



PowerPhase[®] 75

for electric, hybrid electric, and fuel cell powered vehicles



Key Features:

- 240 Nm peak torque
- 75 kW peak, 45 kW continuous motor power
- 75 kW peak, 41 kW continuous generator power
- Full Power at 240-420 VDC
- 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
- Full 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

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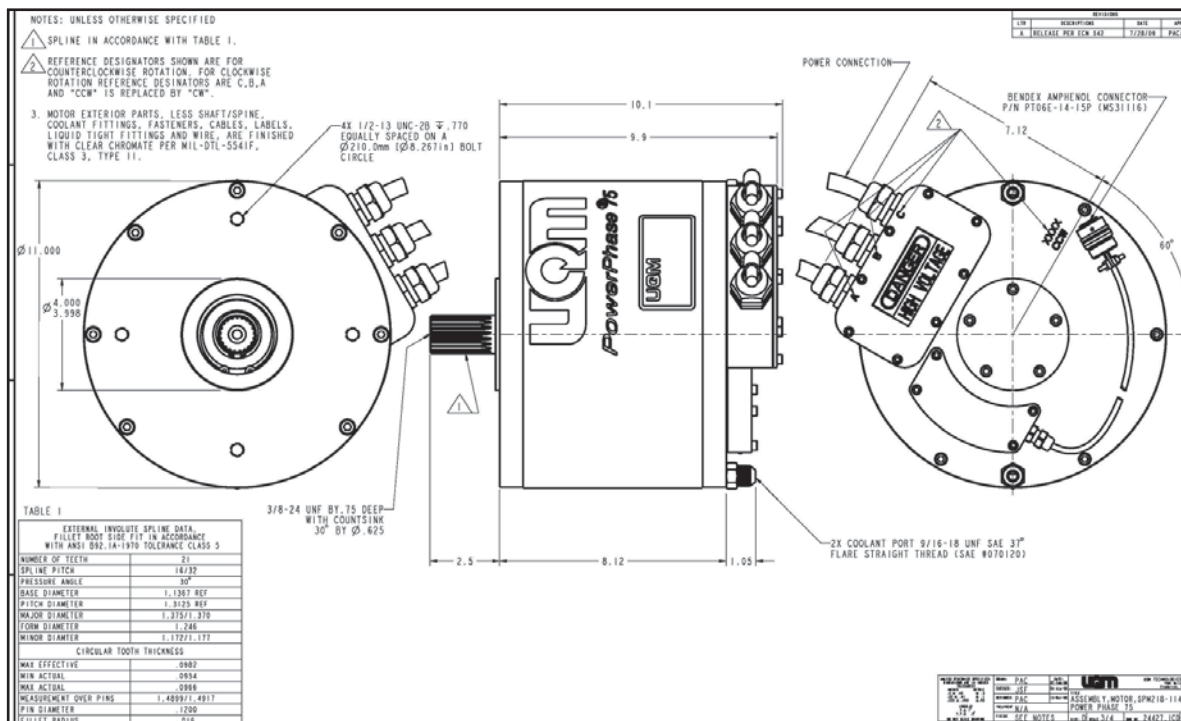
SR218N Motor/Generator

Dimensions

Length	9.94 in	252 mm
Diameter	11.00 in	280 mm
Weight	90 lb	41 kg

Performance

Peak power	100 hp	75 kW
Continuous power at 4,000 rpm	60 hp	45 kW
Peak torque	176 lbf•ft	240 N•m
Continuous torque	110 lbf•ft	150 N•m
Maximum speed	8000 RPM	
Maximum efficiency	94%	
Power density (based on 75 kW)	1.11 hp/lb	1.83 kW/kg



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DD45-400L Inverter/Controller

Operating Voltage

Nominal input range	240 to 420 VDC
Operating voltage input range	240 to 420 VDC
Minimum voltage limit	240 VDC
Input current limitation	400 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

