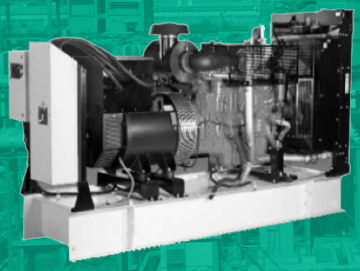
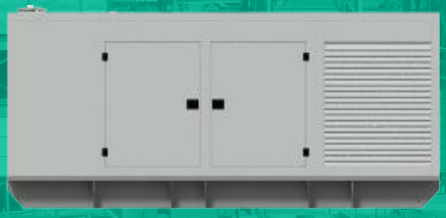
# Model C

## 50Hz/60Hz switchable

1000kW @ 50Hz 400V
1000kW @ 60Hz 480V



Open



Canopy

Container

FossilPower

Caigate.com

CAIGATETEX
ENERGY SOLUTIONS

# Model C

| | | Prime | | Standby | |
|---|---|---|---|---|---|
| **Genset model** | | **Model C** | | **Model C** | |
| 380 V | 50Hz | 1250.0 kVA | 1000.0 kW | 1375.0 kVA | 1100.0 kW |
| 400 V | 50Hz | 1250.0 kVA | 1000.0 kW | 1375.0 kVA | 1100.0 kW |
| 415 V | 50Hz | 1250.0 kVA | 1000.0 kW | 1375.0 kVA | 1100.0 kW |
| **Genset model** | | **Model C** | | **Model C** | |
| 380 V | 60Hz | 1250.0 kVA | 1000.0 kW | 1375.0 kVA | 1100.0 kW |
| 480 V | 60Hz | 1250.0 kVA | 1000.0 kW | 1375.0 kVA | 1100.0 kW |

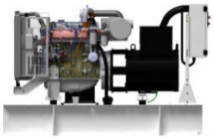
Ratings at 0.8pf

Prime: This rating is for the supply of continuous electrical power (at variable load) in lieu of commercially purchased power. There is no limitation on the annual hours of operation and 10% overload power can be supplied for one hour in twelve hours.

Standby: This rating is for the supply of continuous electrical power (at variable load) in the event of a utility power failure. No overload is permitted.

| **Engine** | | **MTU** | **18V2000 B76** | **18V2000 B76** |
|---|---|---|---|---|
| Number of cylinders | | | 18 | 18 |
| Cubic capacity | | litre (cu inch) | 40.2 | 40.2 |
| Aspiration | | | Turbocharged | Turbocharged |
| Alternator | | European | MeccAlte | MeccAlte |
| Frequency | | Hz | 50 | 60 |
| Engine Speed | | rpm | 1500 | 1800 |
| Fuel consumption at full rating: | 110% | litre / h | 269.3 | 279 |
| | 100% | litre / h | 249 | 254.5 |
| | 75% | litre / h | 185.8 | 188.9 |
| | 50% | litre / h | 133.4 | 133.4 |
| Heat rejection to exhaust system (max) | | KW (BTU / min) | 684 (38930) | 779 (44337) |
| Heat rejection to cooling system (max) | | KW (BTU / min) | 645 (36710) | 760 (43255) |
| Total radiated heat (max) | | KW (BTU / min) | 45 (2561) | 45 (2561) |
| Exhaust temperature (max) | | deg C (deg F) | 500 (932) | 500 (932 |
| Radiator cooling air flow with max restriction | | cum / min (cfm)<br>mm (inch) $H_2O$ | 1463 (51666)<br>20 (0.787) | 1776 (62719)<br>20 (0.787) |
| Combustion air flow (max) | | cum / min (cfm) | 80.4 (2839) | 90.6 (3200) |
| Exhaust gas flow (max) with max allowable back pressure | | cum / min (cfm)<br>mm (inch) $H_2O$ | 206.4 (7289)<br>500 (19.7) | 237 (8370)<br>500 (19.7) |

Note: Standard reference conditions: 25deg C (77deg F) air inlet temperature, 152.4, (500 feet) above sea level, 60% relative humidity. All engine performance data based on the above mentioned maximum continuous ratings. Fuel consumption data at full load for diesel fuel with specific gravity of 0.85 and conforming to BS2869: 1998, class A2. TBA - To be advised. N/A - Not applicable

| **Model** | **Dimensions: mm (inch)** | **Weight: (kg)** | **Fuel tank: (L)** |
|---|---|---|---|
|  <br>Open | Length 5814 (228.9)<br>Width 4750 (187.0)<br>Height 2198 (86.5) | 8400 | 940 |
|  <br>Container | Length 6060 (238.6)<br>Width 2440 (90.1)<br>Height 2590 (102.0) | 11200 | 1000 |

Note: Above weights for Open/Canopy/Container are estimated figures, excluding fuel and options.

# Technical Sales Document

**- Product Data -**

| | | | |
|---|---|---|---|
| **Name** | 18V2000B76 | **Speed [rpm]** | 1500/1800 |
| **Application Group** | 3B | **Nominal power [kW]** | 1102/1097 |
| **Dataset** | Ref. 25°C/-; 50 Hz; Air charge air cooling | **Nominal power [bhp]** | 1478/1471 |
| | | **Nominal power [kVA]** | - |
| | | **Nominal power [kWel]** | - |
| | | **Frequency [Hz]** | 50/60 |
| **Exhaust Regulations** | TA-Luft optimized (Diesel); | | |

## Reference conditions

| No. | Description | Index | Value | Unit |
|---|---|---|---|---|
| 6 | Intake air temperature | | 25 | °C |
| 7 | Charge-air coolant temperature | | - | °C |
| 8 | Barometric pressure | | 1000 | mbar |
| 9 | Site altitude above sea level | | 100 | m |

[BL] **Reference value: fuel stop power**
Maximum engine power that cannot be run continuously on some applications (stabilization reserve)
[DL] **Reference value: continuous power**
Engine power that can be run continuously under standard conditions

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# Technical Sales Document

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| | | **Frequency [Hz]** | 50/60 |
| **Exhaust Regulations** | TA-Luft optimized (Diesel); | | |

## 0. Data-relevant engine design configuration

| No. | Description | Index | Value | Unit |
|---|---|---|---|---|
| 8 | Engine rated speed switchable (1500/1800 rpm) | | X | - |
| 13 | Engine without sequential turbocharging (turbochargers without cut-in/cut-out control) | | X | - |
| 31 | Engine with air-cooled charge air | | X | - |
| 61 | Engine with water/charge air cooling (LT, on-engine) | | - | - |

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| **Dataset** | Ref. 25°C/-; 50 Hz; Air charge air cooling | **Nominal power [bhp]** | 1478/1471 |
| | | **Nominal power [kVA]** | - |
| | | **Nominal power [kWel]** | - |
| | | **Frequency [Hz]** | 50/60 |
| **Exhaust Regulations** | TA-Luft optimized (Diesel); | | |

## 1. Power-related data

| No. | Description | Index | Value | Unit |
|---|---|---|---|---|
| 1 | Engine rated speed | A | 1500 | rpm |
| 4 | Continuous power ISO 3046 (10% overload capability) (design power DIN 6280, ISO 8528) | A | 1102 | kW |
| 5 | Fuel stop power ISO 3046 | A | 1212 | kW |
| 8 | Mean effective pressure (MEP) (Continuous power ISO 3046) | | 21.9 | bar |
| 9 | Mean effective pressure (MEP) (Fuel stop power ISO 3046) | | 24.1 | bar |

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| | | **Nominal power [kVA]** | - |
| | | **Nominal power [kWel]** | - |
| | | **Frequency [Hz]** | 50/60 |
| **Exhaust Regulations** | TA-Luft optimized (Diesel); | | |

## 2. General Conditions (for maximum power)

| No. | Description | Index | Value | Unit |
|---|---|---|---|---|
| 46 | Individual power calculation (ESCM) required for maximum power | | X | - |
| 1 | Intake air depression (new filter) | A | 15 | mbar |
| 2 | Intake air depression, max. | L | 40 | mbar |
| 3 | Exhaust back pressure | A | 30 | mbar |
| 4 | Exhaust back pressure, max. | L | 50 | mbar |
| 5 | Fuel temperature at fuel feed connection | R | 25 | °C |
| 9 | Fuel temperature at fuel feed connection, max. (w/o power reduction) | L | - | °C |
| 10 | Fuel temperature at fuel feed connection, max. | L | 65 | °C |
| 49 | Max. ambient temperature in direct vicinity of vibration damper | L | - | °C |
| 18 | Fuel temperature at fuel feed connection, min. | L | N | °C |

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|---|---|---|---|
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| **Application Group** | 3B | **Nominal power [kW]** | 1102/1097 |
| **Dataset** | Ref. 25°C/-; 50 Hz; Air charge air cooling | **Nominal power [bhp]** | 1478/1471 |
| | | **Nominal power [kVA]** | - |
| | | **Nominal power [kWel]** | - |
| | | **Frequency [Hz]** | 50/60 |
| **Exhaust Regulations** | TA-Luft optimized (Diesel); | | |

## 3. Consumption

| No. | Description | Index | Value | Unit |
|---|---|---|---|---|
| 17 | Specific fuel consumption (be) - 100 % CP (+ 5 %; EN 590; 42.8 MJ/kg) | R | 199 | g/kWh |
| 18 | Specific fuel consumption (be) - 75 % CP (+ 5 %; EN 590; 42.8 MJ/kg) | R | 198 | g/kWh |
| 19 | Specific fuel consumption (be) - 50 % CP (+ 5 %; EN 590; 42.8 MJ/kg) | R | 204 | g/kWh |
| 20 | Specific fuel consumption (be) - 25 % CP (+ 5 %; EN 590; 42.8 MJ/kg) | R | 221 | g/kWh |
| 21 | Specific fuel consumption (be) - FSP (+ 5 %; EN 590; 42.8 MJ/kg) | R | 199 | g/kWh |
| 56 | Specific fuel consumption (be) - 100 % FSP (+ 5 %; EN 590; 42.8 MJ/kg) | R | - | g/kWh |
| 57 | Specific fuel consumption (be) - 75 % FSP (+ 5 %; EN 590; 42.8 MJ/kg) | R | - | g/kWh |
| 58 | Specific fuel consumption (be) - 50 % FSP (+ 5 %; EN 590; 42.8 MJ/kg) | R | - | g/kWh |
| 59 | Specific fuel consumption (be) - 25 % FSP (+ 5 %; EN 590; 42.8 MJ/kg) | R | - | g/kWh |
| 73 | No-load fuel consumption | R | 15 | kg/h |
| 92 | Lube oil consumption after 100 h of operation (B = fuel consumption per hour) Guideline value does not apply for the design of EGAT systems. Please consult the Applications Center with regard to the layout of EGA systems. | R | 0.35 | % of B |
| 62 | Lube oil consumption after 100 h of operation, max. (B = fuel consumption per hour) | L | 0.8 | % of B |

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# Technical Sales Document

**- Product Data -**

| | | | |
|---|---|---|---|
| **Name** | 18V2000B76 | **Speed [rpm]** | 1500/1800 |
| **Application Group** | 3B | **Nominal power [kW]** | 1102/1097 |
| **Dataset** | Ref. 25°C/-; 50 Hz; Air charge air cooling | **Nominal power [bhp]** | 1478/1471 |
| | | **Nominal power [kVA]** | - |
| | | **Nominal power [kWel]** | - |
| | | **Frequency [Hz]** | 50/60 |
| **Exhaust Regulations** | TA-Luft optimized (Diesel); | | |

## 4. Model-related data (basic design)

| No. | Description | Index | Value | Unit |
|---|---|---|---|---|
| 3 | Engine with exhaust turbocharger (ETC) and intercooler | | X | - |
| 4 | Exhaust piping, non-cooled | | X | - |
| 33 | Working method: four-cycle, diesel, single-acting | | X | - |
| 34 | Combustion method: direct injection | | X | - |
| 36 | Cooling system: conditioned water | | X | - |
| 37 | Direction of rotation: c.c.w. (facing driving end) | | X | - |
| 6 | Number of cylinders | | 18 | - |
| 7 | Cylinder configuration: V angle | | 90 | degrees (°) |
| 10 | Bore | | 135 | mm |
| 11 | Stroke | | 156 | mm |
| 12 | Displacement, cylinder | | 2.233 | liter |
| 13 | Displacement, total | | 40.2 | liter |
| 14 | Compression ratio | | 17.5 | - |
| 40 | Cylinder heads: single-cylinder | | X | - |
| 41 | Cylinder liners: wet, replaceable | | X | - |
| 24 | Number of inlet valves, per cylinder | | 2 | - |
| 25 | Number of exhaust valves, per cylinder | | 2 | - |
| 15 | Number of turbochargers | | 2 | - |
| 16 | Number of L.P. turbochargers | | - | - |
| 17 | Number of H.P. turbochargers | | - | - |
| 18 | Number of intercoolers | | 1 | - |
| 19 | Number of L.P. intercoolers | | - | - |
| 20 | Number of H.P. intercoolers | | - | - |

