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# Datasheet VM600M-28W0115

Art.-No: VM600M-28W0115-RH20060-0610

## VM600M - Expert eMotors

Synchronous electric motors and generators for mobile applications perfectly matched to the VP600 inverter product line.

### VM600M Features

- maximum lifetime
- high efficiency especially at partial load
- scalable performance and easy implementation of redundancy

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Product overview	
Article no.	VM600M-28W0115-RH20060-0110
Finishing	black
Motor topology	PM reluctance

Size	
Weight	170 kg
Diameter shaft	48 mm
Length shaft	80 mm
Total length	664.5 mm
Length	593.5 mm
External diameter	247 mm

Technical data	
Noiminal torque <sup>1)</sup>	460 Nm
Rated speed	3530 1/min
Nominal current UVW, per phase	277 A <sub>rms</sub>
Terminal voltage (AC)	410 V
Cos Phi	0.9
Torque constant	1.66 Nm/A <sub>rms</sub>
Peak current UVW, per phase	770 A <sub>rms</sub>
Max. overload for 1 min <sup>2)</sup>	1150 Nm
Max. overload for 3 min <sup>2)</sup>	750 Nm
Max. overload for 10 min <sup>2)</sup>	500 Nm
Voltage constant	102 V/1000 rpm
Efficiency at continuous load (up to)	96.7 %
Number of pole pairs	4
Electrical wiring	Star connection
Rotary encoder	<ul style="list-style-type: none"> <li>• Resolver</li> </ul>
Shaft design	Gear shaft W50x2x30x24x9g (or cylindrical with shaft key)
Temperature sensors	PTC , PT100

Cooling	
Liquid cooling	yes
Cooling medium	Water/glycol (50:50)
Min. coolant pressure	0.5 bar
Max. coolant temperature without derating	35 °C
Max. coolant temperature with derating	65 °C

## Environment

## Environment

Max. ambient temperature in operation	65 °C
Min. ambient temperature in operation	-25 °C
Protection class according to EN 60529	IP65

## Pin settings

## Sign

### Properties

Plug type	A DF A 015
Plug design	17 pol, Typ"E"

pin-no.	operation	type	I/O
1	Resolver P+	male	
2	Resolver P-	male	
3	Resolver A+	male	
4	Resolver A-	male	
5	Resolver B+	male	
6	Resolver B-	male	
7	NC		
8	NC		
9	NC		
10	NC		
11	NC		
12	NC		
13	NC		
14	PT100	male	
15	PT100 GND	male	
16	PTC	male	
17	PTC GND	male	

