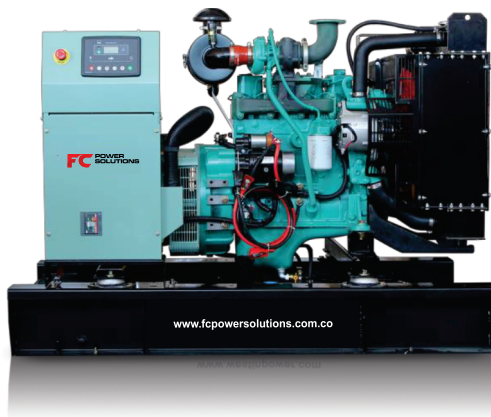


**TC38LS**

60Hz POWERED BY CUMMINS SERIES

**TECHNICAL SPECIFICATIONS****DIESEL GENERATING SET 220/127V-60Hz-3Phase**

| Model                | TC38LS   |              |
|----------------------|----------|--------------|
| Power(ESP)           | kVA/kW   | 38/30        |
| Power(PRP)           | kVA/kW   | 35/28        |
| Starter Voltage      | V        | 24           |
| Rated Current        | A        | 100          |
| Rated rotation speed | r/min    | 1800         |
| Power Factor         |          | 0.8          |
| Fuel Consumption     | L/hour   | 9.4L / h     |
| Fuel Tank Capacity   | L        |              |
| Noise level          | dB(A)@7m | Silent Type: |

**WEIGHT AND DIMENSIONS**

| GEN-Set     | Dimension ( L*W*H )  | Weight  |
|-------------|----------------------|---------|
| Open Type   | 1650mm×820mm×1355mm  | 852 Kg  |
| Silent Type | 2396mm×1056mm×1723mm | 1241 Kg |

**STANDARDS:****Genset:** GB/T2820—2009,ISO8528**Alternator:** LEROY SOMER, TAL-A42-E**Diesel Engine:** CUMMINS , 4B3.9-G12**Standby Power:** Continues running at variable load for duration of an emergency. No overload is permitted on these ratings.**Prime Power:** Continues running at variable load for unlimited periods with 10% overload available for 1 hour in any 12 hour period.**CONFIGURATION:****Standard:** Engine, alternator, cooling system, Base frame (excluding fuel tank), shock absorber, air inlet system, control box (including mains floating charge), plastic fan blades (when the engine and water tank do not bring).**Optional:** Base frame (including fuel tank), water jacket heater, fuel water separator, fuel heater, fuel level sensor (only supporting underframe tank), switch box (with switch), power switch, the water level sensor, motor anti condensation heater, automatic fueling system (only supporting base frame including fuel tank), battery frame.**Accessories:** Silencer, bellow, exhaust silencing system accessories (with the matching engine), regular battery, starting cord assembly, data of gen-set, random tool (with the matching engine).

Una compañía de servicio a su servicio

gerencia@fcpowersolutions.com.co / 310 834 9075 / Carrera 48 # 166-66, oficinas 105 C  
Bogotá-Colombia // www.fcpowersolutions.com.co

# ENGINE Specification

**Manufacturer CUMMINS**

|                                     |                     |
|-------------------------------------|---------------------|
| Model                               | 4B3.9-G12           |
| Engine speed Rated                  | 1800 RPM            |
| Cylinder /Arrangement               | 4 / L               |
| Displacement                        | 3.9 L               |
| Bore and Stroke                     | 102 mm×120 mm       |
| Compression ratio                   | 18.0 : 1            |
| Max. stand by power at rated RPM    | 36KW                |
| Frequency regulation , steady state |                     |
| Governor : type                     | Electrical          |
| Aspiration and Cooling              | Naturally Aspirated |

**Exhaust System**

|                     |           |
|---------------------|-----------|
| Exhaust gas flow    | 81.9L/sec |
| Exhaust temperature | 370°C     |
| Max back pressure   | 10kpa     |

**Fuel System**

|                                           |           |
|-------------------------------------------|-----------|
| Fuel consumption100% (of the Prime Power) | 9.4L / h  |
| Fuel consumption75% (of the Prime Power)  | 7.5L / h  |
| Fuel consumption50% (of the Prime Power)  | 5.5L / h  |
| Fuel consumption110% (of the Prime Power) | 10.1L / h |

**Oil system**

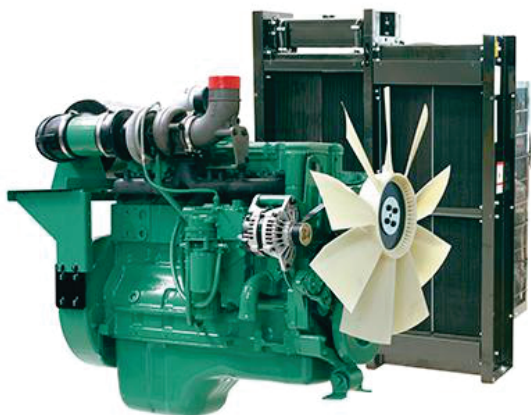
|                              |       |
|------------------------------|-------|
| Total oil capacity w/filters | 10.9L |
|------------------------------|-------|

**Air intake**

|                 |         |
|-----------------|---------|
| Engine air flow | 43L/sec |
|-----------------|---------|

**Coolant System**

|                            |         |
|----------------------------|---------|
| Radiator & engine capacity | 7.2L    |
| Max water temperature      | 110°C   |
| Thermostat                 | 83-95°C |



Cummins engines with advanced design, reliable performance, durable operation.