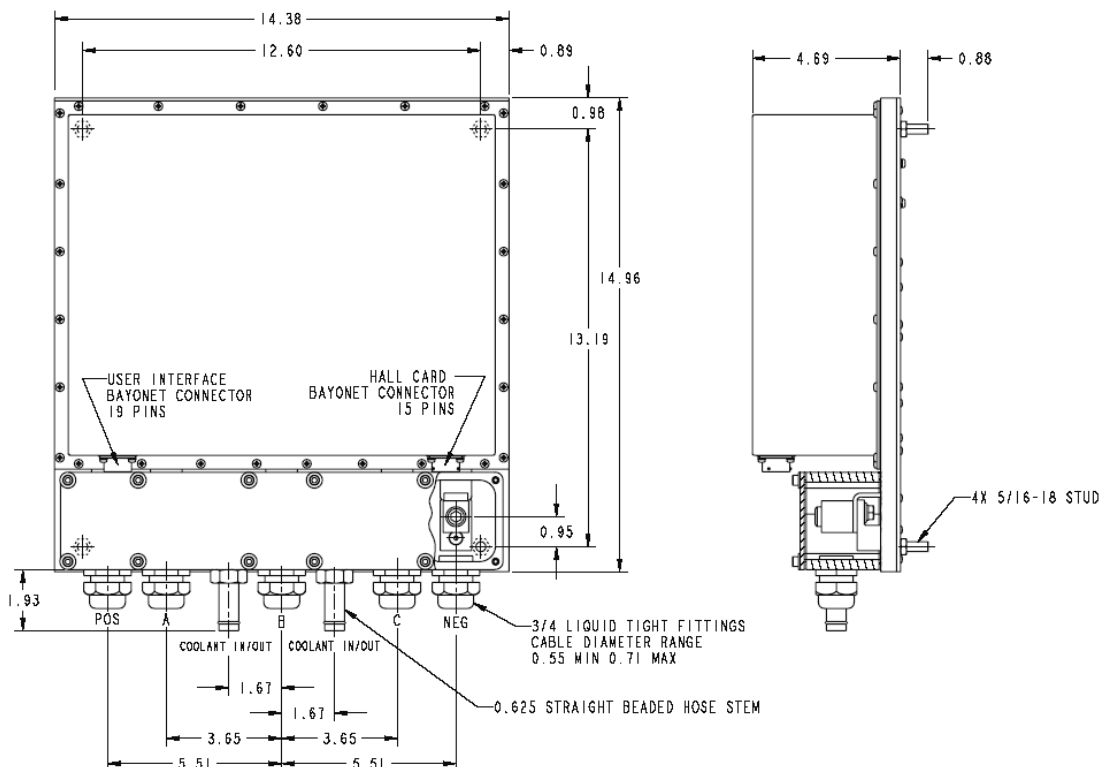
Control type	PWM & phase advance, 3-Phase Brushless PM
Power device	IGBT module half bridge × 3
Switching frequency	12.5 kHz
Standby power consumption	17 W (inverter and microprocessor)

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)

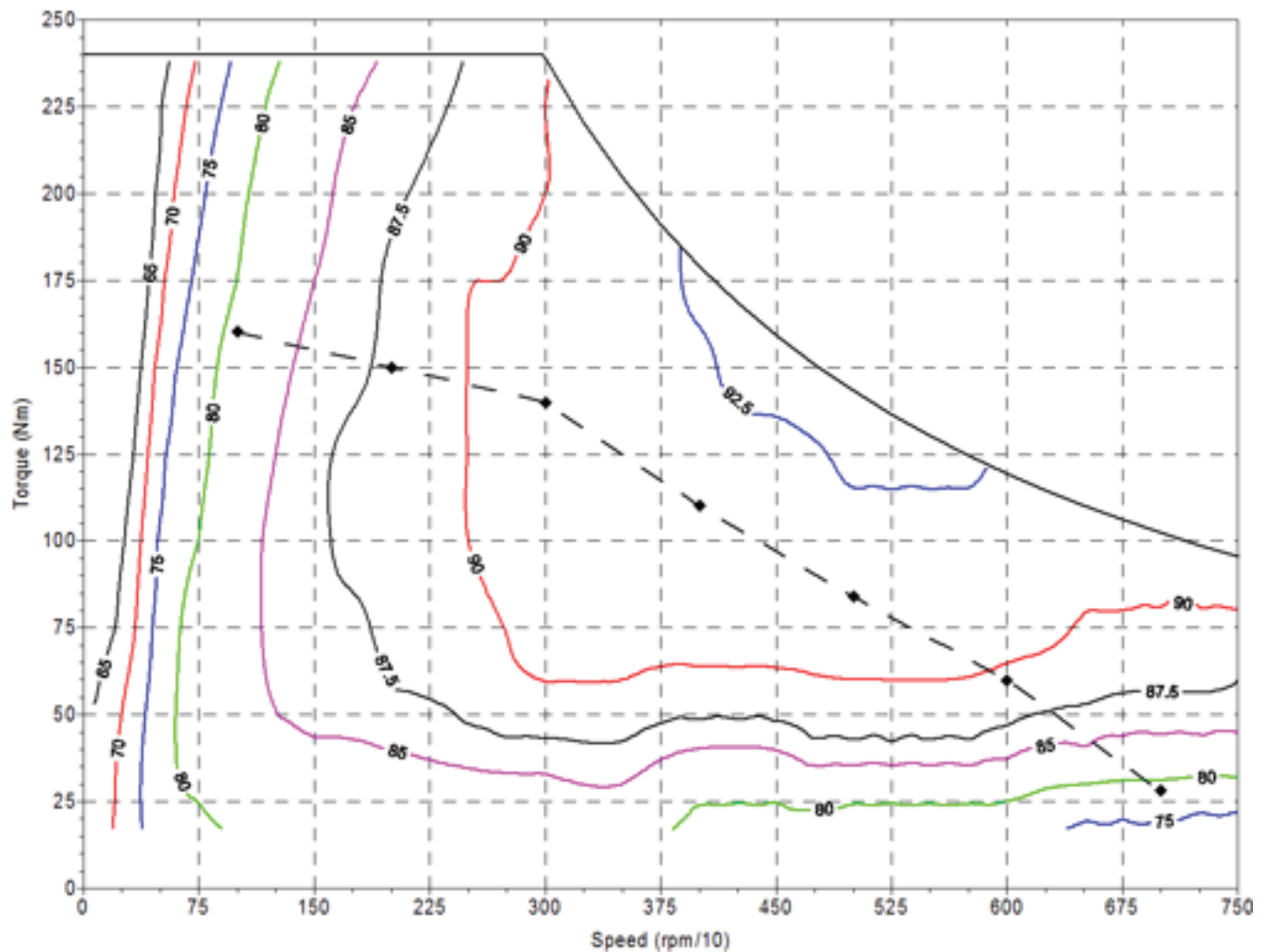
Nominal input voltage	12 VDC
Input supply voltage range	8 to 15 VDC
Input supply current range	0.3 to 0.5 A