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# Technical Sales Document

**- Product Data -**

| | | | |
|---|---|---|---|
| **Name** | 18V2000B76 | **Speed [rpm]** | 1500/1800 |
| **Application Group** | 3B | **Nominal power [kW]** | 1102/1097 |
| **Dataset** | Ref. 25°C/-; 50 Hz; Air charge air cooling | **Nominal power [bhp]** | 1478/1471 |
| | | **Nominal power [kVA]** | - |
| | | **Nominal power [kWel]** | - |
| | | **Frequency [Hz]** | 50/60 |
| **Exhaust Regulations** | TA-Luft optimized (Diesel); | | |

| | | | | |
|---|---|---|---|---|
| 28 | Standard flywheel housing flange (engine main PTO) | | 0 | SAE |
| 50 | Static bending moment at standard flywheel housing flange, max. | L | N | kNm |
| 51 | Dynamic bending moment at standard flywheel housing flange, max. | L | N | kNm |
| 43 | Flywheel interface (DISC) | | 18" | - |
| 46 | Engine mass diagram, drawing No. | | N | - |
| 47 | Engine mass diagram, drawing No. (cont.) | | N | - |

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|---|---|---|---|
| **Name** | 18V2000B76 | **Speed [rpm]** | 1500/1800 |
| **Application Group** | 3B | **Nominal power [kW]** | 1102/1097 |
| **Dataset** | Ref. 25°C/-; 50 Hz; Air charge air cooling | **Nominal power [bhp]** | 1478/1471 |
| | | **Nominal power [kVA]** | - |
| | | **Nominal power [kWel]** | - |
| | | **Frequency [Hz]** | 50/60 |
| **Exhaust Regulations** | TA-Luft optimized (Diesel); | | |

## 5. Combustion air / exhaust gas

| No. | Description | Index | Value | Unit |
|---|---|---|---|---|
| 33 | Charge-air flow through external air-to-air intercooler | A | N | m³/s |
| 34 | Charge-air temperature before external air-to-air intercooler | A | 220 | °C |
| 35 | Charge-air temperature after external air-to-air intercooler | A | 50 | °C |
| 36 | Charge-air temperature after external air-to-air intercooler, max. | L | 65 | °C |
| 37 | Charge-air temperature after external air-to-air intercooler, min. | L | 10 | °C |
| 39 | Pressure differential in external air-to-air intercooler, max. | L | 130 | mbar |
| 8 | Charge-air pressure before cylinder - CP | R | 3.6 | bar abs |
| 27 | Charge-air pressure before cylinder - FSP | R | 3.8 | bar abs |
| 9 | Combustion air volume flow - CP | R | 1.48 | m³/s |
| 10 | Combustion air volume flow - FSP | R | 1.55 | m³/s |
| 11 | Exhaust volume flow (at exhaust temperature) - CP | R | 3.8 | m³/s |
| 12 | Exhaust volume flow (at exhaust temperature) - FSP | R | 4.0 | m³/s |
| 17 | Exhaust temperature after engine - CP | R | 480 | °C |
| 18 | Exhaust temperature after engine - FSP | R | 495 | °C |
| 58 | Exhaust temperature after engine (turbocharger), max. | L | 650 | °C |

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|---|---|---|---|
| **Name** | 18V2000B76 | **Speed [rpm]** | 1500/1800 |
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| **Dataset** | Ref. 25°C/-; 50 Hz; Air charge air cooling | **Nominal power [bhp]** | 1478/1471 |
| | | **Nominal power [kVA]** | - |
| | | **Nominal power [kWel]** | - |
| | | **Frequency [Hz]** | 50/60 |
| **Exhaust Regulations** | TA-Luft optimized (Diesel); | | |

## 6. Heat dissipation

| No. | Description | Index | Value | Unit |
|---|---|---|---|---|
| 60 | Heat dissipated by engine coolant - CP (high-temperature circuit) | R | 425 | kW |
| 61 | Heat dissipated by engine coolant - CP (low-temperature circuit) | R | - | kW |
| 62 | Heat dissipated by engine coolant - FSP (high-temperature circuit) | R | 455 | kW |
| 63 | Heat dissipated by engine coolant - FSP (low-temperature circuit) | R | - | kW |
| 26 | Charge-air heat dissipation - CP | R | 280 | kW |
| 27 | Charge-air heat dissipation - FSP | R | 315 | kW |
| 31 | Heat dissipated by return fuel flow - CP | R | 4.0 | kW |
| 32 | Heat dissipated by return fuel flow - FSP | R | 4.0 | kW |
| 33 | Radiation and convection heat, engine - CP | R | 45 | kW |
| 34 | Radiation and convection heat, engine - FSP | R | 45 | kW |

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Typical average value as information – only suitable for design purposes to a limited extent
[L] **Limit value**
A value representing the lower limit/minimum value or upper limit/maximum value that may not be exceeded. Not suitable for design purposes

# Technical Sales Document

**- Product Data -**

| | | | |
|---|---|---|---|
| **Name** | 18V2000B76 | **Speed [rpm]** | 1500/1800 |
| **Application Group** | 3B | **Nominal power [kW]** | 1102/1097 |
| **Dataset** | Ref. 25°C/-; 50 Hz; Air charge air cooling | **Nominal power [bhp]** | 1478/1471 |
| | | **Nominal power [kVA]** | - |
| | | **Nominal power [kWel]** | - |
| | | **Frequency [Hz]** | 50/60 |
| **Exhaust Regulations** | TA-Luft optimized (Diesel); | | |

## 7. Coolant system (high-temperature circuit)

| No. | Description | Index | Value | Unit |
|---|---|---|---|---|
| 17 | Coolant temperature (at engine outlet to cooling equipment) | A | 100 | °C |
| 20 | Coolant temperature after engine, limit 1 | L | 102 | °C |
| 21 | Coolant temperature after engine, limit 2 | L | 105 | °C |
| 25 | Coolant antifreeze content, max. | L | 50 | % |
| 30 | Cooling equipment: coolant flow rate | A | 46.3 | m³/h |
| 35 | Coolant pump: inlet pressure, min. | L | 0.4 | bar |
| 36 | Coolant pump: inlet pressure, max. | L | 1.5 | bar |
| 41 | Pressure loss in off-engine cooling system, max. | L | 1.0 | bar |
| 72 | Pressure loss in off-engine cooling system, min. | L | 0.3 | bar |
| 47 | Breather valve (expansion tank) opening pressure (excess pressure) | R | 1.0 | bar |
| 54 | Cooling equipment: height above engine, max. | L | 20 | m |
| 50 | Thermostat, starts to open | R | 79 | °C |

[BL] **Reference value: fuel stop power**
Maximum engine power that cannot be run continuously on some applications (stabilization reserve)
[DL] **Reference value: continuous power**
Engine power that can be run continuously under standard conditions

[>] **Actual value must be greater than specified value**
[<] **Actual value must be less than specified value**

[X] **Applicable**
The module is valid for this product type
[-] **Non-applicable**
The module is not valid for this product type
[N] **Value not named**
The value has not yet been named or will not be named

[*] **Adequate verification not yet available (tolerance +/- 10%)**
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[A] **Design value**
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# Technical Sales Document

**- Product Data -**

| | | | |
|---|---|---|---|
| **Name** | 18V2000B76 | **Speed [rpm]** | 1500/1800 |
| **Application Group** | 3B | **Nominal power [kW]** | 1102/1097 |
| **Dataset** | Ref. 25°C/-; 50 Hz; Air charge air cooling | **Nominal power [bhp]** | 1478/1471 |
| | | **Nominal power [kVA]** | - |
| | | **Nominal power [kWel]** | - |
| | | **Frequency [Hz]** | 50/60 |
| **Exhaust Regulations** | TA-Luft optimized (Diesel); | | |

## 8. Coolant system (low-temperature circuit)

| No. | Description | Index | Value | Unit |
|---|---|---|---|---|
| 9 | Coolant temperature before intercooler (at engine inlet from cooling equipment) | A | - | °C |
| 13 | Coolant antifreeze content, max. | L | - | % |
| 17 | Charge-air temperature after intercooler, max. | L | - | °C |
| 76 | Temperature differential between intake air and charge-air coolant before intercooler | A | - | K |
| 20 | Cooling equipment: coolant flow rate | A | - | m³/h |
| 24 | Coolant pump: inlet pressure, min. | L | - | bar |
| 25 | Coolant pump: inlet pressure, max. | L | - | bar |
| 29 | Pressure loss in off-engine cooling system, max. | L | - | bar |
| 62 | Pressure loss in off-engine cooling system, min. | L | - | bar |
| 43 | Cooling equipment: height above engine, max. | L | - | m |
| 36 | Breather valve (expansion tank) opening pressure (excess pressure) | R | - | bar |
| 39 | Thermostat, starts to open | R | - | °C |

[BL] **Reference value: fuel stop power**
Maximum engine power that cannot be run continuously on some applications (stabilization reserve)
[DL] **Reference value: continuous power**
Engine power that can be run continuously under standard conditions

[>] **Actual value must be greater than specified value**
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# Technical Sales Document

**- Product Data -**

| | | | |
|---|---|---|---|
| **Name** | 18V2000B76 | **Speed [rpm]** | 1500/1800 |
| **Application Group** | 3B | **Nominal power [kW]** | 1102/1097 |
| **Dataset** | Ref. 25°C/-; 50 Hz; Air charge air cooling | **Nominal power [bhp]** | 1478/1471 |
| | | **Nominal power [kVA]** | - |
| | | **Nominal power [kWel]** | - |
| | | **Frequency [Hz]** | 50/60 |
| **Exhaust Regulations** | TA-Luft optimized (Diesel); | | |

## 10. Lube oil system

| No. | Description | Index | Value | Unit |
|---|---|---|---|---|
| 1 | Lube oil operating temp. before engine, from | R | 75 | °C |
| 2 | Lube oil operating temp. before engine, to | R | 100 | °C |
| 5 | Lube oil temperature before engine, limit 1 | L | 103 | °C |
| 6 | Lube oil temperature before engine, limit 2 | L | 105 | °C |
| 8 | Lube oil operating press. bef. engine, from | R | 6.0 | bar |
| 9 | Lube oil operating press. bef. engine, to | R | 8.0 | bar |
| 10 | Lube oil pressure before engine, alarm | L | 4.5 | bar |
| 11 | Lube oil pressure before engine, shutdown | L | 4.0 | bar |
| 19 | Lube oil fine filter (main circuit): number of units | | 1 | - |
| 20 | Lube oil fine filter (main circuit): number of elements per unit | | 3 | - |
| 32 | Lube oil fine filter (main circuit): pressure differential, max. | L | 1.0 | bar |

# Technical Sales Document

**- Product Data -**

| | | | |
|---|---|---|---|
| **Name** | 18V2000B76 | **Speed [rpm]** | 1500/1800 |
| **Application Group** | 3B | **Nominal power [kW]** | 1102/1097 |
| **Dataset** | Ref. 25°C/-; 50 Hz; Air charge air cooling | **Nominal power [bhp]** | 1478/1471 |
| | | **Nominal power [kVA]** | - |
| | | **Nominal power [kWel]** | - |
| | | **Frequency [Hz]** | 50/60 |
| **Exhaust Regulations** | TA-Luft optimized (Diesel); | | |

