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# Datasheet VM600M-18W0270

Art.-No: VM600M-18W0270-AC30048-0110

## VM600M - Expert eMotors

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

### VM600M Features

- maximum lifetime and easy maintenance
- high efficiency especially at partial load
- No losses in idle operation
- No generated voltage in idle operation
- No unwanted braking torque in case of error

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Product overview	
Article no.	VM600M-18W0270-AC30048-0110
Finishing	black, RAL9005
Description	"DirectDrive" VECTOPOWER motor for mobile applications, optimized to 1:1 speed of the cardan shaft; Optimized for DC voltage of 670V.
Motor topology	Asynchronous

Size	
Weight	752 kg
Diameter shaft	75 mm
Length shaft	105 mm
Total length	1205 mm
Length	1100 mm
External diameter	500 mm

Technical data	
Noiminal torque <sup>1)</sup>	804 Nm
Rated speed	2380 1/min
Max. speed $n_{max}$ <sup>4)</sup>	4800 1/min
Nominal current UVW, per phase	330 A <sub>rms</sub>
Rated power <sup>3)</sup>	200 kW
Terminal voltage (AC)	440 V
Cos Phi	0.83
Torque constant	2.43 Nm/A <sub>rms</sub>
Peak current UVW, per phase	800 A <sub>rms</sub>
Max. overload for 10 sec <sup>2)</sup>	2700 Nm
Max. overload for 1 min <sup>2)</sup>	2700 Nm
Max. overload for 3 min <sup>2)</sup>	2115 Nm
Max. overload for 10 min <sup>2)</sup>	1430 Nm
Efficiency at continuous load (up to)	95 %
Efficiency at 50% load (up to)	94 %
Number of pole pairs	2
Electrical wiring	Delta connection
Heating	155°C, class of insulation H according to DIN60034-1
Rotary encoder	<ul style="list-style-type: none"> <li>• Resolver</li> </ul>
Encoder manufacturer name	Yingshuang
Encoder manufacturer type	YS 135XU9736
Shaft design	cylindrical without shaft key
Temperature sensors	PT100, NTC

## Technical data

### Technical notes

- <sup>1)</sup> Rated torque at: <2380 rpm, 670VDC, 15l/min coolant flow rate at 35°C and 25°C ambient
- <sup>2)</sup> Max. torque at: < 2000 rpm, 670VDC, 15l/min coolant flow rate at 35°C and 25°C ambient
- <sup>3)</sup> Rated power valid for 30 min.
- <sup>4)</sup> dependent on available DC-voltage

## Cooling

Liquid cooling	yes
Cooling medium	Water / glycol (50:50)
Cooling water connection (screw thread)	3/4"
Min. coolant throughput	20 l / min
Max. coolant pressure	2 bar
Min. coolant pressure	0.5 bar
Max. coolant temperature without derating	35 °C
Max. coolant temperature with derating	65 °C

## Environment

Max. ambient temperature in operation with derating	75 °C
Max. ambient temperature in operation	75 °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		

