Low-speed synchronous PM generator AW-1000 3P

Rating plate

Rating rotational speed = 180 RPM
Rated power = 1030 W
Rated phase current = 3.5 A
Phase = 3
Phase voltage = AC 120V
Weight = 32 kg

Specifications

Electrical specification

	AW-1000 3P
Rated power at 3.5A (W)	1030
Output power range (W)	0-1880
Rotational speed range (RPM)	32-300
Number of phases	3
Phase voltage range, AC (V)	0-210
Frequency (Hz)	0-120
Phase current (A)	0-3.5
Efficiency	up to 82%
Phase resistance (Ω)	5.1
Output wire square section (mm^2)	6x2.5mm^2, 1x4mm^2 (grounding)
Insulation class	F
Design lifetime	>10 years
Ambient temperature	-30…+40^oC

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

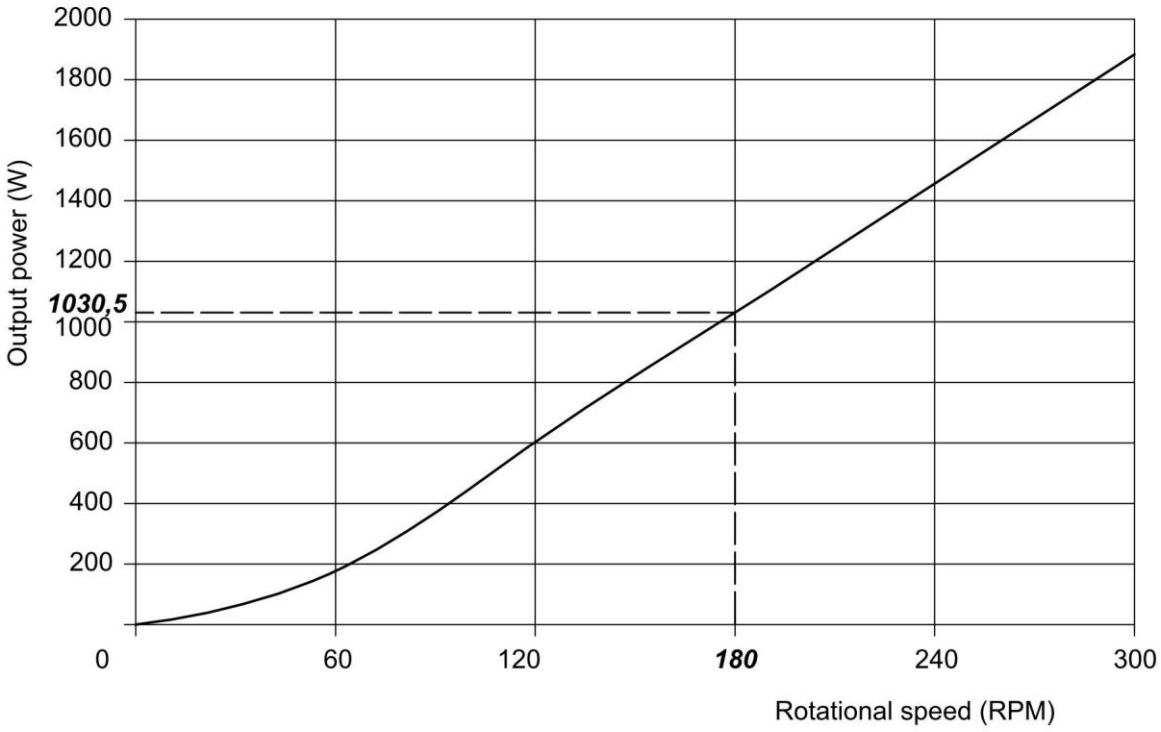
Bearing Type	SKF 6006-2z (2 pcs); 26206k (1 pc)
Shaft material	Steel AISI431 (X20CrNi72)
Outer frame material	Al. alloy Al6061
Magnet material	NdFeB (N42H)
Magnet temperature rating (C^o)	120
Winding material	Polyesterimide enameled copper wire Ø 0.95mm
Winding temperature rating (C^o)	155

Important!