## 11. Fuel system

| No. | Description | Index | Value | Unit |
|---|---|---|---|---|
| 3307 | Fuel pressure at fuel feed connection, min. (when engine is starting), absolute pressure | L | 0.5 | bar abs |
| 3308 | Fuel pressure at fuel feed connection, min. (when engine is running), absolute pressure | L | 0.5 | bar abs |
| 3309 | Fuel pressure at fuel feed connection, max. (when engine is starting), absolute pressure | L | 1.5 | bar abs |
| 3310 | Fuel pressure at fuel feed connection, max. (permanent), absolute pressure | L | 1.0 | bar abs |
| 3311 | Fuel pressure at fuel feed connection, specification | | XZ54407000001 | - |
| 37 | Fuel supply flow, max. | A | 25 | liter/min |
| 8 | Fuel return flow, max. | A | 25 | liter/min |
| 10 | Fuel pressure at return connection on engine, max. | L | 0.5 | bar |
| 13 | Fuel temperature differential before/after engine, max. | L | 15 | K |
| 18 | Fuel fine filter (main circuit): number of units | A | 1 | - |
| 19 | Fuel fine filter (main circuit): number of elements per unit | A | 5 | - |
| 20 | Fuel fine filter (main circuit): particle retention | A | 0.005 | mm |
| 21 | Fuel fine filter (main circuit): pressure differential, max. | L | 1.0 | bar |

# Technical Sales Document

**- Product Data -**

| | | | |
|---|---|---|---|
| **Name** | 18V2000B76 | **Speed [rpm]** | 1500/1800 |
| **Application Group** | 3B | **Nominal power [kW]** | 1102/1097 |
| **Dataset** | Ref. 25°C/-; 50 Hz; Air charge air cooling | **Nominal power [bhp]** | 1478/1471 |
| | | **Nominal power [kVA]** | - |
| | | **Nominal power [kWel]** | - |
| | | **Frequency [Hz]** | 50/60 |
| **Exhaust Regulations** | TA-Luft optimized (Diesel); | | |

## 12. General operating data

| No. | Description | Index | Value | Unit |
|---|---|---|---|---|
| 1 | Cold start capability: air temperature (w/o starting aid, w/o preheating) - (case A) | R | 0 | °C |
| 22 | Coolant preheating, preheating temperature, min. | L | 32 | °C |
| 28 | Breakaway torque (without driven machinery) coolant temperature +5°C | R | - | Nm |
| 30 | Breakaway torque (without driven machinery) coolant temperature +40°C | R | - | Nm |
| 29 | Cranking torque at firing speed (without driven machinery) coolant temperature +5°C | R | - | Nm |
| 31 | Cranking torque at firing speed (without driven machinery) coolant temperature +40°C | R | - | Nm |
| 96 | Starting is blocked if the engine coolant temperature is below | | -20 | °C |
| 37 | High idling speed, max. (static) | L | 1660 | rpm |
| 38 | Limit speed for overspeed alarm / emergency shutdown | L | 2100 | rpm |
| 42 | Firing speed, from | R | 100 | rpm |
| 43 | Firing speed, to | R | 120 | rpm |
| 44 | Engine coolant temperature before starting full-load operation, recommended min. (for emergency/standby sets with coolant preheating the minimum preheating temperature referred to extended property No.22 is sufficient) | R | 40 | °C |
| 48 | Minimum continuous load | R | 20 | % |
| 49 | Extended low or no-load operation possible (consultation required) | | X | - |

[BL] **Reference value: fuel stop power**
Maximum engine power that cannot be run continuously on some applications (stabilization reserve)
[DL] **Reference value: continuous power**
Engine power that can be run continuously under standard conditions

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Typical average value as information – only suitable for design purposes to a limited extent
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# Technical Sales Document

**- Product Data -**

| | | | |
|---|---|---|---|
| **Name** | 18V2000B76 | **Speed [rpm]** | 1500/1800 |
| **Application Group** | 3B | **Nominal power [kW]** | 1102/1097 |
| **Dataset** | Ref. 25°C/-; 50 Hz; Air charge air cooling | **Nominal power [bhp]** | 1478/1471 |
| | | **Nominal power [kVA]** | - |
| | | **Nominal power [kWel]** | - |
| | | **Frequency [Hz]** | 50/60 |
| **Exhaust Regulations** | TA-Luft optimized (Diesel); | | |

| | | | | |
|---|---|---|---|---|
| 50 | Engine mass moment of inertia (without flywheel) | R | 4.24 | kgm² |
| 52 | Standard flywheel mass moment of inertia | R | 2.99 | kgm² |
| 1981 | Block bending moment - SAE 0 | R | N | kNm |
| 69 | Speed droop (with electronic governor) adjustable, from | R | 0 | % |
| 70 | Speed droop (with electronic governor) adjustable, to | R | 5 | % |

[BL] **Reference value: fuel stop power**
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**- Product Data -**

| | | | |
|---|---|---|---|
| **Name** | 18V2000B76 | **Speed [rpm]** | 1500/1800 |
| **Application Group** | 3B | **Nominal power [kW]** | 1102/1097 |
| **Dataset** | Ref. 25°C/-; 50 Hz; Air charge air cooling | **Nominal power [bhp]** | 1478/1471 |
| | | **Nominal power [kVA]** | - |
| | | **Nominal power [kWel]** | - |
| | | **Frequency [Hz]** | 50/60 |
| **Exhaust Regulations** | TA-Luft optimized (Diesel); | | |

## 13. Starting (electric)

| No. | Description | Index | Value | Unit |
|---|---|---|---|---|
| 2309 | Manufacturer | | PRESTOLITE M105R | - |
| 2310 | Number of starter | | 1 | - |
| 2312 | Starter electrically redundant | | - | - |
| 2313 | Rated power per starter | R | 7.5 | kW |
| 2314 | Starter, rated voltage | R | 24 | VDC |
| 2315 | Rated short-circuit current per starter | L | 1730 | A |
| 2316 | Power consumption per starter (at an engine speed of 100 rpm) | R | 720 | A |
| 3000 | Power consumption per starter (at an engine speed of 100 rpm, SAE0) | R | - | A |
| 3002 | Power consumption per starter (at an engine speed of 100 rpm, SAE1) | R | - | A |
| 2317 | Internal resistance of power supply + line resistance per starter | A | 0.008 | Ω |
| 2318 | Manufacturer | | PRESTOLITE M105R | - |
| 2319 | Number of starter | | 2 | - |
| 2320 | Starter electrically redundant | | X | - |
| 2321 | Rated power per starter | R | 7.5 | kW |
| 2322 | Starter, rated voltage | R | 24 | VDC |
| 2323 | Rated short-circuit current per starter | L | 1730 | A |
| 2324 | Power consumption per starter (at an engine speed of 100 rpm) | R | 720 | A |
| 3001 | Power consumption per starter (at an engine speed of 100 rpm, SAE0) | R | - | A |
| 3003 | Power consumption per starter (at an engine speed of 100 rpm, SAE1) | R | - | A |

[BL] **Reference value: fuel stop power**
Maximum engine power that cannot be run continuously on some applications (stabilization reserve)
[DL] **Reference value: continuous power**
Engine power that can be run continuously under standard conditions

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# Technical Sales Document

**- Product Data -**

| | | | |
|---|---|---|---|
| **Name** | 18V2000B76 | **Speed [rpm]** | 1500/1800 |
| **Application Group** | 3B | **Nominal power [kW]** | 1102/1097 |
| **Dataset** | Ref. 25°C/-; 50 Hz; Air charge air cooling | **Nominal power [bhp]** | 1478/1471 |
| | | **Nominal power [kVA]** | - |
| | | **Nominal power [kWel]** | - |
| | | **Frequency [Hz]** | 50/60 |
| **Exhaust Regulations** | TA-Luft optimized (Diesel); | | |

| | | | | |
|---|---|---|---|---|
| 2325 | Internal resistance of power supply + line resistance per starter | A | 0.008 | Ω |
| 2347 | Generally valid data for starter | | X | - |
| 2342 | Rated starting-attempt Duration (at +20°C ambient temperature with battery full) | R | 3 | s |
| 2343 | Interval between starts (at rated starting-attempt duration), min. | L | 5 | s |
| 2345 | Maximum acceptable starting-attempt duration | L | 15 | s |
| 2344 | Interval between starts (when starting-attempt duration > rated starting-attempt duration) | R | 60 | s |
| 2346 | Starting attempts within 30 minutes (at +20°C ambient temperature with battery full), max. | L | 6 | - |

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**- Product Data -**

| | | | |
|---|---|---|---|
| **Name** | 18V2000B76 | **Speed [rpm]** | 1500/1800 |
| **Application Group** | 3B | **Nominal power [kW]** | 1102/1097 |
| **Dataset** | Ref. 25°C/-; 50 Hz; Air charge air cooling | **Nominal power [bhp]** | 1478/1471 |
| | | **Nominal power [kVA]** | - |
| | | **Nominal power [kWel]** | - |
| | | **Frequency [Hz]** | 50/60 |
| **Exhaust Regulations** | TA-Luft optimized (Diesel); | | |

## 16. Inclinations - standard oil system (ref.: waterline)

| No. | Description | Index | Value | Unit |
|---|---|---|---|---|
| 15 | Longitudinal inclination, continuous max. driving end down (Option: max. operating inclinations) | L | 5 | degrees (°) |
| 17 | Longitudinal inclination, continuous max. driving end up (Option: max. operating inclinations) | L | 5 | degrees (°) |
| 19 | Transverse inclination, continuous max. (Option: max. operating inclinations) | L | 10 | degrees (°) |

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# Technical Sales Document

**- Product Data -**

| | | | |
|---|---|---|---|
| **Name** | 18V2000B76 | **Speed [rpm]** | 1500/1800 |
| **Application Group** | 3B | **Nominal power [kW]** | 1102/1097 |
| **Dataset** | Ref. 25°C/-; 50 Hz; Air charge air cooling | **Nominal power [bhp]** | 1478/1471 |
| | | **Nominal power [kVA]** | - |
| | | **Nominal power [kWel]** | - |
| | | **Frequency [Hz]** | 50/60 |
| **Exhaust Regulations** | TA-Luft optimized (Diesel); | | |

## 18. Capacities

| No. | Description | Index | Value | Unit |
|---|---|---|---|---|
| 1 | Engine coolant capacity (without cooling equipment) | R | 73 | liter |
| 10 | Intercooler coolant capacity | R | - | liter |
| 11 | On-engine fuel capacity | R | 7 | liter |
| 14 | Engine oil capacity, initial filling (standard oil system) (Option: max. operating inclinations) | R | 122 | liter |
| 20 | Oil change quantity, max. (standard oil system) (Option: max. operating inclinations) | R | 110 | liter |
| 2024 | Oil pan capacity, dipstick mark min. (standard oil system) | R | 92 | liter |
| 2025 | Oil pan capacity, dipstick mark max. (standard oil system) | R | 102 | liter |

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# Technical Sales Document

**- Product Data -**

| | | | |
|---|---|---|---|
| **Name** | 18V2000B76 | **Speed [rpm]** | 1500/1800 |
| **Application Group** | 3B | **Nominal power [kW]** | 1102/1097 |
| **Dataset** | Ref. 25°C/-; 50 Hz; Air charge air cooling | **Nominal power [bhp]** | 1478/1471 |
| | | **Nominal power [kVA]** | - |
| | | **Nominal power [kWel]** | - |
| | | **Frequency [Hz]** | 50/60 |
| **Exhaust Regulations** | TA-Luft optimized (Diesel); | | |

## 19. Masses / dimensions

| No. | Description | Index | Value | Unit |
|---|---|---|---|---|
| 9 | Engine mass, dry (basic engine configuration acc. to scope of supply specification) | R | 3360 | kg |
| 10 | Engine mass, wet (basic engine configuration acc. to scope of supply specification) | R | 3605 | kg |

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Maximum engine power that cannot be run continuously on some applications (stabilization reserve)
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# Technical Sales Document

**- Product Data -**

| | | | |
|---|---|---|---|
| **Name** | 18V2000B76 | **Speed [rpm]** | 1500/1800 |
| **Application Group** | 3B | **Nominal power [kW]** | 1102/1097 |
| **Dataset** | Ref. 25°C/-; 50 Hz; Air charge air cooling | **Nominal power [bhp]** | 1478/1471 |
| | | **Nominal power [kVA]** | - |
| | | **Nominal power [kWel]** | - |
| | | **Frequency [Hz]** | 50/60 |
| **Exhaust Regulations** | TA-Luft optimized (Diesel); | | |

## 20. Fan / fan cooler

| No. | Description | Index | Value | Unit |
|---|---|---|---|---|
| 1 | Standard design | | - | - |
| 3 | Fan, pusher-type | | X | - |
| 9 | Fan drive: mechanical via V-belt | | X | - |
| 13 | Fan: speed | R | N | rpm |

