



Low-speed synchronous PM generator AW-1000s

Rating plate

		
Electrical Machinery Engineering Ltd. Low-speed synchronous PM generator		
Type: AW-1000s	No: 2200100012	Date: 2014
○ Power: 1000 W	Phase: 2	Phase voltage: AC 58 V ○
Rated phase current: 8.7 A	RPM: 180	Max overspeed: 360 RPM
Weight: 32 kg	IP 43	Duty: S9
		Ins. Class: F
Ambient: -30...+40°C		IEC 60034-1

Specifications

Electrical specification

	AW-1000s
Rated power (W)	1000
Output power range (W)	0-1800
Rotational speed range (RPM)	0-300
Number of phases	2
Phase voltage range, AC (V)	0-120
Frequency (Hz)	0-120
Phase current at Rated Output (A)	8.7
Efficiency	82%
Phase resistance (Ω)	1.2
Output wire square section (mm ²)	4x2.5mm ² , 1x4mm ² (grounding)
Insulation class	F
Design lifetime	>10 years
Ambient temperature	-30...+40°C

Mechanical specification

Torque at rated power (N·m)	67
Starting torque (N·m)	<0.1
Weight (kg)	32
Specific torque at Rated Power (N·m/kg)	2.1
Rotor inertia (kg·m ²)	0.33

Material specification

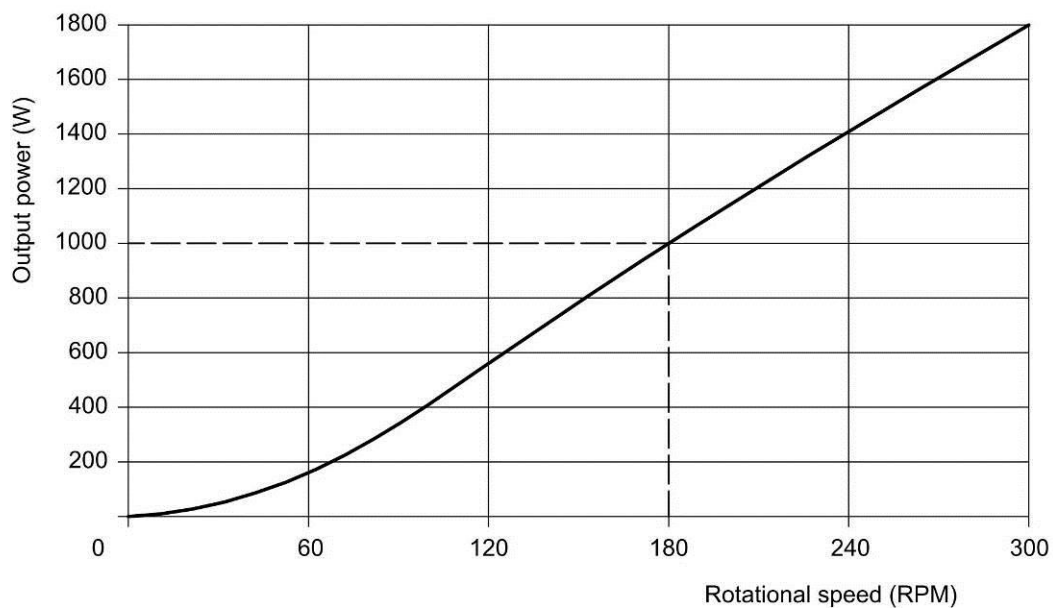
Bearing Type	SKF 6006-2z (2 pcs); 26206k (1 pc)
Shaft material	Steel AISI431 (X20CrNi72)
Outer frame material	Al. alloy Al6061
Magnet material	NdFeB (N42H)
Magnet temperature rating (C°)	120
Winding material	Polyesterimide enameled copper wire 0.9*2mm
Winding temperature rating (C°)	155

Important!

1. Do not connect phases before current rectification.
2. Phase voltage before reaching temperature equilibrium may be up to 150V.
3. Store at temperature -30...+40°C

