

SMART ALTERNATOR

K TYPE with CAN Communications



This alternator has a specially wound stator to achieve high power output in a small, low weight package. High current diodes are used in the rectifier and internal fans provide forced air cooling. The output is controlled by a regulator inside the alternator and is configurable over the CAN interface. The units are assembled with stiff brush springs and extra flexible wire to connect the stator to the rectifier.

All screws are locked. High quality bearings are used to enable the alternators to run at high speeds (up to 18,000rpm). The standard mounting method is intended for a belt drive, but the alternator may also be driven directly, if required.

Electrical

- Output voltage 14.3V DC default, configurable over range 11V to 16V DC
- Nominal output current at 10,000 RPM at 13.3V, see performance chart

A detailed performance chart is shown on the next page

Mechanical

- Weight <5kg
- Aluminium alloy body
- Aluminium rear cover
- Maximum speed 18,000rpm

Design and manufacture is in-house, so if our existing designs do not suit your application, we can provide cost effective customised parts to suit even the most demanding application.

Please contact our technical consultancy service who will be pleased to help.

CAN Communications Interface

- Voltage set point configuration
- On/Off control
- Diagnostic information, including:
 - Regulator and Rectifier Temperatures
 - Output Voltage Measurement
 - Over-Current Warning
 - RPM measurement

Connection Definition

- 22AWG un-screened cable
- Viton jacketed cable
- Positive power output M8 stud (B+ terminal)
- Ground connection for power and regulator is through the case. Ensure that the case has a high current, low resistance connection to vehicle ground
- Cable Connection

| | | |
|-------|------------|----------|
| Pin 1 | Green wire | Ignition |
| Pin 2 | Red wire | Sense |
| Pin 3 | White wire | Lamp |
| Pin 4 | Yellow | CAN+ |
| Pin 5 | Blue | CAN- |
- Alternative connection details: Ignition and sense connections are through the power output stud (B+ terminal), no lamp connection, CAN as above.

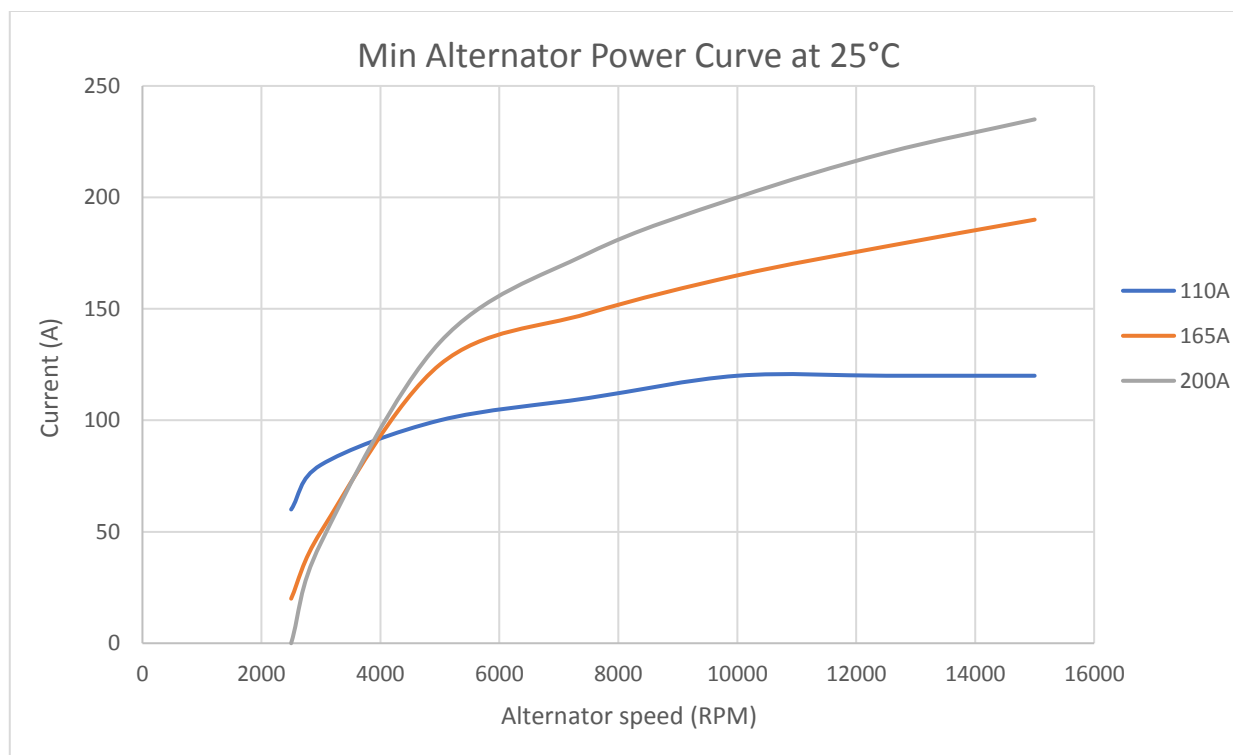
Environmental

- Splash resistant to standard motorsport fluids
- Continuous ambient operating temperature -30 to +90°C
- Maximum ambient temperature 110°C short term. Providing the following temperatures are not exceeded:

| | |
|-----------|-------|
| Stator | 200°C |
| Diodes | 175°C |
| Regulator | 105°C |
| Bearings | 150°C |

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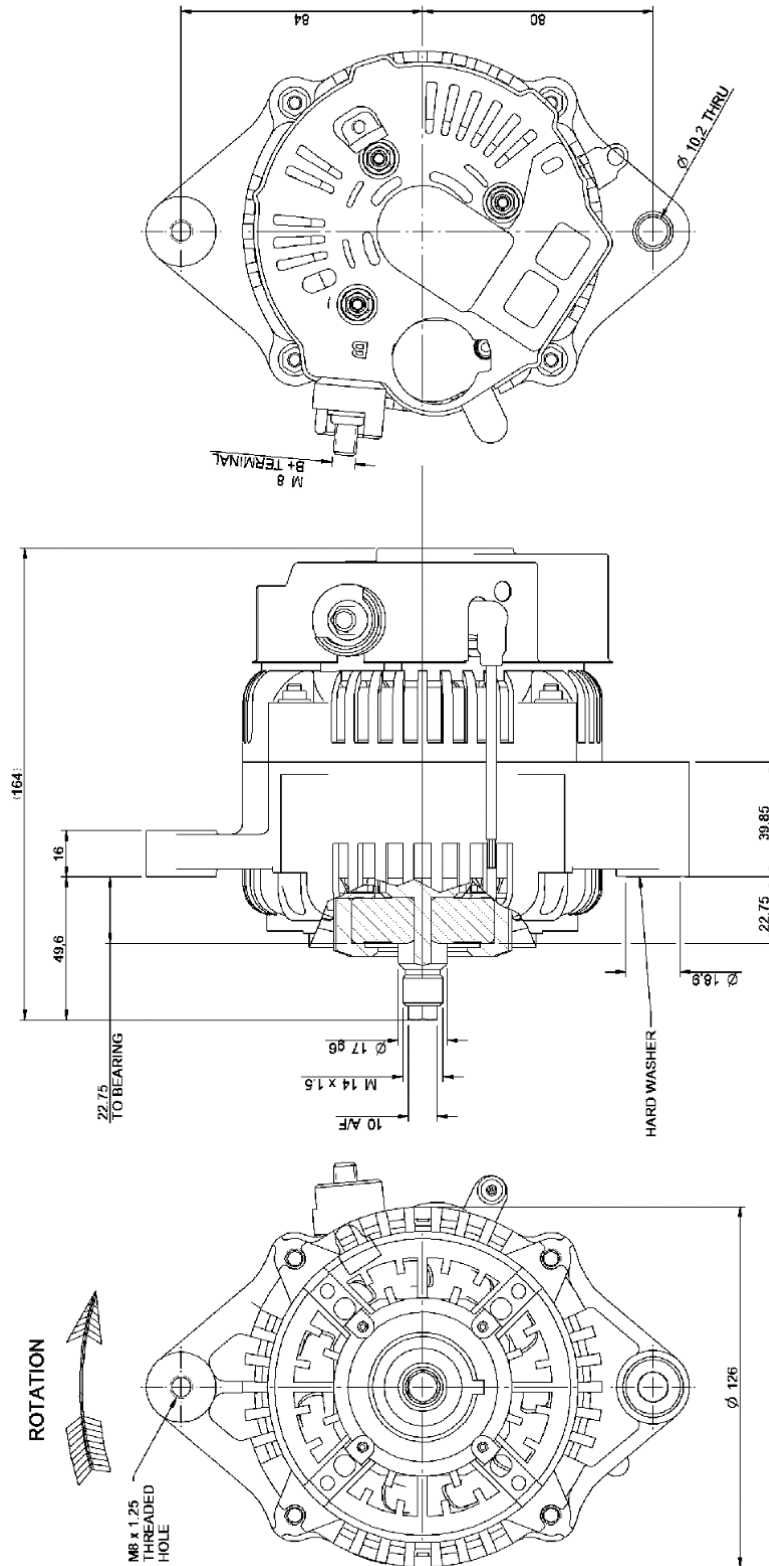