pin-no.	operation	type	I/O
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

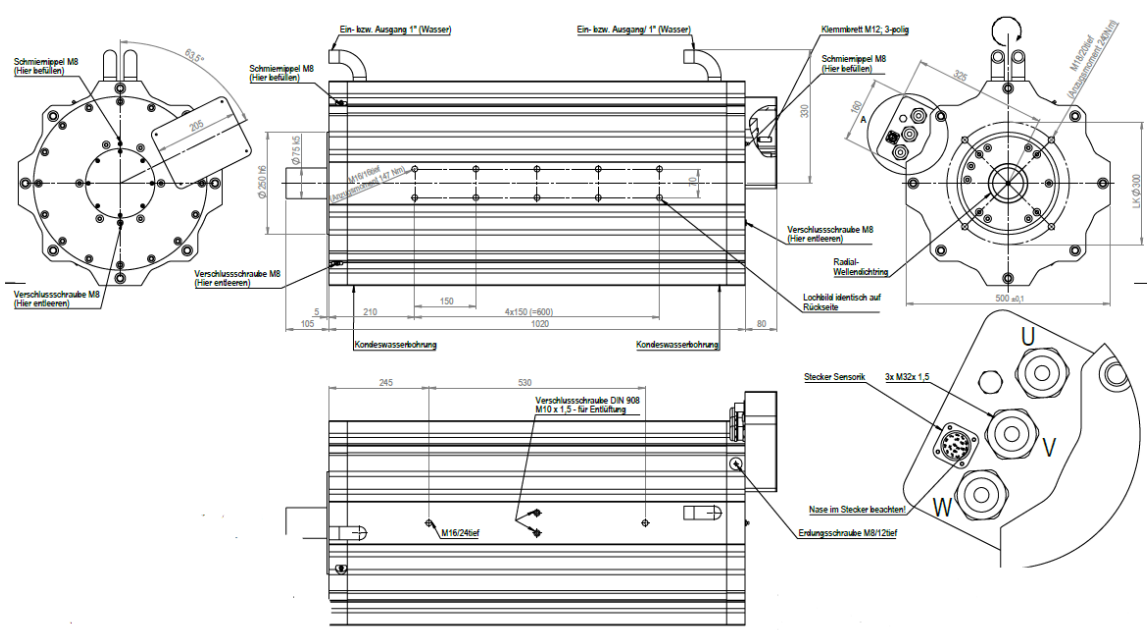


Illustration: Dimensions

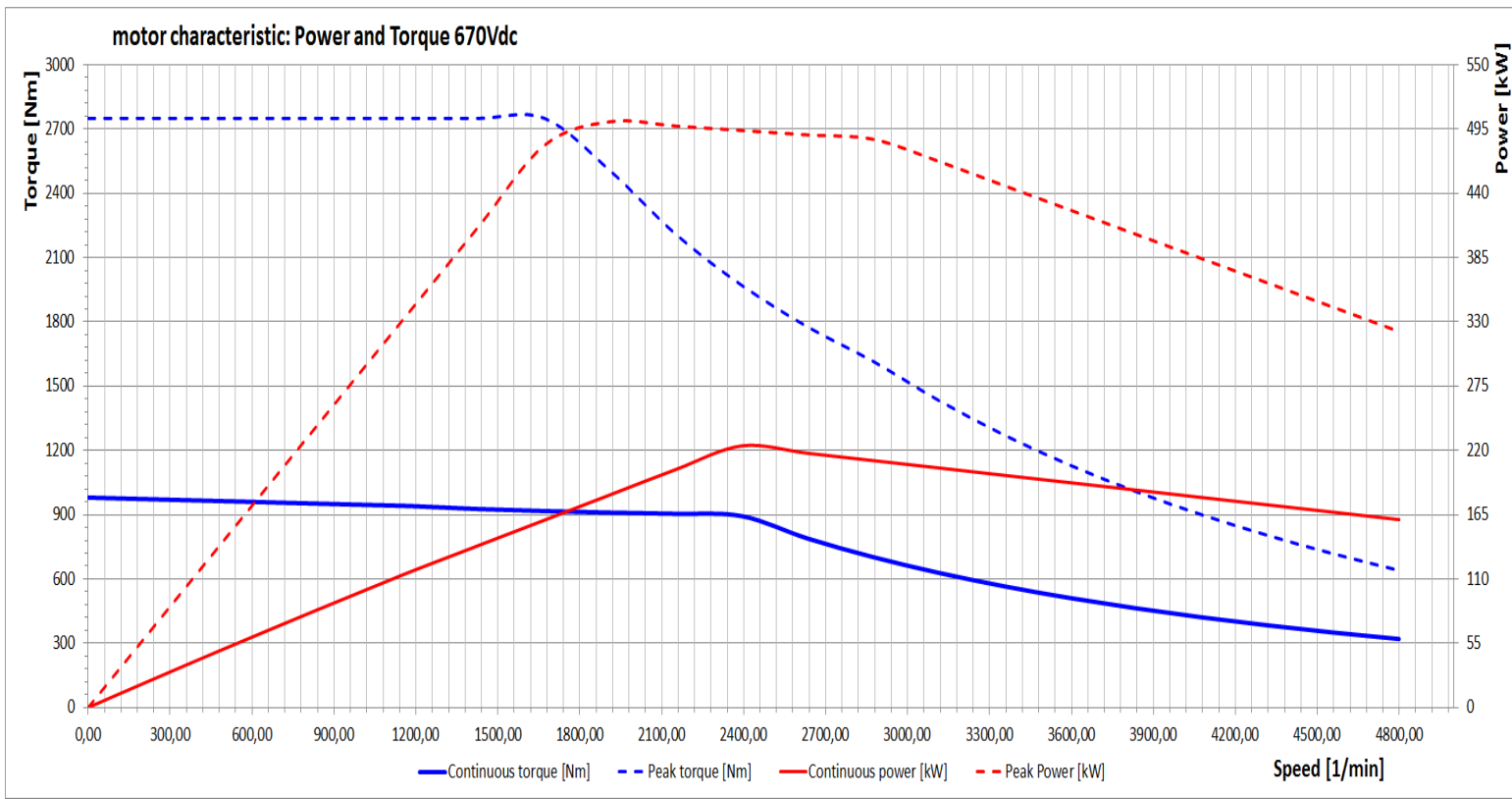


Illustration: S1 torque and power curve