Alloy-steel and connecting steel-lever, high durability

High combustion efficiency and low fuel consumption, work continuously

P/T pump injection technology, low cost, completely combustion

Note: All data sheets are for reference only  
and subject to change without prior notice.



# ALTERNATOR Specification

**Manufacturer LEROY SOMER**

|                                       |           |
|---------------------------------------|-----------|
| Type                                  | TAL-A42-E |
| Number of phase power                 | 3         |
| Factor (Cos Phi)                      | 0.8       |
| Pole                                  | 4         |
| Bearing                               | 1         |
| Coupling                              | Direct    |
| Exciter type                          | SHUNT     |
| Insulation : class , temperature rise | H / H     |
| Degree of protection                  | IP23      |
| AVR model                             | R120      |
| Altitude                              | ≤1000m    |
| Winding Pitch                         | 2/3       |
| Winding Leads                         | 12        |

## FEATURES

- Tight control of procedures right from the initial sales offering through to delivery to the customer, including the design process, manufacturing start-up and production.
- A total quality policy based on making continuous progress in improving operational procedures, involving all departments in the company in order to give customer satisfaction as regards delivery times, conformity and cost.
- Indicators used to monitor process performance.
- Corrective actions and advancements with tools such as FMECA, QFD, MAVP,
- MSP/MSQ and Hoshin type improvement workshops on flows, process re-engineering, plus Lean Manufacturing and Lean Office.
- Annual surveys, opinion polls and regular visits to customers in order to ascertain and detect their expectations.

## STANDARDS

IEC 60034, NEMA MG 1.32 - 33, ISO 8528/3, CSA, UL 1446, UL 1004  
on request and depending on voltages, marine.

Note: All data sheets are for reference only and subject to change without prior notice.



# Control Panel

**Model: DSE**

## AUTO START & AUTO MAINS FAILURE CONTROL MODULES

### DIMENSIONS

#### OVERALL

**240mm x 181mm x 42mm  
(9.4" x 7.1" x 1.6")**

#### PANEL CUTOUT

**220mm x 160mm  
(8.7" x 6.3")**

#### WEIGHT

**400g (0.4kg)**

#### KEY FEATURES

4-Line back-lit LCD text display  
Five key menu navigation  
Front panel editing with PIN protection  
Customisable status screens  
Power save mode  
Support for up to three remote display units  
9 configurable inputs  
8 configurable outputs  
Flexible sender inputs  
Configurable timers and alarms  
3 configurable maintenance alarms  
Multiple date and time scheduler  
Configurable event log (250)  
Tier 4 CAN engine support  
Integral PLC editor  
Easy access diagnostic page  
CAN and Magnetic Pick-up/Alt. sensing  
Fuel usage monitor and low fuel alarms  
Charge alternator failure alarm  
Manual speed control (on compatible CAN engines)  
Manual fuel pump control  
Engine exerciser  
"Protections disabled" feature  
kW & kV Ar protection

Reverse power (kW & kV Ar) protection  
LED and LCD alarm indication  
Power monitoring (kW h, kV Ar, kVA h, kV Ar h)  
Load switching (load shedding and dummy load outputs)  
Automatic load transfer (DSE7320)  
Unbalanced load protection  
Independent Earth Fault trip  
True dual mutual standby with load balancing timer (DSE7310 only)  
USB connectivity  
Backed up real time clock  
Fully configurable via DSE Configuration Suite PC software  
Configurable display languages  
Remote SCADA monitoring via DSE Configuration Suite PC software  
User selectable RS232 and RS485 communications  
Configurable Gencomm pages  
Advanced SMS messaging (additional external modem required)  
Start & stop capability via SMS messaging  
Additional display screens to

help with modem diagnostics  
Idle control for starting & stopping.

DSENet® expansion compatible

#### KEY BENEFITS

132 x 64 pixel ratio display for clarity  
Real-time clock provides accurate event logging  
Multiple date and time scheduler  
Set maintenance periods can be configured to maintain optimum engine performance  
Ethernet communications (via DSE860/865 modules), provides advanced remote monitoring at low cost  
Modules can be integrated into building management systems(BMS)  
Increased input and output expansion capability via DSENet®  
Licence-free PC software  
IP65 rating (with supplied gasket) offers increased resistance to water ingress  
PLC editor allows user configurable functions to meet specific application requirements.