| | | Minimum Output (Amps) @13.3V | | |
|--------------------|-------|------------------------------|------|------|
| Output Voltage | | 110A | 165A | 200A |
| Cut In Speed (RPM) | | 1300 | 2000 | 2500 |
| Speed RPM | 2500 | 60 | 20 | 0 |
| | 3000 | 80 | 50 | 45 |
| | 5000 | 100 | 125 | 135 |
| | 7500 | 110 | 148 | 175 |
| | 10000 | 120 | 165 | 200 |
| | 12500 | 120 | 178 | 220 |
| | 15000 | 120 | 190 | 235 |

McLaren Applied Technologies can service and repair alternators.
Please contact our technical consultancy service for more information.

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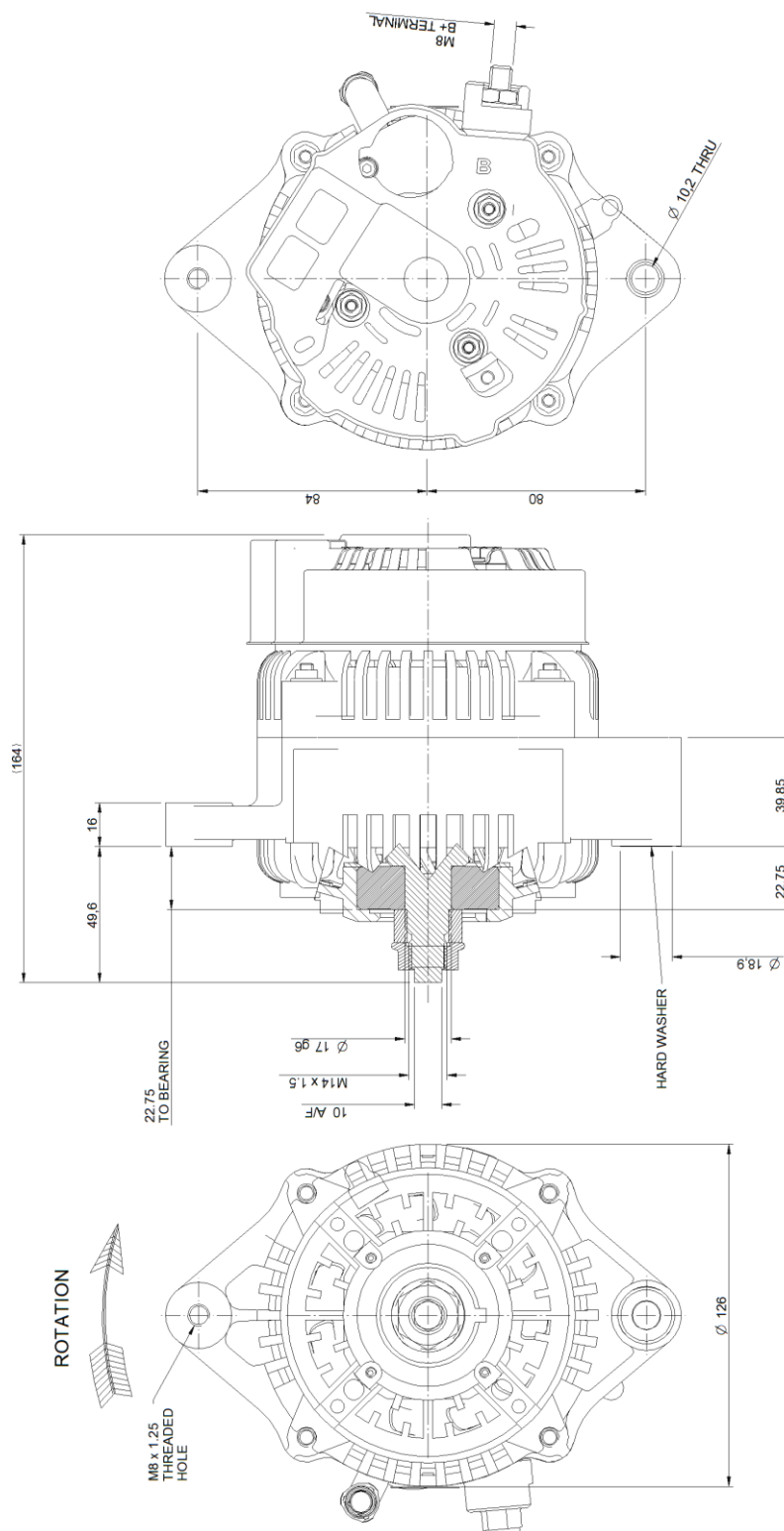


| | |
|-----------------------------|-------------------|
| Order Code | O 030 650 035 000 |
| Connector | Not fitted |
| 120Ω CAN termination | Not fitted |
| Cable Length | 500mm |
| Rotation | Clockwise |
| Output | 200A |