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Motoring Efficiency Map

Includes controller and motor



Testing Conditions

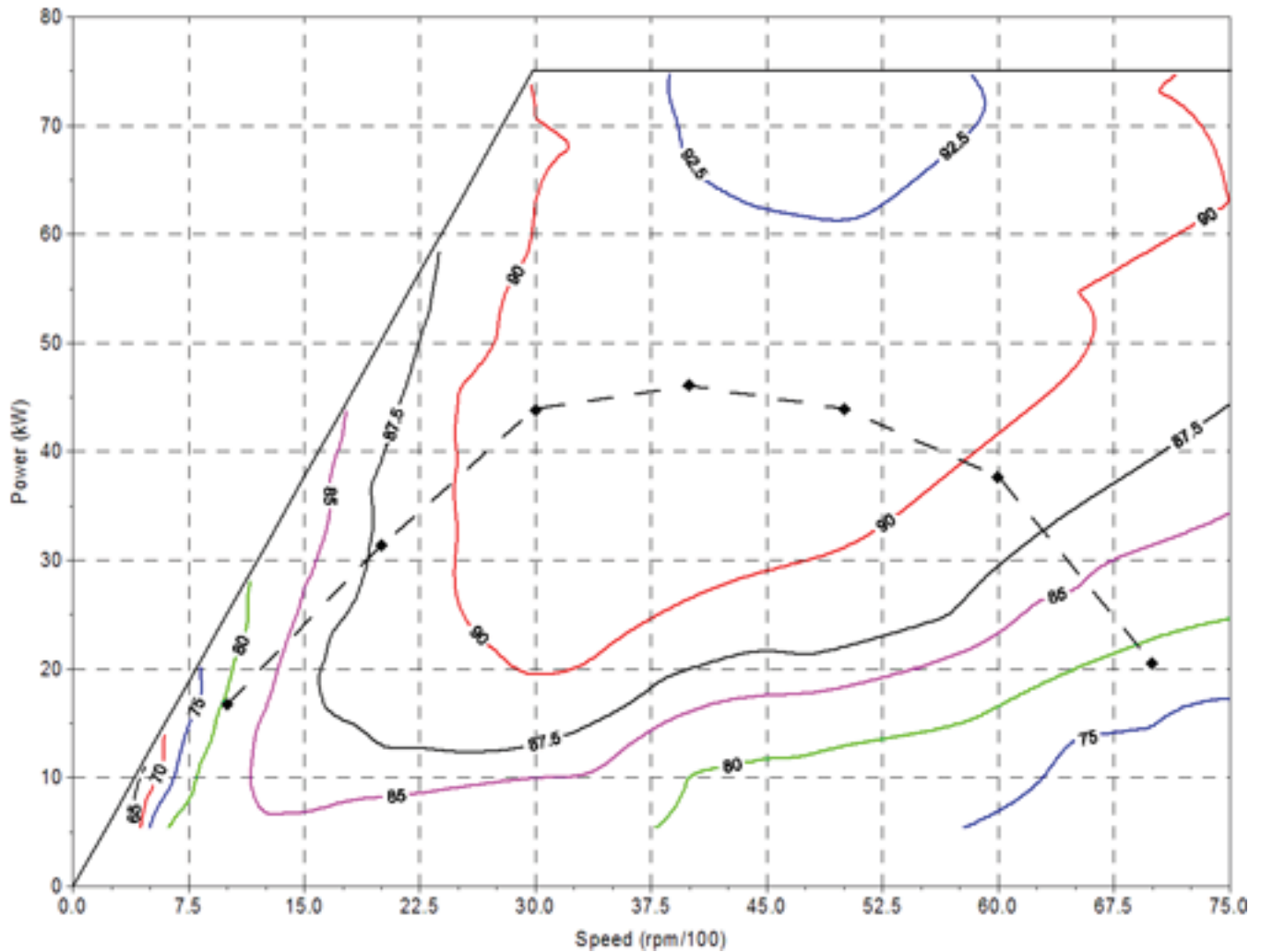
Continuous Output: 300 VDC input, 55°C coolant

