2 General Features

- Cummins engine QST30-G4
- Close coupled to a Stamford alternator HCI634J
- Microprocessor control module PLC-7420
- ABB main circuit breaker: 1600A
- Rotate speed governor: Electronic fuel injection governor
- Excitation system: PMG
- A.V.R model: MX321
- Key switch
- Emergency stop switch
- 2x ventilation fan + 1x cooling fan
- ATS (automatic transfer switch) receptacle
- 4x12V/150AH sealed for life maintenance free battery

- Lockable battery isolator switch
- Powder coated canopy
- 50°C radiator
- Fire extinguisher
- Oil pump on the engine
- Steel base frame with forkslots
- Vibration isolators between the engine/alternator and base frame
- Dry type air filter
- Fuel tank with 6 hours running
- Drain points for fuel tank
- Fuel inlet pump
- Added fuel-water separator for fuel tank
- Operation Manual / Specifications

## 3 Equipment Specification

### General technical data

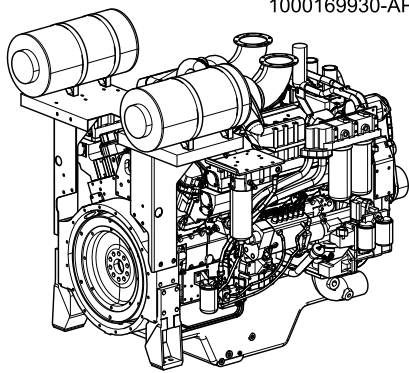


1000023328-AP1-A2

Model..... WCS1100S  
 Structure type ..... C  
 Tank capacity..... 1250L  
 Dry weight..... 12804kg  
 Noise level @7m ..... N/A  
 Dimensions L×W×H..... 6058x2438x2734mm  
 Standby Power ..... 1100kVA/880kW  
 Prime Power ..... 1000kVA/800kW  
 Voltage/Ampere ..... 415V/1391.2A

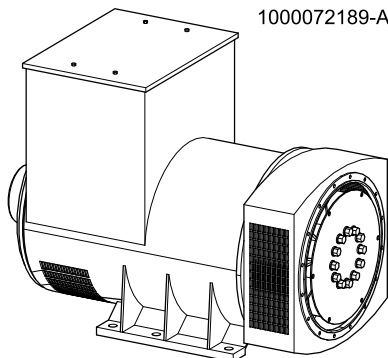
Voltage	380V	400V	415V	440V	
Ampere	1519A	1443A	1391A	1312A	
<b>Genset Fuel Consumption</b>					
Frequency/Load	25%	50%	75%	100%	110%
50Hz (L/h)	54	102	151	202	224

## Power System



1000169930-AP1-A6

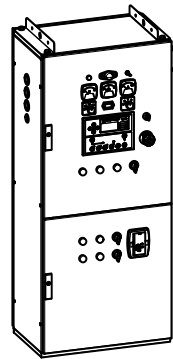
Engine Manufacturer/Brand .....	Cummins
Engine Model .....	QST30-G4
Dimensions L×W×H.....	2026×1422×1650mm
Dry Weigh (approx.) .....	3012kg
Number of Cylinders.....	12
Bore.....	140mm
Stroke .....	165mm
Displacement.....	30.48L
Compression Ratio .....	14
Type of injection.....	Direct Injection
Intake 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) .....	79L
Back Pressure .....	≤6.8kPa
Standby Power .....	.970kW
Prime Power .....	.880kW
Fuel Consumption(100%load) .....	.202L/h



1000072189-AP1-A1

Alternator Manufacturer/Brand .....	Stamford
Alternator Model .....	HCI634J
Exciter.....	Brushless
Cooling Fan .....	Cast alloy aluminum
Windings.....	100% copper
Insulation Class .....	H
Winding Pitch.....	2/3
Terminals .....	6
Drip Proof .....	IP23
Altitude.....	≤1000m
Overspeed .....	.2250 rpm
Air Flow.....	1.614m³/s(50HZ), 1.961m³/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