06/02/18

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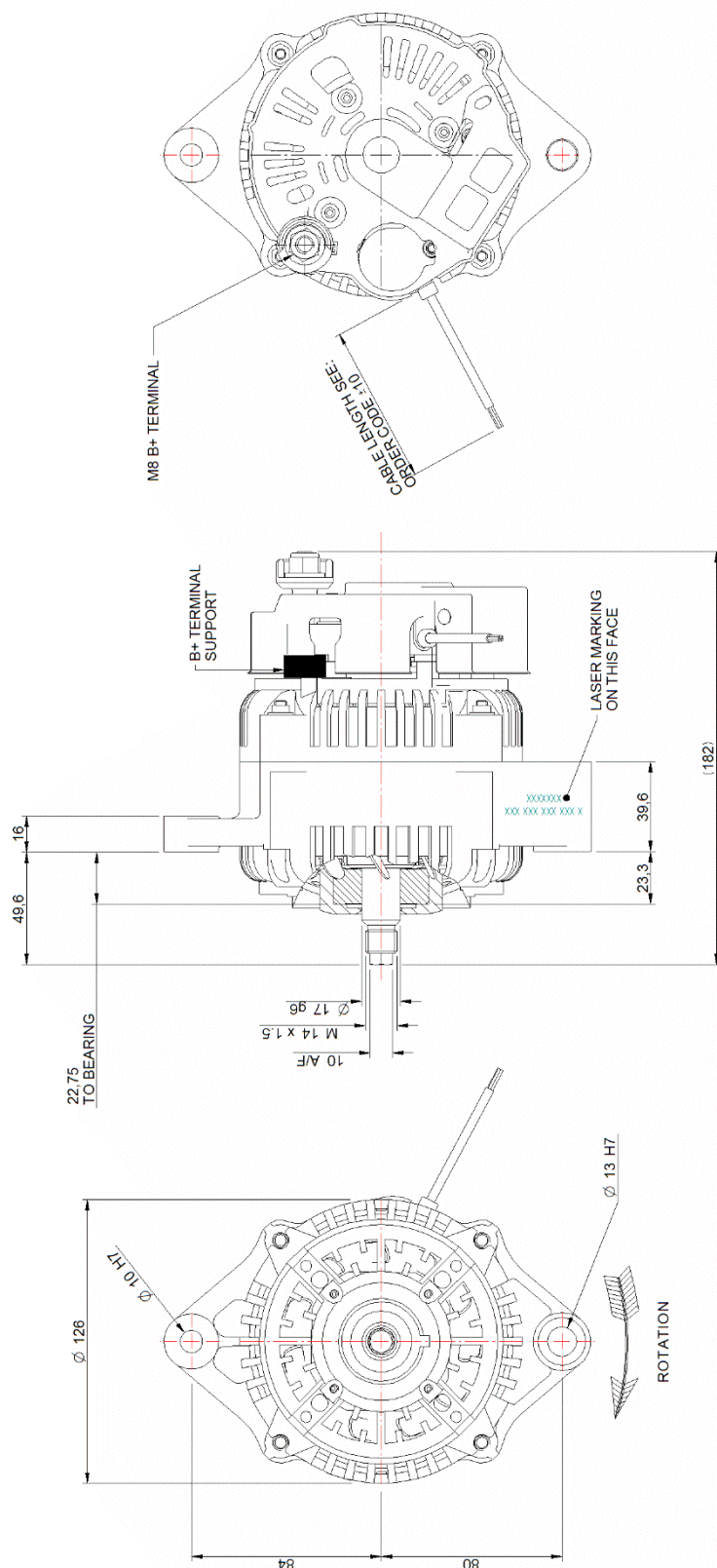


| | |
|-----------------------------|----------------------|
| Order Code | O 030 650 035 001 |
| Connector | ASL 6 06-05 PN-HE |
| 120Ω CAN termination | Not fitted |
| Cable Length | 300mm |
| Rotation | Clockwise |
| Output | 200A |

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| | |
|----------------------|-------------------|
| Order Code | O 030 650 035 002 |
| Connector | Not fitted |
| 120Ω CAN termination | Not fitted |
| Cable Length | 1000mm |
| Rotation | Clockwise |
| Output | 200A |

06/02/18