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

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Motoring Efficiency Map

Includes controller and motor



Testing Conditions

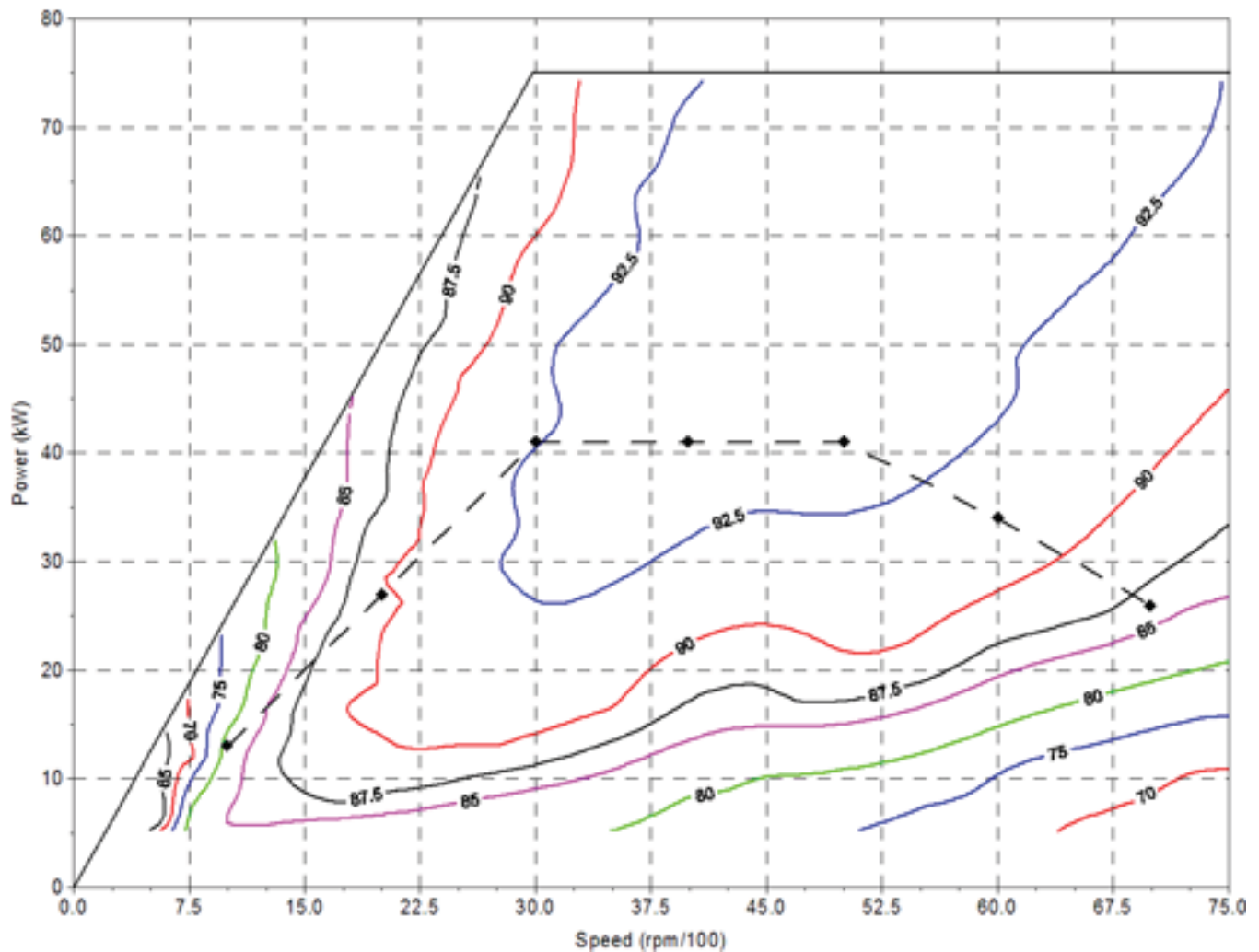
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Generating Efficiency Map

Includes controller and generator



Testing Conditions

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