1. Electrical connection: "star" (Y-system) or "delta" (Δ-system).
2. Phase voltage before reaching temperature equilibrium may be up to 250V.
3. Store at temperature -30…+40°C

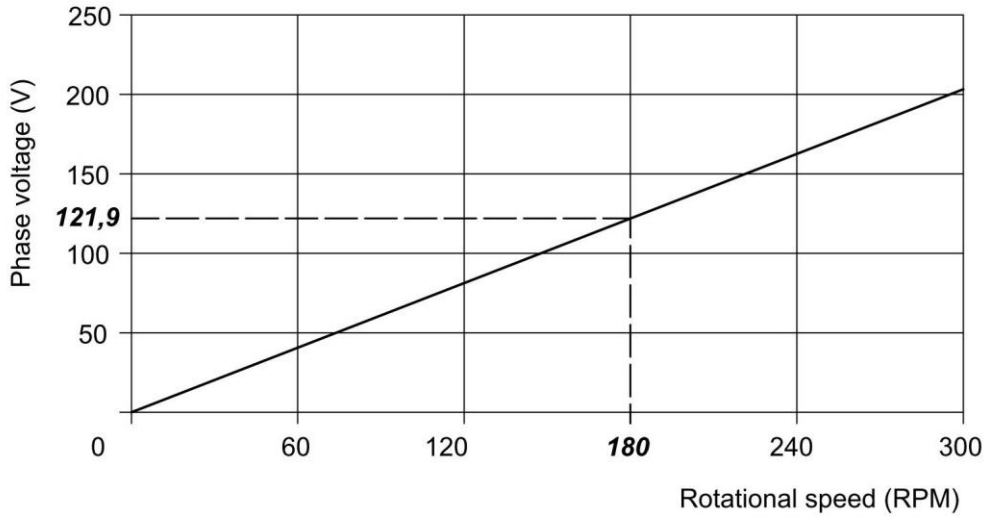
Curves

Power curve P=f(n) at a fixed rated current I = 3.5A



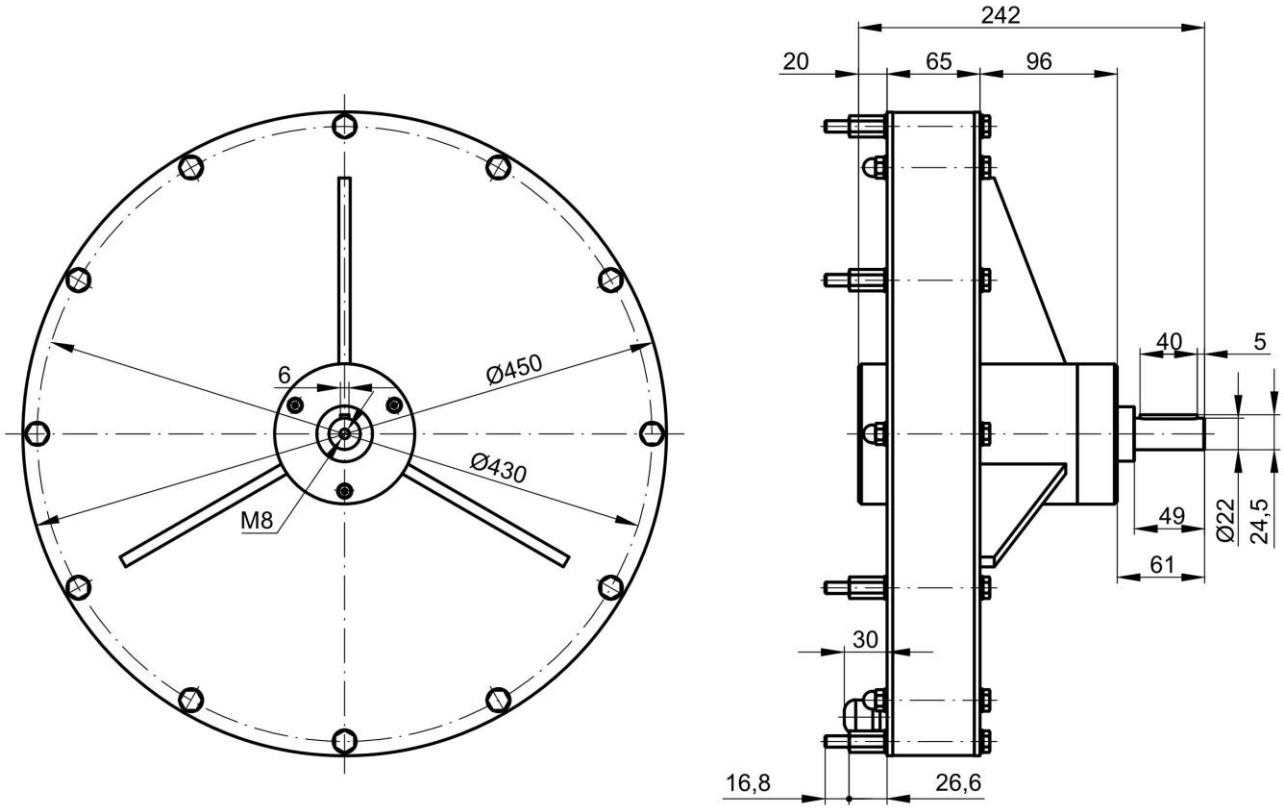
Rotational speed (RPM)	Power (W)
0	0
60	177,2
120	603,8
180	***1030,5***
240	1457,1
300	1883,8