# Technical Sales Document

**- Product Data -**

| | | | |
|---|---|---|---|
| **Name** | 18V2000B76 | **Speed [rpm]** | 1500/1800 |
| **Application Group** | 3B | **Nominal power [kW]** | 1102/1097 |
| **Dataset** | Ref. 25°C/-; 50 Hz; Air charge air cooling | **Nominal power [bhp]** | 1478/1471 |
| | | **Nominal power [kVA]** | - |
| | | **Nominal power [kWel]** | - |
| | | **Frequency [Hz]** | 50/60 |
| **Exhaust Regulations** | TA-Luft optimized (Diesel); | | |

## 21. Exhaust emissions

| No. | Description | Index | Value | Unit |
|---|---|---|---|---|
| 1947 | Emissions data sheet: “TA-Luft” - CP | | EDS20000431 | - |
| 2005 | Emissions data sheet: NEA Singapore for ORDE | | - | - |
| 1959 | Emissions data sheet: US EPA Tier 4i | | - | - |
| 2052 | Emissions data sheet: MoEF India / CPCB Stage II | | - | - |
| 1972 | Emissions data sheet: Fuel-consumption optimized | | - | - |

[BL] **Reference value: fuel stop power**
Maximum engine power that cannot be run continuously on some applications (stabilization reserve)
[DL] **Reference value: continuous power**
Engine power that can be run continuously under standard conditions

[>] **Actual value must be greater than specified value**
[<] **Actual value must be less than specified value**

[X] **Applicable**
The module is valid for this product type
[-] **Non-applicable**
The module is not valid for this product type
[N] **Value not named**
The value has not yet been named or will not be named

[*] **Adequate verification not yet available (tolerance +/- 10%)**
[**] **Adequate verification not yet available (tolerance +/- 5%)**

[A] **Design value**
Value required for the design of an external system (plant)
[R] **Guideline value**
Typical average value as information – only suitable for design purposes to a limited extent
[L] **Limit value**
A value representing the lower limit/minimum value or upper limit/maximum value that may not be exceeded. Not suitable for design purposes

# Technical Sales Document

**- Product Data -**

| | | | |
|---|---|---|---|
| **Name** | 18V2000B76 | **Speed [rpm]** | 1500/1800 |
| **Application Group** | 3B | **Nominal power [kW]** | 1102/1097 |
| **Dataset** | Ref. 25°C/-; 50 Hz; Air charge air cooling | **Nominal power [bhp]** | 1478/1471 |
| | | **Nominal power [kVA]** | - |
| | | **Nominal power [kWel]** | - |
| | | **Frequency [Hz]** | 50/60 |
| **Exhaust Regulations** | TA-Luft optimized (Diesel); | | |

## 22. Acoustics

| No. | Description | Index | Value | Unit |
|---|---|---|---|---|
| 101 | Exhaust noise, unsilenced - CP (free-field sound-pressure level Lp, 1m distance, ISO 6798, +3dB(A) tolerance) | R | 115 | dB(A) |
| 201 | Exhaust noise, unsilenced - CP (sound power level LW, ISO 6798, +3dB(A) tolerance) | R | 127 | dB(A) |
| 103 | Exhaust noise, unsilenced - CP (free-field sound-pressure level Lp, 1m distance, ISO 6798) Spectrum No. | R | 736772e | - |
| 109 | Engine surface noise with attenuated intake noise (filter) - CP (free-field sound-pressure level Lp, 1m distance, ISO 6798, +2dB(A) tolerance) | R | 103 | dB(A) |
| 209 | Engine surface noise with attenuated intake noise (filter) - CP (sound power level LW, ISO 6798, +2dB(A) tolerance) | R | 121 | dB(A) |
| 111 | Engine surface noise with attenuated intake noise (filter) - CP (free-field sound-pressure level Lp, 1m distance, ISO 6798) Spectrum No. | R | 736611e | - |

[BL] **Reference value: fuel stop power**
Maximum engine power that cannot be run continuously on some applications (stabilization reserve)
[DL] **Reference value: continuous power**
Engine power that can be run continuously under standard conditions

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# Technical Sales Document

**- Product Data -**

| | | | |
|---|---|---|---|
| **Name** | 18V2000B76 | **Speed [rpm]** | 1500/1800 |
| **Application Group** | 3B | **Nominal power [kW]** | 1102/1097 |
| **Dataset** | Ref. 25°C/-; 50 Hz; Air charge air cooling | **Nominal power [bhp]** | 1478/1471 |
| | | **Nominal power [kVA]** | - |
| | | **Nominal power [kWel]** | - |
| | | **Frequency [Hz]** | 50/60 |
| **Exhaust Regulations** | TA-Luft optimized (Diesel); | | |

## 23. TBO and load profile (case A)

| No. | Description | Index | Value | Unit |
|---|---|---|---|---|
| 1 | TBO (Time between Overhaul)<br>(related to standard load profile (Pn,tn)) | L | 18000 | h |
| 22 | P1 (percent load related to CP) | R | 110 | % |
| 3 | t1 (percentage of operating time) | R | 1 | % |
| 24 | P2 (percent load related to CP) | R | 100 | % |
| 5 | t2 (percentage of operating time) | R | 9 | % |
| 26 | P3 (percent load related to CP) | R | 70 | % |
| 7 | t3 (percentage of operating time) | R | 90 | % |
| 28 | P4 (percent load related to CP) | R | - | % |
| 9 | t4 (percentage of operating time) | R | - | % |
| 30 | P5 (percent load related to CP) | R | - | % |
| 18 | t5 (percentage of operating time) | R | - | % |
| 11 | Mean utilization rate (percentage of rated power) | R | <75 | % |
| 12 | Number of load changes/hour, type I<br>(< 10% to >90% load) | R | 2 | - |
| 13 | Number of load changes/hour, type II<br>(< 10% to between 70% and 90% load) | R | 2 | - |
| 15 | Maintenance schedule No. | | N | - |
| 16 | Maintenance schedule No. (cont.) | | N | - |

[BL] **Reference value: fuel stop power**
Maximum engine power that cannot be run continuously on some applications (stabilization reserve)
[DL] **Reference value: continuous power**
Engine power that can be run continuously under standard conditions

[>] **Actual value must be greater than specified value**
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The module is valid for this product type
[-] **Non-applicable**
The module is not valid for this product type
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[*] **Adequate verification not yet available (tolerance +/- 10%)**
[**] **Adequate verification not yet available (tolerance +/- 5%)**

[A] **Design value**
Value required for the design of an external system (plant)
[R] **Guideline value**
Typical average value as information – only suitable for design purposes to a limited extent
[L] **Limit value**
A value representing the lower limit/minimum value or upper limit/maximum value that may not be exceeded. Not suitable for design purposes

# ALTERNATOR MA6014D

Document : **provisional**
issue 001 date 29/06/2015

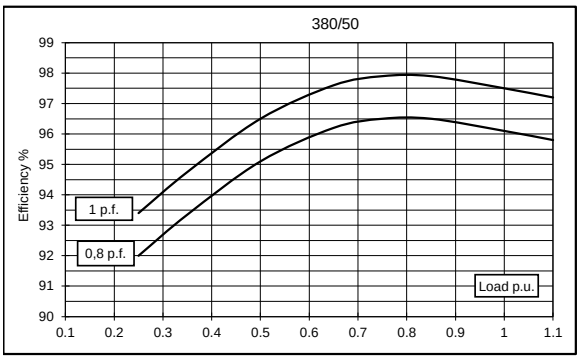
| **Electrical Characteristics** | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Frequency | | Hz | 50 | | | | 60 | | | |
| Voltage (parallel star) | | V | 380 | 400 | 415 | 440 | 415 | 440 | 460 | 480 |
| Rated power class H | | kVA | 1300 | 1300 | 1300 | 1235 | 1451 | 1482 | 1560 | 1560 |
| | | kW | 1040 | 1040 | 1040 | 988 | 1161 | 1186 | 1248 | 1248 |
| Rated power class F | | kVA | 1200 | 1200 | 1200 | 1140 | 1339 | 1368 | 1440 | 1440 |
| | | kW | 960 | 960 | 960 | 912 | 1071 | 1094 | 1152 | 1152 |
| Regulation with | | DER1 | ±0.5% with any power factor and speed variations between -5% +30% | | | | | | | |
| Insulation class | | | H | | | | | | | |
| Execution | | | Brushless | | | | | | | |
| Stator winding | | | 12 ends | | | | | | | |
| Rotor | | | with damping cage | | | | | | | |
| Efficiencies class H | 4/4 | % | 96.1 | 96 | 95.8 | 95.6 | 95.8 | 96.3 | 96.5 | 96.4 |
| (see graph. for details) | 3/4 | % | 96.5 | 96.2 | 96.2 | 96.1 | 96.1 | 96.3 | 96.7 | 96.5 |
| | 2/4 | % | 95.1 | 95 | 94.9 | 94.6 | 95 | 95.1 | 95.3 | 95.2 |
| | 1/4 | % | 92 | 92 | 91.8 | 91.3 | 92.5 | 92.5 | 92.5 | 92.5 |
| Reactances (f. l.cl. F) | Xd | % | 416.6 | 376 | 349.3 | 295.2 | 467.7 | 425.1 | 409.4 | 376 |
| | Xd' | % | 19.7 | 17.8 | 16.5 | 14 | 22.1 | 20.1 | 19.38 | 17.8 |
| | Xd'' | % | 9.3 | 8.4 | 7.8 | 6.6 | 10.4 | 9.5 | 9.15 | 8.4 |
| | Xq | % | 192.8 | 174 | 161.6 | 136.6 | 216.4 | 196.7 | 189.5 | 174 |
| | Xq' | % | 192.8 | 174 | 161.6 | 136.6 | 216.4 | 196.7 | 189.5 | 174 |
| | Xq'' | % | 21.2 | 19.1 | 17.7 | 15 | 23.8 | 21.6 | 20.8 | 19.1 |
| | $X_2$ | % | 15.2 | 13.7 | 12.7 | 10.8 | 17.0 | 15.5 | 14.9 | 13.7 |
| | $X_0$ | % | 4.3 | 3.9 | 3.6 | 3.1 | 4.9 | 4.4 | 4.25 | 3.9 |
| Short Circuit Ratio | Kcc | | 0.33 | 0.38 | 0.43 | 0.53 | 0.24 | 0.28 | 0.33 | 0.38 |
| Time Constants | Td' | sec. | 0.271 | | | | | | | |
| | Td'' | sec. | 0.0184 | | | | | | | |
| | Tdo' | sec. | 8.90 | | | | | | | |
| | $T\alpha$ | sec. | 0.026 | | | | | | | |
| Short Circuit Current Capacity | | % | >300 | | | | >350 | | | |
| Excitation at no load | | Amp. | 0.6 | 0.7 | 0.8 | 1 | 0.4 | 0.5 | 0.6 | 0.7 |
| Excitation at full load | | Amp. | 3.2 | 3.3 | 3.4 | 3.5 | 2.9 | 3 | 3.1 | 3.3 |
| Overload (long-term) | | % | 1 hour in a 6 hours period 110% rated load | | | | | | | |
| Overload per 20 sec. | | % | 300 | | | | | | | |
| Stator Winding Resistance (20°C) | | Ω | 0.0058 | | | | | | | |
| Rotor Winding Resistance (20°C) | | Ω | 2.800 | | | | | | | |
| Exciter Resistance (20 °C) | | Ω | Rotor : 0,130 | | | | Stator : 10,63 | | | |
| Heat dissipation at f.l.cl.H | | W | 42206 | 43333 | 45595 | 45473 | 50891 | 45553 | 45264 | 46606 |
| Telephone Interference | | | THF < 2% | | | | TIF < 40 | | | |
| Radio interference | | | EN61000-6-3, EN61000-6-1. For others standards apply to factory | | | | | | | |
| Waveform Distors.(THD) at f. load | | LL/LN % | 1,5 / 1,5 | | | | | | | |
| Waveform Distors.(THD) at no load | | LL/LN % | 2,4 / 2,4 | | | | | | | |
| **Mechanical characteristics** | | | | | | | | | | |
| Protection | | | IP 23 (other protection on request) | | | | | | | |
| DE bearing | | | 6324 | | | | | | | |
| NDE bearing | | | 6322 | | | | | | | |
| Weight of wound stator assembly | | kg | 979 | | | | | | | |
| Weight of wound rotor assembly | | kg | 759 | | | | | | | |
| Weight of complete generator | | kg | 2660 | | | | | | | |
| Maximun overspeed | | rpm | 2250 | | | | | | | |
| Unbalanced magnetic pull at f.l.cl.F | | kN/mm | 5.9 | | | | | | | |
| Cooling air requirement | | $m^3$/min | 90 | | | | 108 | | | |
| Inertia Constant (H) | | sec. | 0.243 | | | | 0.292 | | | |
| Noise level at 1m/7m | | dB(A) | 95 / 84 | | | | 99 / 89 | | | |

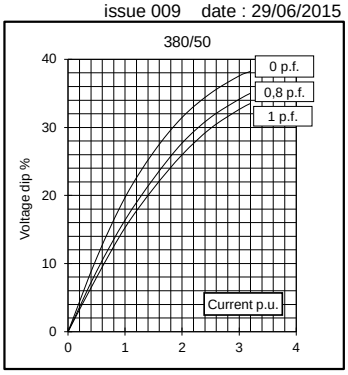
All technical data are to be considered as a reference and they can be modified without any notice.

