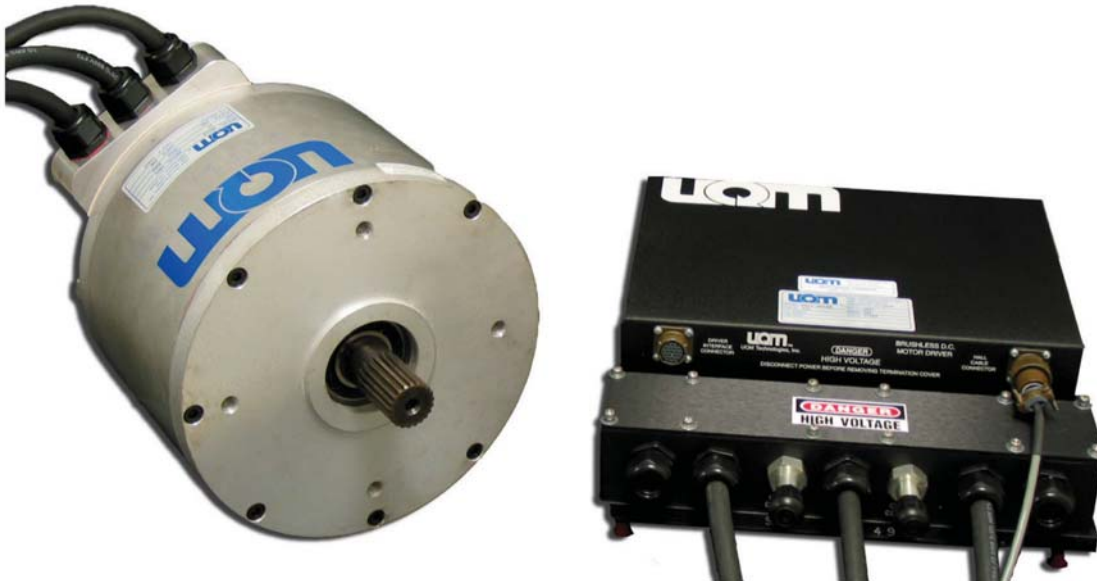




PowerPhase[®] 125

for electric, hybrid electric, and fuel cell powered vehicles



Key Features:

- 300 Nm peak torque
- 125 kW peak, 45 kW continuous motor power
- 125 kW peak, 41 kW continuous generator power
- Full Power at 300-420VDC
- EV/HEV traction drive or HEV starter/generator system
- Efficient, power dense, brushless permanent magnet motor
- Microprocessor-controlled inverter with sine wave drive
- Application-friendly graphical user interface
- Regenerative Braking

Driver Electronics Incorporate:

- Serial communication
- CAN bus compatibility
- Diagnostic capability
- Temperature sensing/alarm
- Speed sensing
- Graphical user interface

Benefits:

- Tight voltage regulation
- Improved braking and extended range
- Suitable for automotive applications
- Enhanced thermal management
- Torque, speed, and voltage control modes
- Rugged, weatherproof enclosure
- Liquid cooling
- Light weight

PowerPhase[®] 125

DD45-500L Inverter/Controller

Operating Voltage

Nominal input range	300 to 420 VDC
Operating voltage input range	240 to 420 VDC
Minimum voltage limit	240 VDC (with derated power output)
Input current limitation	500 A

Dimensions

Length	14.96 in	380 mm
Width	14.37 in	365 mm
Height	4.69 in	119 mm
Weight	35.0 lb	15.9 kg