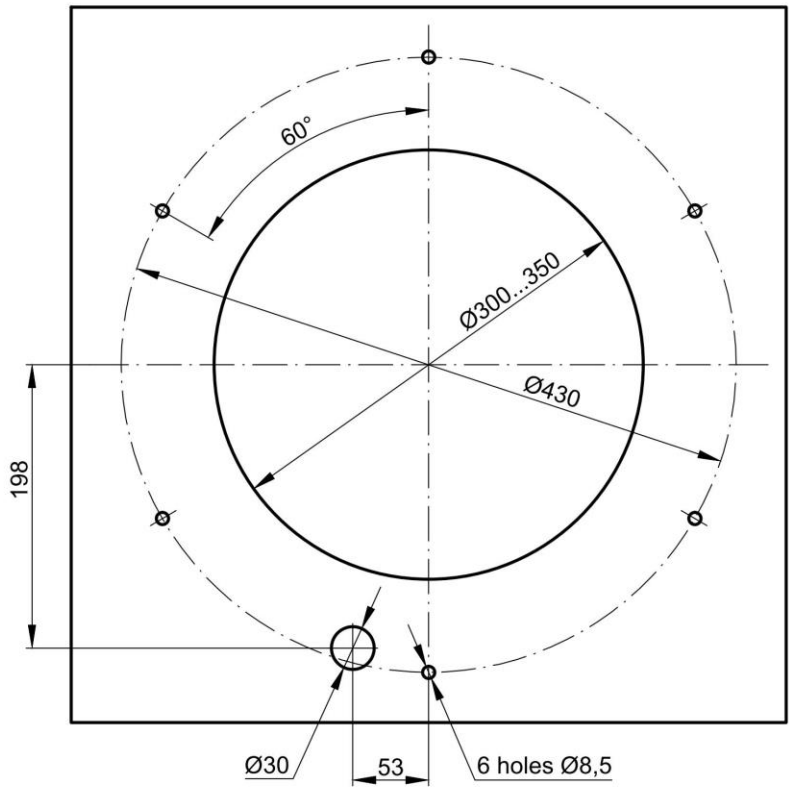
Unload voltage curve U=f(n)