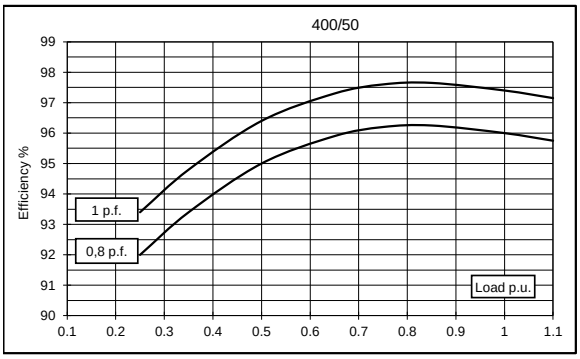
# ALTERNATOR MA6014D

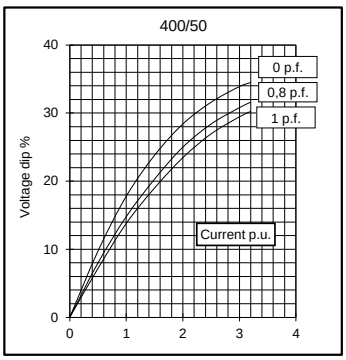
Document : **provisional**
issue 009 date : 29/06/2015

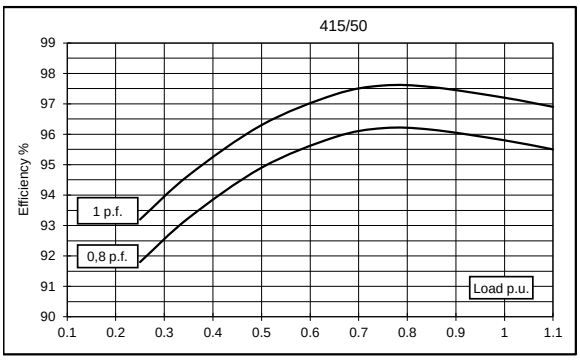
**50 Hz**

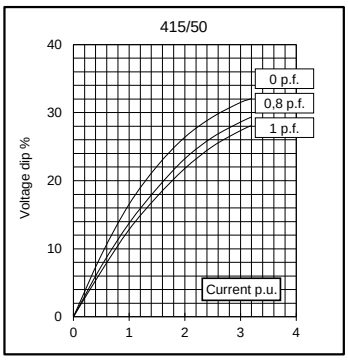


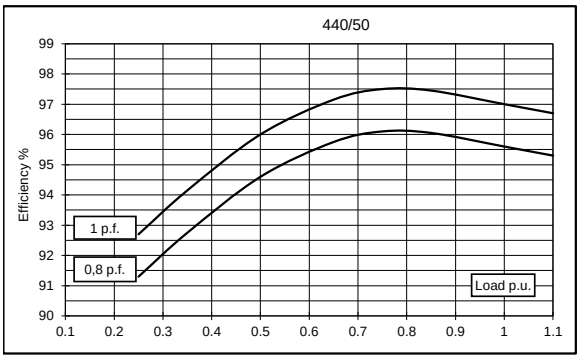



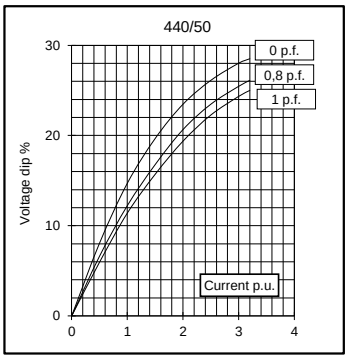



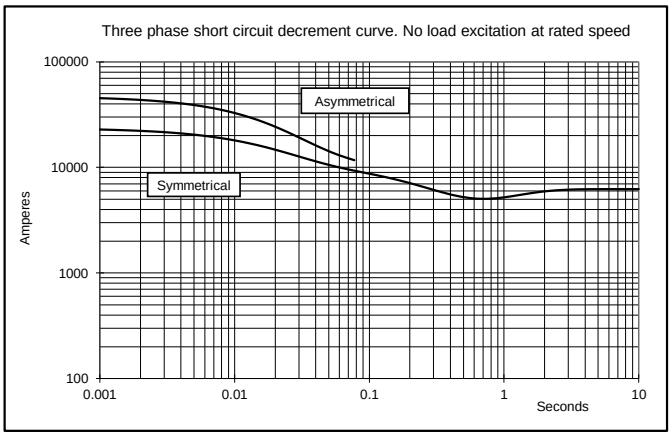

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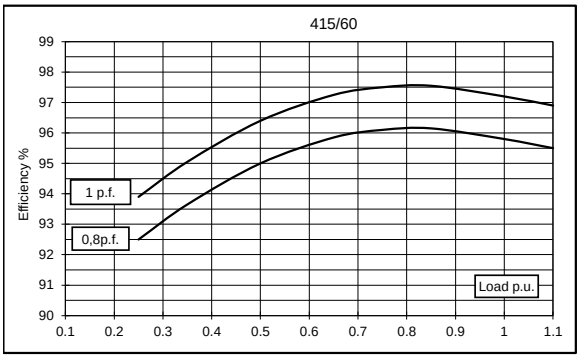
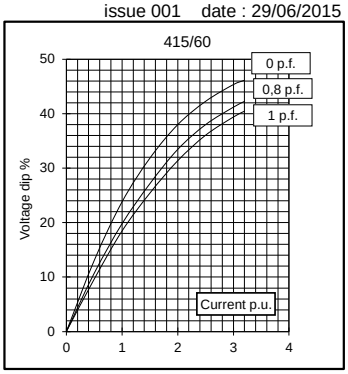
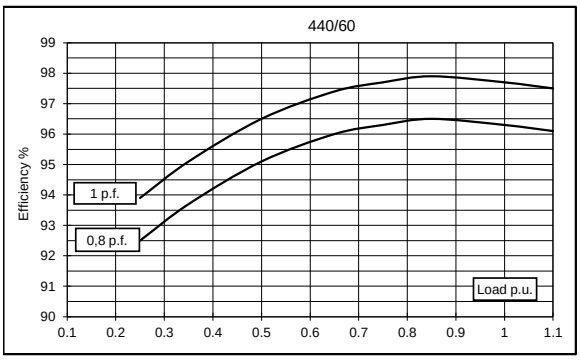
# ALTERNATOR MA6014D

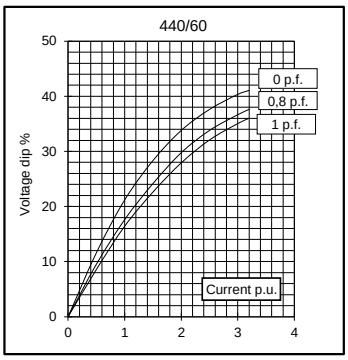
Document : **provisional**
issue 001 date : 29/06/2015

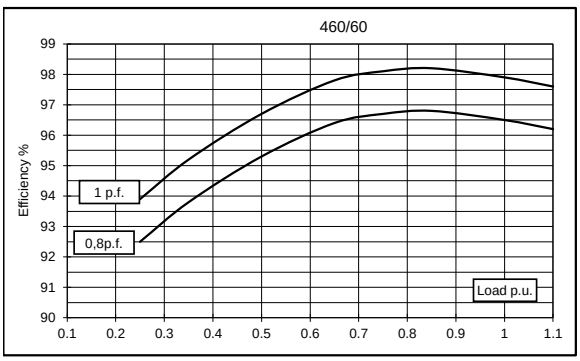
**60 Hz**

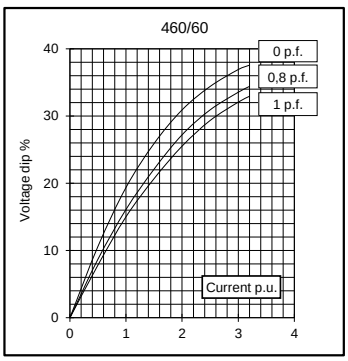


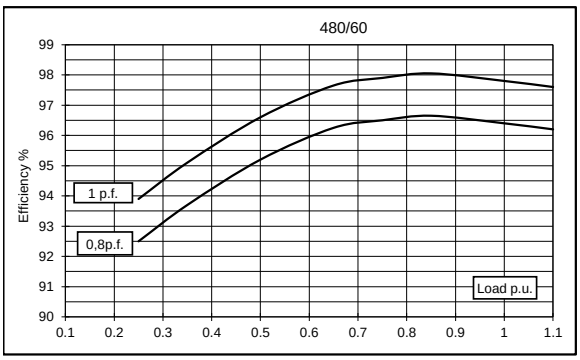



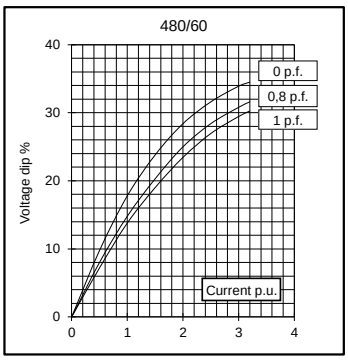



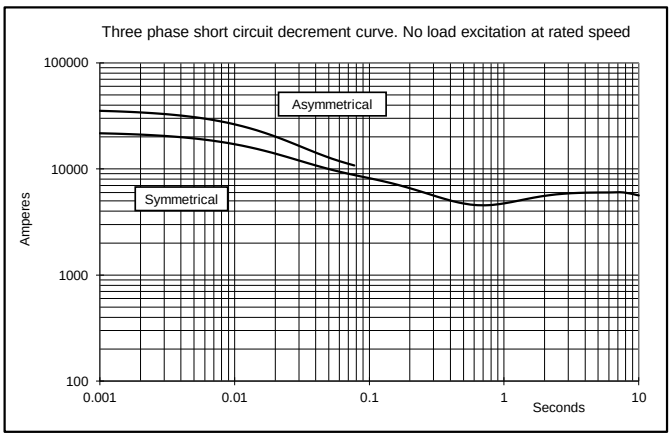

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DSEGenset®

# DSE7410/20 MKII

## AUTO START & AUTO MAINS FAILURE CONTROL MODULES

DSE**7420 MKII**


DSE**7410 MKII**

### KEY FEATURES

- 4-Line back-lit LCD text display
- Multiple Display Languages
- Five key menu navigation
- LCD alarm indication
- Heated display option available
- Customisable power-up text and images
- DSENet expansion compatibility
- Data logging facility upto 20 parameters
- Internal PLC editor
- Protections disable feature
- Fully configurable via PC using USB, RS232, RS485 and ethernet communication
- Front panel configuration with multi-level PIN protection
- Power save mode
- 3 phase generator sensing and protection
- 3 phase mains (utility) sensing and protection (DSE7420 MKII only)
- Automatic load transfer control (DSE7420 MKII only)
- Generator current and power monitoring (kW, kvar, kVA, pf)
- Mains current and power monitoring (kW, kvar, kVA, pf) (DSE7420 MKII only)
- kW and kvar overload and reverse power alarms
- Over current protection
- Unbalanced load protection
- Independent earth fault protection
- Breaker control via fascia buttons
- Fuel and start outputs configurable when using CAN
- 6 configurable DC outputs
- 2 configurable volt-free relay outputs
- 6 configurable analogue/digital inputs
- Support for 0 V to 10 V & 4 mA to 20 mA sensors
- Support for 3 kΩ resistive sensors
- 8 configurable digital inputs
- Configurable 5 stage dummy load and load shedding outputs
- CAN, MPU and alternator frequency speed sensing in one variant
- Real time clock
- Manual and automatic fuel pump control
- Engine pre-heat and post-heat functions
- Engine run-time scheduler
- Engine idle control for starting & stopping
- Fuel usage monitor and low fuel level alarms
- Simultaneous use of RS232, RS485 & ethernet communication ports
- True dual mutual standby using RS232 or RS485 for accurate hours balancing.
- MODBUS RTU & TCP support with configurable MODBUS pages.
- SNMP GET, SET and TRAP support built in.
- Advanced SMS messaging (additional external modem required)
- Start & stop capability via SMS messaging
- 3 configurable maintenance alarms
- Compatible with a wide range of CAN engines, including tier 4 engine support
- J1939-75 support & CAN alarm ignore function
- Uses DSE Configuration Suite PC Software for simplified configuration
- Licence-free PC software
- IP65 rating (with supplied gasket) offers increased resistance to water ingress
- Modules can be integrated into building management systems (BMS) using MODBUS RTU & TCP
- Configurable CAN parameters to read and display CAN information from external CAN devices.