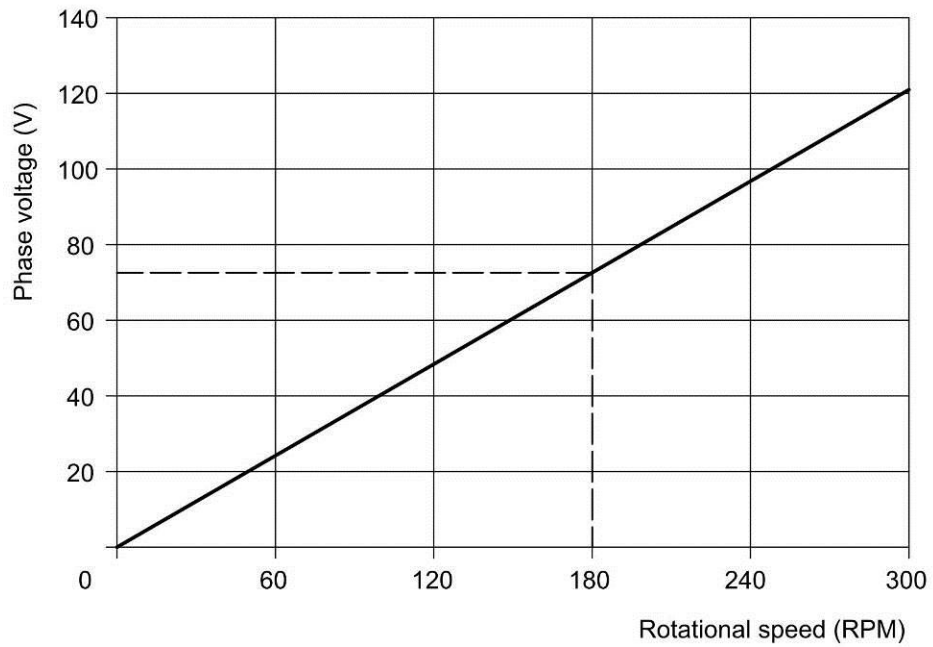
Curves

Power curve $P=f(n)$ at a fixed rated current $I = 8.7 \text{ A}$



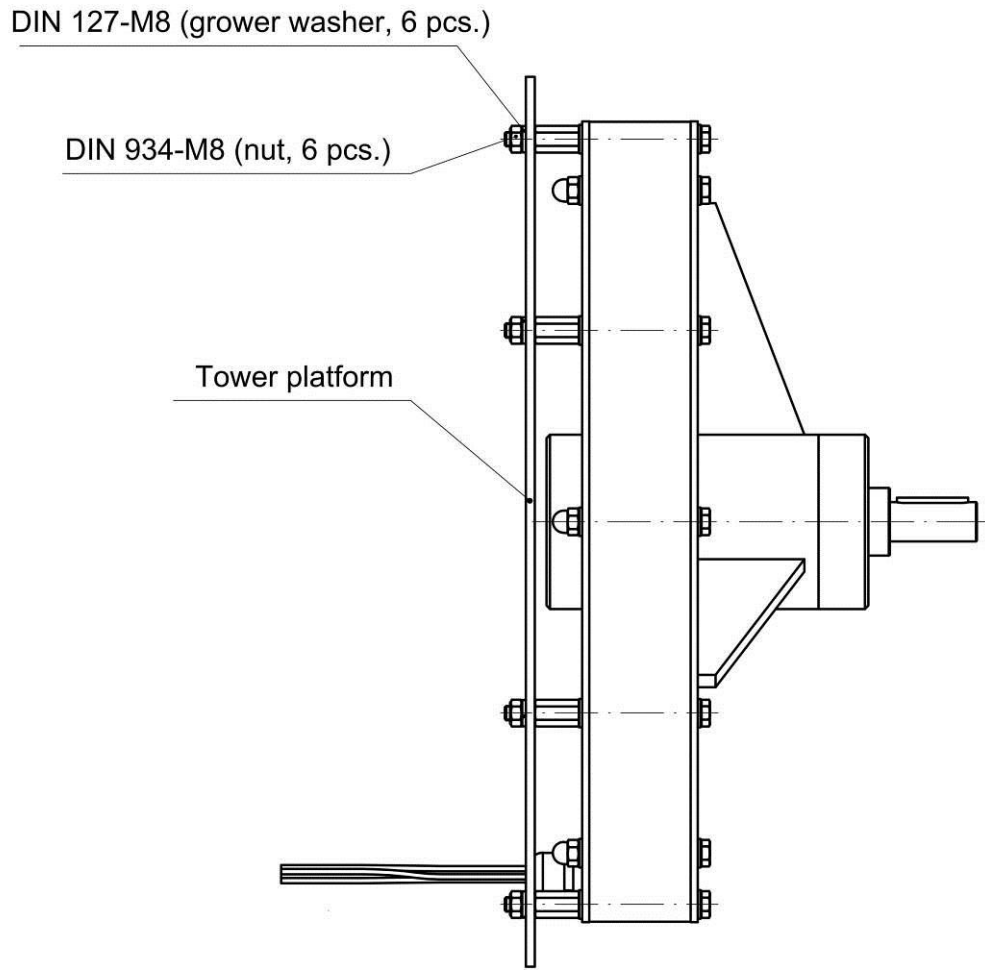
Rotational speed (RPM)	Power (W)
0	0
60	160
120	560
180	1000
240	1410
300	1800

Unload voltage curve $U=f(n)$

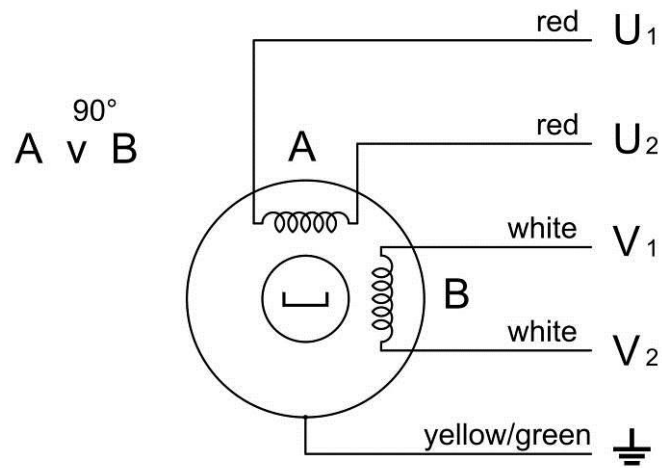


Rotational speed (RPM)	Phase voltage (V)
	0
60	25
120	49
180	73
240	97
300	121

Mounting diagram



Electric circuit diagram



Wiring diagram in the terminal box