Attachments

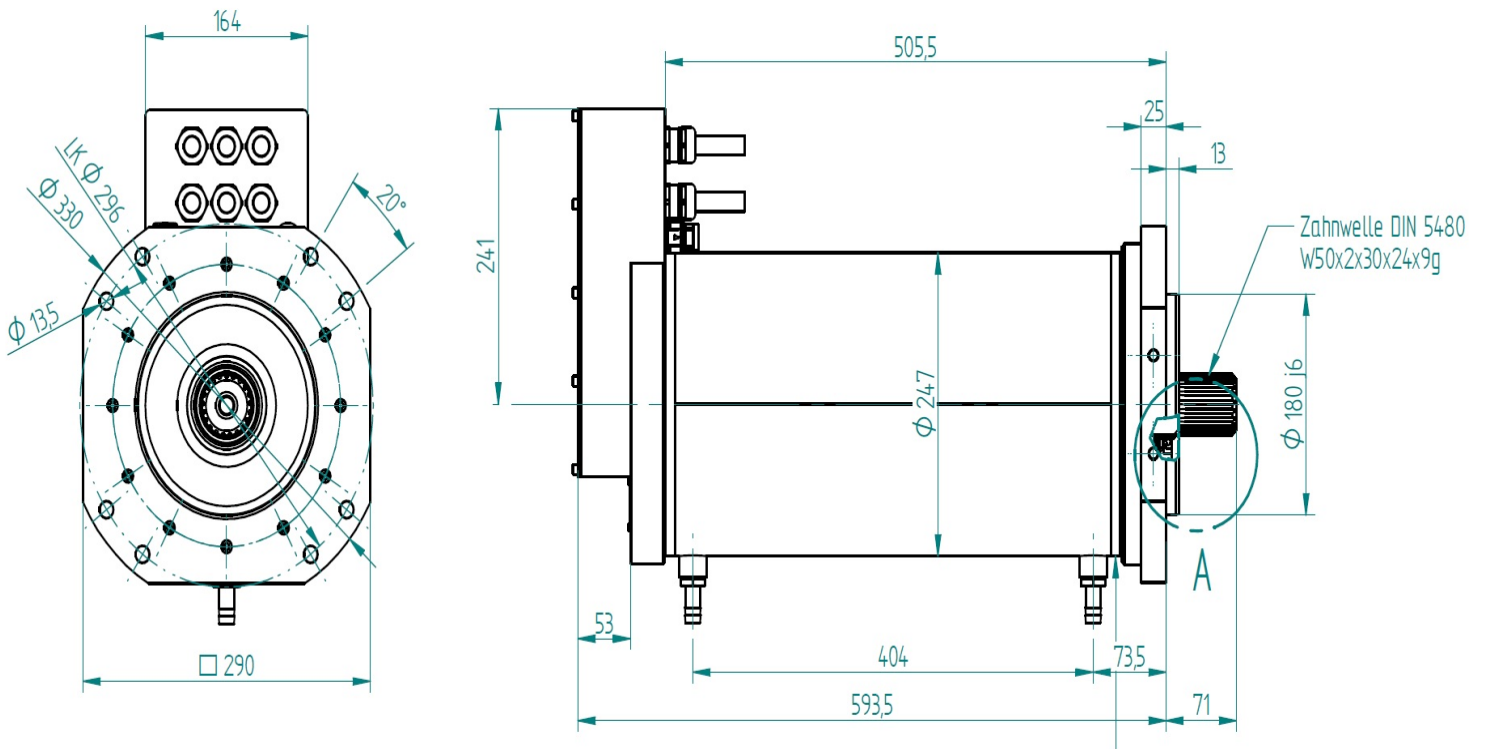


Illustration: Dimensions

Motor characteristic S1

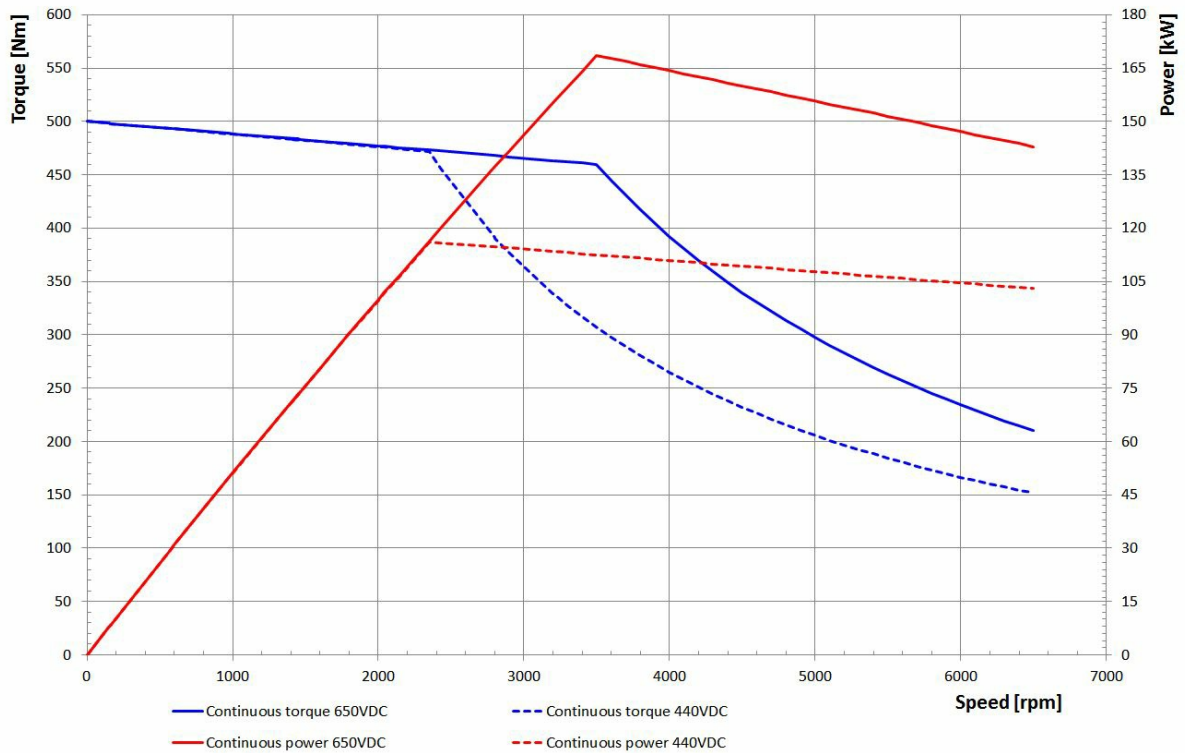


