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Datasheet VM600M-18W0018

Art.-No: VM600M-18W0018-PM10040-0210-A

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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General	
product name	VM600M-18W0018
Article no.	VM600M-18W0018-PM10040-0210-A
product family	VM600M
product description	

Product overview	
Article no.	VM600M-18W0018-PM10040-0210-A
Motor topology	Permanent magnet synchronous
Finishing	black
Name	VM600M-18W0018
Description	AuxiliaryDrive VECTOMOTOR for mobile applications. Use for auxiliary and functional drives.

Properties	
Plug type	3 x HVBI-02R6-AMHA-xx
Plug design	Phase U = Codierung "C"; Phase V = Codierung "D"; Phase W = Codierung "E"

Size	
Weight	50 kg
Length	437 mm
Total length	495 mm
Length shaft	58 mm
Diameter shaft	32 mm
External dimensions	190

Technical data	
Nominal current UVW, per phase	49.6 A _{rms}
Peak current UVW, per phase	163 A _{rms}
Voltage constant	101 V/1000 rpm
Max. speed n _{max}	4000 1/min
Rated speed	3000 1/min
Electrical wiring	Star connection
Heating	155 °C, class of insulation F according to DIN57530
Rotor moment of inertia	148 kgcm ²
Rated power ³⁾	22 kW
Number of pole pairs	3
Rotary encoder	• Resolver
Shaft design	cylindrical with shaft key according to DIN6885

Technical data	
Temperature sensors	PTC, PT100
Noiminal torque ¹⁾	72 Nm
Max. overload for 10 sec ²⁾	221 Nm
Torque constant	1.45 Nm/A _{rms}
Terminal voltage (AC)	360 V
Technical notes	<p>¹⁾ at 3000 1/min, 560Vdc, 35 ° C liquid cooling temperature and 25 ° C ambient temperature</p> <p>²⁾ at 2000 1/min, 560Vdc, 35 ° C liquid cooling temperature and 25 ° C ambient temperature</p> <p>³⁾ at 3000 1/min, 560Vdc, 35 ° C liquid cooling temperature and 25 ° C ambient temperature</p>

Cooling	
Cooling medium	Water/glycol (50:50)
Liquid cooling	yes
Min. coolant throughput	8 l / min
Max. coolant pressure	2 bar
Min. coolant pressure	0.15 bar
Max. coolant temperature without derating	35 °C
Max. coolant temperature with derating	65 °C
General information about cooling	Cooling A-flange and B-flange in serial

Environment	
Protection class according to EN 60529	IP64* <small>*with gearbox IP65</small>
Min. ambient temperature in operation	-25 °C
Max. ambient temperature in operation	65 °C

Pin settings

ENC

Properties	
Plug type	A DF A 015
Plug design	17 pol., type "E"

pin-no.	operation	type	I/O
1	P+	male	
2	P-	male	
3	A+	male	

pin-no.	operation	type	I/O
4	A-	male	
5	B+	male	
6	B-	male	
7	N.C.	N.C.	
8	N.C.	N.C.	
9	N.C.	N.C.	
10	N.C.	N.C.	
11	N.C.	N.C.	
12	Interlock	male	
13	Interlock	male	
14	PT100	male	
15	PT100 GND	male	
16	PTC	male	
17	PTC GND	male	