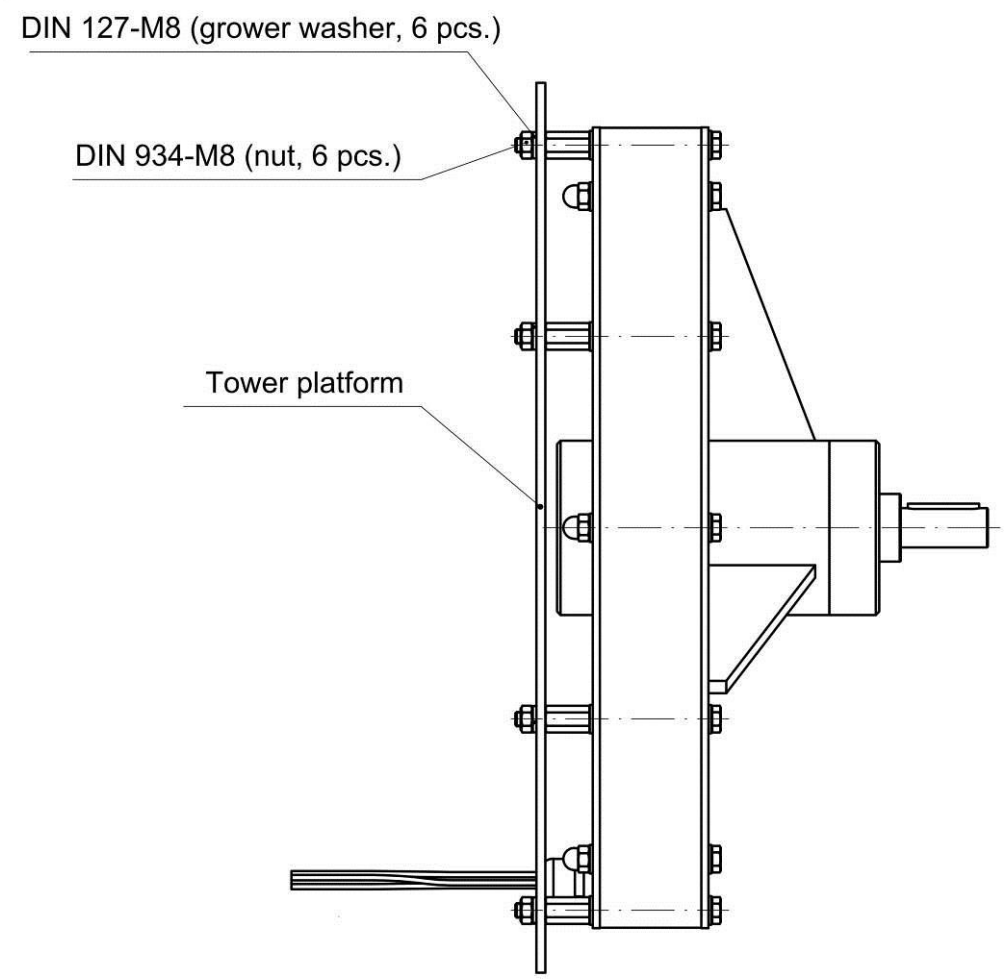
Rotational speed (RPM)	Phase voltage (V)
0	0
60	40,63
120	81,26
180	***121,90***
240	162,53
300	203,17

Outer Dimensions and Mounting Dimensions

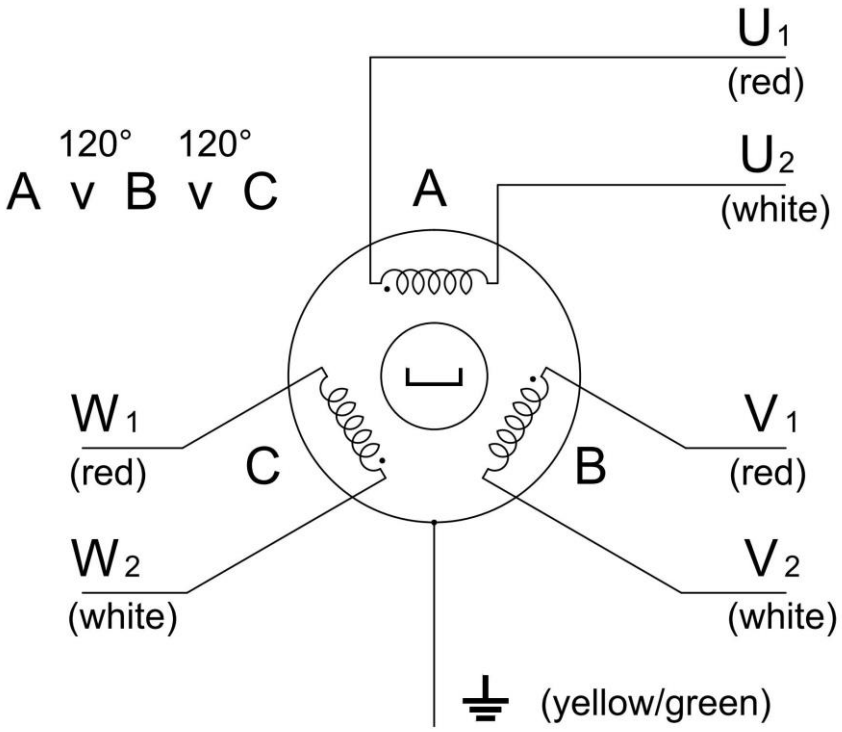




Mounting diagram



Electric circuit diagram



Wiring diagram in the terminal box