Inverter Type

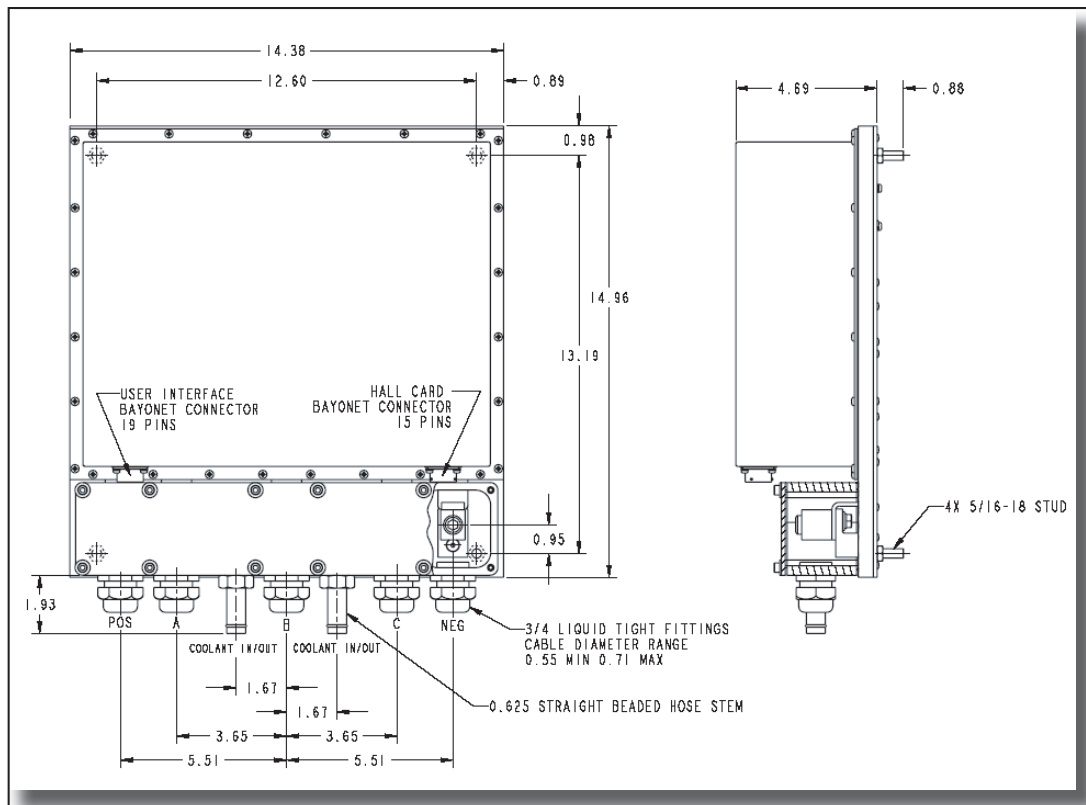
Control type	PWM & phase advance, 3-Phase Brushless PM
Power device	IGBT module half bridge × 3
Switching frequency	12.5 kHz
Standby power consumption	17 W (inverter and microprocessor)

Liquid Cooling System

Minimum coolant flow	8 l/min (50/50 water/glycol mix)
Max. inlet temp of controller	131° F 55° C
Inner diameter of hose	5/8 in 16 mm
Max. inlet pressure	10 psig 0.7 bar

TI2812 Digital Signal Processor (internally packaged)

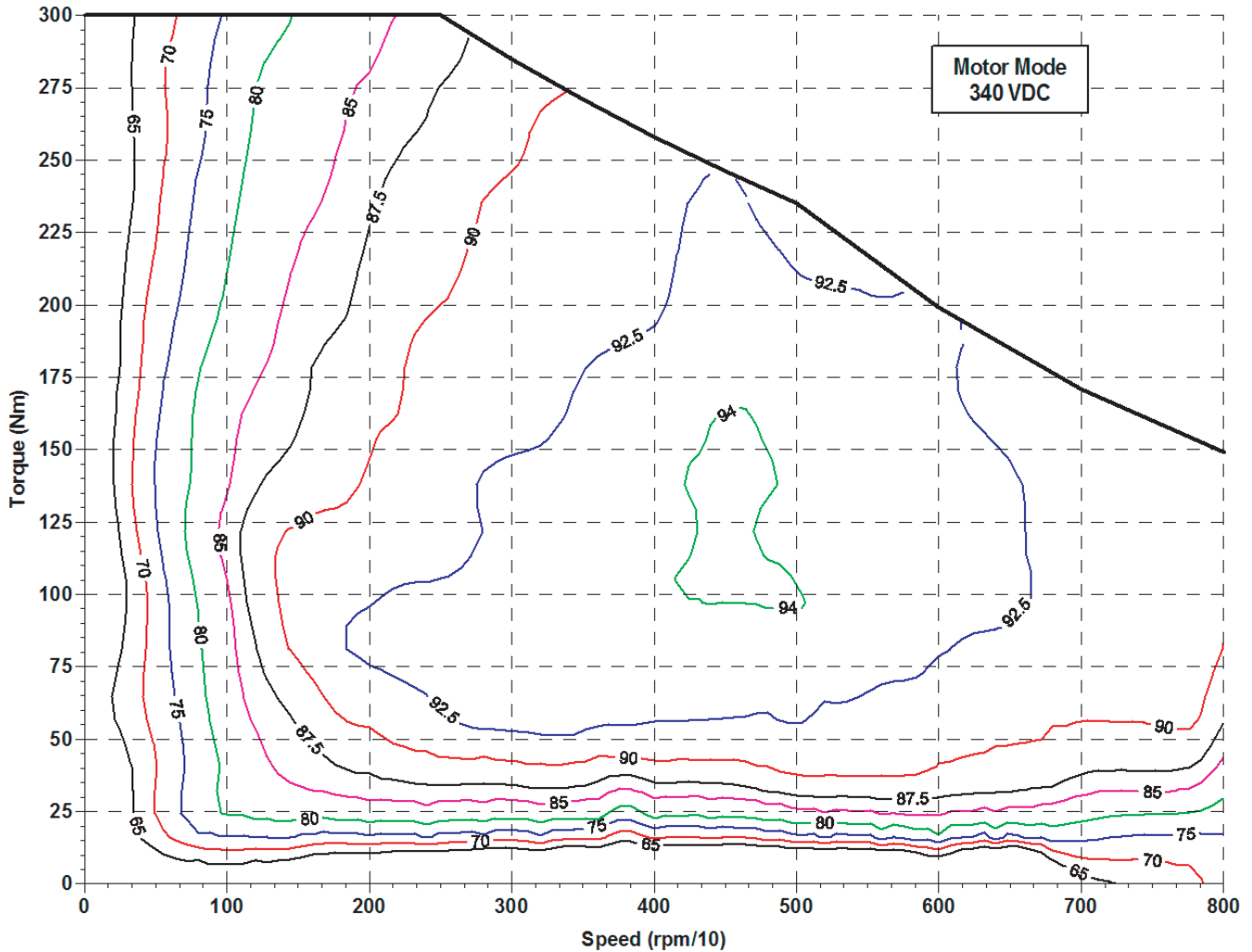
Nominal input voltage	12 VDC
Input supply voltage range	8 to 15 VDC
Input supply current range	0.3 to 0.5 A