### KEY BENEFITS

- Automatically transfers between mains (utility) and generator (DSE7420 MKII only) for convenience.
- Hours counter provides accurate information for monitoring and maintenance periods
- User-friendly set-up and button layout for ease of use
- Multiple parameters are monitored & displayed simultaneously for full visibility
- The module can be configured to suit a wide range of applications for user flexibility
- PLC editor allows user configurable functions to meet user specific application requirements.

### RELATED MATERIALS

| TITLE | PART NO. |
|---|---|
| DSE7410 MKII & DSE7420 MKII Installation Instructions | 053-191 |
| DSE7410 MKII & DSE7420 MKII Operator Manual | 057-263 |
| DSE7410 MKII & DSE7420 MKII Configuration Suite PC Manual | 057-262 |

### SPECIFICATIONS

**DC SUPPLY**

**CONTINUOUS VOLTAGE RATING**
8 V to 35 V Continuous
5 V for up to 1 minute

**CRANKING DROPOUTS**
Able to survive 0 V for 100 mS, providing supply was at least 10 V before dropout and supply recovers to 5 V. This is achieved without the need for internal batteries. LEDs and backlight will not be maintained during cranking.

**MAXIMUM OPERATING CURRENT**
510 mA at 12 V, 240 mA at 24 V

**MAXIMUM STANDBY CURRENT**
330 mA at 12 V, 160 mA at 24 V

**CHARGE FAIL/EXCITATION RANGE**
0 V to 35 V

**GENERATOR & MAINS (UTILITY)**

**VOLTAGE RANGE**
15 V to 415 V AC (Ph to N)
26 V to 719 V AC (Ph to Ph)

**FREQUENCY RANGE**
3.5 Hz to 75 Hz

**MAGNETIC PICKUP**

**VOLTAGE RANGE**
+/- 0.5 V to 70 V

**FREQUENCY RANGE**
10,000 Hz (max)

**INPUTS**

**DIGITAL INPUTS A TO H**
Negative switching

**ANALOGUE INPUTS A, B, E & F**
Configurable as:
Negative switching digital input
0 V to 10 V sensor
4 mA to 20 mA sensor
Resistive sensor

**ANALOGUE INPUTS C & D**
Configurable as:
Negative switching digital input
Resistive sensor

**OUTPUTS**

**OUTPUT A & B (FUEL & START)**
15 A DC at supply voltage

**OUTPUTS C & D**
8 A AC at 250 V AC (Volt-free)

**AUXILIARY OUTPUTS E, F, G, H, I & J**
2 A DC at supply voltage

**DIMENSIONS**

**OVERALL**
245 mm x 184 mm x 51 mm
9.6” x 7.2” x 2.0”

**PANEL CUT-OUT**
220 mm x 160 mm
8.7” x 6.3”

**MAXIMUM PANEL THICKNESS**
8 mm
0.3”

**STORAGE TEMPERATURE RANGE**
-40°C to +85 °C
-40 °F to +185 °F

**OPERATING TEMPERATURE RANGE**

**NON-HEATED DISPLAY VARIANT**
-30°C to +70 °C
-22 °F to +158 °F

**HEATED DISPLAY VARIANT**
-40 °C to +70 °C
-40 °F to +158 °F

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**EMAIL** sales@deepseausa.com **WEBSITE** www.deepseausa.com

DSEGenset®

# DSE7410/20 MKII

## AUTO START & AUTO MAINS FAILURE CONTROL MODULES

The DSE7410 MKII is an Auto Start Control Module and the DSE7420 MKII is an Auto Mains (Utility) Failure Control Module suitable for a wide variety of single, diesel or gas, gen-set applications.

Monitoring an extensive number of engine parameters, the modules will display warnings, shutdown and engine status information on the back-lit LCD screen, illuminated LEDs, remote PC and via SMS text alerts (with external modem).

The DSE7420 MKII will also monitor the mains (utility) supply. The modules include USB, RS232, RS485 and Ethernet ports as well as dedicated DSENet® terminals for system expansion.

Both modules are compatible with electronic (CAN) and non-electronic (magnetic pick-up/alternator sensing) engines and offer an extensive number of flexible inputs, outputs and extensive engine protections so the system can be easily adapted to meet the most demanding industry requirements.

The extensive list of features includes enhanced event and performance monitoring, remote communications & PLC functionality.

Dual mutual standby is now available on both the DSE7410 MKII & DSE7420 MKII using RS232 or RS485 communications. This provides for a simpler and more convenient installation with more advanced features such as true hours balancing.

The modules also feature SNMP functionality for connection to SNMP systems.

The modules can be easily configured using the DSE Configuration Suite PC software. Selected front panel editing is also available.

### ENVIRONMENTAL TESTING STANDARDS

**ELECTRO-MAGNETIC COMPATIBILITY**
BS EN 61000-6-2
EMC Generic Immunity Standard for the Industrial Environment
BS EN 61000-6-4
EMC Generic Emission Standard for the Industrial Environment

**ELECTRICAL SAFETY**
BS EN 60950
Safety of Information Technology Equipment, including Electrical Business Equipment

**TEMPERATURE**
BS EN 60068-2-1
Ab/Ae Cold Test -30 °C
BS EN 60068-2-2
Bb/Be Dry Heat +70 °C

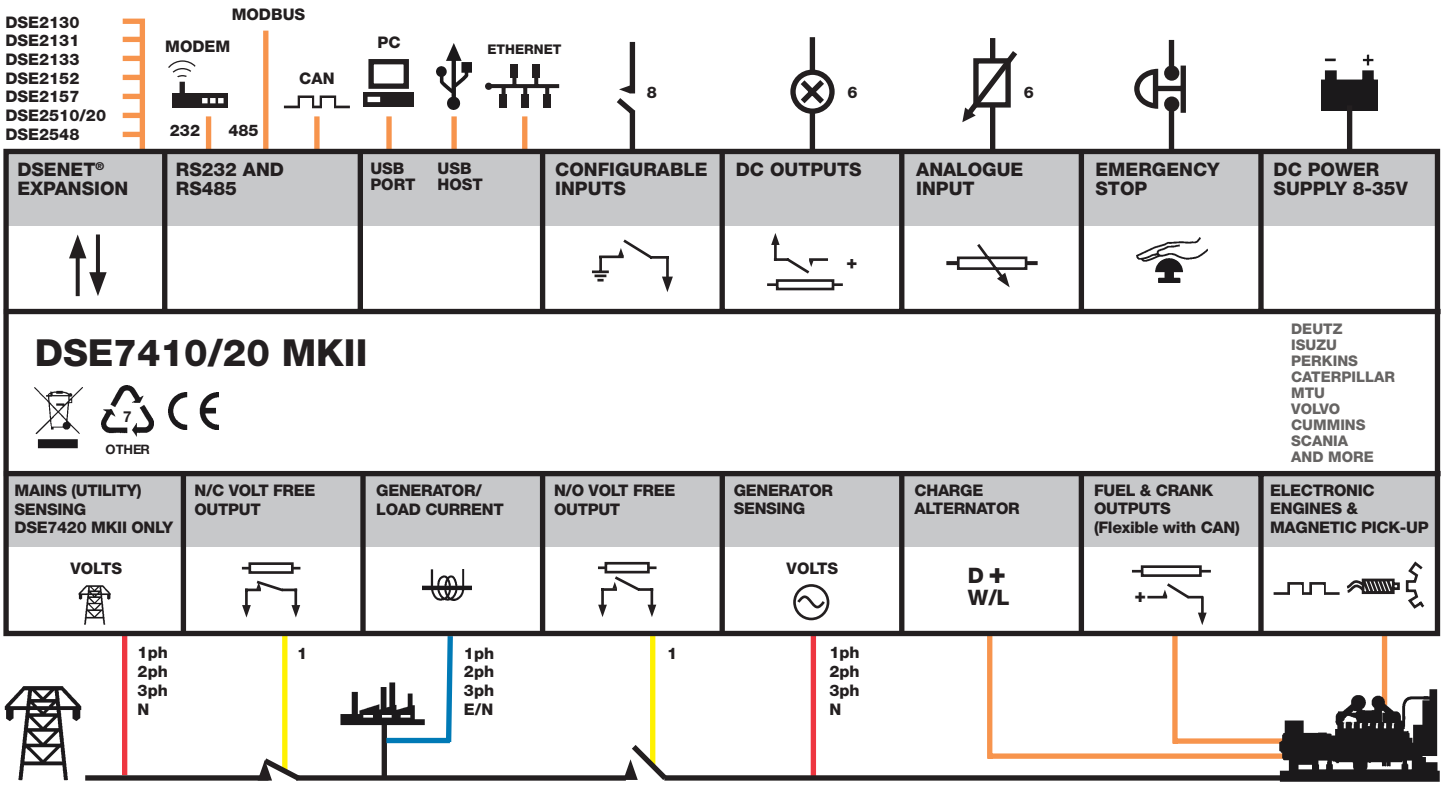
**VIBRATION**
BS EN 60068-2-6
Ten sweeps in each of three major axes
5 Hz to 8 Hz at +/-7.5 mm,
8 Hz to 500 Hz at 2 gn

**HUMIDITY**
BS EN 60068-2-30
Db Damp Heat Cyclic 20/55 °C
at 95% RH 48 Hours
BS EN 60068-2-78
Cab Damp Heat Static 40 °C
at 93% RH 48 Hours

**SHOCK**
BS EN 60068-2-27
Three shocks in each of three major axes
15 gn in 11 mS

**DEGREES OF PROTECTION PROVIDED BY ENCLOSURES**
BS EN 60529
IP65 - Front of module when installed into the control panel with the supplied sealing gasket.

## COMPREHENSIVE FEATURE LIST TO SUIT A WIDE VARIETY OF GEN-SET APPLICATIONS



DSEGenset

DSE

# DSE8610
## SYNCHRONISING AUTO START LOAD SHARE CONTROL MODULE

### FEATURES

The DSE8610 is an easy to use Synchronising Auto Start Control Module suitable for use in a multi-generator loadshare system, designed to synchronise up to 32 generators including electronic and non-electronic engines.

The DSE8610 monitors the generator and indicates operational status and fault conditions, automatically starting or stopping the engine on load demand or fault condition.

System alarms are annunciated on the LCD screen (multiple language options available), illuminated LED and audible sounder.

The event log will record 250 events to facilitate easy maintenance. An extensive number of fixed and flexible monitoring, metering and protection features are included as well as comprehensive communication and system expansion options.

Using the DSE PC Configuration Suite Software allows easy alteration of the operational sequences, timers and alarms. With all communication ports capable of being active at the same time, the DSE8610 is ideal for a wide variety of demanding load share applications.