1000196935-AP1-A1

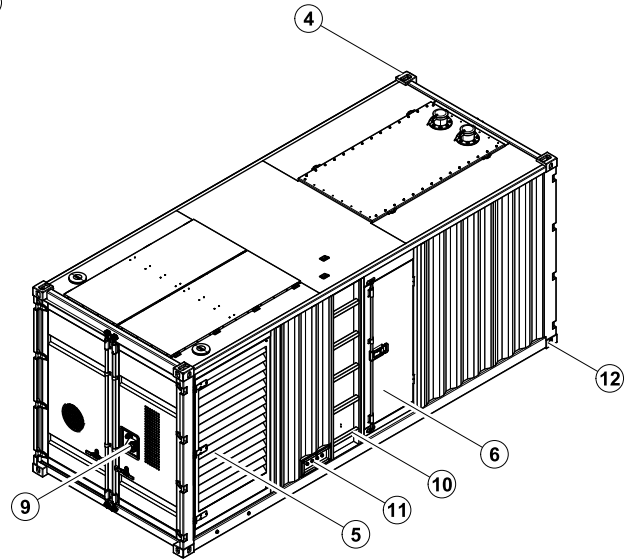
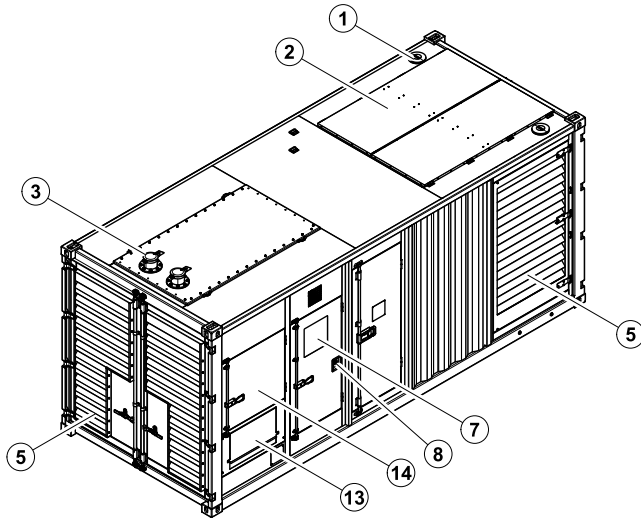
PLC-7420 is an advanced control module based on micro-processor, containing all necessary functions for protection of the genset and the breaker control. It can monitor the mains supply, and automatically start the engine when the mains is abnormal. Accurately measure various operational parameters and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

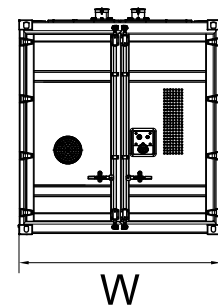
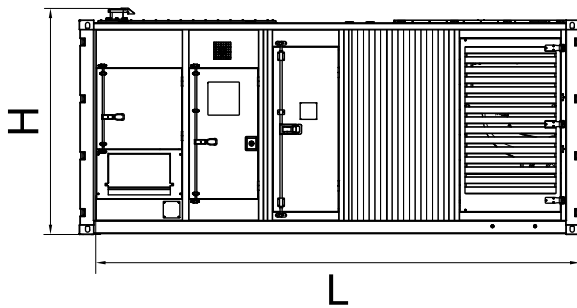
## 4 Overall Dimensions

1000023328-DR1-A2

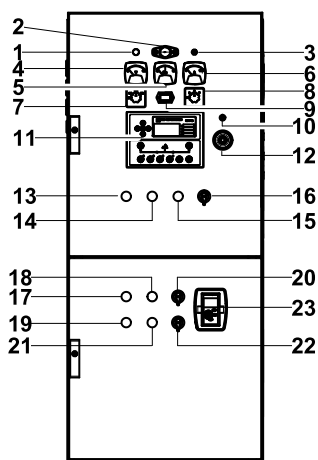
Dry weight	12624kg
Fuel tank capacity	1250L
Dimensions L x W x H	6058x2438x2734mm



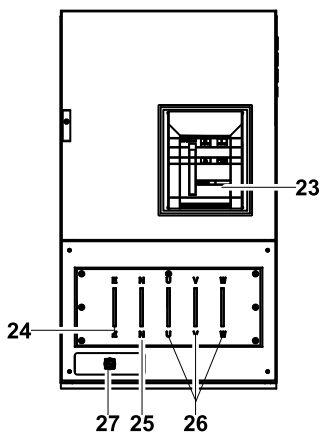
- ⑦ Control cabinet
- ⑥ Access door
- ⑤ Air inlet
- ④ Lifting lug
- ③ Exhaust gas outlet
- ② Cooling fan plate
- ① Coolant inlet
- ⑭ Switch cabinet
- ⑬ Cable trench
- ⑫ Fixing lug
- ⑪ Water/oil drain hose fitting
- ⑩ Ladder
- ⑨ Fuel inlet
- ⑧ Emergency stop switch



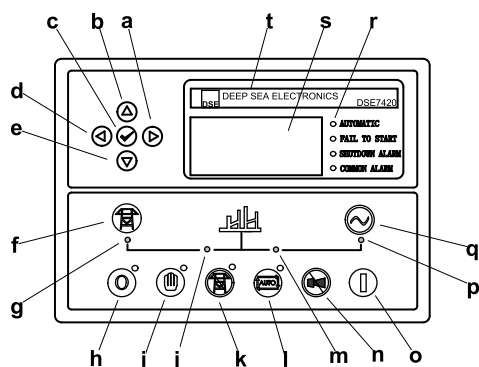
## 5 Control system



**Control cabinet**



**Field wiring cabinet**



**Control Module**

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

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	Key switch
11	Control module
12	Emergency stop switch
13	Genset close indicator
14	Genset open indicator
15	Alarm reset button
16	Fuel adding manual/atuio selector
17	Cover of 1# cooling fan open indicator
18	Cover of 1# cooling fan close indicator
19	2/3# ventilation fan start button
20	Switch of 1# fan cover open/close
21	2/3# ventilation fan stop button
22	2/3# ventilation fan manual/ auto selector
23	1# cooling fan control interface
24	Main circuit breaker
25	Ground wire terminal
26	Neutral wire terminal
27	Live wire terminals
28	Mains input/ remote 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)