Illustration: S1 torque and power curve

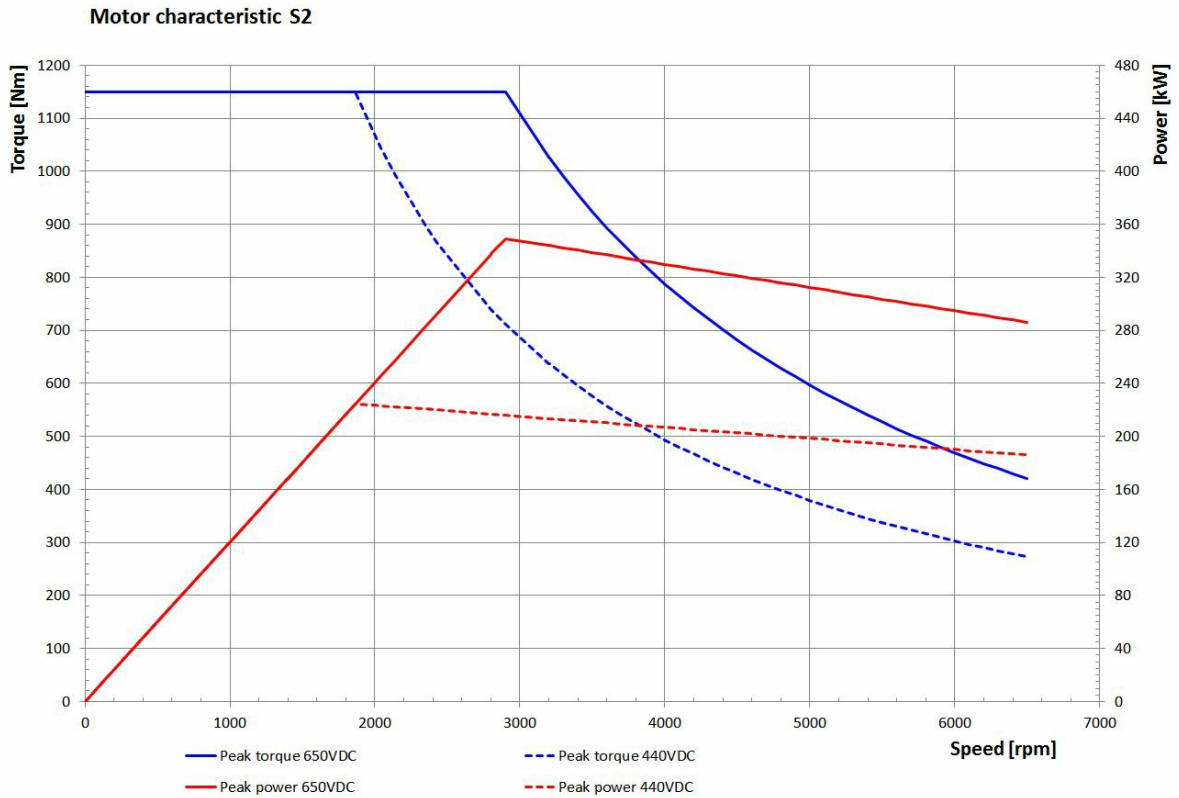


Illustration: S2 torque and power curve