### KEY LOAD SHARE FEATURES:

- Peak lopping/sharing (with DSExx60)
- Sequential set start
- Manual voltage/frequency adjustment
- R.O.C.O.F. and vector shift protection
- Generator load demand
- Automatic hours run balancing
- Mains (Utility) de-coupling
- Mains (Utility) de-coupling test mode
- Dead bus sensing
- Bus failure detection
- Direct governor and AVR control
- Volts and frequency matching
- kW and kV Ar load sharing
- Dead bus synchronising

### ENVIRONMENTAL TESTING STANDARDS

**ELECTRO MAGNETIC COMPATIBILITY**
BS EN 61000-6-2
EMC Generic Immunity Standard for the Industrial Environment
BS EN 61000-6-4
EMC Generic Emission Standard for the Industrial Environment

**ELECTRICAL SAFETY**
BS EN 60950
Safety of Information Technology Equipment, including Electrical Business Equipment

**TEMPERATURE**
BS EN 60068
Ab/Ae Cold Test -30°C
BS EN 60068-2-2
Bb/Be Dry Heat +70°C

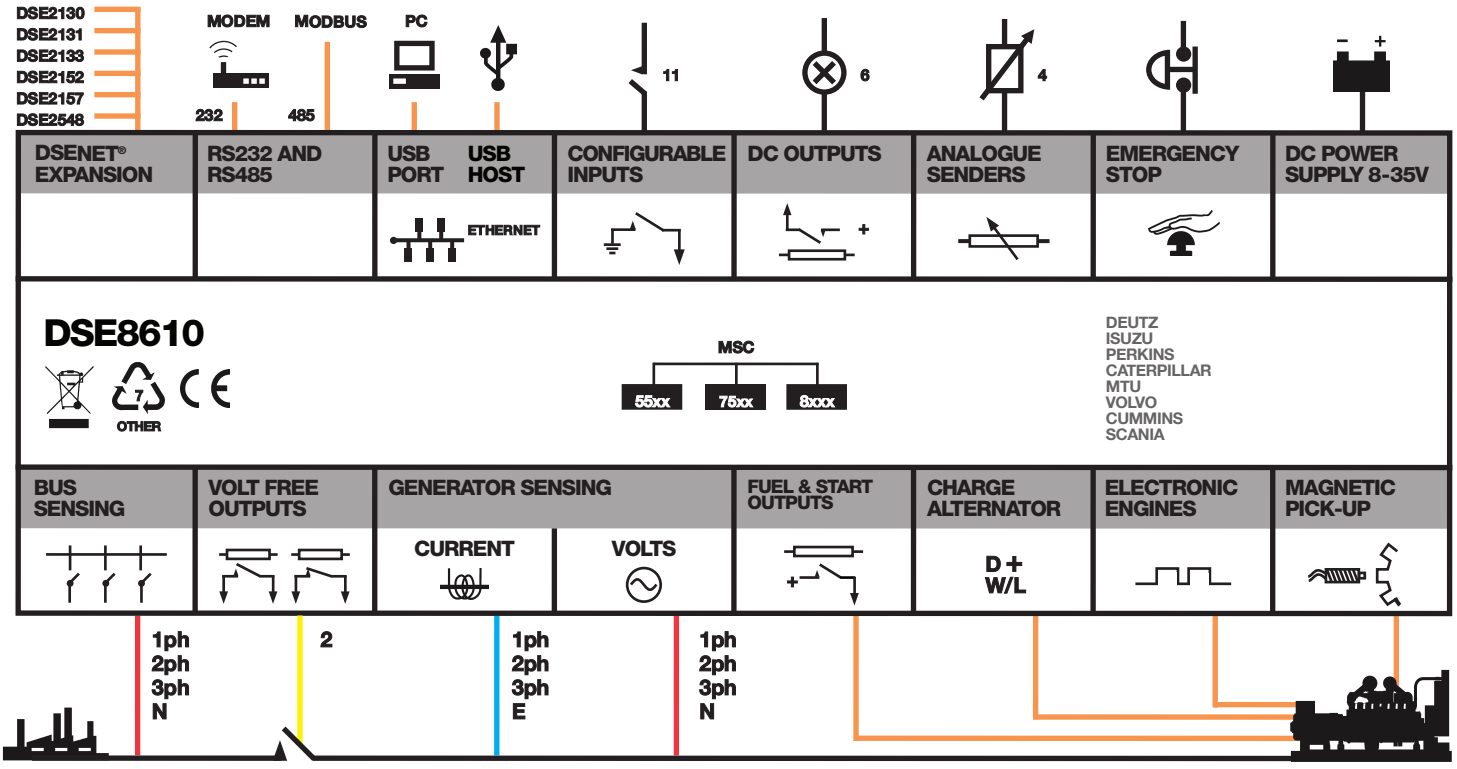
**VIBRATION**
BS EN 60068-2-6
Ten sweeps in each of three major axes
5Hz to 8Hz @ +/-7.5mm, 8Hz to 500Hz @ 2gn

**HUMIDITY**
BS EN 60068-2-30
Db Damp Heat Cyclic 20/55°C @ 95% RH
48 Hours
BS EN 60068-2-78
Cab Damp Heat Static 40°C @ 93% RH
48 Hours

**SHOCK**
BS EN 60068-2-27
Three shocks in each of three major axes
15gn in 11mS

**DEGREES OF PROTECTION PROVIDED BY ENCLOSURES**
BS EN 60529
IP65 - Front of module when installed into the control panel with the supplied sealing gasket.

## COMPREHENSIVE FEATURE LIST TO SUIT A WIDE VARIETY OF LOAD SHARE APPLICATIONS




ISSUE 3

DSEGenset

DSE

# DSE8610

## SYNCHRONISING AUTO START LOAD SHARE CONTROL MODULE

### FEATURES


### KEY FEATURES

- Comprehensive synchronising & loadsharing capabilities
- Built-in governor and AVR control
- Base load (kW export) functionality
- Positive & negative kVAr export control
- Mains (utility) de-coupling protection
- Generator power (kW, kV Ar, kV A & pf) monitoring
- Overload (kW & kV Ar) protection
- Reverse power (kW & kV Ar) protection
- Unbalanced load protection
- Independent earth fault protection
- Advanced integral PLC editor
- 11 Configurable inputs
- 8 Configurable outputs
- Configurable flexible sensor inputs
- DSENet® expansion compatibility
- User configurable RS232, RS485 and Ethernet communications
- Remote SCADA monitoring via various DSE software applications
- MODBUS RTU & TCP support
- User configurable MODBUS pages
- Advanced SMS control and fault messaging (additional GSM modem required)
- Easy access diagnostic pages including modem diagnostic pages
- Data logging and trending
- CAN, MPU and Frequency speed sensing
- Tier 4 CAN engine support
- “Protections disabled” feature
- Front panel editing with PIN protection
- Fully configurable using DSE Configuration Suite PC software via USB
- 4 Line back-lit LCD text display
- LED and LCD alarm indication
- Configurable display languages
- USB connectivity
- Customisable status screens
- Five key menu navigation
- 3 Configurable maintenance alarms
- Multiple date and time run scheduler
- Manual fuel pump control
- Fuel usage monitor and low fuel level protection
- Charge alternator failure protection
- Load switching (load shedding and dummy load control)
- Configurable event log (250)
- Backed up real time clock

### KEY BENEFITS

- Compatible in load share systems containing DSE5500, DSE7500 and DSE8600 series. Contact DSE for further details
- 132 x 64 pixel ratio display for clarity
- Real-time clock provides accurate event logging
- Ethernet communication, provides builit in advanced remote monitoring.
- Can be integrated into building management systems (BMS) and programmable logic control (PLC)
- Increased input and output expansion capability via DSENet®
- Licence-free PC software
- IP65 rating (with supplied gasket) offers increased resistance to water ingress
- Advanced Internal PLC editor allows user configurable functions to meet specific application requirements.

### EXPANSION DEVICES

- DSE124 CAN/MSC Extender
- DSE2130 Input Expansion Module
- DSE2131 Ratio-metric Input Expansion Module
- DSE2133 RTD & Thermo-couple Expansion Module
- DSE2152 Ratio-metric Output Expansion Module
- DSE2157 Output Expansion Module
- DSE2548 LED Expansion Module

### SPECIFICATION

**DC SUPPLY**
**CONTINUOUS VOLTAGE RATING**
8 V to 35 V continuous

**CRANKING DROPOUTS**
Able to survive 0 V for 50 mS, providing supply was at least 10 V before dropout and supply recovers to 5 V. This is achieved without the need for internal batteries

**MAXIMUM OPERATING CURRENT**
460 mA at 12 V, 245 mA at 24 V

**MAXIMUM STANDBY CURRENT**
375 mA at 12 V, 200 mA at 24 V

**CHARGE FAIL/EXCITATION RANGE**
0 V to 35 V

**OUTPUTS**
**OUTPUT A (FUEL)**
15 A DC at supply voltage

**OUTPUT B (START)**
15 A DC at supply voltage

**OUTPUTS C & D**
8 A AC at 250 V AC (Volt free)

**AUXILIARY OUTPUTS E,F,G,H,I & J**
2 A DC at supply voltage

**GENERATOR & BUS**
**VOLTAGE RANGE**
15 V to 333 V AC (L-N)

**FREQUENCY RANGE**
3.5 Hz to 75 Hz

**MAGNETIC PICK-UP**
**VOLTAGE RANGE**
+/- 0.5 V to 70 V

**FREQUENCY RANGE**
10,000 Hz (max)

**BUILT-IN GOVERNOR CONTROL**
**MINIMUM LOAD IMPEDANCE**
1000Ω
Fully isolated

**GAIN VOLTAGE**
0 V to 10 V DC
Fully isolated

**OFFSET VOLTAGE**
+/- 10 V DC
Fully isolated

**BUILT-IN AVR CONTROL**
**MINIMUM LOAD IMPEDANCE**
1000Ω
Fully isolated

**GAIN VOLTAGE**
0 V to 10 V DC
Fully isolated

**OFFSET VOLTAGE**
+/- 10 V DC
Fully isolated

**DIMENSIONS**
**OVERALL**
240 mm x 181 mm x 42 mm
9.4” x 6.8” x 1.6”

**PANEL CUTOUT**
220 mm x 160 mm
8.7” x 6.3”

**MAXIMUM PANEL THICKNESS**
8 mm
0.3”

**OPERATING TEMPERATURE RANGE**
-30 °C to +70 °C

**STORAGE TEMPERATURE RANGE**
-40 °C to +85 °C

### RELATED MATERIALS

| TITLE | PART NO’S |
|---|---|
| DSE8610 Installation Instructions | 053-069 |
| DSE8610 Operator Manual | 057-115 |
| DSE8600 PC Configuration Suite Manual | 057-119 |
| DSE8660 Date Sheet | 055-086 |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VAT No.316923457

**055-083/03/12 (10)**

DSEGenset

DSE

# DSE8660
## AUTO TRANSFER SWITCH & MAINS CONTROL MODULE

### FEATURES

The DSE8660 is an easy-to-use single or multi-mains controller with automatic transfer switch capability. Designed to synchronise single or multiple DSE8610s and DSE8680s with single or multiple mains (utility) supplies, the DSE8660 will automatically control the change over from mains (utility) to generator supply or run generators in synchronisation with the mains (utility) to provide no-break, peak lopping and peak shaving power solutions.

The module can indicate operational status and fault conditions on the LCD screen (multiple languages available), by illuminated LED, audible sounder and SMS messaging.

Comprehensive communications are also available via RS232, RS485 & Ethernet for remote PC control and monitoring, and integration into building management systems.
The comprehensive event log will record up to 250 events to facilitate maintenance.

An extensive number of fixed and flexible monitoring and protection features are included. Easy alteration of the sequences, timers and alarms can be made using the DSE PC Configuration Suite Software. Selected configuration is also available via the module's front panel.

With all communication ports capable of being active at the same time, the DSE8xxx Series is ideal for a wide variety of demanding load share applications.