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Motoring Efficiency Map

Includes controller and motor



Testing Conditions

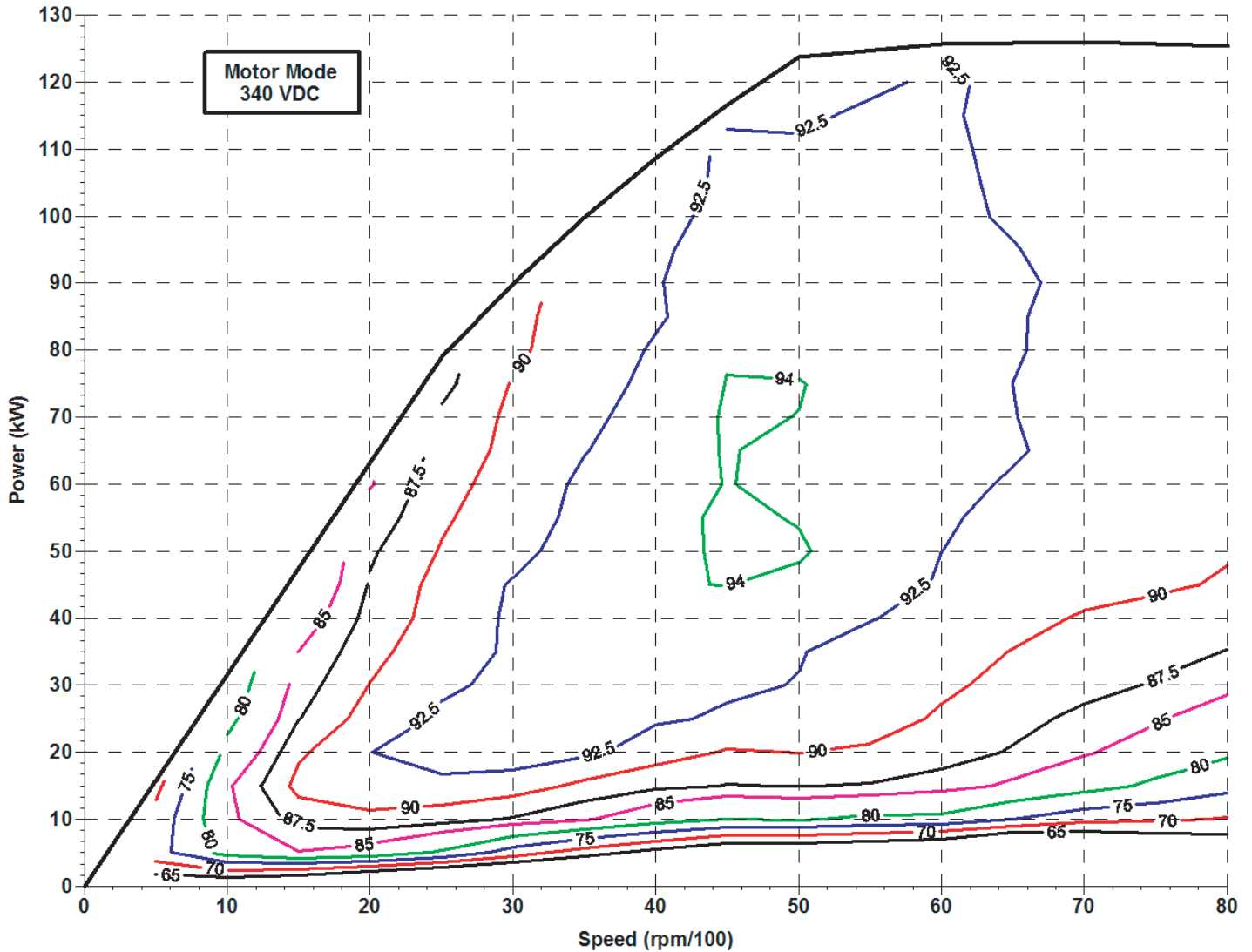
Continuous Output: 45 kW at 4,000 rpm with 300 VDC input, 55°C coolant

Peak Output: 300 VDC input, 55°C coolant, duration 30-90 seconds

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Includes controller and motor



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