### KEY LOAD SHARE FEATURES (WITH DSE8x10) :

- Peak lopping/shaving
- Sequential set start
- Manual voltage/frequency adjustment
- R.O.C.O.F. and vector shift protection
- Generator load demand
- Automatic hours run balancing
- Mains (Utility) de-coupling
- Mains (Utility) de-coupling test mode
- Bus failure detection
- Volts and frequency matching.
- kW & kV Ar load sharing

### ENVIRONMENTAL TESTING STANDARDS

**ELECTRO MAGNETIC COMPATIBILITY**
BS EN 61000-6-2
EMC Generic Immunity Standard for the Industrial Environment
BS EN 61000-6-4
EMC Generic Emission Standard for the Industrial Environment

**ELECTRICAL SAFETY**
BS EN 60950
Safety of Information Technology Equipment, including Electrical Business Equipment

**TEMPERATURE**
BS EN 60068-2-1
Ab/Ae Cold Test -30°C
BS EN 60068-2-2
Bb/Be Dry Heat +70°C

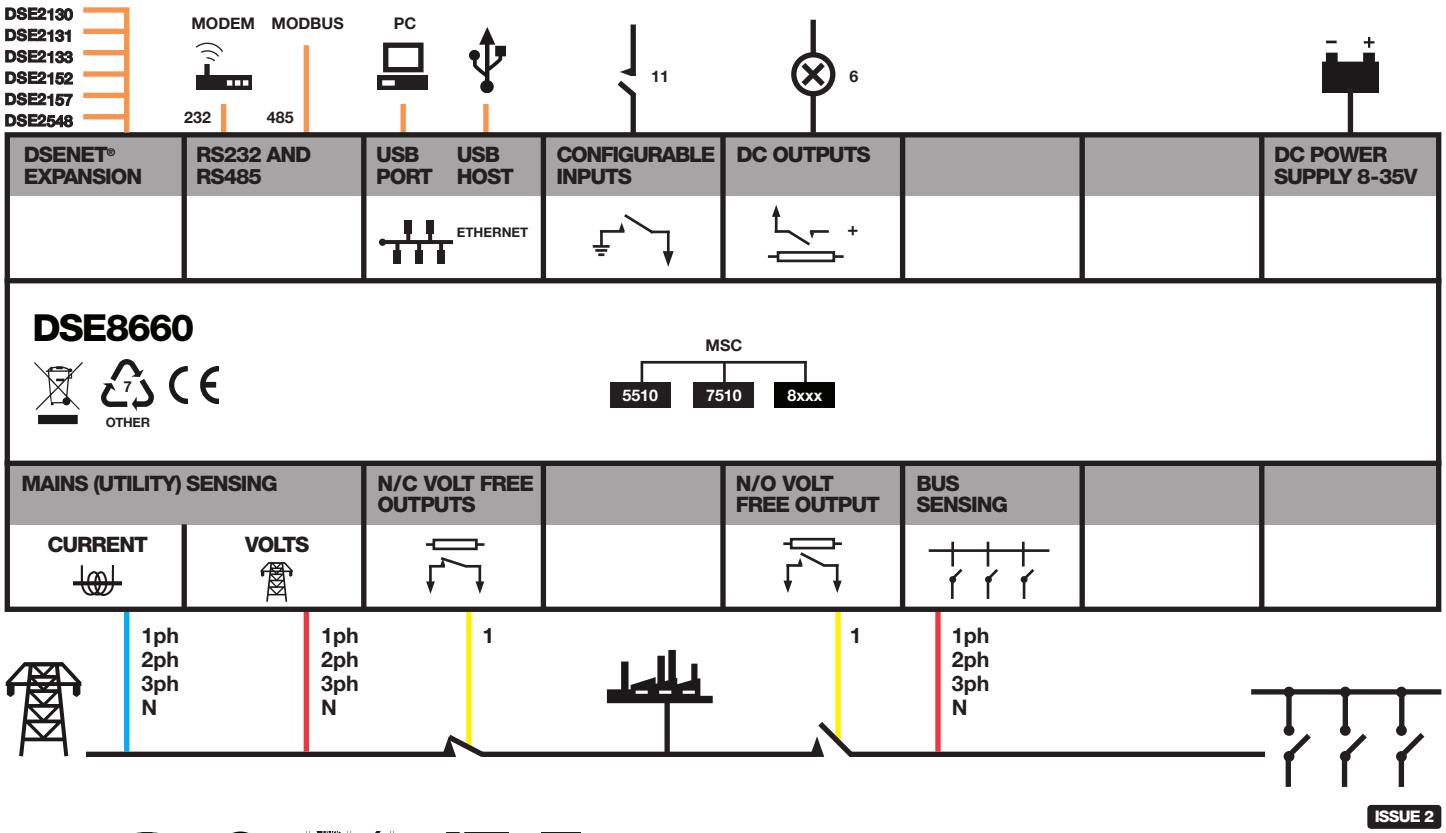
**VIBRATION**
BS EN 60068-2-6
Ten sweeps in each of three major axes
5Hz to 8Hz @ +/-7.5mm, 8Hz to 500Hz @ 2gn

**HUMIDITY**
BS EN 60068-2-30
Db Damp Heat Cyclic 20/55°C @ 95% RH 48 Hours
BS EN 60068-2-78
Cab Damp Heat Static 40°C @ 93% RH 48 Hours

**SHOCK**
BS EN 60068-2-27
Three shocks in each of three major axes
15gn in 11mS

**DEGREES OF PROTECTION PROVIDED BY ENCLOSURES**
BS EN 60529
IP65 - Front of module when installed into the control panel with the supplied sealing gasket.

## COMPREHENSIVE FEATURE LIST TO SUIT A WIDE VARIETY OF LOAD SHARE APPLICATIONS




ISSUE 2

DSEGenset

# DSE8660
## AUTO TRANSFER SWITCH & MAINS CONTROL MODULE

### FEATURES


### KEY FEATURES

- Mains (utility) failure detection
- Mains (utility) power monitoring (kW, kV Ar, kV A and pf)
- Comprehensive synchronising and loadsharing capabilities
- Base load (kW export) functionality
- Positive & negative kVAr export control
- Peak lopping & shaving functionality
- Mains (utility) kW export protection
- Mains (utility) de-coupling protection
- Advanced integral PLC editor
- User configurable RS232, RS485 & Ethernet communications
- MODBUS RTU & TCP support
- User configurable MODBUS pages
- Advanced SMS control and fault messaging (additional GSM modem required)
- DSENet expansion compatible
- Data logging and trending
- 4-Line back-lit LCD text display
- Multiple display languages
- Five key menu navigation
- Front panel editing with PIN protection
- Customisable status screens
- Configurable inputs (11)
- Configurable outputs (8)
- Configurable timers and alarms
- Multiple entry scheduler
- Configurable event log (250)
- Easy access diagnostic pages
- LED and LCD alarm indication
- USB connectivity
- Backed up real time clock
- Fully configurable via DSE Configuration Suite PC Software

### KEY BENEFITS

- A single flexible solution for multiple applications
- Compatible with DSE5510, DSE7510 & DSE8x10 series of modules
- 132 x 64 pixel ratio display for clarity
- Real-time clock provides accurate event logging
- Ethernet communication provides built in advanced remote monitoring.
- Can be integrated into building management systems (BMS) and programmable logic control (PLC)
- Increased input and output expansion capability via DSENet®
- Licence-free PC software
- IP65 rating (with supplied gasket) offers increased resistance to water ingress
- Advanced Internal PLC editor allows user configurable functions to meet specific application requirements.

### EXPANSION DEVICES

- DSE124 CAN/MSC Extender
- DSE2130 Input Expansion Module
- DSE2131 Ratiometric Input Expansion Module
- DSE2133 RTD & Thermocouple Expansion Module
- DSE2152 Analogue Output Expansion Module
- DSE2157 Output Expansion Module
- DSE2548 LED Expansion Module

### SPECIFICATION

**DC SUPPLY**
**CONTINUOUS VOLTAGE RATING**
8 V to 35 V Continuous

**CRANKING DROPOUTS**
Able to survive 0 V for 50 mS, providing supply was at least 10 V before dropout and supply recovers to 5 V. This is achieved without the need for internal batteries. LEDs and backlight will not be maintained during cranking.

**MAXIMUM OPERATING CURRENT**
340 mA at 12 V, 160 mA at 24 V

**MAXIMUM STANDBY CURRENT**
160 mA at 12 V, 80 mA at 24 V

**MAINS (UTILITY)**
**VOLTAGE RANGE**
15 V to 333 V AC (L-N)

**FREQUENCY RANGE**
3.5 Hz to 75 Hz

**BUS**
**VOLTAGE RANGE**
15 V to 333 V AC (L-N)

**FREQUENCY RANGE**
3.5 Hz to 75 Hz

**OUTPUTS**
**OUTPUTS C & D**
8 A at 250 V AC (Volt free)

**AUXILIARY OUTPUTS E,F,G,H, I & J**
2 A DC at supply voltage

**DIMENSIONS**
**OVERALL**
240 mm x 181 mm x 42 mm
9.4" x 7.1" x 1.6"

**PANEL CUT-OUT**
220 mm x 160 mm
8.7" x 6.3"

**MAXIMUM PANEL THICKNESS**
8 mm
0.3"

**OPERATING TEMPERATURE RANGE**
-30°C to +70°C

**STORAGE TEMPERATURE RANGE**
-40°C to +85°C

### RELATED MATERIALS

| TITLE | PART NO'S |
|---|---|
| DSE8660 Installation Instructions | 053-070 |
| DSE8660 Operator Manual | 057-120 |
| DSE8600 PC Configuration Suite Manual | 057-119 |
| DSE8610 Data Sheet | 055-083 |
| DSE8680 Data Sheet | 055-091 |
| DSE8700 Data Sheet | 055-090 |
| DSE8810 Data Sheet | 055-116 |
| DSE8860 Data Sheet | 055-139 |

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DSEGenset®

# DSE8003 MKII

## 7” COLOUR MULTI-SET REMOTE OVERVIEW DISPLAY


### KEY FEATURES

- Multiple modules (max 20) within the same load sharing system can be viewed on the 8003’s front screen.
- Touch-screen enabled.
- RS232, RS485 and Ethernet communications.
- Audible alarm.
- Front panel mounting.
- Protected front panel configuration.
- Remote monitoring.
- System monitoring.
- Enhanced graphical user interface.
- Powerful processor for fast operating response times.

### KEY BENEFITS

- Compatible with DSE86XX MKII load share modules.
- Data communication link allows remote system management.
- 800 x 480 pixels for high screen resolution.

### SPECIFICATIONS

**DC SUPPLY**

**CONTINUOUS VOLTAGE RATING**
8 V to 35 V continuous

**CRANKING DROPOUTS**
Able to survive 0 V for 50 mS, providing supply was at least 10 V before dropout and supply recovers to 5 V. This is achieved without the need for internal batteries

**MAXIMUM OPERATING CURRENT**
300 mA at 12V, 150 mA at 24V

**OUTPUTS**

**ALARM OUTPUTS C & D**
2 A DC at supply voltage

**DIMENSIONS**

**OVERALL**
310 mm x 160 mm x 40 mm
12.2” x 6.3” x 1.5”

**PANEL CUTOUT**
282 mm x 136 mm
11.1” x 5.3”

**OPERATING TEMPERATURE RANGE**
-30 °C to +70 °C
-22 °F to +158 °F

**STORAGE TEMPERATURE RANGE**
-40 °C to +85 °C
-40 °F to +185 °F

### RELATED MATERIALS

| TITLE | PART NO. |
|---|---|
| DSE8003 MKII Installation Instructions | 053-231 |
| DSE8005 SCADA Suite Manual | 057-128 |
| DSE8610 MKII Data Sheet | 055-204 |
| DSE8660 MKII Data Sheet | 055-169 |

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055-251/10/18 (1§)

DSEGenset®

# DSE8003 MKII

## 7” COLOUR MULTI-SET REMOTE OVERVIEW DISPLAY

The DSE8003 MKII is designed for use with the DSE86xx MKII load share control modules, giving a choice of display options suitable for a wide variety of applications. One (1) DSE8003 MKII module can be connected to multiple compatible modules via a data communication link up to a maximum distance of 1.2 km in length, using RS485.

The DSE8003 MKII features completely re-designed screen layouts and icons to provide comprehensive large screen graphs, charts, metering, power display and engine status information in a clear image and text format.

The DSE8003 MKII also features an improved processor for improved operating response times.

**ENVIRONMENTAL TESTING STANDARDS**

**ELECTRO MAGNETIC COMPATIBILITY**
BS EN 61000-6-2
EMC Generic Immunity Standard for the Industrial Environment
BS EN 61000-6-4
EMC Generic Emission Standard for the Industrial Environment

**ELECTRICAL SAFETY**
BS EN 60950
Safety of Information Technology Equipment, including Electrical Business Equipment

**TEMPERATURE**
BS EN 60068-2-1
Ab/Ae Cold Test -30°C
BS EN 60068-2-2
Bb/Be Dry Heat +70°C

**VIBRATION**
BS EN 60068-2-6
Ten sweeps in each of three major axes
5Hz to 8Hz @ +/-7.5mm, 8Hz to 500Hz @ 2gn

**HUMIDITY**
BS EN 60068-2-30
Db Damp Heat Cyclic 20/55°C @ 95% RH
48 Hours
BS EN 60068-2-78
Cab Damp Heat Static 40°C @ 93% RH
48 Hours

**SHOCK**
BS EN 60068-2-27
Three shocks in each of three major axes
15gn in 11mS

**DEGREES OF PROTECTION PROVIDED BY ENCLOSURES**
BS EN 60529 IP65 - Front of module when installed into the control panel with the supplied sealing gasket.

## COMPREHENSIVE FEATURE LIST TO SUIT A WIDE VARIETY OF LOAD SHARE APPLICATIONS